Getting Started Guide for Administrators

For
Numara FootPrints®,
Numara FootPrints® for eService
Version 9.0

Numara Software Inc.

Numara FootPrints Getting Started for Administrators Manual: Rev 9.0

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Chapter 1: Welcome to Numara FootPrints

Welcome to Numara FootPrints® from Numara Software

Numara FootPrints® and Numara FootPrints for Customer Service are the 100% web-based help desk and customer support tools that are so easy to use and administer, you can get into live production in just a few days. Users and administrators require only a browser to take full advantage of Numara FootPrints' many capabilities. Numara Software developed Numara FootPrints to address the void in the mid-market for an easy to use and comprehensive system that puts control in the hands of the help desk or support manager—without high costs, additional programming, or complex administration.

Numara FootPrints is extremely flexible, scalable, and customizable. This proven, award-winning

100% web-based service desk tool eliminates expensive training, consulting, database programming, and staff additions to manage support automation software from your list of challenges. Numara FootPrints can be used for multiple, simultaneous projects and support multiple languages for users and groups, and you can leverage Numara FootPrints' capabilities across multiple locations and corporate functions to expand the reach of your issue management and related communication.

What's New in Numara FootPrints 9.0?

Numara FootPrints version 9.0 presents a variety of exciting enhancements and new features to improve your FootPrints experience. These provide functionality that, in many cases, you won't find anywhere else.

- Numara FootPrints Mobile – This new add-on module combines real-time, dynamic access to Numara FootPrints via a web browser on Microsoft® Windows Mobile, RIM® Blackberry®, and Apple® iPhone® devices, with Numara FootPrints Sync functionality for calendar, task and contact synchronization. Allows agents to manage their assignments, search the knowledge base, etc., on the go and without the need of a PC.
- Preventive Maintenance – This new, included module allows the service desk to provide proactive service management with Quick Issue Templates that automatically create new issues on a recurring basis, which can be used for periodic server maintenance, ensuring password changes on strategic accounts every 90 days, and regular auditing of systems for SOX compliance, or any other regularly scheduled maintenance event.
- Integrated ITIL v3 Service Catalog – This new add-on module allows you to configure and present a menu of services to your customers, with all related details, in an easy-to-understand format within the Customer Service Portal of Numara FootPrints

Dashboard Enhancements

- Save Search" function to save custom search configurations in Dashboard components
- Can view "Project Totals" for multiple projects, allowing you to see totals without having to switch projects
- Can limit graphs and charts to top "N" categories such as Top 5 Issue types based on number of incidents

Report Enhancements

- Added graph and chart drill-down capability in Dashboards, Flashboards, and built-in and custom reports
- Added support for time queries "relative" to date/time fields
- Added "Closed Date" as a searchable field and Added "Not Equal To" option when searching on Create/Last Edit date
- Added new options to the "Received vs Closed" metric report to break results down by any custom dropdown fields.
- Added breakdown by individual ticket to let you see how long that ticket was in any of the statuses to Built-in Metric Report on time spent in each status
- Option to prevent "large" reports from being run on-the-fly to prevent performance degradation.

Change Management Enhancements

- Incorporated Customers and their supervisors as approvers to extend approval processes throughout the organization without special configuration or access rights
- Approvers can also be identified from custom fields for more advanced approval workflow

CMDB Enhancements

- Greatly improved navigation options in the visualization view
- Added CMDB roles to extend selective security to agents and customers based on business needs

- Made it easier and faster to link CIs to an Incident or Problem with new key word search option
- Added Web Services (XML/SOAP) support to the CMDB to allow for creating and updating of CIs and their relationships from other applications (note this feature is not available in the beta, but will be in the final release)

Knowledge Management Enhancements

- Auto suggests solutions based on populated fields on the issue screen for faster search
- Added Solution flags to identify the state of a solution, ie: Draft, Approved, Published, etc for authoring approvals and reporting, and enhanced the approval workflow
- Added “Solutions Only” fields so that selected fields do not appear in the Issue view
- Added “inaccurate” with a comment section to Yes/No solutions rating allowing customers to identify solutions that appear to be incorrect of unclean so that they can be updated and improved
- New report that shows number of authored solutions per agent and how often used over a period of time

SLA Enhancements

- SLAs can now be set in hourly increments up to 48 hours instead of 24 hours
- SLAs are now checked every minute to improve accuracy of SLA
- Added option to prevent agents from changing SLA fields when the issue status has changed

Usability Enhancements

- Added tabbed views to report, search, escalation, user preferences and project option screens to make it easier to find what you want
- Added rich text editor to Description field for Firefox and Safari browsers
- Added weekly calendar view to improve availability management and team scheduling
- Added Closed Date and Closed as possible Homepage columns
-

Numara Software FootPrints Versions and Add-ons

The following versions of Numara FootPrints are available:

- Numara FootPrints—The web-based help desk and customer problem management solution for Windows, UNIX, and Linux servers.
- Numara FootPrints for Customer Service—The web-based customer service desk automation solution
- Numara FootPrints Hosting Service—All the power of Numara FootPrints, hosted by Numara Software, Inc..

NOTE
FootPrints for Exchange is no longer available, but customers can continue to enjoy the same functionality by upgrading to Numara FootPrints.

The following add-on modules are also available for integration with Numara FootPrints:

- Numara Configuration Management—ITIL compliant add-on module that provides complete Configuration Management functionality and includes Service Catalog. Import assets and define your entire configuration. Configuration management data can be imported to Issues. Also features reporting.
- Numara FootPrints Sync—Two-way, dynamic synchronization of calendar appointments, tasks, and contacts with the user's desktop, PIM (Personal Information Manager), or handheld productivity tool.
- Numara Asset Manager—Auto-discovery of PC assets, network management, and software deployment using any combination of the following:
  - Numara Asset Manager—Complete, up-to-the-minute PC hardware and software identification.
  - Numara FootPrints Integration with Microsoft System Center Configuration Manager/SMS—Allows help desks agents to dynamically access PC asset data while they're working on an Issue from within Numara FootPrints.
  - Numara FootPrints Integration with LANDesk—Allows help desks agents to dynamically access PC asset data while they're working on an Issue from within Numara FootPrints.
  - Numara FootPrints Deployment—Enables organizations to leverage their support and help desk operations to optimize IT resources and implement preventative maintenance, eliminating potential technical issues before they occur.
- Numara FootPrints Dynamic Address Book Link—Gives access to multiple LDAP-based and SQL-based address books.
- Numara FootPrints Integration with Right Answers—Comprehensive Knowledge-Paks with hundreds of thousands of solutions for more than one hundred fifty applications.
- Numara FootPrints Telephony—An integrated, hosted contact center service that works with your Numara FootPrints software, offering call centers and service desks advanced, skills-based call routing that automatically transfers incoming customer requests to the right help desk agent or customer service representative. Numara FootPrints Telephony is an integration, not an add-on.
- Numara FootPrints Change Management—Enables organizations to develop their own approval process for Issues, with no programming. In Numara FootPrints Change

Management, approvers are designated for specific Projects. When an Issue meets approval criteria, the approvers are notified that an Issue awaits approval. The approvers then give or withhold approval. When an Issue is approved or rejected, it is moved to another stage in the process.

- Numara FootPrints CRM Bridge—Integration with some of the most widely-used sales automation tools. This integration helps organizations tie their web-based customer support tracking and automation with their web-based CRM sales tracking process to give sales and customer support teams direct access to the latest customer support interactions at any time. From within the sales automation tool, sales representatives can see active support issues for their customers in Numara FootPrints. From within Numara FootPrints, sales representatives can access their customer Address Books that are stored in the sales automation tool. The following sales automation tools are integrated via the Numara FootPrints CRM Bridge.
    - Numara FootPrints Integration with MS CRM
    - Numara FootPrints Integration with Salesforce.com
    - Numara FootPrints Integration with Sales/CRM powered by SalesNet®

NOTE

Live eSupport and the LANSurveyor integration are no longer supported.

- Numara Remote—Enables an Agents to take control of a customer's PC.

PerlEx Modules, Packages, and Extensions

ActivePerl Enterprise Edition is the up-to-date, quality-assured perl binary distribution from ActiveState. Current releases, and other professional tools for open source language developers are available at:

http://www.ActiveState.com

Numara FootPrints Requirements

Numara FootPrints is a 100% web-based solution that is installed on a web server. Please review the following requirements prior to installing Numara FootPrints.

- Windows
- Linux/UNIX
- Suggested Hardware Based on Volume

NOTE

Performance is severely limited on servers which use McAfee and Numara FootPrints together.

Although Numara FootPrints runs under VMware on Windows, Numara FootPrints does not support VMware.

Windows Requirements

Database	Microsoft SQL Server	Oracle
Version	Microsoft SQL Server 2005/2000	Oracle 10g/11g (Note: The database can reside

	Microsoft SQL Server Express 2005	on a Windows, Linux, or UNIX server)
Platform	Windows Server 2003 (32 bit) Windows 2008 Server (32 bit)	
Web Server	Internet Information Server (IIS) v6-7	
Hardware 1-20 Agents	SQL Server on a different server: 1GB RAM 1 Pentium 4 or 1 Xeon® 4 2.4 GHz processor or better 1 GB disk space SQL Server on the same server: 2 GB RAM 1 Pentium 4 or 1 Xeon 2.4 GHz processor or better 1 GB disk space	Oracle on a different server: 1 GB RAM 1 Xeon 2.4 GHz processor or better 1 GB disk space Oracle on the same server: 2 GB RAM 1 Xeon 2.4 GHz processor or better 1 GB disk space
Hardware 21-50 Agents	SQL Server on a different server: 2 GB RAM 2 Xeon® 4 2.4 GHz processors or better 2 GB disk space SQL Server on the same server: 4 GB RAM 2 Xeon 2.4 GHz processors or better 2 GB disk space	Oracle on a different server: 1-2 GB RAM 2 Xeon 2.4 GHz processors or better 2 GB disk space Oracle on the same server: 2 GB RAM 2 Xeon 2.4 GHz processors or better 2 GB disk space
Hardware Large Volume 51+ Agents	See the "Suggested hardware based on volume" chart. Database must be on a separate machine	
Email	SMTP for email notification, including Microsoft Exchange and Lotus Notes POP/IMAP for incoming email processing, including Microsoft Exchange and Lotus Notes	
Client Platform	Any client platform with a web browser, including Microsoft Windows, UNIX, and Mac®	
Web Browser	Microsoft Internet Explorer 6 or above Mozilla® Firefox® v2.0 or above Safari 2 or above	
Other	NTFS-formatted hard drive Oracle versions require Oracle Enterprise Intermedia if not included Numara FootPrints is supported if installed in a DMZ Numara FootPrints has been proven to function properly in virtualized data centers that use Parallels• ™ Virtuozzo®, VMware® ESXi and VMware Infrastructure by Numara Software customers. As such, Numara FootPrints is supported in these environments to the extent of the product's functionality as long as it is installed on the approved OS platforms, web servers and databases. Numara Software makes no claims regarding Numara FootPrints performance in these environments since the mix of other applications and hardware can have a direct impact on overall performance. Numara FootPrints may work properly on other virtualization products, but Numara FootPrints does not make claims that it will. Furthermore, Numara FootPrints is not supported on VMware Server or VMware Workstation using the GSX engine in a production environment since it is not designed for hardware optimization.	

*NOTE ON LICENSES

Use of Numara FootPrints with Microsoft® SQL Server may require additional licenses. For more information, contact Microsoft at www.microsoft.com. A no-cost Microsoft SQL Server Express 2005 is available from Numara Software. Use of Numara FootPrints with Oracle may require additional licenses. For more information, contact them at www.oracle.com.

Linux/UNIX Requirements

Platform	Linux	Sun® Solaris®	IBM® AIX®	HP UX
Version	Any Intel® 32 bit Linux System	Sun Sparc 2.8 and above	IBM® eServer pSeries® 5.x	HP® PA-RISC w/ HP-UX® 11
Web Server	Apache and other Linux web servers	Apache and other Unix web servers	Apache and other Unix web servers	Apache and other Unix web servers
Database	MySQL 5+ --Oracle 10g/11g --Postgres 7/8	MySQL 5+ --Oracle 10g/11g --Postgres 7/8	MySQL 5+ --Oracle 10g/11g	Oracle 10g/11g
Hardware 1-20 Agents	All Databases: 1 GB RAM 2.4 GHz processor 1 GB disk space	All Databases: 1 GB RAM 1 processor 1 GB disk space	All Databases: 1 GB RAM 1.0 GHz processor 1 GB disk space	All Databases: 1 GB RAM 1.0 GHz processor 1 GB disk space
Hardware 21-50 Agents	Oracle/MySQL/Postgres 2 GB RAM 2-2.4 GHz processors 2 GB disk space	All Databases: 2 GB RAM 2 processors 2 GB disk space	All Databases: 2 GB RAM 2-1 GHz processors 2 GB disk space	All Databases: 2 GB RAM 2-1 GHz processors 2 GB disk space
Hardware Large Volume 51+ Agents	See the "Suggested hardware based on volume" chart. Database must be on a separate machine.			
Email	Sendmail SMTP Pop/IMAP			
Client Platform Web Browser	Any web browser, including Microsoft Windows, UNIX, and Mac® Microsoft Internet Explorer 6 or higher Netscape v7 Mozilla Firefox v1.0 or higher Safari 1.2 or higher			
Other	NTFS-formatted hard drive Oracle versions require Oracle Enterprise Intermedia FootPrints is supported if installed in a DMZ FootPrints is supported if installed in a virtualized data center providing it receives the resources defined above. FootPrints is not supported on VMWare GSX engine in a production environment.			

***NOTE ON ORACLE**

Use of Numara FootPrintds with an Oracle® database may require additional licenses. For more information contact Oracle at www.oracle.com.

Suggested Hardware Based on Volume

Platform # of users	Windows 5 **2003/2008 Server w/**	**Linux Any Intel Server w/**	**Sun Solaris Sun SPARC Server w/**	**HP HP PA-RISC Server w/**	**AIX IBM RS6000 Server w/**
1-20	1 GB RAM 1 – 2.4+ Processor	1 GB RAM 1 – 2.4+ Processor	1 GB RAM 1 Processor	1 GB RAM 1 Processor	1 GB RAM 1 Processor
21-50	2 GB RAM 2-2.4+ Processors	2 GB RAM 2-2.4+ Processors	2 GB RAM 2 Processors	2 GB RAM 2 Processors	2 GB RAM 2 Processors
51-150 1	4 GB RAM 4-2.4+ Processors	4 GB RAM 2-2.4+ Processors	4 GB RAM 4 Processors	4 GB RAM 4 Processors	4 GB RAM 4 Processors
151-249 2	8 GB RAM 8-2.4+ Processors	4-8 GB RAM 4 Processors	4-8 GB RAM 4 Processors	4-8 GB RAM 4 Processors	4-8 GB RAM 4 Processors
250-500 3	16 GB RAM 16-2.4+ Processors	8-16 GB RAM 8 Processors	8-16 GB RAM 8 Processors	8-16 GB RAM 8 Processors	8-16 GB RAM 8 Processors
501+ 3	32 GB RAM 32-2.4+ Processors	32+ GB RAM 16+ Processors	32+ GB RAM 16+ Processors	32+ GB RAM 16+ Processors	32+ GB RAM 16+ Processors
Sample Server for Large Volume 4	HP Proliant DL580, IBM x3850 or Dell PowerEdge R200 for up to 150 users. HP Integrity Servers, IBM x3950 R2, or Dell PowerEdge R900 for over 150 users.	HP Integrity rx7620-16 Server	Sun 800/4880/6800 Series	HP RP8400, available w/2-16 PA-RISC Processors and 2-128 GB RAM	IBM pSeries 670, available w/4-16 Processors and 4-256 GB RAM

(1) In all cases, Xeon CPUs should be used with the exception of 1-20 agents on Windows. In which case, Pentium 4 CPUs can be substituted.

(2) Windows 2003 Standard (SP2 and R2) supports up to 4 processors and 4 GB RAM(3) Windows 2003 Enterprise (SP2 and R2) supports up to 8 processors and 64 GB RAM(4) Windows 2003 DataCenter supports up to 32 processors and 64 GB RAM(5) "Sample Server" is not intended to be an inclusive list of authorized hardware or vendors, but examples of possible servers that can be used.(6) Dual and Quad Core CPUs are equivalent to 2 and 4 processors respectively. 4 Processors can be 4 single CPUs, 2 Dual Core, or 1 Quad

NOTE: The number of users refers to the average number of concurrent users on the system at any one time. This should include agents and the total number of customers (if using Numara FootPrints for customer service). So, if you have 20 agents and 1000 customers using customer 30-40 users should be counted. This is only a rough guide. Actual load on the system is dependent upon your usage of Numara FootPrints.

Numara FootPrints Documentation

List of Available Documents

The following table lists Numara FootPrints user documentation.

Document	Description
Numara FootPrints Getting Started Guide for Administrator	Provides a means for administrators to get Numara FootPrints to production quickly. All of the immediate actions of implementation are covered in detail.
Numara FootPrints User Guide	Covers the basic functionality of Numara FootPrints for Agents, including Issue creation and Report generation.
Numara FootPrints Reference Manual	Documents every aspect and detail of Numara FootPrints.

Document	Description
Numara **FootPrints Change Management Guide**	Provides best practices for **Numara FootPrints** Change Management as well as the details of configuration and implementation.

Online Help

Help is available from within **Numara FootPrints**. To access the online Help document, click the **Help** icon on the **FootPrints** Toolbar. A new browser window is spawned containing complete documentation on **Numara FootPrints**. This includes:

- Table of contents, Index, and Search tabs for navigation.
- A glossary defining common terms used in **Numara FootPrints**.

In addition to the **Help** icon on the **FootPrints** Toolbar, context-sensitive help links are available throughout the Numara FootPrints system. If you see the icon anywhere outside of the **FootPrints** Toolbar, it is a link to context-sensitive help. Click the link to view information that is specific to the current page.

The on-line help works as expected in Internet Explorer, Netscape, and FireFox browsers. The on-line help may show some unexpected behavior in rare instances when used with these or other browsers.

Technical Support

For questions regarding **Numara FootPrints** and for technical support, contact the Numara Software Support team:

Phone	1.800.222.0550 (dial 2 when you connect) (USA and Canada)
	732.287.2100 ext. 2 (international)
Email	footprints.support@numarasoftware.com
Web	http://www.numarasoftware.com/support

Numara Software Support hours are Monday through Thursday, 9am to 8pm, and Friday, 9am to 6:30pm Eastern Standard Time. You can search the **FootPrints** Knowledge Base any time at the web address above.

For our **international users**, please contact your local distributor.

Thank you for using **Numara FootPrints**!

SUPPORT

Commercial support for ActivePerl Enterprise Edition is available through ActiveState at:
http://www.ActiveState.com/Support/Enterprise/
For peer support resources for ActivePerl Enterprise Edition issues see:
http://www.ActiveState.com/Support/

Chapter 2: Numara FootPrints Concepts

Projects

FootPrints stores and tracks information in Projects. A Project is a separate sub-database within the system which can have its own custom fields, options, and users. There is no limit to the number of Projects that you can create within FootPrints. You may choose to keep all of your data in a single Project or you can create multiple Projects. For example, one Project can be used for help desk activity while a second Project can be used for internal bug tracking.

New projects can only be created by System Administrators.

Other topics in this Chapter:

- Issues
- User Types and Roles
- Customer-Self-service
- Fields
- Address Book
- Resolving Issues
- Licenses
- Asset Management
- Authentication and Different Authentication Methods
- Searching and Reporting
- Time-tracking
- Numara FootPrints Calendar
- Automated Workflow
- FootPrints Web Services
- Numara FootPrints Sync

Issues

A FootPrints Project comprises a set of related Issues. "Issue" is the default name given to a FootPrints record. Each Issue is a numbered record in the FootPrints Project database around which all help desk and problem tracking activity centers.

All Issues have some built-in content in the form of required fields (i.e., mandatory data required for the database), as follows:

- Title—a short description of the Issue
- Priority—the urgency of the Issue
- Status—the current state of the Issue; Open and Closed are required status options, but administrators can create as many categories of status (e.g., Pending approval), as they wish.
- Description—a description of the Issue, usually containing much more detail and history than the Title.
- Assignee—the person or persons assigned to track or resolve the Issue.

Not all organizations use the term "Issue" as the label for a record of this type. Administrators can customize FootPrints to apply whatever label is appropriate in your local culture. Administrators can change the name "Issues" to "Tickets", for example, so that wherever the word "Issues" appears by default in FootPrints, the word "Tickets" is displayed.

NOTE

During installation, the administrator is given the chance to change the default term "Issue" to another name, such as "Entry," "Call," or "Ticket." For consistency, this manual always refers to FootPrints records as "Issues."

Types of Issues

FootPrints provides a number of different types of Issues:

1. Issue—An Issue is normally used to log any event or problem. The name for this may differ (Ticket, Entry, etc.) depending on how your system is configured. An Issue can be opened, assigned, worked on, and closed by internal Agent users and Administrators. FootPrints can automatically send notification email whenever an Issue is worked.
2. Request—A Request is a preliminary Issue that is submitted by a Customer. FootPrints Agents can then "take" the Request and turn it into a regular Issue, or Requests can be automatically assigned to one or more Agents. (Administrators can read the section on Auto Assign for more information). Your Administrator can tell you how Requests are handled in your organization.
3. Quick Issue—Quick Issues are templates that contain pre-filled information for standard types of Customer problems and requests. For example, a Quick Issue template for "Password Reset" would start out pre-filled with a description of the problem, the problem categories pre-filled with "Network" and "Password Reset", and perhaps a Status of "Closed". The Agent only needs to fill in the user's contact information to submit the Issue. The Project Administrator can create an unlimited number of templates
4. Master Issue/Subtask—Sometimes an Issue needs to be broken up into separate subtasks to be completed by different users. When a subtask is created for an Issue, the originating Issue automatically becomes a Master Issue of that subtask. Multiple subtasks can be created for an Issue.

5. **Master Quick Issue**—Quick Issue templates can also be defined to create Master Issues and related subtasks automatically, for example, to define the New Hire process.
6. **Global Issue/GlobalLink**—Global Issues are used to designate important or frequently reported Issues that will affect many users. Global Issues can be broadcast to all Agents, are displayed on the Agent **FootPrints** Homepage, and can optionally be displayed for Customers to subscribe to. Whenever a new Issue is reported with the same problem as an existing Global Issue, the Agent (or, optionally, the Customer) can link the Issue to the known Global Issue (called GlobalLinks). Global Issues can be closed simultaneously with their GlobalLinks.
7. **Solution**—Solutions are a special type of record in **FootPrints** that make up the Knowledge Base. They are used to describe solutions to common problems, frequently asked questions, document procedures, etc. A Solution can be created from scratch or spun off from an Issue. Solutions can be public or internal and they can be configured to require an approval process before they are published.

NOTE

Issues and Requests can also be submitted and updated via email. Please refer to the section on submission via Emailfor more information.

Master Issues and Subtasks

Sometimes an Issue must be divided into subtasks to be completed by different users. The **FootPrints** Master Issue/Subtasks facility allows you to create parent–child relationships between Issues for complex processes.

When a subtask is created for an Issue, the originating Issue automatically becomes a Master Issue of that subtask. Multiple subtasks can be created for an Issue. As an example, numerous tasks must be accomplished when a new hire is performed. **FootPrints** users often create a Master Issue for new hires. Each of the tasks that must be performed for a new hire, such as acquiring a telephone or adding the new hire as a user to the network, is created as a subtask.

Subtasks can be created manually by an Agent or automatically by a Master Quick Issue Template.

Creating a subtask of an Issue automatically makes the originating Issue a Master Issue, with a parent–child relationship existing between the Master Issue and the subtask.

Master Issues and subtasks have a special relationship. When a Master Issue is opened and subtasks are created, the Master Issue remains opened until all of the subtasks have been closed. When the last subtask is closed, the Master Issue can either be closed automatically or **FootPrints** can automatically send an email to all individuals who are assigned to the Master Issue informing them that the subtasks have been closed. It then becomes the responsibility of someone assigned to the Master Issue to close it. The default is to automatically change the status to Closed.

Global Issues

Global Issues are used to designate important or frequently reported Issues that affect many users. For example, a "System Down" failure that will be reported by many users can be made into a Global Issue. Global Issues can be broadcast to all Agents, are displayed on the Agent's **FootPrints** Homepage, and can optionally be displayed for customers to subscribe to. Whenever a new Issue is reported with the same problem, the Agent (and, optionally, the customer) can link the Issue to the known Global Issue. Global Issues can be closed simultaneously with their associated GlobalLinks. This feature can save the time for Agents by preventing duplicate work and can make it easier to communicate pervasive problems to all users.

Global Issues have two parts to them:

- **Global Issue**—This is the originating problem. It is broadcast to all Agents when it is created, is available on the Homepage for setting up a link, and can optionally be broadcast to customers so that they can link to it. Agents can be restricted from creating Global Issues via their role assignment.
- **GlobalLinks**—These are Issues linked to a Global Issue because they describe the same or a similar problem, but are reported by different users. Issues can be made GlobalLinks by Agents from the **FootPrints** home page or the Issue Details page. Customers can optionally link to a Global Issue, allowing them to create their own GlobalLink automatically.

NOTE

The name of this feature depends on the name given to records in **FootPrints** for the system/project. For example, if the name "Ticket" has been defined for records in the current project, the Global Issue is referred to as a "Global Ticket" throughout the project. However, GlobalLinks are always referred to as "GlobalLinks". For consistency, all help files refer to the feature as "Global Issue" and "GlobalLinks".

Quick Issues

Quick Issues are templates that contain pre-filled information for frequently reported customer Issues, such as "Password Reset", "Service Request", etc. For example, a Quick Issue template for "Password Reset" would start out pre-filled with a description of the problem, the problem categories pre-filled with Network and Password Reset, and perhaps a status of Closed. The Agent only needs to fill in the user's contact information to submit the Issue. The Project Administrator can create an unlimited number of templates, which are available to all Agents and customers from the **FootPrints** Toolbar. (Customers cannot access Master Issues.)

Quick Issue templates are created by the Project Administrator.

Quick Issues are considered advanced **FootPrints** features. Refer to Creating Quick Issue Templates and subsequent topics in that section for details on configuring Quick Issues.

NOTE

The name of this feature depends on the name given to records in **FootPrints** for the system/project. For example, if the name "Call" has been defined for records in the current project, the feature is called "Quick Call" throughout the project (on the toolbar, in the Administration pages, etc.). For consistency, all help files refer to the feature as "Quick Issue"

Linked Issues

When Issues are "linked", it means that an association has been created between the Issues. The association is displayed whenever the Issue is displayed in **FootPrints**. Associations of this type denote that there are similarities between the issues that the person who established the link wants everyone to see. Linked Issues can be set up so that changes made to one Issue are propagated to the other Issue or Issues.

In the case of Global Issues, links are called "GlobalLinks". These are Issues linked to the Global Issue because they describe the same or similar problem, but are reported by different users.

Issues linked to a Master Issue are called "Subtasks". These are Issues linked to the Master Issue because they describe a subset of activities to be performed in resolving the Master Issue.

Requests

A request is a preliminary Issue that is submitted by a customer, either through the FootPrints interface (using the Customer Self-service interface) or via email. There are three options for the handling of new Requests:

1. The Requests go into the Request "bin". From there, an Agent or Administrator may assign new Requests to one or more Agents to work on them. The Requests then appear in each assigned Agent's Assignments list on the Homepage.

8. Agents can "take" Requests from the Request bin and assign themselves to the Requests.

9. New Requests can automatically be converted into Open Issues and assigned to internal users based on the value in a drop-down field. This feature must be configured by the Project Administrator. Please refer to the section on Auto Assignment for more information.

Please check with your FootPrints Administrator for more information on how your organization handles Requests in FootPrints.

Customers can follow progress on Requests that they have submitted as they are worked. In addition, FootPrints can automatically send email to the customer who submitted the Request when changes to the Request are made.

User Types and Roles

Agents and Customers

FootPrints supports different levels of user privileges for users with different needs. An "Agent" user account is intended for specified internal users, such as help desk Agents, customer service representatives, or engineers. A "Customer" account is intended for employee end-users or external Customers, allowing those users to submit and track their own requests and to search the knowledge base.

FootPrints comes with a number of built-in user types, called "roles". Custom roles can also be created by the Administrator to define permissions for different groups of users.

Here is a breakdown of the built-in roles:

- Agent roles:
    - Agent—A standard, full-strength user. This user type commonly includes: help desk Agent, call center Agent, developer, engineer, manager, and project member. Agent users have the ability to use all of the basic functions of FootPrints, including creating, viewing, and editing Issues and running queries.
    - Project Administrator—In addition to Agent privileges, a Project Administrator can administer an existing Project, including adding custom fields, setting options, and adding users.
    - System Administrator—In addition to Agent and Project Administrator privileges, the System Administrator has control over the whole FootPrints system, including administration of any Project, adding new Projects, and managing licenses.
- Customer roles:
    - Read KB—View and search the Knowledge Base.
    - Read KB/Requests—View and search the Knowledge Base and check the statuses on Requests (entered by an internal user or via email).

- o **Read/Submit**—In addition to the functionality described above, can submit Requests via a FootPrints web interface.
- o **Read/Submit/Edit**—In addition to the functionality described above, these users have limited edit privileges of their own Requests.

More About Customers

Customer users have a number of components:

- **User Account**—This is the ID and password of the Customer. Users can have unique IDs and passwords or they can share a generic ID and password. This record is kept in the password file.
- **Contact Record**—The contact information for the user is kept in the **FootPrints** Address Book or dynamically read from an LDAP or other External Database/SQL source. The data kept depends on the fields that exist in the Address Book.
- **Primary Key**—The Customer user account and contact records are linked via the Primary Key field. This is a field in the Address Book, such as User ID or Email Address, that uniquely identifies the user.
- **Role**—The permission level for the user. Built-in and custom roles are available.

Supervisors

FootPrints contains the concept of "Supervisors". Agents can be designated as assigned to specific supervisors, which makes it easier to designate where emails go when, for example, there is an Issue Escalation.

Permissions

"Permissions" refers to the level of restriction applied to any user, whether it is an Agent, Administrator, or Customer. As an example, Agents can be restricted from submitting Solutions to the Knowledge Base; therefore, such Agents would not have "permission" to submit Solutions to the Knowledge Base.

Configuration of Permissions

Permissions are configured by Administrators. Project Administrators can configure permissions on a Project level, allowing a specified role (e.g., Agents) to perform or not perform certain actions. System Administrators can configure permissions on either a project level or system-wide. For example, Customers could be restricted from submitting their own Requests in a specific project, allowing them to submit Requests to other projects, or they could be restricted from submitting Requests to any Project.

Permissions can also be set on the field level. That is, users can be prevented from entering data into designated fields without the appropriate permissions. Field level permissions are set by either a Project Administrator for a specific project or system-wide by a System Administrator. With field level permissions, there are two ways in which users are prevented from accessing the field to enter data. In the first instance, the field may be visible to the user, but the user would be prevented from entering data into the field without permissions. In the second instance, the field may be invisible to specified roles.

Permission Assignment

Permissions are assigned by role. That is, Administrators determine which permissions a specific role is allows. The Administrator then can determine which individuals are assigned that role.

Because Administrators can create new roles, the affect of permissions can be limited to a small group or even an individual. For example, if an Administrator wants only a single person or a small number of people to be able to add Solutions to the Knowledge Base, the Administrator could restrict all Agents from adding to the Knowledge Base, then create a new Agent role, assign the appropriate users to the new role, and allow the new role to add Solutions to the Knowledge Base.

Field-level Permissions

"Permission" refers to the level of restriction applied to any user, whether it is an Agent, Administrator, or Customer. For example, Agents can be restricted from submitting Solutions to the Knowledge Base; therefore, such Agents would not have "permission" to submit Solutions to the Knowledge Base. Field-level permissions restrict which fields are accessible to users. Field-level permissions, like regular permissions, are defined by role. For example, Issues can sometimes become exceptionally lengthy and cluttered in terms of the number of fields that are displayed, but not all users need to see all fields. Field-level permissions can be used to "clean up" the Issues page.

As another example, field-level permissions can be used to keep some fields hidden until such time as they become relevant, such as fields created for system test being hidden until a certain status is reached.

For details on configuring field-level permissions, refer to Field-level Permissions.

How Roles and Teams Work Together

Roles and teams are two user elements in **FootPrints** that work together:

- **Team**—Users are organized in teams for assignment purposes.
- **Role**—Users are granted permissions on what they can do within their team and within the **FootPrints** project via a user role.

For example, while the "Level 1 Support Team" may be made up of five users, one of those users might be the team leader and the other four are support technicians. All five users share the same "Level 1 Support Team", but the team leader can be assigned the "Team Leader" role and the other members can be assigned the "Technician" role. This distinction is illustrated in the following table:

User	Team	Role
Jill Smith	Level 1 Support Team	Leader
Linda Thompson	Level 1 Support Team	Technician
Bill Jones	Level 1 Support Team	Technician
Jose Gomez	Level 1 Support Team	Technician
Brian Patel	Level 1 Support Team	Technician

In this example, when someone assigns an Issue to the Level 1 Support Team, all five members receive an email notification and the Issue appears in the Team Assignment queue. Although the Technician role may not allow those users to take the Issue, the Team Leader role allows Jill to assign the Issue to one of the Technicians on the team. In addition, the Technicians may be restricted to only viewing Issues for their own team, while Jill could view the Issues for all teams in the Project.

Teams can be organized for different functions, departments, groups, etc. Roles can be configured to give as much or as little access as desired for a group of users.

Other Aspects of Roles and Teams

- One Role, Many Teams—While a user can be a member of multiple teams, a user can only have one user role within a Project. Therefore, within a Project, a user has the same permissions regardless of the team to which he or she belongs.
- Team leaders—Team leaders can be designated for a Team. This makes a convenient method for designating where an email should go when an Issue Escalation occurs.
- Customers—Customers cannot belong to teams because they cannot be assigned to Issues. Customers are organized by "organizational unit". (The organization unit is an optional property of a contact in the Address Book. Examples of an organizational unit include "Department", "Business Unit", or "Company". If an organizational unit is specified, the contacts in the Address Book are grouped by organizational unit.) Customers can, however, be assigned to a customized role in order to create a special set of permissions.
- Same Name for Role and Team—While the ability to configure roles and teams separately gives you more flexibility, you can choose to give all of the users in a team the same permissions. In that case, you might, optionally, give the role and the team the same name.
- Optional—If the functionality provided in roles and teams is not needed by your organization, you do not need to configure these features at all. Users can be assigned individually without teams and can inherit the permissions of the built-in roles.

Customer Self-service

Customers in FootPrints have access to many self–service features. Depending on their permission level, Customers can submit Requests, track the status of their Requests, search the Knowledge Base for Solutions to their problems, etc. This user type is appropriate for both employee Customers and external Customers of your organization.

With respect to security for self-service Customers, FootPrints can authenticate against multiple login methods. This allows, for example, new customers to be validated against the Windows password file, while Agents are validated against the company's master /Active-Directory/LDAP contact book.

Fields

A "field" is a section of a web form that can accept input. Fields generally accept either text or numbers. In addition, fields can accept a mouse click that selects an option from a list or a mouse click that checks or unchecks a box.

Field Types

The following project field types are supported:

- Character (single or multiple line)—This type of field can contain any type of data, such as alpha, numeric, or special characters. Single-line character fields accept one line of data, while multiple-line character fields accept an unlimited number of lines of data. There is no effective limit on the amount of text in a field.
- Integer—Accepts integers.
- Real Number—Accepts positive integers or decimal numbers (no negative numbers). If FootPrints is running on MS SQL Server or MySQL, you will be asked to include Tital Digits and Total Decimal Places for the real number when configuring the field. Total Digits is the total number of digits in the number and Total Decimal Places is the number of digits to the right of the decimal. If an unacceptable value is entered into a real number field, such as a value that includes alphabetical characters, has too many digits after the decimal place, or is too wide for the field as it has been configured, FootPrints generates a warning before you can leave the page.

  When creating a new real number field, MS SQL versions of **FootPrints** asks for the total digits and total decimal places on the field maintenance page. This is necessary since SQL Server real numbers default to four decimal places, which might not be what you want displayed if you are entering currency information.
- Date—Accepts valid dates (format based on system or user preference).
- Date-Time—The user can select both a date and a time for this field type. Can optionally be linked to the Calendar. A default link to the calendar(s) can be changed at the time of Issue creation by the Agent. In addition, the field can be configured as a link to the personal calendar or personal and project calendars by default. by clicking the radio button for either linking to the personal calendar or linking to the personal and project calendars when the Issue is created.
- Drop-down—Offers a pre-defined drop-down list of choices from which the user chooses one of the options.
- Multi-select—Allows the user to select multiple choices from a pre-defined list.
- Checkbox—Offers a checkbox for users to select in the Issue form. In searches, reports and on the Details screen, the values "On" and "Off" are displayed, or alternate values can be defined. Mandatory/optional permissions do not apply to checkboxes; this field can be checked or left unchecked by the user.
- Web site—Accepts URL addresses (of the form http://*server.name.com*). Appears as a hypertext link on the Details page of an Issue.
- FTP—Accepts fully-qualified FTP addresses (of the form ftp://ftp.*sitename*.com). Appears as a hypertext link on the Details page of an Issue.
- Email Address—Accepts Email addresses. Appear as a hypertext link on the Details page of an Issue.
- Add Tab/Section—Adds a section header or new tab, depending on whether you are using the expandable/collapsable sections version of FootPrints or tabs. When a tab or section is added, it is automatically placed at the end of the set of tabs or sections. The administrator must use the arrow keys to move the tab or section into its appropriate position on the page and must also move the fields to be associated with that tab or section individually.

Built-in Fields

Built-in fields are fields that are included in the FootPrints Project templates at installation. Some of the built-in fields cannot be removed, but the labels on built-in fields can be changed. For example, "Title" can be changed to "Incident", but the field itself must remain on the Issue form and must be filled out in order for an Issue to be submitted, i.e., accepted by the system.

To see which Project templates contain which built-in fields, refer to Chapter 12: Sample Project Templates.

Mandatory and Optional Fields

Mandatory fields are fields that must be populated in order for the Issue to be successfully submitted.

Optional fields are fields that may or may not be populated when an Issue is submitted. If all mandatory fields are populated but one or more optional fields are not populated when an Issue is submitted, the submission should be successful.

Field Dependency

"Field dependency" refers to a configuration in which the data entered in one field changes the options in the next field. For example, if you have a drop-down field labeled Problem Type and you select Printer from its drop-down list, the next field would offer options that are specific to printer problems. If, instead of Printer, you had select Network, then the next field only displays options related to network problems. FootPrints has a facility for creating field dependencies, so that users can be lead through a series of fields, each of which contains options that are specific to the choice made in the previous field.

Multiple dependencies can be configured per project and multi-level dependency groups can be created to funnel the user to categories and sub-categories.

There are two kinds of field dependencies supported in FootPrints:

- Pop-up window containing dependent fields—For this type of field dependency, a drop-down menu is designated as a “decision field”. A different pop-up window is displayed depending on which option is selected in the decision field (drop-down menu). Each of the pop-up windows is configured with your choice of fields. For example, assume that there is a field called Resource. The options for Resource are Hardware and Software. If the user selects Hardware from the menu, a pop-up window is displayed with a drop-down menu field called Asset, a multi-line character field called Description, etc. The drop-down menu might contain a list of hardware assets, such as Printer or Edge router, and the Description field is for describing the problem, and so on. If, however, the user selects Software, a pop-up window is displayed with a drop-down menu field called Application which lists the applications, such as Excel or Visio, and a second field called Server, which lists DNS names.
- Dynamic drop-down dependency groups—A drop-down menu is designated as a decision field for this type of field dependency as well. However, in this case, a pop-up window is not the dependent factor. Instead, there is a set of subsequent drop-down menus on the same page. The choices that are displayed in each of those drop-downs depend on the choice made in the preceding drop-down field. An example of this would be a drop-down menu field called Software that lists software products. The next field is called Release. The user selects a software title in the Software field. The values in the Release drop-down change depending on which software product was selected in the decision field. The next drop-down menu field might be called Known Problems. This contains a list of known problems that are based on the specific software product and release. If a different software product is selected, different release numbers are displayed and, depending on the release selected, different known problems are displayed.

This type of field dependency is very useful in setting up multi-level groups of dependencies that drill-down and refine the information being submitted.

Project Schema

The Project Schema is a display of the order of the fields in a project. The Project Schema is useful when you are attempting to import data to FootPrints or export data from FootPrints. The Project Schema can be used to check that the tables of data match up.

InstaCalc Fields

FootPrints allows you to create simple mathematical formulas using Project fields. The formulas allow multiplication, division, addition,and subtraction as well as the use of the unary minus and parentheses. Formulas follow the standard order of operations.

Address Book

The FootPrints Address Book is a database of contact information for your end users, whether they are employees, remote users, or customers. The contact data can be kept in FootPrints or can be dynamically read from an outside source, such as Microsoft Exchange, Active Directory, or other LDAP source. The LDAP option is only available in the demo or if you purchased the Dynamic Address Book Link add-on module. When the Dynamic Address Book Link is used, individual contacts cannot be added to the FootPrints Address Book directly. If you wish to add someone to the Address Book when using the Dynamic Address Book Link, you must add the contact to the LDAP source. Supported contact databases include Microsoft Exchange 5.x/2000, Netscape iPlanet, Lotus Notes, and Novell Directory Services.

NOTE

FootPrints supports Secure LDAP (LDAPS). For additional information on LDAPS support, contact Numara Software Support.

Address Book data can also be imported from an outside source, such as a SQL database.

When an Issue is created in FootPrints, it can be linked to a contact, so that the information about the end user is available to technical users looking at the Issue.

A FootPrints Address Book is made up of fields, just like an Issue. When a Project is built, the fields in the Address Book are dependent on the Project template that was selected. Administrators can modify the fields in the Address Book as appropriate.

The Address Book contains two additional properties:

- Primary Key—The primary key is a unique identifier for each contact in the Address Book. If the customer self-service feature is used, the primary key is the ID that customers use to log into FootPrints, along with a password. This field should be both present and unique to all contacts. "User ID" is the recommended field and also the default for all templates.
- Organizational Unit—The organization unit is an optional property used to organize contacts in the Address Book. Examples include "Department", "Business Unit", or "Company". If organizational unit is used, the contacts in the Address Book are grouped by the field.

Contacts

"Contact" is the default name given to a record in the FootPrints Address Book. Normally this contains a customer's name, email address, phone number, etc., but a contact can be any record in the Address Book containing any number and variety of fields.

Contact data can be added to the database in a variety of ways. Contacts can be typed in directly, one-by-one, or imported from another source. In addition, FootPrints allows you to dynamically link to any LDAP source and populate the Address Book from that source. This has the advantage of allowing you to maintain only the one LDAP resource. Any changes made to the LDAP resource are reflected dynamically when contact information is accessed in FootPrints.

Master Contact Record

The Master Contact Record provides an easy way to organize contacts by company, with contacts from each company inheriting properties from the master company record. A master contact record allows an Agent to store information common to an organization, such as a company name or department, in a record similar to that of an address book contact. Upon adding or editing a contact who is a member of an organization for which a master contact record exists, the Agent may pre-load the master contact record information into the contact.

For details on configuring the Master Contact Record, refer to Master Contact Record Setup.

For details on using the Master Contact Record, refer to Master Contact Record Actions.

Resolving Issues

Issue resolution can be accomplished in a number of ways. The first and most obvious is by Agents directly working on an Issue. In a normal workflow, an Issue may be created or received as a Request from a Customer, an Agent is assigned when the Issue is created, and the Agent resolves and closes the Issue.

Other ways in which Issues can be resolved outside the normal workflow described above are with:

- The Knowledge Base
- Frequently Asked Questions (FAQ)

Knowledge Base

The Knowledge Base is a place to record, organize and manage important information for a FootPrints Project database. This can include, but is not limited to: solutions to common problems, answers to Frequently Asked Questions, patches, and documents. By using the FootPrints Knowledge Base feature, you can turn the past experiences of individual customers and agents into a database of Solutions for all Project members. This can assist Agents in finding quicker resolutions to recurring problems and in empowering customers to find the answers to their questions without submitting a request.

Records in the Knowledge Base are called "Solutions". Solutions can be developed specifically for the Knowledge Base or can be Issues that were resolved and contain a solution to a problem. Users may be required to obtain an "approval" before a Solution that they submitted is accepted into the Knowledge Base. Approvals are described in more detail below.

Internal Knowledge Base

Solutions can be designated to go into the internal Knowledge Base. The internal Knowledge Base is only available to internal FootPrints users, i.e., it is not accessible by anyone in a customer role. Internal users can also be configured in roles to restrict access to the Knowledge Base.

Public Knowledge Base

Solutions can be designated to go into the public Knowledge Base. The public Knowledge Base is accessible by all internal users as well as any customer with permissions.

External Resources

In addition to the FootPrints Knowledge Base, which comprises Issues that are designated as Solutions, FootPrints can provide links to external Knowledge Bases. FootPrints comes with links pre-configured for the following external Knowledge Bases:

- Adobe
- Apple
- Google Groups
- Hewlett-Packard
- Microsoft Technet

An additional external Knowledge Base is Knowledge-Paks® Online (from RightAnswers, LLC), which is described below.

Administrators can add external Knowledge Bases to FootPrints.

Knowledge-Paks Online

Knowledge-Paks OnLine, a product of RightAnswers, contain thousands of solutions to common desktop and other IT Issues. Knowledge-Paks OnLine is only available if you have purchased and enabled the Knowledge-Paks add-on module from Numara Software.

Approvals

By default, Agents in FootPrints can submit Solutions to both the public and internal Knowledge Bases. Using role permissions, Administrators can limit designated users from submitting Solutions to the Knowledge Bases, and/or can require designated users to receive approval before their Solutions are published. This allows the Administrator to have better control over which information is published to Customers and to review Solutions before Customers see them.

When Agents are required to receive approval before publishing Solutions, one or more users must be designated as approvers. These users (usually Administrators) receive email when a Solution is submitted for approval and can approve, edit, or reject the Solution.

Once approvals are configured for at least one user role, the approval process is in place automatically.

Frequently Asked Questions

In FootPrints, Frequently Asked Questions (FAQs) are categories that are available to Agents and Customers (who have appropriate permissions) when searching the Knowledge Base. These categories are created and maintained by the Project Administrator. The categories are defined by advanced search criteria, such as problem type, platform, software version, etc., and named and saved by the Administrator. Each time a category is accessed, it returns the latest Solutions that match the criteria defined for that category.

The FootPrints idea of a FAQ page is not like other FAQ pages with their question and answer format. Instead, a FootPrints FAQ is more of a pre-defined search category within the Knowledge Base that displays all of the Solutions that were found during the search. It is a time-saving device that helps organize the Solutions in the database for the user. A FootPrints FAQ can also contain hierarchies of categories.

Licenses

There are three categories of FootPrints license: fixed, concurrent, and Customer:

- Fixed—The user is assigned a single license and logs into FootPrints with his own unique ID and password. Only one user can use this type of license at a time because it is assigned to a specific user. A fixed license is always available to the user to whom it is assigned.
- Concurrent—A concurrent license is sometimes referred to as a "floating" license. A concurrent license can be shared by an unlimited number of people, but only one such user can be logged into FootPrints under an instance of a concurrent license at one time. Each user sharing a concurrent license has his or her own unique ID and password, but can only log in if a concurrent license is free. To further clarify, if five concurrent licenses are purchased and twenty-five people are sharing those licenses, only five of the twenty-five can be logged in at one time. If a sixth person tries to log in, a message is displayed to the sixth person stating that there are no available licenses. If one of the five users logs out of FootPrints, a license is freed and a new person can then log in.

Concurrent user access is logged, including successful logins and denials due to lack of license availability. This allows the administrator to gauge usage of concurrent licenses over a period of time.

- Customer—A Customer license is unlimited. That is, a single Customer ID and password can be shared by an unlimited number of people (each person is uniquely identified by their email address or other unique key), which means you could set up a Customer login for "Guest" with a password of "Guest" and allow all Customers to come in via that login and password. Alternatively, each Customer can have his or her own ID and password. In either case, an unlimited number of Customers are covered by the Customer license.

Licensing and User Roles

As stated above, you must have a Customer license to enable incoming email for external users.

Project Administrators and Agent users can use a fixed or a concurrent license.

System Administrators must have a fixed license.

Asset Management

Asset Management is an add-on module to Numara FootPrints. Asset Management enables the auto-discovery of PC assets, network management, and software deployment using any combination of the following:

- Numara Asset Manager—Complete, up-to-the-minute PC hardware and software identification.
- FootPrints Integration with Microsoft System Center Configuration Manager/SMS—Allows help desk Agents to dynamically access PC asset data, acquired with Microsoft System Center Configuration Manager/SMS, while they're working on an Issue from within FootPrints.

Note

Microsoft System Center Configuration Manager/SMS is only available for systems running the Windows OS.

- FootPrints Integration with LANDesk by LANDesk Software—Allows Agents to dynamically access PC asset data, acquired with LANDesk, while they're working on an Issue from within FootPrints.

Numara Asset Manager

With Numara Asset Manager, you can track all hardware and software assets. Numara Asset Manager allows Agents to dynamically identify which PC assets (including hardware and software) are on the corporate network, where they are, how they are configured, and also record changes made to them. Routers and other network elements are also identified. Asset data is fully integrated with FootPrints Issue management. Agents can get automatic snapshots of users' configurations, including platform, hardware, and software information and save the information as part of the Issue record.

For details on configuring Numara Asset Manager, refer to Numara Asset Manager.

Integration with Microsoft System Center Configuration Manager/SMS Inventory

If your organization uses Microsoft System Center Configuration Manager/SMS for tracking PC-based inventory, you can take advantage of Microsoft System Center Configuration Manager/SMS inventory data from within FootPrints. FootPrints with Microsoft System Center Configuration Manager/SMS integration allows help desk Agents to dynamically access PC asset data for a user directly from within an Issue in FootPrints. This automated process saves time, helps Agents solve users' issues quickly, and ensures data accuracy.

When creating or editing an issue from within FootPrints, you can directly view hardware, software, and network information that's contained in the Microsoft System Center Configuration Manager/SMS inventory database for a particular machine or user. The data can then be imported into the FootPrints Issue. This information becomes part of the Issue's history and is searchable from the FootPrints Advanced Search and Reporting tools.

FootPrints with Microsoft System Center Configuration Manager/SMS integration can be enabled on a per Project basis.

For details on configuring FootPrints Integration with Microsoft System Center Configuration Manager/SMS, refer to Microsoft System Center Configuration Manager/SMS.

Integration with LANDesk

If your organization uses LANDesk for tracking PC-based inventory, you can take advantage of LANDesk inventory data from within FootPrints. FootPrints Integration with LANDesk allows help desk Agents to dynamically access PC asset data for a user directly from within an Issue in

FootPrints. This automated process saves time, helps Agents solve users' issues quickly, and ensures data accuracy.

When creating or editing an issue from within FootPrints, you can directly view hardware, software, and network information that's contained in the LANDesk inventory database for a particular machine or user. The data can then be imported into the FootPrints Issue. This information becomes part of the Issue's history and is searchable from the FootPrints Advanced Search and Reporting tools.

FootPrints Integration with LANDesk can be enabled on a per Project basis.

For details on configuring FootPrints Integration with LANDesk, refer to LANDesk Asset Manager.

Another Asset Management Tool–FootPrints Deploy powered by Prism Deploy®

FootPrints Software Deployment, powered by Prism Deploy, installs and updates software on any PC, laptop, or server throughout your entire organization. Featuring mature, award-winning software deployment technology, a drag and drop deployment console, and a unique Conflict Checker utility, FootPrints Software Deployment makes software deployment very simple.

For details on configuring FootPrints Deploy powered by Prism Deploy, refer to FootPrints Deploy.

FootPrints supports several modes of user/password authentication. Administrators have the option of using FootPrints' internal encryption techniques, in which FootPrints maintains its own database of users and passwords, FootPrints can let the web server perform the authentication, or FootPrints can authenticate by interfacing with either an LDAP directory server or the Windows NT user list on Windows, and UNIX/Linux user list on UNIX systems.

Each FootPrints user may be assigned either a primary or secondary authentication method. Only the assigned method is attempted when a user tries to authenticate. If the secondary authentication method selected is None, all FootPrints users are authenticated against the primary authentication method.

If FootPrints authentication is used, any user attempting to access FootPrints must have a unique FootPrints ID and password. If an external authentication method is enabled (Windows NT, UNIX, or LDAP), then authentication is based on the users' network IDs and passwords, but a user ID must still be created within FootPrints for each agent.

Searching and Reporting

Searches

When FootPrints conducts a search, it means that the user supplies some criteria (a keyword, an Issue number, a date range, etc.) and FootPrints assembles and displays all of the records that meet the search criteria. Searches can be conducted on specific fields (for example, search the Problem Type field for all records that contain the word "Printer" in that field) or on all fields (for example, the user supplies keywords such as "wireless data" and FootPrints searches all of the fields in all of the records for those words). Searches can also be conducted on a date or range of dates (e.g., all Issues that were opened between April 1, 2007 and April 30, 2007).

FootPrints contains a number of search facilities that allow you to search and locate specific Issues in the database and create custom queues for the Homepage:

- Quick Search—Available from any page in FootPrints. Search by entering a keyword, title, or Issue number.
- Built-in Queues—These are lists on the FootPrints Homepage that, when selected, assemble and display records according to predetermined criteria. For example, the user might click on the My Assignments queue, which would then display all of the Issues assigned to the user.
- Advanced Search—Complex search on all fields and criteria.
- Saved Searches—Save advanced search criteria to create queues available from the FootPrints Homepage.
- Cross-project Searching—Search for issues across multiple Projects.

Reports

Reports quantify and format information stored in the database. When the user requests a report, it means nothing more than deciding which field data to retrieve and how the output should look. FootPrints then provides the information in the requested format. The key to making Reports that are useful is deciding what sort of information you want to have before you run the Report. For example, if you want to determine how many issues were in an active state (i.e., not yet closed) on a specific date and how many of those particular issues were then closed one month later, you can specify those criteria to FootPrints and request a Report. FootPrints then connects to the database, counts these items for you, and generates a Report that displays the data in the format you requested.

Types of Reports

The following Report types can be obtained from FootPrints:

- Single Issue Report—Create a report on a single Issue.
- Quick Report—Create a report on a set of Issues displayed on the Homepage.
- Custom Reports—Create custom reports with custom criteria and formatting options, including graphics and multi-level metrics.
- Saved Reports—Access saved custom report templates.
- Shared Reports—Access report templates that are shared by different users.
- Project Flashboard—Display an up-to-the-minute, customizable, graphical representation of help desk and project activity.
- Personal Flashboard—Display an up-to-the-minute, customizable, graphical representation of the individual's activity and the activity of Teams to which the Agent belongs for the current Project.
- Metrics—Generate reports for statistical and historical analysis.
- Cross-project Reporting—Create custom reports across multiple projects.
- Time-tracking Reports—Generate time-tracking and billing reports.
- Report Templates—Create single-issue report templates for printing out Purchase Orders, Work Orders, RMA's, etc.
- Change Management Reports—Only available with the Change Management Add-on module, provides data about Issues that match the Change Management criteria.

Time-tracking

Time-tracking is used to track the time Agents spend working on Issues. Time can be tracked automatically by the system or manually by the Agent. Agents can be assigned hourly billing rates to be used in calculating the monetary amounts spent on Issues in addition to time spent. Time can be tracked for any Agent when creating Issues and when editing Issues. The total time counted over all sessions is accumulated and stored for the Issue. If this feature is not needed, it can be disabled for the Project.

This data can be used to create time-tracking reports, which can be used for billing, or to track any time-related information, such as how long one or more users spent on certain kinds of Issues. A **FootPrints** time-tracking report returns totals and averages of all time-tracking data included in the report and individual time-tracking information for each Issue reported. In addition to returning specific data for billing purposes, the time-tracking report can be used to return averages and totals for a specific internal user, Customer, status or priority type, etc.

Numara FootPrints Calendar

The **FootPrints** Calendar is a web-based calendaring system that is fully integrated with **FootPrints** issue tracking and customer problem management. Agents and Administrators can track personal and project-wide appointments, schedule meetings, jobs, and more. Calendar appointments can be linked to **FootPrints** issues. Recurring appointments can be created that automatically create new Issues at the next recurrence. Appointments can be synchronized with Microsoft Outlook via email or, if you have the FootPrints Sync add-on module, with a number of supported Personal Information Managers (PIMs). Work schedules can be defined for the Project and for individual Agents, including regular work hours, holidays, vacations and sick leave, which can reduce conflicts when scheduling work. Agents can set their FootPrints interface to their local time zone so that all appointments and other times appear in local time rather than the time on the server.

There are three options for the **FootPrints** calendar system:

- **Project**—The Project Calendar can be used to track appointments for all Agents and Teams for a **FootPrints** project. Each Project has its own calendar.
- **Personal**—Each Agent/Administrator in **FootPrints** has a Personal Calendar. This is a place to add both personal appointments and work-related appointments. The Personal Calendar remains constant throughout all projects for a user.
- **Availability**—Each Agent/Administrator can have an availability schedule defined for them, minimizing conflicts when work appointments are scheduled. Availability can be linked to date/time fields in an issue.

Project Work Schedule

A work schedule can be defined for a Project and for individual Agents. Regular working hours, days off, and holidays can be defined in the work schedule by the Project Administrator. Escalation rules can be configured to follow the Calendar. Holidays and exceptions to the regular schedule are defined in the work schedule. When generating a time-tracking Report, work schedule time can be figured into the Report so that only time during work hours is calculated. For example, if your organization usually works an eight hour day, Monday through Friday, you can define your Project Work Schedule as eight hours, Monday through Friday. You can then run a report showing how long it took to close Issues. By setting the Report to account for the eight hour work day and five day work week, the Report will only count the time spent during the defined days and hours (a maximum of 40 hours per week). If an issue took from 9AM Monday morning until 9AM Wednesday morning to close, the Report will show that as 16 hours. If, on the other hand, the Report did not account for the Project Work Schedule, the same Issue would be reported as taking 48 hours to close.

The FootPrints Project Work Schedule also allows the administrator to establish a second shift in the work schedule. This provides greater flexibility in work hours and reporting.

Synchronizing Appointments

Appointments in the FootPrints calendar can synchronized with external calendars and vice-versa. This means that, from within FootPrints, you can create an appointment on the FootPrints calendar and have that appointment show up on your external calendar (Outlook, Lotus Notes, etc.) You can also create an appointment in your external calendar and have it show up in your FootPrints calendar. This requires installation of a small client. Refer to Numara FootPrints Sync for details on installation and configuration of the client.

Automated Workflow

Workflow Functions

"Workflow" refers to tasks and business rules that can be configured by the Project Administrator to occur automatically based on many different criteria. "Workflow" functions are the mechanisms that are built into FootPrints for configuring those tasks and business rules to occur automatically.

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Escalation

FootPrints escalation enables you to automate business processes throughout the system with no programming, using the same web-based interface used for searches, reports, creating Issues, etc. This feature can perform simple escalations that send email when an Issue has been unresolved for a certain amount of time as well as observe more complex rules based on multiple criteria that enact multiple actions, such as changing status, assignment, etc.

Some of the common uses of the FootPrints escalation feature are:

- **Time-based escalation**—Escalate overdue Issues to another user or priority
- **Service Level Agreements**—Alert Agents to the fact that a service level agreement threshold is being reached.
- **Reminders**—Send follow-up reminders to Agents.

- **Automatic Assignment**—Create auto-assignment rules based on a combination of multiple criteria.
- **Custom Email Notifications**—Create custom email notifications to be sent to Agents and Customers at any stage in the workflow.
- **External Programs**—Launch a batch job in another system or application.
- **Multi-project workflow**—Automate the escalation of an Issue from one project to another.
- **Approvals**—Use in conjunction with statuses and roles to define a custom approval process.

An escalation rule automatically escalates Issues based on your criteria on a project-wide basis. Rules can be defined for which Issues should be automatically escalated and for defining what should occur when Issues meet those criteria. For example, your organization may have a rule that states that "all priority 1 Issues must be closed within 24 hours." **FootPrints'** automatic escalation feature can be configured to send an email automatically to alert the Administrator when a priority 1 Issue is still open after 24 hours.

The order of escalation rules on the escalation page determines which rules take precedence. For details on configuring escalation, refer to Managing Escalations.

Service Level Management

The Service Level Management feature is designed to help the service desk meet service levels for customers based on their service contracts. Service levels can be defined based on the problem or incident type using a Project field, or can be based on who the customer is using an Address Book field. Resolution time, response time (how quickly a response of some kind must be made to an Issue), contract information, and associated escalation rules can be defined for each level, and an unlimited number of service levels can be defined. Due dates and times are automatically generated based on the resolution time. Service Level Metric reports can be generated including percentage of issues that exceeded the resolution time for a particular time period. In sum, the Service Level Management feature can provide the basis for a series of automated workflow rules that ensure the standard of service provided to customers.

NOTE

This feature is not available in the **FootPrints** database versions. To get the benefit of this feature, you must upgrade to one of the SQL/ODBC-based versions for Windows (MS SQL Server, Access, etc.), or DBD/DBI-database versions for UNIX/Linux (Oracle, MySQL, Postgres, etc.).

For details on Service Level Management, refer to Creating a Service Level Field.

Numara Software Change Management

In general, change management is a process developed to ensure that standardized methods and procedures are used for handling all changes. The goal of change management is to minimize the impact of changes on service quality.

The **FootPrints** Change Management add-on module enables organizations to develop their own approval process for Issues with no programming. In **FootPrints** Change Management, approvers are designated for specific projects. When an Issue meets approval criteria, the approvers are notified that an Issue awaits approval. The approvers then give or withhold approval. When an Issue meets approval criteria, it is moved to another stage in the process. Note that meeting "approval criteria" may mean that the Issue is rejected rather than approved.

Project administrators can designate different approvers for different stages in the approval process. For example, a proposal for a software change may require an approval in principle for the change from product management, then an approval for the design from the development organization, then an approval for the actual software build from software development, then a testing approval from quality assurance, and so on. The Change Management feature allows the Project administrator to create an orderly and efficient method for getting those approvals and ensuring that nothing falls through the cracks or waits too long for review.

NOTE

FootPrints Change Management is an add-on module that incurs an additional cost. This add-on module is not available for the FootPrints database version. Maintenance customers can upgrade to another database version to enable this add-on module for no additional cost (other than the cost of the add-on). Approvers must have a FootPrints Agent license (fixed or concurrent).

FootPrints Change Management provides features that include the following:

- Customizable criteria for automatically setting off an approval process (including all built-in and custom fields)
- Customizable rules for meeting an approval (i.e. requiring one, a majority, or all to approve)
- Customizable actions upon approval or disapproval, including the start of another approval phase, change of status, re-assignment, etc.
- Customizable email notifications for various stages of approval
- Change Management Audit Trail
- Customizable Permissions for access to approval information
- Built-in homepage listing “My Approvals”
- Built-in Change Management reports
- Approval via email
- Optional anonymous approvals

For details on configuring Change Management, refer to Configuring Change Management.

For details on using Change Management, refer to Using Change Management.

Numara Configuration Management

The Information Technology Infrastructure (ITIL) standards include two main categories for organizing best practices that are further divided into five sub-categories each. One of these requirements is Configuration Management, which is a sub-category of the Services Support category.

Configuration Management deals with tracking individual “Configuration Items" (CIs) throughout an enterprise. Configuration Management involves relating assets or CIs and establishing dependencies and hierarchies. It also involves designating certain services as CIs, such as Email, Internet, etc., and then determining upon which CIs each service is dependent. This process is very important for identifying the impact of any changes that would be made within an organization.

Numara FootPrints Service Catalog

Service Catalog is the heart of ITIL v3. A Service Catalog is a document that provides a brief overview, in business terms, of all the business and infrastructure services offered by the IT provider, which may also include service charges. Numara FootPrints Service Catalog (SC) enables IT organizations to offer a menu of services customized to their business customers; this allows IT to demonstrate its value to the business, and provide transparency of service costs . Items in the Service Catalog might include new equipment (laptop, Blackberry, etc.), critical business services such as email, or services required for a new hire. An entry in the SC would include a description of service, costs, service level agreement, etc. in a customer-friendly interface.

The Numara Service Catalog builds on existing functionality in FootPrints (configuration management, projects, quick issue templates, self-service, and change management) to provide its Service Catalog solution. Because of its great flexibility, the Numara Service Catalog can be used in any type of organization or department – IT, HR, Pro Services/Training, Facilities, External Customer Support, etc.

Broadcast Message

A broadcast message is a message displayed in a pop-up window to all logged in FootPrints internal users (i.e., not customers). Only system administrators can create broadcast messages.

Customer Surveys

When this feature is enabled, a customer satisfaction survey can be automatically emailed to customers when their Issues are closed. The email, with the survey attached, is sent to the customer according to the rules specified under Administration | Project | Automated Workflow | Customer Surveys.

IMPORTANT

Check local laws governing automated surveys before enabling the feature.

Preventive Maintenance

The Preventive Maintenance feature enables the FootPrints user to provide proactive service management with Quick Issue Templates that automatically create new issues on a recurring basis, which can be used for periodic server maintenance, ensuring password changes on strategic accounts every X days, regular auditing of systems for SOX compliance, or any other regularly scheduled maintenance event.

FootPrints Web Services

FootPrints Web Services is a way for users to programmatically access the database over the Internet using web services and perform specific functions. The specific functions are:

- Searching the database (using queries for Issue, Address Book, History data, etc.). This search can be more complex than the built-in searching functions of the FootPrints interface, since users can, for example, build combinations of AND and OR queries.
- Retrieve the details of an Issue.

- Create an Issue.
- Edit an Issue.
- Create dynamic or static link between Issues.
- Create a new contact in the Address Book.
- Edit an existing contact in the Address Book
- Create a new or edit an existing contact in the Address Book.

The functionality is limited in that the programmatic interface to FootPrints cannot alter the database structure. For instance, the user (or program) could not remove a database column.

In addition, Numara FootPrints Web services has CMDB APIs for interacting with Numara FootPrints Configuration Manager.

Numara FootPrints Sync

The FootPrints Sync feature enables FootPrints agents to:

- synchronize appointments made in FootPrints to their PIM (Personal Information Manager) and synchronize appointments made on their PIM to FootPrints
- make tasks in the PIM from FootPrints Issues that are assigned to them and update the status fields of Issues in FootPrints based on a field in the PIM
- synchronize their FootPrints Address Book to their PIM (i.e., write the contacts in the FootPrints Address Book to their PIM).

FootPrints Sync requires installation of a client. FootPrints Sync supports Microsoft Outlook, Lotus Notes, Palm Desktop/Hotsync, Pocket PC (through Outlook), Blackberry/RIM, and Outlook Express. This is an add-on module and must be purchased for use with FootPrints.

NOTE

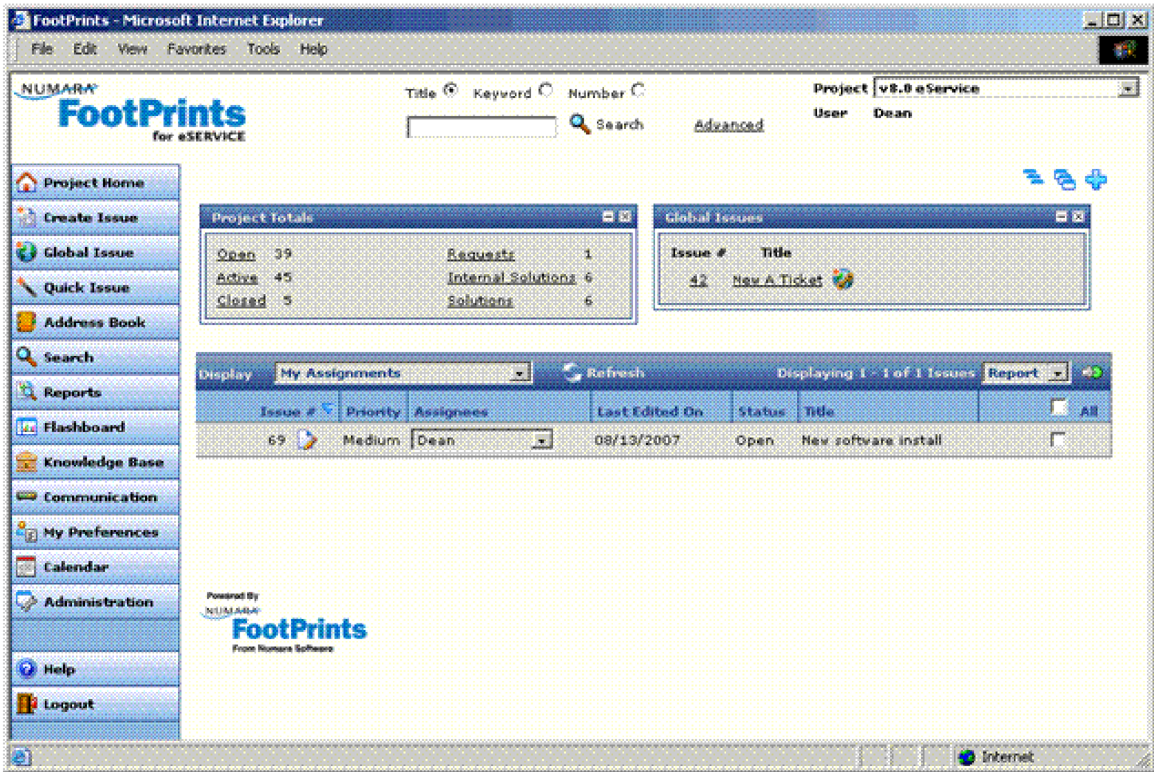
Synchronizing with Blackberry/RIM is a two-step process in which the user either synchronizes FootPrints with Outlook on the desktop and then synchronizes Blackberry/RIM with Outlook or synchronizes Blackberry/RIM with Outlook and then synchronizes Outlook with FootPrints.

Chapter 3: The Numara FootPrints Interface

The Numara FootPrints Homepage

After successful login, the FootPrints Homepage is displayed. The FootPrints Homepage is the starting point of your FootPrints project. You can return to the home page at any time by clicking "Project Home" on the FootPrints Toolbar.

The FootPrints Homepage is split into three frames. The left frame contains the FootPrints toolbar. It has links for most of your tasks in FootPrints. The top frame contains a quick search facility, and displays your user ID and current project. The main frame contains dashboards and a summary list of your assigned Issues. There is a drop-down box that contains a list of different types of Issues that you can view (this can be customized). Totals for the different kinds of Issues in the database are also displayed.



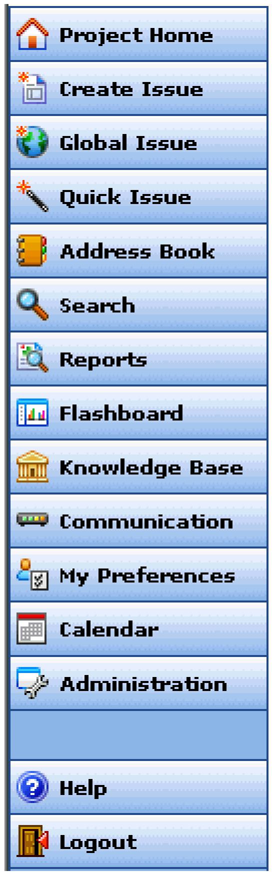
The FootPrints Homepage—Expandible/Collapsible

Topics covered in this section are:

- FootPrints Toolbar
- The Main Frame
- Resorting the Homepage
- Display Drop-Down
- Viewing Issues
- The Top Frame
- Quick Action Dialog
- Administration (Administrators only)—A complete list of options can be found in the chapters on Administration.
  - o Project—Perform project administration on the current project.
  - o Address Book—Perform administration on the current Address Book.
  - o System—Perform system administration (System Administrators only).

The Numara FootPrints Toolbar

The FootPrints Toolbar in the left frame of your home page has links to all of your tasks in FootPrints. It remains on the left of every screen in FootPrints. Many of the topics in the Toolbar can be expanded; simply click on an option to see all of the choices. To collapse the Toolbar, click the option for "Project Home".



FootPrints Toolbar

The options in the Toolbar are:

- Project Home—Go to your FootPrints home page.
- Create Issue—Create a new Issue in FootPrints.
- Global Issue—Make a new Global Issue[1].
- Quick Issue—Create an Issue from a Quick Issue[2] template.
- Address Book—Display this project's Address Book (opens in separate window).
- Search
    - Advanced—Perform detailed search of Project database.
    - Saved Searches—Access your saved searches.

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[1] A special FootPrints Issue type used to designate important or frequently reported Issues that will affect many users. Global Issues can be broadcast to all Agents, are displayed on the Agent Home page, and can optionally be displayed for Customers to subscribe to. Whenever a new Issue is reported with the same problem, the Agent (and optionally the Customer) can link the Issue to the known Global Issue (called GlobalLinks). Global Issues can be closed with the GlobalLinks together at one time.

[2] Quick Issues are templates that contain pre-filled information for frequently reported Customer Issues, such as "Password Reset", "Service Request", etc. For example, a Quick Issue template for "Password Reset" would start out pre-filled with a description of the problem, the problem categories pre-filled with "Network" and "Password Reset",and perhaps a Status of "Closed". The Agent only needs to fill in the user's contact information to submit the Issue. The Project Administrator can create an unlimited number of templates, which are available to all Agents from the FootPrints Toolbar.

- Cross Project—Search in multiple projects.

- Reports
  - Custom—Create a detailed report from the database.
  - Saved—Save, edit and reuse report criteria.
  - Metrics—Report on statistical and historical data.
  - Cross Project—Report on data from multiple FootPrints projects.
  - Time Tracking—Create Time tracking report.
- Flashboard—There are two types of Flashboard. The Project Flashboard is only available to Project and System Administrators and reflects activity for the current Project. The Personal Flashboard is available to any Agent and reflects the individual's activity and the activity of Teams to which the Agent belongs for the current Project.
- Knowledge Base
  - Browse—Includes options to Search the FootPrints Knowledge Base, popular public knowledge bases, and FAQ's.
  - Add to KB—Create a new Solution to a common problem for the Knowledge Base.
  - FAQ Admin—Create and edit Frequently Asked Question categories (administrators only).
- Communication
  - Instant Talk™—Chat online one-on-one with another user.
  - Numara Remote (optional)—Remote control of client machines by agents. Numara Remote requires installation of a software client.
- Change Project—Open a different project.
- Search Assets (optional)—If this option is enabled, access the Asset Management database.
- My Preferences—Change your user preferences.
- Calendar—View a Calendar of appointments and jobs.
  - Personal—View your own appointments and jobs.
  - Project—View appointments and jobs for the whole project.
  - Availability—View agent availability matrix
- Administration (Administrators only)—A complete list of options can be found in the chapters on Administration.
  - Project—Perform project administration on the current project.
  - Address Book—Perform administration on the current Address Book.
  - System—Perform system administration (System Administrators only).
- Help—Access online help for FootPrints.
- Logout—Log out of FootPrints.

The options on the Toolbar may differ, depending on your role. If you have the Configuration Management Database add-on module, an additional toolbar button is displayed.

This document describes all of the Toolbar options.

The Main Frame

The main frame displays a list of the Issues contained in your project. By default, the listing includes columns with descriptive information about each Issue, such as the title, the date on which it was submitted, and the assignees. The assignees are displayed in a drop-down menu. The user has control of which columns are displayed through the My Preferences page.

In addition to displaying information about each Issue, you can view, edit, or perform tasks on each of the Issues listed.

- **To edit an Issue**, click the "**Edit**" icon next to the Issue's number (only displayed if you have Edit rights to the Issue).
- **To view an Issue**, click the Issue number. The Details screen is displayed, with complete information about the Issue shown.
- **To perform an action on multiple Issues**, use the Quick Action Checkbox Dialog.

For each Issue, you will see (from left to right):

2. **Issue #**—This is the number that **FootPrints** has assigned this Issue.
10. **Priority**—This is the priority this Issue was given.
11. **Assignees**—The assignees for this Issue are listed in a drop-down box.
12. **Last Edited On**—The date when this Issue was last worked on.
13. **Status**—The status of this Issue.
14. **Title**—The title of the Issue, usually used as a Subject or Summary. Click the hypertext link to view the details of the Issue, or click the green "Edit" button to edit the Issue (only appears if you have permission to edit this Issue).
15. **Quick Action Checkbox Dialog**—Perform a task on multiple Issues at one time.

NOTE

The fields listed above are the default fields for display ont he homepage. The fields displayed on the home page can be customized on the "My Preferences" screen. For example, "Department" or "Problem type" can be displayed as columns on the home page. Please refer to the topic on Customizing Your Preferences for more information.

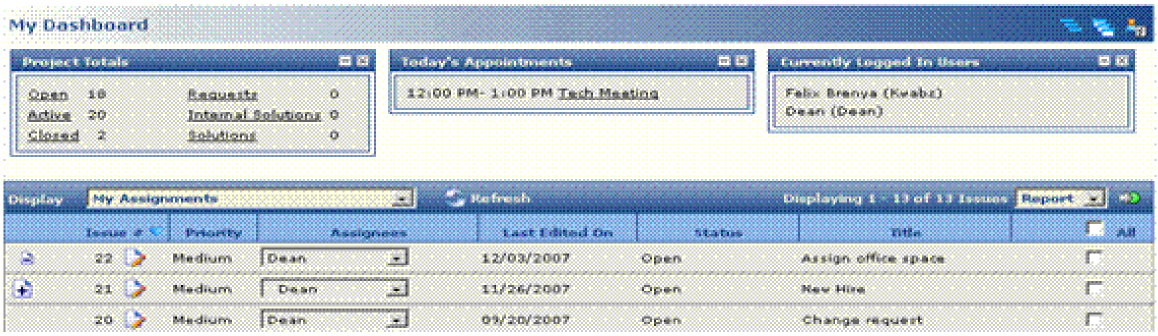
FootPrints Dashboard Components

FootPrints Dashboard components are small boxes containing lists of specific information. By default, Project Totals and Global Issues are displayed. FootPrints Dashboard components can be displayed in as many as four columns. Users can also make custom components for display on the homepage. The Project Totals component displays the number of Issues the project contains in different categories. The Global Issues component displays the Title fields of active Global Issues, which are also links to those issues. Buttons that are displayed to the upper right of the components on the homepage allow you to:

- collapse the components ( )
- expand the components ( )
- go to the My Preferences page to add or edit components ( )

Note

The components displayed on the home page can be customized on the "My Preferences" page. For example, you can add a component containing an RSS feed. Please refer to the topic on Customizing Your Preferences for more information.



Homepage Main Frame

Resorting the Homepage

The list displayed on the homepage can be resorted by column. Note that most column headings on the homepage, or any search results page, are "clickable". The column currently being used to sortthe page is designated by a down arrow (in the figure below, it is the Issue column and the list is sorted according to Issue number). To re-sort the list, click a column heading. The first click sorts the list in descending order by that column (highest to lowest). Click the column heading again and the list resorts in ascending order by that column (lowest to highest). Note that the down arrow is replaced by an “up” arrow when the order is reversed.

Click column heading to resort list

NOTE

The homepage cannot be sorted by the assignee field or any time fields (Last Edit Time, Time Submitted). All other fields, including custom fields, can be sorted. To view Issue data that is sorted by assignee or time, please use the reports feature.

Display Drop-Down

Above the home page list is the display drop-down box. This list contains built-in and custom queues and searches. Agents can customize this list under My Preferences on the FootPrints Toolbar. By selecting an option, the homepage list changes to the queue selected automatically. To refresh the current list, click Refresh.

The Display drop-down choices include (some of the choices are only displayed if you are an administrator, a member of a team, a member of multiple projects, a Change Management approver, etc.):

- My Assignments—The most recent active Issues assigned to you. Shown by default.
- My Assignments in All Projects—Active Issues assigned to you in all projects (only displayed if you belong to multiple projects).

- **My Assignments and Requests**—Active Issues assigned to you and unassigned requests from Customers.
- **Team Assignments**—Active Issues for your Team (only displayed if you belong to a Team).
- **My Active Approvals**—Lists all Issues for which the Agent is an approver, the Agent may or may not have yet voted, and voting has not been completed. (Applies to Change Management approvers only.)
- **My Active Approvals and Assignments**—Lists all Issues for which the Agent is an approver, the Agent may or may not have yet voted, and voting has not been completed, as well as the Agent's assignments in the current project. (Applies to Change Management approvers only.)
- **My Vote Required**—Displays Change Management Issues on which the Agent's vote is required.
- **My Vote Required and Assignments**—Displays Change Management Issues on which the Agent's vote is required as well as Issues to which the Agent is assigned.
- **All Issues**—All Issues in the project database (only available if you have rights to see all Issues in the project).
- **Global Issues**—All active Global Issues for the project.
- **Deleted Issues**—Deleted Issues (Administrators only).
- **Requests**—Requests submitted by Customers (see below).
- **Saved Searches**—Displays the Issues for Personal and Shared custom searches.
- **Knowledge Base**—Displays Solutions from the Knowledge Base. Select Internal Solutions (available to agents only), Solutions (available to agents and customers), or Solutions in All projects, which are solutions available to agents and customers in all Projects.

For example, if you choose "Requests", a list of all Customer Requests is displayed. To return to the original view, click "Project Home" on the **FootPrints** Toolbar, or choose "My Assignments" as your view. Both of these have the same effect: They return you to your original Home page.

If the current list has many Issues, Next and Previous buttons appear in the top right hand corner of the frame. Use these to page through the complete list.

Viewing Issues

To view the details of an Issue, click the Issue number on the home page. The full details of the Issue then appear on the "Details" screen.

The Details, Create Issue, and Edit Issue pages can be displayed with expandable/collapsible sections or tabs. The type of display is specified by the user from the **My Preferences** page.

Here are examples of an expandible/collapsible Details page and a tabbed Details page:

Details screen—expandible/collapsible

Details screen—tabbed

The Details page gives you all of the information on an Issue, including Submit Date, Priority, Status, Description, Contact Information, Issue Information, Assignees, etc. If you don't see all data, use the scroll bar to display the full Issue.

There are also buttons that allow you to work with this Issue. They are:

- Edit—Update the Issue (only available if you have Edit permissions to this Issue).
- Details—Display details of Issue (default).
- Take—Take the Issue (only available if you have Taking permissions).
- Copy/Move—This icon will open a second toolbar with options to copy the Issue within the current project, or copy or move the Issue to another project
- Link—Create a static or dynamic link between Issues.
- Subtask—This icon will open a second toolbar with options to create a Subtask[3] of the Issue, or make this issue a subtask of an existing issue.
- Global—Turn the Issue into a Global Issue[4] or GlobalLink[5].
- Delete—Delete the Issue from the project (only available if you have Delete permissions for the Issue).
- Report—Display a report of this Issue (opens in separate window for printing).
- Add to KB—Create a Solution for the Knowledge Base with the details from this Issue (won't affect original Issue).

These options are discussed in more detail in the chapter on Issues.

Quick Action Checkbox Dialog

The Quick Action checkbox dialog, available on the FootPrints Homepage, allows users to perform an action on one or more Issues. This provides a quick means to update or report on an Issue or to make a change that affects many Issues simultaneously. Some of the functions are only available to administrators, while others are available to Agents and administrators.

To perform a Quick Action on Issues from the Homepage:

1. In the main frame, check the box for each of the Issues you wish to change, or check the All box at the top of the column to select all of the Issues displayed on the current page.

[3]A type of FootPrints issue that is a "child" of a related "parent", called a Master Issue. Multiple subtasks can be created to define different tasks to be completed for a larger Master Issue. The Master Issue cannot be closed until all Subtasks are completed.

[4]A special FootPrints Issue type used to designate important or frequently reported Issues that will affect many users. Global Issues can be broadcast to all Agents, are displayed on the Agent Home page, and can optionally be displayed for Customers to subscribe to. Whenever a new Issue is reported with the same problem, the Agent (and optionally the Customer) can link the Issue to the known Global Issue (called GlobalLinks). Global Issues can be closed with the GlobalLinks together at one time.

[5]The child or related Issue linked to a Global Issue. A Global Issue is a special FootPrints Issue type used to designate important or frequently reported Issues that will affect many users. Global Issues can be broadcast to allAgents, are displayed on the Agent Home page, and can optionally be displayed for Customers to subscribe to. Whenever a new Issue is reported with the same problem,the Agent (and optionally the Customer) can link the Issue to the known Global Issue (called GlobalLinks). Global Issues can be closed with the GlobalLinks together atone time.

Quick Action Dialog

16. Select the action from the drop-down list.

17. Click .

18. Different options are available depending on the action selected. See below for more details.

The Following Options are Available to All Internal Users

- Report—Display the details of the Issues in a separate window. If custom templates have been created, a drop-down is displayed that lists the available templates (Work Order, RMA, etc.) The Summary report displays all Issues in one window. Custom templates display each Issue in a separate window for printing purposes.
- Close—Close the Issues selected. Only Issues to which you have close rights are Closed. When Close is selected:

    19. A special Close Issues page is displayed.

    20. You can enter final notes in the Description box. They are appended to all Issues selected.

    21. Check the boxes to send email to the Assignees, Customer Contacts, and CCs for the selected Issues.

    22. Click GO. The Issues are closed and updated and emails are sent.

The Following Options are Available Only to Administrators

- Delete—Delete all Issues selected. A confirmation message appears. Click OK to proceed.
- Status—Change the status of the Issues selected.
- Priority—Change the priority of the Issues selected.
- Assign—Re-assign the Issues selected.

When Status, Priority, or Assign is selected:

3. A special Change Issues page is displayed.

    23. Select the new priority, status, or assignees for the Issues.

    24. If re-assigning an Issue, you can unassign the current assignees of the Issues selected by checking the Remove Previous Assignees checkbox.

    25. You can optionally enter notes in the Description box. The notes are appended to all Issues selected.

    26. Check the boxes to send email to the Assignees, Customer Contacts, and CCs for the selected Issues.

    27. Click GO. The Issues are updated and emails are sent.

The Following Option is Only Available If You Have "Taking" Rights

- **Taking**—Take the Issues and assign them to yourself.

When Taking is selected:

4. A special Take Issues page is displayed.

    28. You can unassign the current assignees of the Issues selected by checking the Remove Previous Assignees checkbox.

    29. You can optionally enter notes in the Description box. The notes are appended to all selected Issues.

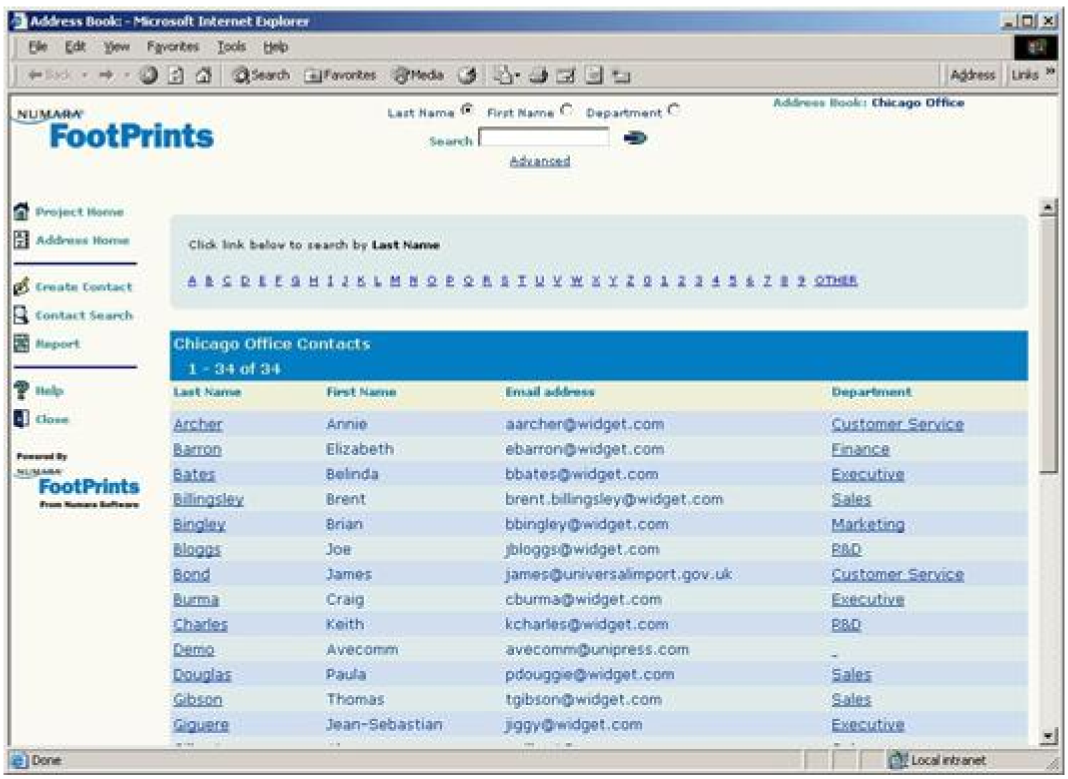
    30. Check the boxes to send email to the Assignees, Customer Contacts, and CCs for the Issues selected.

    31. Click **GO**. You are now assigned to the selected Issues.

The Address Book Homepage

If you selected Address Book from the **FootPrints** Toolbar, the Address Book Homepage is spawned in its own window. The Address Book Homepage is the starting point of your Address Book activities. If you wish to access the **FootPrints** page, it is still displayed as well.

The Address Book Homepage is split into three frames. The left frame contains the Address Book Toolbar. It has links for most of your Address Book activities. The top frame contains a quick search facility for finding contacts and also displays the name given to this Address Book. The main frame contains a summary list of your contacts. At the top of the main frame is an index for moving more quickly through the list of contacts. For administrators only, Quick Action checkboxes are located down the right side of the main frame. The Quick Action checkboxes allow an administrator to quickly delete one or more contacts from the list.



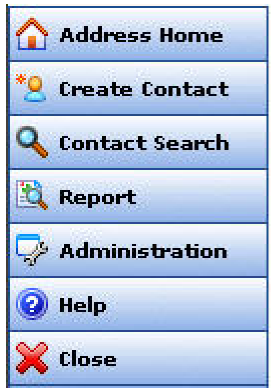
The Address Book Homepage

Topics covered in this section are:

- Address Book Toolbar
- The Address Book Main Frame
- The Address Book Top Frame

Address Book Toolbar

The Address Book Toolbar in the left frame of your home page has links to all of your Address Book tasks. It remains on the left of every page of the Address Book interface.



Address Book Toolbar

The options in the Toolbar are:

- Address Home—Go to your Address Book Homepage.
- Create Contact—Create a new contact in the Address Book.
- Contact Search—Perform detailed search of the Address Book based on our choice of first or last name.
- Report—Displays a brief reporting page in the main frame.
- Administration (administrators only)—Displays the Address Book Administration page in the main frame. A complete discussion of Address Book administration can be found in Address Book Administration.
- Help—Access online help for FootPrints.
- Close—Close the Address Book interface.

The options on the Toolbar will be slightly different depending on your user level. This manual discusses all of the Toolbar options.

The Address Book Main Frame

The main frame displays a list of the contacts associated with your project. The listing includes the contacts' first and last names, email addresses, and user IDs.

In addition to displaying information about each contact, you can view, edit, or perform tasks on each of the contacts listed. You can also create an Issue from a contact's detailed view.

- To view a contact, click the contact's last name link. The Detail View page is displayed, showing the contact's complete contact record.
- To edit a contact, click the contact's last name link and, when the Detail View page is displayed, click the Edit Contact icon above the details.
- For administrators only, to delete one or more contacts quickly, use the Quick Action Checkbox Dialog.

The Address Book Top Frame

The top frame contains the name of the Address Book. It also contains a quick search facility for searching the Address Book for a contact. To use Quick Search:

1. Search on Last Name or First Name by choosing the corresponding radio button.

2. Depending on your choice in the precious step, enter the last or first name of the person for whose record you want to search.
3. Click GO.

Chapter 4: Implementation and Design

About FootPrints Implementation and Design

Setting up a FootPrints Project is easy enough to do, but you still must plan and follow a logical approach to setting the Project up. Quite a few decisions must be made ahead of time so that the setup itself goes smoothly. As a general approach to setting up a FootPrints project, Numara Software has some recommendations, as illustrated in the following diagram.

These steps are explained in greater detail in the following sections of this document.

Topics covered in this section are:

- Plan
- Install
- Setup with Project Setup Wizard
- Populate the Address Book
- Perform Global Administration
- Perform High-level Project Administration
- Configure Fields
- Configure Users and Customers
- Email Management
- Create Workflow Functions
- Set Up Reporting
- Set Up the Knowledge Base

Recommended Approach

Plan

For many organizations, **FootPrints** is the first tool used to track issues. Therefore, we recommend some introductory steps that can be done before **FootPrints** installation. This is especially important if you anticipate a complex configuration. Numara Software can provide help with any of these steps.

- **Establish Responsibilities**—Get buy in from those in your organization who will use FootPrints. Include these users to conduct your assessment and develop you organizational policy.
- **Conduct Initial Assessment**—The process you are currently using, whether you are replacing an existing tracking tool or FootPrints is your first tool, should serve as a starting point for creating the workflow that FootPrints will manage automatically.
- **Develop Organizational Policy**—Decide how FootPrints will be used, who will use it, and what business rules FootPrints should enforce.
- **Provide Training**—FootPrints is very easy to use. We encourage attendance at the Administrator Course provided by Numara Software for your designated FootPrints administrator because it maximizes the administrator's understanding in a shorter period of time. It also gives your administrator the opportunity to meet with other FootPrints users and exchange ideas. Extensive, readable documentation for your agent users and customers is available in addition to online help, so that you can easily get new users on board with minimal user training required from you.

Install

Identify system administrator(s) for FootPrints and technical staff that can support the administrator. No programming is required to set up FootPrints, but if you will be using LDAP, accessing an external database dynamically using the FootPrints Dynamic SQL Link to manage your Address Book data, or you will be loading a large amount of data into the FootPrints Address Book from an external source, some understanding of these activities is required.

NOTE

After installation, running the Project Wizard gets you up and running quickly and enables you to start entering Issues immediately. However, there are a number of system level administrative tasks that you should complete early in the configuration process, which are described in the Perform Global Administration section of the recommended approach.

Setup with Project Setup Wizard

Software installation should take no more than an hour. Be sure to gather all the information you need as specified in the **FootPrints Getting Started Guide for Administrators** or the **FootPrints Reference Manual**.

Run the Project Wizard

The Project Setup Wizard provides a broad range of templates for getting started with **FootPrints**. If you have already gathered information from an initial assessment of your organization's needs, you should use this data to configure the templates to best reflect your workflow. Keep in mind that you can always go back and make adjustments to the project you're creating. If you are configuring LDAP as your address book, refer to the instructions in the **FootPrints Getting Started Guide for Administrators**. Finally, you will be able configure some basic system options.

Step 1. Select a template that best reflects your business process

Step 2. Modify the values of the **FootPrints** built-in fields, including Status and Priority. You can also go back and make these modifications later.

Step 3. Modify the template fields: change permissions, add fields, and delete fields. You can also go back and make these modifications later.

Step 4. Configure the fields you will need for your customer users. Using LDAP, Dynamic SQL Address Book, or importing data from an external database into the **FootPrints** Address Book will take longer.

Step 5. Set up incoming and outgoing email for the project, including default rules for notifying customers and agents when Issues are created or edited.

Step 6. Configure basic system options, i.e., enable/disable cookies, define the term you would like to use for records (the default is "Issue"), define the date format, and change the logo.

Populate the Address Book

A **FootPrints** Address Book can be populated with user contact data in a variety of ways:

- **By Agents**—Contact information can be entered manually by Agents and Administrators in Address Book, or on the "Create Issue" screen.
- **By Customers**—Customers can enter their own contact information the first time they submit a Request to the system via the Customer Self-Service web interface.
- **Imported**—Contacts can be imported from a comma-delimited file (discussed below).
- **Dynamically**—Contact data can be retrieved dynamically from an external database that is either LDAP–compliant (such as Active Directory, Lotus Domino, SunONE or Novell eDirectory) or SQL–based (i.e. SQL Server, MySQL, Access, etc.) using the FootPrints Dynamic LDAP Address Book Link or the FootPrints Dynamic SQL Address Book link (available as add–on modules).

The FootPrints Dynamic Address Book Link feature retrieves contact data dynamically from any LDAP-compliant contact database for the Address Book. The Lightweight Directory Access Protocol (LDAP) is the standard Internet directory protocol. Examples of an LDAP-compliant database include Microsoft Active Directory, Sun ONE Directory Server, and Novell Directory Services.

The FootPrints Dynamic SQL Address Book Link feature retrieves contact data dynamically from supported contact databases for the Address Book via ODBC or via Perl DBI. Open DataBase Connectivity, or ODBC, is a standard relational database access method developed by Microsoft Corporation. The goal of ODBC is to make it possible to access any data from any application, regardless of which database management system (DBMS) is handling the data. FootPrints harnesses this power by providing access to existing ODBC-compliant contact data without requiring that the records be loaded into a separate FootPrints Address Book. The supported ODBC-compliant databases include Oracle, SQL Server, Access, MySQL, DB2, PostgreSQL and Sybase. These are potentially all available on Windows installations, so long as an appropriate driver and System DSN are configured on the machine. For Unix installations, the appropriate DBD must be built on the FootPrints server to access that particular database type.

Import Address Book Contact Data

Review the **FootPrints Getting Started Guide for Administrators** for instructions for Address Book data import. You will need to perform the following tasks:

- Create the Address Book Data File
- Load External Data into the Address Book

Create Dynamic Address Book Link

- Select an LDAP Directory or Dynamic SQL Address Book to be used instead of the FootPrints Address Book.
- If you are using the Dynamic SQL Address Book Link, you will need to configure the DSN (Data Source Name) if on Windows or install an appropriate DBD if on Unix. Instructions are available in the online help and the Reference Manual.
- If you are using the Dynamic LDAP Address Book Link, you will need to configure the link based on the Active Directory structure that has been set up for your system.
- Perform LDAP Address Book Field Mapping or Dynamic SQL field mapping.
- Set up additional fields that will be used in your project.

Perform Global Administration

If you ran the Project Setup Wizard, many of the basic options that are configured in the System Administration page to change the look and feel of **FootPrints** were completed in Step 6. If you want to make additional changes, you can access these features under Administration | System in the **FootPrints** Toolbar and then choose the option listed below.

- Configure system-wide settings
- Configure multiple language support
- Change the display colors for FootPrints. This task can also be done per project.
- Choose the date format
- Rename **FootPrints** fields (Title, Status, Priority…). This task can also be done per project.
- Create an archive project to save old data.

Perform High-level Project Administration

Project Administrators can set options on a per project basis. You can create custom project fields, add users to a project, etc. The Project Setup Wizard has configured most of the quick start features. Additional customizations can be made, and **FootPrints** further refined by selecting Administration | Project from the **FootPrints** Toolbar. This section lists some of the options you might want to configure soon after installation.

Basic Project Options

Most of these basic project options have been configured if you ran the Project Setup Wizard at installation. You can change the values here, or set up additional options.

- Configure project appearance
- Define the Priority field

- Enable and define time-tracking
- Configure project and agent schedules for availability
- Validate email addresses
- Configure add–on modules :
    - Knowledge–Paks Online (just enter the id and password and enable the feature)
    - CRM Bridge
- Miscellaneous:
    - Disable the Address Book
    - Hide Address Book Fields
    - Create a Splash Screen for agents and/or customers
    - Enable/disable Global Issues
    - Define Subtask Closure Procedure
- Define Mail Preferences for incoming and outgoing email, including basic notification rules and templates.

Saved Searches

Custom searches can be defined to create queues for different service levels, problem types, overdue issues, etc. If shared with the other members in the project, these searches are available from the homepage "Display" option.

Configure Fields

If you created a project from a template, you can begin entering Issues without additional customization of the form. You might want to modify some of the field attributes, or wish to add or delete fields. How much customization you do at this point determines how much time it takes to implement your new project. Basic field additions, deletions, or changes can be done quickly.

Defining values for drop-down or multi-select fields with many choices is a bit more complicated than creating simple fields. If you want your drop-down or multi-select field to have many selections, and to be used for dependency groups, we recommend creating the list in a separate text file and then importing the selections. Setting up dependency groups can take an hour or more to specify and implement.

Another consideration is whether to implement field-level permissions and which fields to restrict or permit. Field-level permissions involve user roles as well, so you must take the user roles you will create into consideration as well.

You might, at your discretion, access the following options to customize the project form:

- Manage the Project fields that appear in the Issue Information section of the Issue form.
- Add or delete values in the Status field that appear between Open and Close.
- Create dependencies between Project fields.
- Rename built-in FootPrints fields (Title, Status, Priority, etc.).
- Define drop-down choices for the Title field, if desired.
- Change the language of the labels of Project and Address Book fields.

- Configure the Dynamic Field Mapper to populate fields from an outside source (requires the Dynamic SQL Link add-on module).

Configure Users and Customers

Agents and customers can be added to FootPrints individually, per project, through Project administration. At the system administration level, Agents and Customers can be loaded into FootPrints from a load file. This is especially useful if you have a large number of users to add. Instructions on loading users into FootPrints are found in the FootPrints Reference Manual or the online help.

Adding Agents

- Add new Agents to this Project.
- Assign roles to the Agents if not using the default.
- Define Teams based on business function.
- Group agents into Teams.
- Modify built–in roles and/or create new ones for agents to reflect access allowed. At this point you can configure field-level permissions per role.
- Assign roles to Agents.
- Configure Agent work schedule.

Adding Customers

Customers can have their own individual account for FootPrints, or share a login, which is especially useful for Knowledge Base access. Depending on your environment, customers can auto-add themselves to FootPrints, they can be loaded from an external file, or they can be added individually by a Project administrator.

There are some restrictions, based on the method of authentication that you are using. Consult the FootPrints Reference Manual, the online help, or Numara Software Support if you have a problem.

- Enable theCustomer Service Portal options if you are configuring a project for external customer support, or wish to use the Customer Service Portal interface, a single–frame interface for your customers.
- Add new Customers to this project.
- Define project-wide options for Customers.
- Modify built-in roles and/or create new ones for customers to reflect access allowed
- Assign roles to Customers, or define the Customer Service Portal Toolbar if you are using the Customer Service Portal interface.
- Configure Auto-add customers and forgotten password functions (optional)

User Preferences

Each Agent (and Customer if the preference is available to the role) can define preferences for how the system behaves for them as individuals. Options include:

- Defining different notification email addresses.

- Defining homepage searches and columns.
- Selecting local time zone and language.
- Configuring defaults for the Issue form.

Email Management

Much of the initial email configuration is performed during installation. The network administrator must create the email account that **FootPrints** uses for receiving requests and sending notifications.

Configure Incoming Email

If you have changes to the defaults set at installation, you can:

- Configure Incoming Email for Windows or UNIX.
- Enable/Disable Email Notification.
- Send Introduction/Help Email.
- Configure Email for additional projects.

Configure Outgoing Email Management

For each project, outgoing mail rules can be defined. Templates are configured using a content grid optimizing what information should be sent to each group that may receive email notifications from FootPrints. Defaults are set and can be used until customizations are performed at a later time.

- Customize the Contents of Mail grid for all recipient groups.
- Create custom Email templates per status.
- Define when to Send Mail.
- Set up Email Filters to catch unwanted mail.

Create Workflow Functions

Automating your workflow takes the longest time to implement because you must determine how to best make **FootPrints** reflect your business rules. It also relies on most of the preceding features, so most of the other features must be set up in advance before workflow can be automated. As with all **FootPrints** configuration, workflow rules can be configured at a later time.

Calendar and Scheduling

- Create a Project Work Schedule
- Define schedules for Agents
- Set Project Calendar preferences
- If FootPrints Sync is enabled, have the Agents download the FootPrints Sync client or, if you have software deployment, download the FootPrints Sync client and install it for the Agents.

Quick Issues

- Create Quick Issue Templates for recurring issues.
- Create Master Quick Issue templates and subtasks.

Auto Assign

- Set up Default Assignment rules for the project.
- Create Auto Assignment rules based on drop down field choices.

Service Level Management

- Configure global SLA parameters.
- Define SLAs and create Escalation processes to support the SLAs.
- Configure the Email that will be sent as notification of escalations.

Issue Workflow

- Select actions for Dynamic Issue Linking.
- Specify procedures for subtasks.

Escalations

- Define additional escalation rules for your desired workflow.

Customer Surveys

- Create a Customer Survey project for tracking user feedback.
- Enable the survey feature in the support project.

Set Up Reporting

The report wizard helps you create custom reports for either one-time use or as templates to be run again and again. Custom reports can include graphical data and text data. These saved reports can be scheduled to run at specific times, and the report contents can be emailed to anyone.

Saved reports should capture information needed by your organization to do its job effectively and efficiently.

The types of report templates often generated from **FootPrints** include:

- Number of closed Issues by Agent for specified time
- Number of open Issues by Agent for specified time
- Sum of various types of problems for a specified period
- Average time to close an Issue
- Personal and Project Flashboards

Set Up the Knowledge Base

The Knowledge Base is a place to record, organize, and manage important information for a FootPrints project. The primary component of the Knowledge Base is a Solution. If you have existing knowledge base information, you can link to it through FootPrints if it's web-based, or you can upload Solutions into the project. This can be implemented at a later time.

The tasks to perform when implementing the Knowledge Base include:

- Upload existing solutions
- Link to an existing KB website
- Create Knowledge Base Role Permissions for Agents
- Exclude Fields from Solutions
- Create/select approvers
- Create solutions

Additional Tasks

Numara Configuration Manager

Numara Configuration Manager is an add-on module and must be purchased in addition to the FootPrints product. A discussion of setting up Configuration Management is in the Numara Configuration Manager section of this document.

Planning a Configuration Management Database

The following is a brief description of the steps to take when planning a CMDB using FootPrints Configuration Management:

1. Determine the items you wish to record and manage-Decide what you are going to manage in your configuration. Will it be hardware only? Hardware and software? Hardware, software, documentation, databases, and services? Office space? Furniture? Trucks and cars? Cell phones? Because of the flexibility of the FootPrints CMDB, it is possible to create a configuration that can track all of these configuration items and many others. It's up to your decision-makers to determine what to include and what to exclude and where the cut-offs are. A true CMDB should consist of all items IT is responsible for, to assist the business of the company. There also has to be great thought put into decided how these items will be related to one another. The relationships are one of the main things that distinguish a CMDB from an asset database.
2. Create a new CMDB in FootPrints. You can choose to use one of the built-in templates, copy an existing CMDB configuration, or build with no types, attributes, or relationships defined if you feel none of the templates match your needs.
3. Define the configuration items that were decided upon in step 1. Configuration items are all of the objects to be managed in your configuration. These can be hardware items like routers, PCs, servers, FAX machines, printers, cell phones, etc. These can be software items like applications. These can be locations like room numbers. Etc. Most of these should be there already based on the template that was selected when creating the CMDB.
4. Define attributes to be included for configuration items in the database. Some examples might include Memory, IP Address, Operating System, and Purchase Price for a desktop, Manufacturer, Version Number, and Maintenance Expiration Date for an application, and

Manufacturer, Model, and IP Address for a network printer. If a template was selected for creating the CMDB, the attributes tat came with it should be reviewed and modified to meet your needs.

5. Decide on statuses for your CIs. This will show at a quick glance of a desktop is out on someone's desk (Active), on the shelf ready to be used (In Inventory), or retired waiting to be used for parts (Retired). Different CI types can share the same or use different statuses. An application for example will never be "Waiting for Parts" and a Printer will never be "Under Development".
6. Define your relationships. If you decided to use a template, there will already be relationships and relationship constraints defined. Make sure they align with your goals and desired functionality. Examples of types of relationships are "Prints To", "Backs Up", and "Is Connected to". The constraints prevent 2 unrelatable CIs from being linked using that relationship. For example, a Router should never "Print To" a Switch.
7. Decide on a CI ID format. This will represent the CI on all listings of CIs and all pages that refer to that CI. It should provide enough information to allow someone to identify what exact CI it is just by seeing the name. An example format would be "%%CI_TYPE_NAME%%-%%MANUFACTURER%%-%%MODEL%%" which might display as "Desktop-Dell-Dimension 2400" or "Printer-HP-LaserJet 4100".
8. Setup imports from your data sources. You may be using only Numara Asset Manager to collect your data, or you may be using the database of some other asset tool, along with a database you constructed yourself, along with 2 separate excel files. You may also be manually creating all of your CIs, although this would be time consuming. Set up all of your imports to initially populate your CMDB.
9. If your import was from NAM, you will have relationships defined between the CIs imported. They should be reviewed and updated. If not using NAM, you will have to implement all the relationships between the CIs that came in during the import.
10. Link CIs to Address Book contacts. This could include the main user of that CI, various users of the same CI, or a Service Desk person responsible for that CI.
11. Decide on an update schedule for imports. If you are still planning on maintaining and using those external sources, you should decide on a schedule for update imports and configure it appropriately.

Add additional settings. These include creating reports, setting up Escalations/Automations, Establishing Roles, and testing the linking to Issues functionality.

Numara Asset Manager

Numara Asset Manager requires the purchase of one or more of the Numara Asset Manager Add-on Modules:

- Numara Asset Manager
- Integration with Microsoft® System Center Configuration Manager Inventory
- FootPrints Integration with LANDesk
- FootPrints Deploy powered by Prism

The first decision you need to make with respect to Asset Management is whether to purchase a Numara Asset Manager module and which one to purchase.

Change Management

Change Management is an add-on module for FootPrints and must be purchased in addition to the FootPrints product.

When setting up a change management process and phases in FootPrints, you should plan ahead by deciding:

- The criteria for automatically setting off an approval process (including all built-in and custom fields)
- Who approves the various phases of the process
- Whether to grant super-approver status to anyone and to whom to grant it (a "super-approver" is someone who can vote on a Change Management Issue and also can, by using an override checkbox, override all of the voting and approve or disapprove the Issue immediately on his or her own authority).
- The rules for meeting an approval (i.e., whether an Issue is approved or rejected based on one vote, a majority vote, or a unanimous vote)
- What to do when the Issue is approved or rejected (place the Issue in phase of the process, change the Issue status, re-assign the Issue, etc.)
- The email notifications for various stages of approval
- Who has permission to access approval information
- Whether to allow anonymous approvals

Import Issue Data

You can optionally import data from another system into a FootPrints project under Administration | System | Projects. The data fields must be in the order of the project's schema and the import file must be in comma-delimited form (.CSV).

Chapter 5: Installing Numara FootPrints

Hardware and Software Requirements

Before installing **FootPrints**, check that your hardware and software platforms meet the minimum requirements for **FootPrints**. The minimum requirements for various platforms and purposes are listed in:

- Windows
- Linux/UNIX
- Suggested Hardware Based on Volume

About Licenses

There are three categories of **FootPrints** license: fixed, concurrent, and Customer, as described earlier.

The first time you login to **FootPrints**, after you have performed the installation, a 9–character license code is displayed on the screen. Click the link for the "licensing page". This opens a second window that brings you to the Numara Software automatic licensing page.

Evaluation Licenses

You may have downloaded a demonstration version of the **FootPrints** software, which comes with an evaluation license. The **FootPrints** Installation Wizard automatically installs the software, creates the necessary aliases in IIS, and creates the SQL or Access database, tables and permissions. After installation, the software can be auto–licensed with a 30 day, full function evaluation license. The evaluation license provides for 5 internal users, Unlimited Customer (end user) access, and the Dynamic Address Book link feature.

Permanent Licenses

If you have purchased **FootPrints**, you should obtain a permanent license and input it when the prompts request your license. To obtain your permanent license, email the 9–character code to footprints.support@numarasoftware.com.

Customer Licenses

A Customer license is unlimited. That is, a single Customer ID and password can be shared by an unlimited number of people (each person is uniquely identified by their email address or other unique key). Alternatively, each Customer can have his or her own ID and password. In either case, an unlimited number of Customers are covered by the Customer license.

Installing FootPrints

Information Needed for Installation

- Your email address
- SMTP email server name for email notification (DNS name or IP address)
- If installing the version for SQL database, please have the following information:
    - Name of SQL Server machine
    - SQL Server Administrator account password (blank password by default)
- The FootPrints Installation Wizard automatically installs the software, creates the necessary aliases in IIS, and creates the SQL or Access database, tables and permissions. After installation, the software can be auto-licensed for 30 days with all functionality.

NOTE FOR SQL SERVER USERS

SQL Server can be installed such that column names are case sensitive; this causes FootPrints to fail. If you have installed SQL Server with case sensitive column names, you will need to reinstall it without case sensitive column names before installing FootPrints.

NOTE FOR SQL EXPRESS 2005 USERS

SQL Express 2005 requires Windows Installer 3.1 or later, MDAC 2.8 SP1 or later, and .Net Framework 2.0 or later.

NOTE

FootPrints must be installed from the server and not through a terminal services session. Installing FootPrints through a terminal server session will result in a "Page Not Found" error when attempting to access FootPrints.

Footprints 9.0 for Unix and Linux Functions Under mod_perl

The mod_perl program builds the perl processor into your Apache Web server and executes Footprints perl scripts much faster than the basic perl compiler. This greatly improves Footprints performance, especially with a large number of Agents.

Numara Software has tested mod_perl on both Linux and Sun Solaris systems extensively. Directions for building and testing mod_perl for Linux and Unix are included in the Footprints install package in a file named README.mod_perl. Please contact Numara Software Support if you need help with this installation.

Installation Instructions

NOTE ON MICROSOFT XP

Because Microsoft XP is not designed to be used as a server, we do not recommend it as a platform for the **FootPrints** server. Microsoft XP is supported, however, as a client platform for connecting to **FootPrints** for all users via the browser.

1. The **FootPrints** software contains installation files for many different platforms. To install **FootPrints** for Windows using the SQL Server database, search for the `fpSQL.exe file`. For the Access version, search for the `fpACCESS.exe file`. To install use the **FootPrints** database, find the fpinstNT.exe file. Double-click this file to begin setup.

NOTE

For UNIX/Linux versions, please read the README for installation instructions.

2. Follow the prompts and enter the information required:

- **Name**—Your name.
- **Company**—Your company.
- **Email server**—Enter the full DNS name or IP address for your SMTP mail server.
- **User ID**—Enter a User ID. You will be given a password.

NOTE

Write down your **FootPrints** user ID and password in the space provided below. You need these to log in to **FootPrints** the first time.

USER ID ________________________________

PASSWORD _____________________________

- **Email address**—Your email address.
- **Project name**—The name of your first FootPrints Project[6].
- **Address Book name**—The name of your first FootPrints Address Book[7].
- **By default, FootPrints is installed to C:\FootPrints.** You can, optionally, browse for a different directory.

NOTE

The install path cannot contain any spaces.

- **When you are asked if you would like FootPrints to setup the web server, answer Yes.** This creates 5 virtual directories in IIS for **FootPrints**.
- **If installing the SQL Server database version**:

[6] FootPrints stores and tracks information in projects. A project is a separate sub-database within the system, which can have its own custom fields, options and users. There is no limit to the number of projects that you can create within FootPrints. You may choose to keep all of your data in a single project, or you can create multiple projects. For example, one project can be used for help desk activity, while a second project is used for internal bug tracking.

[7] FootPrints table used to keep customer contact and configuration information. For example, the Project Administrator may have set up the Address Book to hold a customer's name, email address, phone number, location, etc. Multiple Address Books can be created within FootPrints, each associated with one or more Projects.

- What is the name of the SQL Server you are using? Specify the machine name of the SQL Server machine.
- **SQL Server Administrator ID**—This is "sa" by default (please consult your SQL Server administrator).
- **SQL Server Administrator Password**—This is blank by default (please consult your SQL Server administrator).
- The Installation Wizard now tests the connection to SQL Server. If the connection fails, you will be prompted to enter the information again.

* **Program Folder**—This defaults to FootPrints.

3. When setup is complete, you must reboot the server.
4. If you decide to not have FootPrints automatically configure IIS for you, you will have to configure IIS on your own. **Complete the FootPrints installation before doing so**. The next steps provide instructions for adding the Perl extension to IIS are below.
5. To add the Perl extension to IIS:

32. Based on the platform you are running:
    - **On Windows NT 4.0**, go to Start | Programs | Windows 4.0 Option Pack | Microsoft Internet Information Server | Internet Server Manager.
    - **On Windows 2000/3 Server**, go to Start | Programs | Administrative Tools | Internet Services Manager.
    - **On Windows 2000 Professional**, go to Start | Settings | Control Panel | Administrative Tools | Internet Services Manager.
33. In the Management Console, highlight your Default Web Site. In the right pane, there should be five **FootPrints** virtual directories listed: FootPrints, help, MRcgi, tmp, and MRimg.

In order to run properly, **FootPrints** requires the following directory aliases to be made in your web server. IIS 4 and IIS 5/6 have different interfaces for entering this information.

Directory	Alias	IIS 4 Permissions	IIS 5/6 Permissions
C:\footprints\cgi	MRcgi	read and execute	scripts and executables
C:\footprints\html	footprints	read and execute	scripts and executables
C:\footprints\html\help	help	read	read
C:\footprints\html\tmp	tmp	read	read
C:\footprints\html\MRimg	MRimg	read	read

34. Highlight MRcgi, right-click the mouse, and select Properties.
35. On the Virtual Directory tab, click the Configuration button. If you don't have this button, click the Create button first.
36. In the App Mappings tab, click the Add button.
37. For Executable, enter: C:\FootPrints\bin\perl\bin\perl.exe "%s" "%s" where C:\FootPrints is the FootPrints installation path. For example, if FootPrints is installed to D:\FootPrints, the Perl executable path should be:
    D:\FootPrints\bin\perl\bin\perl.exe "%s" "%s"
38. For Extension, enter: .pl

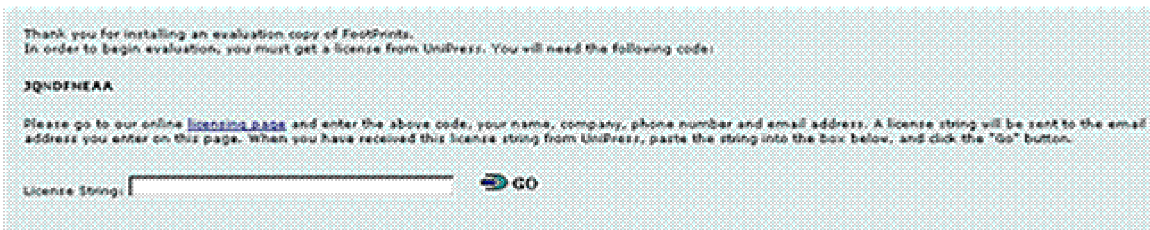
39. Click OK, then click Apply, and then OK on the App Mappings tab.
40. Click OK on the MRcgi Properties.
41. Close IIS and save any changes.

6. To access **FootPrints**, point your web browser to:

   http://mywebservername/footprints/

   where myservername is the URL for the server on which **FootPrints** is installed. To run it locally, the machine name can be used, e.g., http://*mymachine*/FootPrints/.

7. Login to **FootPrints** with the user ID and password creating during installation, then click LOGIN or press ENTER.
8. To start using **FootPrints**, you must obtain a license. The first time you log in, a 9-character license code is displayed on the screen. Click the link to connect to the licensing page. This opens a second window that brings you to the Numara Software automatic licensing page.



Get a license

9. Fill in the short form on this screen, and click SUBMIT. You will immediately receive a 36-character license string via email. You must enter a valid email address to receive the license.
10. Enter the 36-character license string in the License String field on the **FootPrints** screen and click GO. Pasting the license string directly from the email (rather than typing it) ensures accuracy. This provides you with a 30-day evaluation license for 5 internal users, Unlimited Customer (end user) access and the Dynamic Address Book link feature.

NOTE

If you have purchased **FootPrints**, you should obtain a permanent license and input it on this screen, instead of following the evaluation license process above. Email the 9-character code to footprints.support@numarasoftware.com for your permanent license.

11. The Project Setup Wizard is displayed. The Project Setup Wizard guides you through setting up the most popular features of **FootPrints**. You can exit the Wizard at any time, which takes you to the **FootPrints** Homepage. To configure options at a later time, visit the Project and System Administration pages by selecting Administration from the **FootPrints** Toolbar.
12. Once the Wizard is complete, you are on the **FootPrints** Homepage. The FootPrints Help appears in a second window. Follow this guide to learn about how to use **FootPrints** and to configure it with additional fields, users, and settings.

Application Pools

If questions arise regarding Application Pools when configuring Virtual Directories, contact Numara Software Support for assistance.

Installing IIS and Numara FootPrints on the Vista OS

Numara FootPrints does not support the Vista platform. Some customers, however,may wish to test or evaluate Numara FootPrints on a machine running under Vista. This procedure is for enabling Internet Information Services (IIS) under the Vista OS so that Numara FootPrints can be installed.

NOTE

The Vista OS does not support MSDE.

To summarize this procedure, the administrator must turn on IIS, then define Aliases, and then set Script Mappings.

42. Select Control Panel | Programs and Features.
43. In the left-hand frame, select the Turn Windows features on or off link.
44. Find the Internet Information Services folder in the window and check the box next to it.
45. Find the ISAPI Extensions and CGI folders in the same window and check the boxes next to them as well.
46. Click the OK button.
47. With other Numara FootPrints installations, Aliases are installed automatically for you. With the Vista Operating System, you must install the Aliases yourself. The next steps describe how to do this.

a. Select Control Panel | Administrative Tools| Internet Information Services. The Internet Information Services window is displayed.

b. Select Web Sites in the left frame of the window.

c. Right click on Default Web Site and select Add virtual directory from the menu, then enter the Alias and path in the Add Virtual Directory window. Perform this step for each of the five aliases, as follows:

Alias	Directory
MRcgi	C:\footprints\cgi
footprints	C:\footprints\html
Help	C:\footprints\html\help
Tmp	C:\footprints\html\tmp
MRimg	C:\footprints\html\MRimg

d. Click the Handler Mappings icon. The Handler Mappings window is displayed.

e. Right click in the main frame of the window and select Add Script Map from the menu.

f. Enter *.pl in the Path field and enter c:\footprints\bin\perl\bin\perl.exe %s%s in the Executable field.

g. Enter any name you like in the Name field.

h. Click the OK button.

i. Right click in the main frame of the window and select Add Script Map from the menu again.

j. Enter *.plex in the Path field and enter c:\footprints\bin\perl\bin\PerlEx30.dll in the Executable field.

k. Enter any name you like in the Name field.

l. Click the Advanced button, then make sure that all verbs are allowed.

m. Click the OK buttons until all values are set.

7. IIS is now enabled and the Aliases are set. From here you can log in to Numara FootPrints, license the product, and begin working with it.

Uninstalling FootPrints

FootPrints can be uninstalled from the Add/Remove programs option in the Control Panel. If you need to manually uninstall FootPrints, please follow these instructions:

1. Remove the five FootPrints virtual directories from IIS

- a. On the server where FootPrints is installed, open the Internet Services Manager by selecting Start | Programs | Administrative Tools | Internet Services Manager from the Start menu.
- b. In the left pane, select SERVERNAME | Default Web Site, where SERVERNAME is name of the web server.
- c. Delete the following 5 FootPrints virtual directories: MRcgi, footprints, help, tmp, and MRimg. To delete a virtual directory, highlight the name, right-click and select "Delete".

48. Stop the FootPrints' Services

- a. On the server where FootPrints is installed, open a command prompt by selecting Start | Programs | Accessories | Command Prompt, and change to the FootPrints directory using the following command:
- cd C:\FootPrints\bin
- where FootPrints is installed to C:\FootPrints. Change the path accordingly if FootPrints is installed to a different directory.
- b. To stop the scheduler service, use the following command:
- FPschedule –u
- c. Stop the backup scheduling service:
- FPwatch -u

49. Uninstall FootPrints

- Select Start | Programs | Control Panel | Add/Remove Programs, and choose FootPrints.
- Follow the prompts to uninstall FootPrints.

12. Delete the FootPrints folder.

Applying FootPrints Patches

If you need to apply a patch to FootPrints, use the following procedure:

1. Save the patch_X.zip file to the FootPrints root directory.

50. Run the mrPatch program from the footprints/cgi directory:

- On UNIX: cd to footprints/cgi, then run ./MRpatch.pl.
- On Windows: run the mrPatch batch file in the footprints/cgi directory. You can do this by double-clicking on the mrpatch.bat file; there's no need to open a command shell first.

2. Follow the prompts to select the patch file and apply it.

The script will automatically back up all files and set the correct permissions on new files.

Chapter 6: Create a Project with the Project Setup Wizard

Project Wizard - Introduction

After licensing **FootPrints** and logging in for the first time, the Project Setup Wizard is displayed. The Project Setup Wizard is intended to help you through setting up some of the most popular features of **FootPrints** for use in help desk, customer service, sales, development, or any other issue tracking needs. While there are many configuration options in **FootPrints**, the Wizard helps you get up and running as quickly as possible with the basic features.

You can navigate through the Wizard using the Next and Back buttons. You can skip any step that you do not want to complete. To exit the Wizard, select Cancel. This brings you directly into **FootPrints**. You can set up the project at a later time through the administration pages by selecting Administration from the **FootPrints** Toolbar.

The Project Setup Wizard is also available for creating additional projects from the System Administration Project Management page.

The project templates are described below.

2. For a list of information needed to complete the Wizard fully, click the Information Needed for the Project Setup Wizard link.

3. On the first page of the Wizard, you can select a project type.

- **Select Project Type**—The drop-down below contains a list of pre-built templates for your first project. Select a project type and click View Details to see a preview of the fields that are included in the template. If you do not want to use a template, select I Will Make My Own Fields Later. In any case, fields can be added, edited, or changed later from the administration pages.
- **Select Project Name**—This is the display name for the project.

  Available templates are:

  - **Corporate Service Desk**—This is intended for a typical corporate service desk that supports hardware, software, network, and other IT issues for employees of the company.
  - **Customer Support**—This template is intended for use by a customer service department that supports outside customers on the company's products and services.

- IT Service Management—This is intended for incorporating a CMDB in the Project. The IT Service Management template actually creates four separate projects: the Incident Project, for tracking Incidents, the Problem Project, for tracking Problems, the Change and Release Management Project, which will provide change management, and the Service Portfolio Project, which creates a project for building a Service Catalog. The Project Wizard follows a different set of steps for the IT Service Management Project than it does for other projects. If you select the IT Service Management project template, go to the Project Wizard for IT Service Management section of this document once you complete this page.
- Asset Requisitioning—This template is designed for purchasing.
- Change and Release Management—This template can be used to track change requests for any number of categories. It is based on the ITIL standard. The Change Management template is only available if the Change Management Add-on module is purchased.
- Survey—This template is used for responses to your customer surveys. This template takes you through a slightly different series of steps than the other templates.
- SOX Financial Control Management—This template is designed to track process controls that relate to financial procedures and processes. The template was created in response to Sarbanes-Oxley requirements.
- SOX IT Change Management—This template is designed to ensure that changes made to financial data comply with Sarbanes-Oxley requirements. The Issue page that is created with this template contains sections that are Status-dependent, meaning that the sections of the Issue expand or collapse depending on the value in the Status field. (Available to Change Management users only.)
- IT Outsourcing—This template is designed to keep track of IT issues for an IT Outsourcer who provides Third-Party technical support and services for another organization.
- HIPAA Patient Management—The HIPAA Patient Management template was created to help medical facilities track and manage patient personal, insurance, and payment information, as well as visits, services rendered, and future appointments.
- Facilities Management—This template helps track maintenance and other facilities requests.
- Human Resources Management - This template is used to track individual employee change requests.
- Service Desk—This is an ITIL-compatible (Information Technology Infrastructure Library) project template for tracking Incidents and Service Requests.
- Problem Management—This is an ITIL-compatible project template for Incident and Problem Management.
- Service Portfolio—This is an ITIL-compatible project template for proposing and approving Services for the Service Catalog.
- Issue Tracking—This is a generalized template for tracking any kind of issues or projects that need to be tracked.
- Resource Management—This template is designed to help an IT department track and manage both hardware and software that it might loan or otherwise install.
- Sales Tracking—This template is designed to help a sales team track leads, quotes, and perform contact management.

- o **Software Change Management**—This template can be used for development and quality assurance teams to track feature requests, bugs, and other issues regarding a company's software products. (Available to Change Management users only.)
- o **Training**—This template is useful for an IT department that trains its employees, as well as for other training organizations uses

NOTE

These templates contain some fields that have sample choices in them, such as Product (Product 1, Product 2, etc.) and Version Number (Version 1.0, 2.0, etc.). They are intended for evaluation purposes only. To use these fields in your environment, you should edit them to include your actual product names, etc. This can be done at any time from within **FootPrints** by selecting Administration | Project | Field Maintenance (for project or issue-based fields) or Administration | Address Book | Field Maintenance (for contact fields) from the **FootPrints** Toolbar. Administrators should also note that some of the templates, such as Corporate Help Desk and eSvc Customer Support, create teams in addition to fields.

1. After selecting a template, click "**Next**".

4. You can now advance to Step 1.

Information Needed for the Setup Wizard

The following information is needed to complete all steps of the Project Setup Wizard. If the information is not currently available, you can skip the corresponding step and configure the feature later from the administration pages within **FootPrints**.

If configuring Email

- **Email server name**—For example, email.widget.com
- **ID of support email account**—For example, support. This is an email account you create on your email server for the exclusive use of **FootPrints** to process incoming email (e.g., *support@myserver.com*). All email sent to this account is processed by **FootPrints** and registered as new Issues within the system or as updates to existing issues.

IMPORTANT

Do not use your own email address for this account.

- Password of support email account
- Whether the support email account uses the IMAP or POP messaging protocol

If configuring an LDAP/Address Book

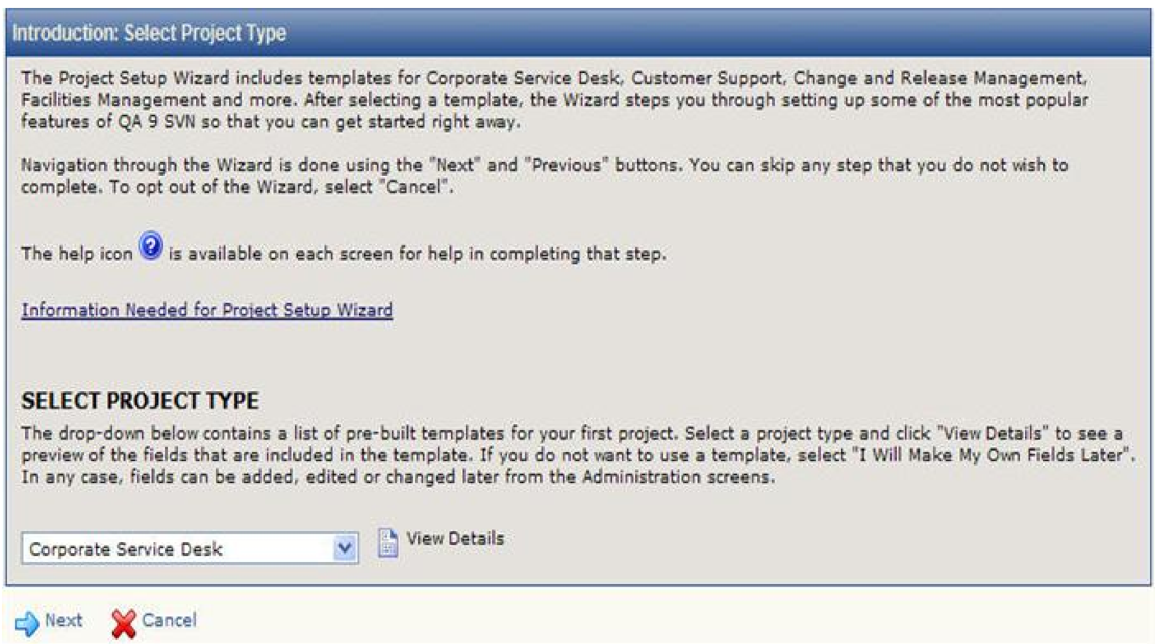
- **LDAP Server Name**—For example, machinedomain.internetdomain.com
- **LDAP Server Port**—For example, 389. An additional option for users beside the standard LDAP port (389) is the Global Catalog port for Active Directory (3268). This enables LDAP to access additional users from trusted domains using a set of common LDAP attributes. The typical scenario in which this would be used is when a large organization has a number of offices that each maintains an Active Directory for its local users. Using the standard port, you might be able to retrieve only a local office's users. Using the Global Catalog port, you can often retrieve everyone, assuming the search base is set correctly.
- **LDAP Search Base for Directory Entries**—For example, cn=Recipients,ou=widget.com,o=chicagoOffice
- **Last Name of Any Person Known to be in the Directory**—For example, Smith

- **Distinguished Name**—Similar to the Search base, but including the LDAP/AD Administrator ID For example, cn=Administrator,cn=Recipients,ou=widget.com,o=chicagoOffice
- **Password**—Password of the LDAP/ID Administrator specified above.

NOTE
The last two are sometimes optional, although it is dependent on the setup of the LDAP server.

If configuring a Customer Survey

- **Project name**—The tracking project(s) to be associated with the Customer Survey project. The Customer Survey project uses the Address Book of the tracking project.
- **FootPrints Database**—The database **FootPrints** is using might have a limit for field names. Included in these characters are some additional hidden characters placed by **FootPrints**. If you are unable to create a question you desire for a survey as a result of this limit, you may type in a shorter field name, but then create a longer display value using the Language of Project and Address Book Fields feature. After completing the Project Setup Wizard, access this feature by selecting Administration | Project | Fields | Language of Project and Address Book Fields from the **FootPrints** Toolbar.



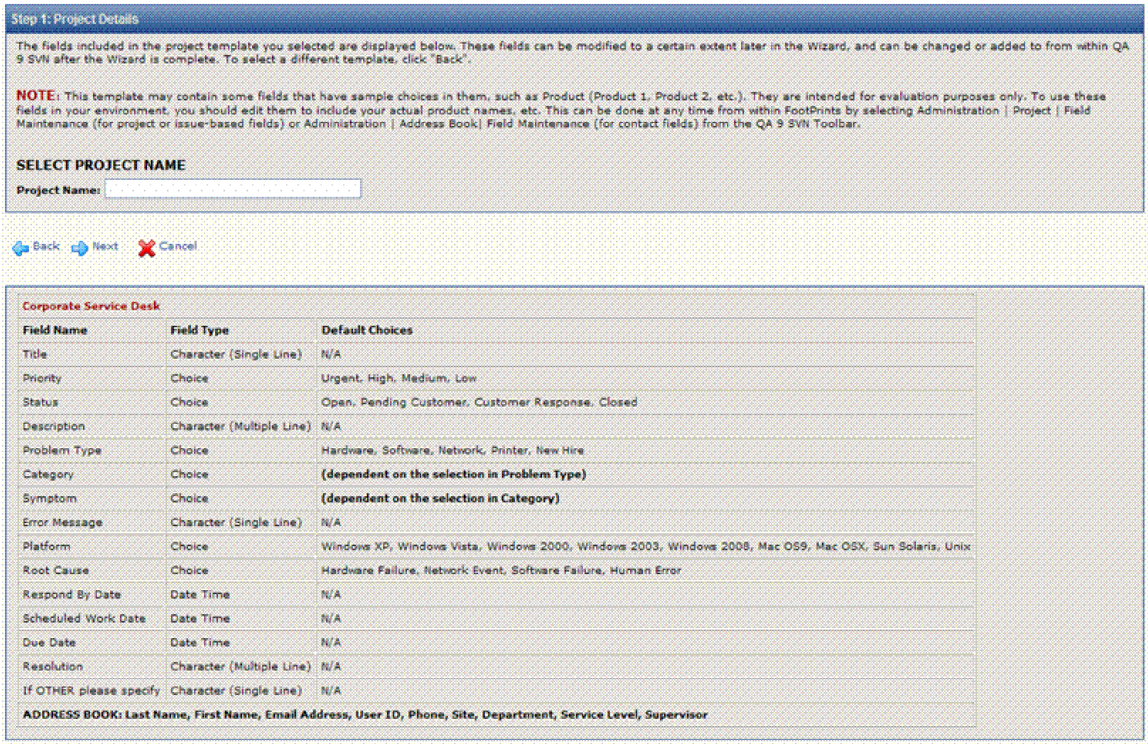
Project Wizard Step 1–Project Details

In this step, enter a name for your project(s) and confirm the template and fields selected in the initial Project Setup Wizard screen. These fields can be modified later in the Wizard and can be changed or added to from within **FootPrints** after the Wizard is complete. To select a different template, click Back.

Enter a project name in the field.

NOTE

The template selected may contain some fields that have sample choices in them, such as Product (Product 1, Product 2, etc.) and Location (First Floor, Second Floor, etc.) They are intended for evaluation purposes only. To use these fields in your environment, you should edit them to include your actual product names, locations, and so on. This can be done at any time from within **FootPrints** by selecting **Administration | Project | Field Maintenance** (for project or issue-based fields) or **Administration | Address Book | Field Maintenance** (for contact fields) from the **FootPrints** Toolbar.



Field Name	Field Type	Default Choices
Title	Character (Single Line)	N/A
Priority	Choice	Urgent, High, Medium, Low
Status	Choice	Open, Pending Customer, Customer Response, Closed
Description	Character (Multiple Line)	N/A
Problem Type	Choice	Hardware, Software, Network, Printer, New Hire
Category	Choice	**(dependent on the selection in Problem Type)**
Symptom	Choice	**(dependent on the selection in Category)**
Error Message	Character (Single Line)	N/A
Platform	Choice	Windows XP, Windows Vista, Windows 2000, Windows 2003, Windows 2008, Mac OS9, Mac OSX, Sun Solaris, Unix
Root Cause	Choice	Hardware Failure, Network Event, Software Failure, Human Error
Respond By Date	Date Time	N/A
Scheduled Work Date	Date Time	N/A
Due Date	Date Time	N/A
Resolution	Character (Multiple Line)	N/A
If OTHER please specify	Character (Single Line)	N/A
ADDRESS BOOK: Last Name, First Name, Email Address, User ID, Phone, Site, Department, Service Level, Supervisor		

Project Wizard Step 2—Built-in Fields

This step allows you to customize some of the built-in **FootPrints** fields for your project.

Priority

The Priority field is used to rate Issues by importance or impact. Options for priority include:

- **Maximum Priority**—The number selected here defines the range or number of priorities available for Agents to select when creating an Issue. Any number from 1—100 can be selected. This defaults to the number assigned by the project template.
- **Default Priority**—This is the default Priority assigned when users create new Issues. If 2 is selected, new Issues are created with a priority of 2 unless the Agent or an automated escalation rule changes it. If words are assigned to the Issue (see below), the corresponding word is the default (for example, Medium).
- **Priority Words and Colors**—Words and colors can be assigned to Priorities. Rather than selecting 1, 2, 3, etc., Agents can select Urgent, High, Medium, etc. If colors are selected, they appear on the **FootPrints** Homepage. Words are assigned by the Project Setup

Wizard. To change the words, to add a word or words for additional priorities, and to select colors, click the link to Assign Words and/or Colors to Priorities.

To map Priority words and colors:

2. Click the link to Assign Words and/or Colors to Priorities. A small pop-up window is displayed. There are input boxes for each priority level in the pop-up window.
5. Enter a word or phrase for each priority level that is blank, or change the existing word.
6. To select a color, click Pick next to a priority level. Another pop-up window appears with a color map.
7. Select a color. The color box for the priority is populated with the hex code.
8. Click GO to save your changes.

Status

The Status field is used to define the workflow of Issues, or the stages that an Issue will move through from beginning to end. Statuses can be added, deleted and reordered here. The dialog is pre-filled with the Statuses defined by the project template.

To add a Status:

3. Enter a name for the new Status.
9. Click the Add button. By default, the new Status is listed just before Closed.

To delete a Status:

10. Select the Status in the dialog box (it will be highlighted in blue).
11. Click Delete Status. The Status is removed from the list.

To re-order Statuses:

12. Select a Status in the dialog box (it will be highlighted in blue).
13. Use the Up and Down arrow buttons to move a Status up and down in the list.

NOTE

Open and Closed are built-in and cannot be changed or re-ordered. You can change the words that represent them from within FootPrints on the Status administration page. In addition, there are other built-in Statuses used by FootPrints that are not displayed here, including Deleted and Request. Refer to the Project Administration topic on Statuses for more information.

Time Tracking

The Time Tracking field is used to track the time that Agents spend working on Issues. Time can be tracked automatically by the system or manually by the Agent. Agents can be assigned hourly billing rates to be used in tracking the cost of Issues in addition to the time spent. Time can be tracked for any Agent when creating Issues and when editing Issues. The total time counted over all sessions is accumulated and stored for the Issue. If this feature is not needed, it can be disabled for the project.

Time Tracking data can be included in reports or exported to a billing system. For more information on creating Time Tracking reports, please refer to the topic titled Time-tracking Reports.

Options for Time Tracking:

- **Automatic**—If this is selected, a visible clock automatically tracks the time spent by Agents working on Issues. This is useful for a call center or service desk where the Agents do most of their work at their desks. A "**Pause**" button is displayed on the Issue form to allow the Agent to temporarily pause the clock.
- **Manual**—If this is selected, Agents manually enter the amount of time worked on an Issue. This is useful for desktop support teams or projects where users will do much of their work away from FootPrints. There are 2 sub-options:
  - **Permissions**
    - **Optional**—Agents have the option to fill in time spent when creating or editing Issues.
    - **Mandatory**—Agents are required to fill in time spent each time an Issue is created or edited.
  - **Start Date/Time**
    - **Always use current date & time**—By default, the date and time at which the Agent enters the information is automatically recorded by FootPrints.
    - **Manually enter start date & time**—If this option is selected, the Agent can fill in the date and time work began manually. This is useful if Agents often do their work away from FootPrints, and only update their Issues at a later time.
- **Disable**—If this is selected, Time Tracking is disabled for the project.

When you have finished making changes to the built-in fields, click **Next**.

Proceed to Step 3

Project Wizard Step 2a–Customer Survey

In this step, select the project(s) to link to this survey project. Whichever project(s) you select on this page automatically have their survey results filtered into this survey project and have their own individual tickets created. The survey project also shares the same Address Book that your selection(s) uses.

- **Project to Link Survey to**—Select a project from the drop-down list whose survey results will be stored in the Customer Survey Project that you are creating.
- **Link to Additional Projects**—If the project you select from the drop-down list shares its Address Book with other projects, you can highlight additional projects to be used with the Customer Survey project being created. To select more than one project from the list, hold down the CTRL key while clicking on the entry.

NOTE

Only projects with unique address books or sharing the same address book can be linked to a single Customer Survey Project.

When you have finished making any changes desired to the project fields, click **Next.**

Project Wizard Step 2b–Customer Survey

In this step, you enable customer surveys in the project(s) selected in the previous step. Surveys generated from the other project(s) are populated in this new survey project.

To change these settings later, select Administration | Project | Automated Workflow | Customer Surveys from the **FootPrints** toolbar in the originating project (not in the survey project).

14. **Subject**—Enter a subject line for the survey email.
15. **Custom Message**—The text entered here will be in the body of the survey email. Certain keywords can be used that will automatically get replaced by their associated values once the email is sent. Click the "**Click here**" link to be presented with a list of those keywords.
16. **Survey Rules**—Select when to send customer surveys:

- Send survey for each customer Issue that is closed.
- For each customer Issue that is closed, there will be a 1 in X chance of the customer receiving a survey (if they haven't received a survey in the last Y months). You choose the values for X and Y.
    - **For X**: Choosing a value of 2 for X does not mean that every other issue closed sends a survey email; it means that each issue closed has a 1 in 2 (50%) chance of sending out a survey email.
    - **For Y**: Indicate how often customers are allowed to receive surveys. You may not want the same customer to receive more than one survey in a 1, 3, 6, or 12 month period.

TIP
You may want to send a survey for every issue that gets closed, but only if the person receiving the email has not received a survey in the past 1, 3, 6, or 12 months. Use the second option and set the value of Y to 1 so that each closed issue has a 1 in 1 chance of sending a survey email.

- Send surveys to all linked customers when a Global Issue is resolved. This option can be selected regardless of when surveys are being sent.
- Include Javascript data validation on surveys and HTML Forms. This option can be turned off so that the Javascript validation is not included.

When you have finished making changes desired to the Customer Survey setup, click **Complete the Wizard**. The project is created and your survey setup is finished.

Project Wizard Step 3–Configure Issue Information Fields

The project fields created by the Project Setup Wizard are displayed in the dialog box. They are based on the project template you selected. These are the fields that will be displayed in the Issue Information section of the Issue pages later, after the project has been built. In this step, as long as there are no dependent fields, you can re-order or delete fields (for more information on field dependencies, refer to Field Dependencies). If you would like to make additional changes to these fields, select Administration | Project | Field Maintenance from the **FootPrints** Toolbar after completing the Wizard.

There is a different Step 3 if you are using the IT Service Management template, which is described in the next topic.

NOTE
When creating additional projects with the Wizard, the full Field Maintenance dialog is available for adding and changing fields.

To re-order the fields:

4. Select a field in the dialog box (it will be highlighted in blue).
17. Use the Up and Down arrow buttons to move a field up and down in the list.
18. Continue to re-order the fields are desired. This is the order in which they are displayed in the project.

To delete a field:

19. Select the field in the dialog box (it will be highlighted in blue).
20. Click Delete. The field is removed from the dialog and is no longer included in the project.

NOTE
The Delete button is only visible when your project template does not contain any dependent fields. There are instances where deleting dependent fields can cause problems, so the Delete button is not available in the installation version of the Project Setup Wizard for those cases.

When you have finished making any changes desired to the project fields, click **Next**.

Project Wizard Step 3 for IT Service Management Project

This step determines how you will create a CMDB for your Project. This step only applies to an IT Service Management Project. Options on this page are explained below. When you finish selecting options on this page, click the **Finish** button.

Use Template

If you select the Use Template radio button, you must select the CMDB template to use from the drop-down field. When you select a template from the drop-down field, the schema for that template is displayed at the bottom of the page. Drop-down options are:

- **ITIL CMDB**—This template contains configuration item types, attributes and relationships recommended as ITIL best practices.
- **Numara Asset Manager**—This template contains configuration item types, attributes and relationships drawn from the Numara Asset Manager.
- **All Assets**—This template contains configuration item types, all attributes and relationships. With this template, you would start off with all possible attributes and relationships and then remove the ones you do not want to use.
- **Inventory**—This templates contains configuration item types, attributes and relationships relating to facilities management.

Use Existing CMDB Configuration

If you select the Use Existing CMDB Configuration radio button, a drop-down field containing existing CMDBs is displayed. Select the CMDB you want to copy from the field. When you select a CMDB from the drop-down field, the schema for that CMDB is displayed at the bottom of the page.

Create on Your Own

If you select the Create on Your Own radio button, CMDB is enabled but no configuration item types, attributes, or relationships are created for you. Instead, you must create all of the configuration item types, attributes, and relationships on your own.

Project Wizard Step 4a–Address Book

In this step, you can select the type of Address Book to be used for your project. The Address Book is a place to keep the contact information for your end users, whether they are employees, remote users, or Customers. The data can be kept in **FootPrints** or can be dynamically read from an outside source, such as Microsoft Exchange, Active Directory, or other LDAP source. The LDAP option is only available in the evaluation software or if you purchased the Dynamic Address Book Link add-on module with **FootPrints**.

NOTE
If you purchased the Dynamic SQL Address Book add-on, you must configure the Address Book after you've run the Project Wizard. Choose FootPrints Address Book, which is converted later. Refer to Dynamic SQL Address Book Link in the *Address Book Administration* chapter.

To select an Address Book:

5. **Address Book Name**—Enter the name for the Address Book, for example, Employees.

21. **Address Book Type** (only requested if you are licensed for Dynamic LDAP Address Book Link)—Select the type of Address Book:

- **New FootPrints Address Book**—If this is selected, the contact data is kept within the **FootPrints** database. Once the Wizard is complete, you can import contact records from a comma-delimited text file. Please refer to the topic on Importing Data into the Address Book for more information.
- **New LDAP/Exchange/Active Directory Connection**—With this option, contact data is read dynamically from an outside source each time it is accessed. No importing or synchronization is necessary. Supported databases include Active Directory, Microsoft Exchange, Lotus Notes, Sun ONE, and Novell eDirectory. If this is selected, you must enter information about the LDAP source in the next step.

NOTE
This option is only available when creating additional projects in **FootPrints.** The LDAP feature can be configured after the Project Setup Wizard is complete under Address Book administration. If you are unsure of your Exchange/Active Directory configuration, select FootPrints Address Book. The Address Book can be changed later from the Address Book administration screen.

- **Link to an existing Address Book**—This option allows you to use an existing Address Book for the project.

Once you have selected an Address Book, click Next. The next step differs based on the type of Address Book selected.

Project Wizard Step 4b–Address Book Fields

The Address Book fields created by the Wizard are displayed in the dialog box. They are based on the project template you selected. They re displayed in the Contact Information section of the Create Issue form and in the Address Book. In this step, you can re-order or delete the fields. If you would like to make additional changes to these fields, select Administration | Address Book | Field Maintenance from the **FootPrints** Toolbar after completing the Wizard.

NOTE

When creating additional projects with the wizard, the full Field Maintenance dialog is available for adding and changing fields.

To re-order the fields:

6. Select a field in the dialog box (it will be highlighted in blue).
22. Use the Up and Down arrow buttons to move a field up and down in the list.
23. Continue to re-order the fields are desired. This is the order in which they are displayed in the Address Book.

To delete a field:

24. Select the field in the dialog box (it will be highlighted in blue).
25. Click Delete. The field is removed from the dialog and is no longer included in the Address Book.

The Address Book also contains two additional properties:

- **Primary Key**—The Primary Key is a unique identifier for each Contact in your Address Book. If the Customer Self-service feature is used, it is the ID that Customers use to log into **FootPrints**, along with a password. This field should be both present and unique to all Contacts. User ID is the recommended field, and also the default value for all templates.
- **Organizational Field**—The Organizational Field is used to organize Contacts in the Address Book. Examples include Department, Business Unit, or Company. It is an optional property. If one is selected, the Contacts in the Address Book are grouped by the field.
- **Master Contact Record**—Check here to enable the Master Contact Record feature.

When you have finished making any changes desired to the Address Book fields, click **Next**.

Project Wizard Step 4b–Configure Exchange/Active Directory

If Exchange/Active Directory Address Book was selected in Step 4a, the LDAP Address Book must be configured in the next few steps. With this option, contact data is dynamically read from an outside source each time it is accessed. No importing or synchronization is necessary. Supported databases include Active Directory, Microsoft Exchange, Lotus Notes, Sun ONE, and Novell eDirectory.

This page requires information about your LDAP source. Please consult with your system or LDAP administrator for more information.

LDAP Server Name

Enter the full domain name of the machine hosting the contact database server.

NOTE FOR MICROSOFT USERS

If Exchange and Active Directory are on different servers, the Active Directory Server name should be entered. The Exchange/Active Directory administrator should be able to provide this name. It will usually be of the form: *machinedomain.internetdomain.com*

LDAP Server Port

This is the port that **FootPrints** uses to communicate with the LDAP contact database to retrieve user contact information. In most cases, the default value of 389 should be used. However, when a machine has more than one directory, a different port number may be used. If port 389 is already in use, administrators often set port 390 as the LDAP port.

LDAP Search Base for Directory Entries

LDAP (including MS Exchange/Active Directory) stores its data in a tree structure. To enable **FootPrints** to retrieve user information, a search base specifying where to search in the tree and in what order must be specified here. The search base is formed by adding names of the root and each subsequent branch of the tree until reaching the point where a search should commence. The search base should be the branch of the tree closest to the data being searched. In most instances, all data being sought is in one branch of the LDAP tree. For instance, if the root of the LDAP Directory tree is o=server.com and the next branch to be taken was ou=People, which contains all the directory information, the search base is: ou=People,o=server.com

The form of the search base is different for Microsoft Exchange 5.5, Exchange 2000, and other LDAP servers. Specific instructions are given below for help in finding the correct search base for two of the most popular LDAP-compliant contact databases: Microsoft Exchange 5.5 and Microsoft Active Directory (2000). For other databases, such as Sun ONE Directory Server, Lotus Notes, and Novell Directory Services, please refer to the product documentation for that server, or contact Numara Software Support for help.

NOTE
If linking to Microsoft Exchange/Active Directory, contacts must reside directly in Exchange/Active Directory as a contact record or user. Contact records that reside in Public Folders are not supported.

Microsoft Exchange 2000/Active Directory

Exchange 2000/Active Directory usually has a search base beginning with cn=Users. For Windows 2000 and later releases using Active Directory, read the value for the following key:

7. On the server where Exchange or Active Directory is installed, select Start | Run from the Start Menu.

26. Enter regedit or regedt32, and then click Open.
27. Browse to the following key:

    HKEY_LOCAL_MACHINE/System/CurrentControlSet/Services/NTDS/Parameters/Root Domain

28. Take the value in the above key and create your search base by starting with cn=Users and continuing by adding the key found above, separated by a comma. For example, if the value found is DC=Ntdomain,DC=internetName,DC=com, you would try:

    cn=Users,DC=NTdomain,DC=internetName,DC=com

NOTE
Spacing, punctuation, and capitalization must be exact for a search base to work correctly. For instance, if one of the values in your search base has spaces and/or punctuation (e.g., o=My

Company, Inc.), you must place the value in quotation marks (e.g., o="My Company, Inc.") and make sure that the spacing, punctuation, and capitalization are correct.

Microsoft Exchange 5.5

Exchange 5.5 usually has a search base beginning with cn=Recipients. The search base can be determined by reading the registry. To find the full search base:

8. On the server where Exchange is installed, select Start | Run from the Start Menu.
29. Enter regedit or regedt32, and then click Open.
30. Browse to the following key:

    HKEY_LOCAL_MACHINE/System/CurrentControlSet/Services/MSExchangeCCMC/Parameters/SiteDN

31. Take the value in the above key and create your search base by starting with cn=Recipients and continuing by adding each key starting with the last (keys are separated by slashes (/)) and adding the last remaining key, separating each new key added with a comma. For example, if you see the following "/o=company/ou=organization" you would try as your search base:

    cn=Recipients,ou=organization,o=company

The parameters for the search base are listed in reverse order from what is displayed in Exchange and commas separate the records rather than forward slashes. See your Exchange administrator if there is any difficulty.

NOTE

Spacing, punctuation, and capitalization must be exact for a search base to work correctly. For instance, if one of the values in your search base has spaces and/or punctuation (e.g., o=My Company, Inc.), you must place the value in quotation marks (e.g., o="My Company, Inc.") and make sure that the spacing, punctuation, and capitalization are correct.

Last Name of Any Person Known to be in the Directory

Enter the last name (surname) of a contact in the Exchange directory. This is the name that **FootPrints** uses to test the connection to your LDAP server.

Distinguished Name (Optional)

Some LDAP servers allow an anonymous login. In these cases, no distinguished name and password are needed; however, if your server requires an authenticated bind of a user to access the directory, you should enter distinguished name and password of the administrator user here. Specifying the distinguished name and password can also improve performance in searching and retrieving data from the LDAP server.

The distinguished name of the binding user can be retrieved from your LDAP Administrator or can be found using the techniques discussed above for the *LDAP Search Base for Directory Entries*. The distinguished name to use for binding is generally cn=userid (where userid is the ID for the account used for binding) followed by a comma and then the search base. For example, if the User ID is Administrator:

- For Exchange 2000, if the search base is:

  cn=Users,DC=NTdomain,DC=internetName,DC=com

  then the distinguished name is:

  cn=Administrator,cn=Users, DC=NTdomain,DC=internetName,DC=com

- For **Exchange 5.5**, if the search base is:

  cn=Recipients,ou=organization,o=company

  then the distinguished name is:

  cn=Administrator,cn=Recipients,ou=organization,o=company

Be sure to leave all information of the user in the distinguished name. Do not omit such information as a CN or UID as you would with a search base. Leave blank if binding anonymously.

NOTE

Exchange 5.5 usually allows anonymous binding, while Exchange 2000 normally does not support anonymous binding. If you have Exchange 2000, you probably need to fill in the distinguished name and password.

Password (Optional)

Place the password of the binding user here. This is the password of the administrator specified in the distinguished name above. Leave this blank if you are binding anonymously.

After all of the information is entered, click Next. The Wizard attempts to connect to your Exchange/LDAP/Active Directory server and search for the contact specified above using the search base and other information entered. If the connection is successful, the Address Book Field Mapping page is displayed. If the Wizard is not able to connect to your LDAP server, an error is displayed or the browser times out. Please contact your LDAP administrator or Numara Software Support for assistance.

Proceed to Step 4c

Project Wizard Step 4c–Exchange/Active Directory Field Mapping

If the test to connect to the Exchange/Active Directory server is successful, the Field Mapping page is displayed. On this page, you can map attributes from your Exchange/Active Directory server to the FootPrints Address Book.

- **Available LDAP/Exchange Attributes**—A list of available Exchange/Active Directory Attributes is in the LDAP Attribute drop-down box. These are attributes found on the Exchange/Active Directory server based upon the search base provided in your LDAP configuration. To see an explanation of the most common Exchange/Active Directory attributes, click the small Help link above the attribute list.
- **FootPrints Field Names**—The right side of the page contains a list of some default fields. All of the fields in the Address Book schema for the template are highlighted. When one of the field names is highlighted and then Edit is clicked, the LDAP Attribute drop-down box is populated with either a recommended name or the name of the Exchange/Active Directory attribute. Regardless of what appears in the box, you can change the name of the field. In addition, the Field Type contains a recommended **FootPrints** field type, which can also be changed. You cannot use the same attribute for more than one field.

9. For each field, select an available Exchange/Active Directory attribute from the drop-down.

32. If there is no corresponding attribute for the field, select Delete. This deletes the field from the Address Book in **FootPrints**.

33. Although some Exchange/Active Directory attributes are obvious in how they relate to the **FootPrints** Address Book fields, others are not. The Exchange/Active Directory administrator should assist in mapping attributes to **FootPrints** Address Book fields.

On this screen, any additional changes desired can be made to the Exchange/Active Directory Address Book fields.

Once you have completed changes in name or field type, click Add Field to send the field to the **FootPrints** Fields box.

- **FootPrints Fields**—The **FootPrints** Fields box contains all fields currently selected.
- **Primary Key**—The Primary Key is a unique identifier for each Contact in your Address Book. If the Customer Self-service feature is used, it is the ID that Customers use to log into **FootPrints**, along with a password. This field should be both present and unique to all Contacts. User ID is the recommended field and also the default for all templates.
- **Organizational Unit**—The Organizational Unit is used to organize Contacts in the Address Book. Examples include Department, Business Unit, or Company. It is an optional property. If an Organizational Unit is selected, the Contacts in the Address Book are grouped by that field.

To re-order the fields:

10. Select a field in the dialog box (it will be highlighted in blue).

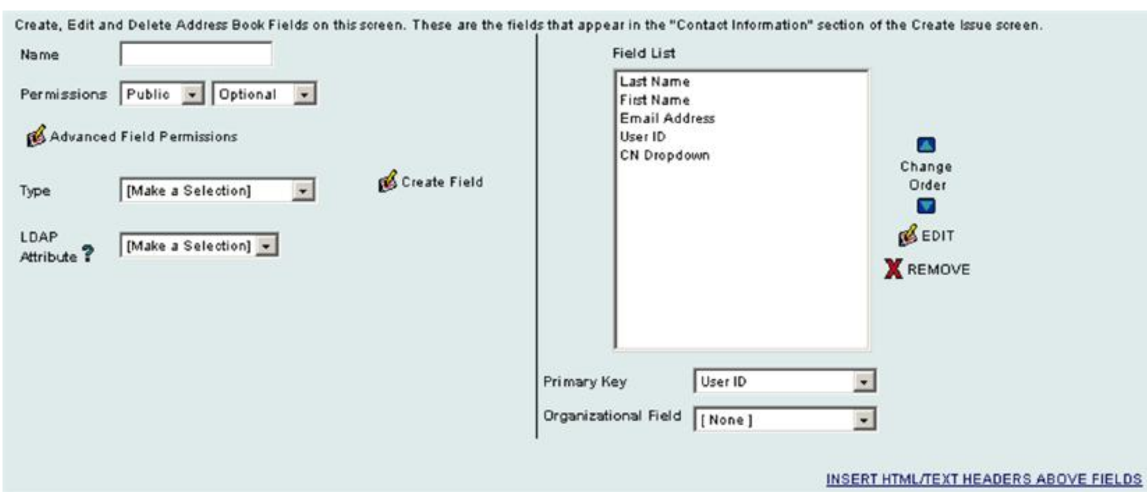
34. Use the Up and Down arrow buttons to move a field up and down in the list.

35. Continue to re-order the fields are desired. This is the order in which they are displayed in the Address Book.

To delete a field:

11. Select the field in the dialog box (it will be highlighted in blue).

36. Click Delete. The field is removed from the dialog and is no longer included in the Address Book.



Add a field from Active Directory to FootPrints

When you have finished making any changes desired to the Exchange/Active Directory Address Book fields, click **Next.**

Project Wizard Step 5–Email

FootPrints can be configured to work with your email server to both send email notification to users about their Issues and to process incoming email submissions for users. The basic email options for your project are configured in this step. Additional options are available on the administration pages within **FootPrints**.

12. **Email Notification - When to Send Mail—FootPrints** can automatically send email notification to users when Issues are created and edited. Separate rules can be set for both Assignees (Agents assigned to Issues) and Customers (end users who report Issues). For example, you may want email notification sent to the Agent assigned to an Issue for all statuses, but you may only want email notification to go to the Customer who submitted the Issue when it is opened, and when it is closed.

A default template is used for email notifications from **FootPrints**. To change the template, select Administration | Project | Mail Preferences | Contents of Mail from the **FootPrints** Toolbar after completing the Wizard.

For each of the categories, the options are:

- **Never send mail:** If this option is chosen, no notification email is sent.
- **Always send mail for every creation/edit:** Email is sent to all assignees for each change to an Issue (default).
- **Send mail only for Issues matching the following criteria:**
    - Priority—Notification is only sent to the assignees/cc's when the Issue's priority falls into the range chosen here.
    - Status—Notification is only sent to the assignees/cc's when the Issue's status matches one of the statuses defined here. Multiple statuses can be selected (Windows users must hold down the CTRL key to highlight multiple statuses).

NOTE

The email notification rules selected here can be manually overridden for a particular Issue by the Agent assigned to that Issue. These are simply defaults.

37. **Request Creation**—An email can be sent automatically to one or more internal users when a new Request is submitted by a Customer. This is in addition to notification sent to Assignees as defined above. If selected, you receive an email each time a Customer submits a new Request to **FootPrints** via the web or email. This option can be changed later under Administration | Project | Mail Preferences after additional users are added to the system.
38. **FootPrints Incoming Email Management—FootPrints** can process incoming email requests from users. An email account must be created on the email server for the exclusive use of **FootPrints** (e.g., *support@myserver.com*). All email sent to this account is processed by **FootPrints** and registered as new Issues within the system or updates to existing issues.

NOTE

Do not enter your own email address in this section.

To enable this feature:

51. Select the mail retrieval protocol used by your email server. The choices are:

- **IMAP** (Internet Message Access Protocol)
- **POP** (Post Office Protocol)

To skip this step: If you do not wish to configure incoming email, select SKIP SETUP (this is the default). You can enable incoming email at a later time by selecting **Administration | System | Email | Incoming Email Setup** from the **FootPrints** Toolbar.

a. Enter the POP/IMAP mail server name for your organization, e.g., *mail.myserver.com* or *123.33.44.55*. This is pre-filled with the name entered during installation.

b. Enter the email account name of the account you have created on your mail server for the exclusive use of FootPrints, e.g., support.

NOTE

Do not enter your own email address in this section. All mail sent to the account entered here is processed by **FootPrints**. If you enter your own email address, you will no longer receive email.

c. Enter the password for the email account (this must be entered twice).

d. Enter the default reply address for this account. We recommend entering the full email address of the account specified above, e.g., *support@myserver.com*.

e. Enter the From name for this account. This is the name that populates the From line of email notification mail headers, e.g., FootPrints or Widget Support. It is used to respond to **FootPrints** email notification, which can be threaded back to the originating Issue.

When you have completed configuration of email, click **Complete the Wizard** to finish the configuration of the project.

Project Wizard Step 6—Other Options

This step allows you to configure some system-wide options for **FootPrints**. These options apply to the first project and all subsequent projects, although most can be changed per project or user, as noted.

NOTE

This step is only available the first time you setup **FootPrints**.

- **Cookies**—Cookies allow **FootPrints** to remember a user's ID and password. If this option is enabled, all users will see a checkbox on the login screen that, if checked, will bypass the login screen when they access FootPrints with their local browser. This cookie will contain their **FootPrints** ID and a unique cookie ID, which will expire in 3 years. This option applies to the whole system.

NOTE

Because this option poses a security risk (anyone can log in as that user if they have access to the user's machine), do not enable Cookies if security is an issue for your organization. Also, if many of your users access **FootPrints** from public or shared terminals, do not use Cookies.

- **Record Names**—The terms entered here are used throughout **FootPrints**. Terms can be specified for both Issue database records, and the Contact records in the Address Book. These names can also be changed per project.
- **Date Format**—This option determines how dates are represented throughout **FootPrints**. Users can also set a personal preference for dates. The options are:
  - **American**—MM/DD/YYYY
  - **European**—DD/MM/YYYY

- o **ISO**—YYYY/MM/DD

- **Logo**—This is the logo that will appear on the **FootPrints** login screen and in the top-left corner of each screen. You can keep the **FootPrints** logo, or upload your own logo. The image's size should not be larger than 180x68 pixels.

To upload your logo:

13. Click the Attach File button.
39. Browse your local machine or network drive for the logo. The image's size should not be larger than 180x68 pixels (a .GIF file is recommended).
40. When you have selected the file, click Open. The file is copied to **FootPrints**. A message that the file was copied successfully is shown in the attachment box on the screen.
41. The logo, when displayed in the top-left corner in **FootPrints**, can optionally be a hypertext link. You can select Yes or No for this option.
42. If Yes is selected, enter a URL for the hypertext link.

By default, when you have completed the Project Setup, the Add Agents setup page is displayed, allowing you to add agents to your newly created project immediately. If you selected the FootPrints Customer Service template, you are given the option to refresh to either the Customer Service Portal setup page or to the Add Agents page.

You have completed the Project Setup Wizard! Click the **Complete** button to finish. You are now on the **FootPrints** Homepage. Go on to the next section, Configuration and Administration, to learn more about **FootPrints** configuration and administration, or browse the Online Help for other topics. You can return to the Help at any time by selecting **Help** from the **FootPrints** Toolbar, or clicking the Help icon found throughout **FootPrints**.

Project Wizard for IT Service Management

Step 1-Project Details

For IT Service Management, enter names for the following projects in the appropriate fields:

- the Incident Project, for tracking Incidents
- the Problem Project, for tracking Problems
- the Change and Release Management Project, which will provide change management, and
- the Service Portfolio Project, , which creates a project for proposing and approving items to be included in the Service Catalog.

Step 2-Select Address Book

In this step, you can select the type of Address Book to be used for your project. The Address Book is a place to keep the contact information for your end users, whether they are employees, remote users, or Customers. The data can be kept in **FootPrints** or can be dynamically read from an outside source, such as Microsoft Exchange, Active Directory, or other LDAP source. The LDAP option is only available in the evaluation software or if you purchased the Dynamic Address Book Link add-on module with **FootPrints**.

NOTE

If you purchased the Dynamic SQL Address Book add-on, you must configure the Address Book after you've run the Project Wizard. Choose FootPrints Address Book, which is converted later. Refer to Dynamic SQL Address Book Link in the *Address Book Administration* chapter.

To select an Address Book:

52. **Address Book Name**—Enter the name for the Address Book, for example, Employees.

43. **Address Book Type** (only requested if you are licensed for Dynamic LDAP Address Book Link)—Select the type of Address Book:

- **New FootPrints Address Book**—If this is selected, the contact data is kept within the **FootPrints** database. Once the Wizard is complete, you can import contact records from a comma-delimited text file. Please refer to the topic on Importing Data into the Address Book for more information.
- **Link to an existing Address Book**—This option allows you to use an existing Address Book for the project.

Step 3 -

- **Use Template**—If you select the Use Template radio button, you must select which CMDB template to use from the drop-down field. When you select a template from the drop-down field, the schema for that template is displayed at the bottom of the page. Drop-down options are:

  - ITIL CMDB—This template contains configuration item types, attributes and relationships recommended as ITIL best practices.
  - Numara Asset Manager—This template contains configuration item types, attributes and relationships drawn from the Numara Asset Manager.
  - All Assets—This template contains configuration item types, all attributes and relationships. With this template, you would start off with all possible attributes and relationships and then remove the ones you do not want to use.
  - Inventory—This templates contains configuration item types, attributes and relationships relating to facilities management.
- Use Existing CMDB Configuration—If you select the Use Existing CMDB Configuration radio button, a drop-down field containing existing CMDBs is displayed. Select the CMDB you want to copy from the field. When you select a CMDB from the drop-down field, the schema for that CMDB is displayed at the bottom of the page.
- Create on Your Own—If you select the Create on Your Own radio button, CMDB is enabled but no configuration item types, attributes, or relationships are created for you. Instead, you must create all of the configuration item types, attributes, and relationships on your own.

Chapter 7: Populate the Address Book

A **FootPrints** Address Book can be populated with user contact data in a variety of ways:

- **By Agents**—Contact information can be entered manually by Agents and Administrators in Address Book, or on the "Create Issue" screen.
- **By Customers**—Customers can enter their own contact information the first time they submit a Request to the system via the Customer Self-Service web interface.
- **Imported**—Contacts can be imported from a comma-delimited file (discussed below).
- **Dynamically**—Contact data can be retrieved dynamically from an external database that is either LDAP–compliant (such as Active Directory, Lotus Domino, SunONE or Novell eDirectory) or SQL–based (i.e. SQL Server, MySQL, Access, etc.) using the FootPrints Dynamic LDAP Address Book Link or the FootPrints Dynamic SQL Address Book link (available as add–on modules).

The FootPrints Dynamic Address Book Link feature retrieves contact data dynamically from any LDAP-compliant contact database for the Address Book. The Lightweight Directory Access Protocol (LDAP) is the standard Internet directory protocol. Examples of an LDAP-compliant database include Microsoft Active Directory, Sun ONE Directory Server, and Novell Directory Services.

The FootPrints Dynamic SQL Address Book Link feature retrieves contact data dynamically from supported contact databases for the Address Book via ODBC or via Perl DBI. Open DataBase Connectivity, or ODBC, is a standard relational database access method developed by Microsoft Corporation. The goal of ODBC is to make it possible to access any data from any application, regardless of which database management system (DBMS) is handling the data. FootPrints harnesses this power by providing access to existing ODBC-compliant contact data without requiring that the records be loaded into a separate FootPrints Address Book. The supported ODBC-compliant databases include Oracle, SQL Server, Access, MySQL, DB2, PostgreSQL and Sybase. These are potentially all available on Windows installations, so long as an appropriate driver and System DSN are configured on the machine. For Unix installations, the appropriate DBD must be built on the FootPrints server to access that particular database type.

This section covers the three administrative methods: data import, the Dynamic LDAP Address Book Link, and Dynamic SQL Address Book Link. Refer to Using the Address Book and Customer Self-Service for more information on entering contacts manually.

- Complete Instructions on Importing Contacts
- Complete Instructions for Dynamic LDAP Address Book Link
- Complete Instructions for Dynamic SQL Address Book Link

Importing Address Book Contact Data

Customer contact data can be imported into the **FootPrints** Address Book from a flat text file. This allows you to start using **FootPrints** with existing contact data from another database. Internal users can look customers up in the **FootPrints** Address Book when logging an Issue. Customers need only enter an email address or other primary key and **FootPrints** completes the rest of the contact data. The data must first be exported from the existing contact database and formatted as described below. The import can be done by the Project or System Administrator, either on the Project Administration page under Address Book | Administration | Load Data, or under Administration in the Address Book itself.

NOTE

FootPrints also supports the importing of Issue data. This Issue data must be loaded separately from Address Book data. It is recommended that Address Book data be imported first. Instructions on importing Issue data and how to link those Issues to imported Address Book contacts can be found in the chapter on System Administration.

Topics in the section:

- Load External Data into the Address Book
- Creating the Data File
- Optional Features for Address Book Imports

Load External Data into the Address Book

NOTE
This option is not available for any LDAP- or SQL-enabled Address Book. It is only for use with the FootPrints Address Book.

Before you begin, the Address Book fields must first be created to match the fields in the data to be imported. Also, the contact data must be placed into a single, flat text file in CSV (Comma Separated Value) format. Details on creating this text file can be found below. Previous releases permitted data to be in either CSV or Field-delimited formats; as of version 8.0 and higher, only the CSV file format is supported.

To load data interactively from the web screens:

53. Select Administration | Address Book | Load Data.
54. Complete the appropriate fields, which are explained as follows:
    - **Select Time to Load Contact Information** section—The data can be imported immediately, or can be scheduled for a future time. If your import file is large (e.g., more than one thousand contacts) and the FootPrints server is in use, we recommend scheduling the import for a time when the server is not being accessed by users.
    - **Please browse for the data import file ...**—Click the Browse... button to browse your local machine or network drives for the file. A link is also provided to review the schema of the data.
    - **Data encoding**—Select the type of data encoding to use for the import file. Options are server default and UTF-8.
        - Server Default - If you're planning to view the csv file in Excel or other non-UTF-8-aware application, or if you are loading data saved from Excel, you should pick the "server default" choice.
        - UTF-8 - If you are sure that the application used to view the data in the .csv file can handle UTF-8 encoded data, select "UTF-8".
    - **Userid or full name of an agent...**—There are two different methods for indicating the default submitter of the contact:
        - If no submitter is indicated, the user ID of the administrator performing the data import becomes the submitter for all Issues being imported.
        - Enter a valid one-word FootPrints ID in the field provided. This user becomes the submitter for all of the Issues being imported.
55. After confirming that everything is correct, click **GO** at the bottom of the screen to load the data. A new Load External Data page is displayed. The new page displays information about the data to be loaded at the top of the page.

56. Complete the appropriate fields, which are explained as follows:

- **You may use the parameters in a built-in Field-Mapping List...**—On the left side of the schema section of the page, a list of built-in and saved field mappings is displayed (if you have saved mappings previously). To use a saved or built-in mapping, select the mapping from the list and the click the **Use Selected List** button. The fields for mapping will be populated from the selected list. To delete a saved list, select the field and then click the **Delete Selected List** button.
- **Check here if your Load File...**—The checkbox lets you indicate if your import file has a Heading line. Check the box as appropriate. If the box is checked, the first line of the import file will not be loaded as data.
- **Save Field-Mapping List** button—The Save Field-Mapping List button saves the list of mappings you create. When you save the mapping, you are prompted for a name for the saved field mapping. When the save completes, the name is displayed in the list on the left side of the page.
- **Field Mapping**—Map the fields in the load file to Address Book fields by selecting the appropriate load file fields from the drop-downs. To skip a field mapping, select Do Not Import from the drop-down. If you select Do Not Import, no data is entered into that field. You can also select Blank Field #1 to leave fields blank.
- **Check here to create/update Master Contact Records with values from your import file...**—Check the box to ensure that Master Contact Records are updated for all Address Book entries with information from the import file.

57. If you are not using a saved mapping, after confirming that everything is correct, click the **Save Field-Mapping List** button if you wish to save the mapping for re-use at a later time.
58. Click the **GO** button at the bottom of the page to import the data.
59. The data is validated. If the data is good, the import proceeds. It takes some time if the import file is large, so be patient. If bad data is present, an error message is displayed with the line numbers of contacts containing errors.
60. If you scheduled the import to occur in the future, the import does not occur until that time. To remove a scheduled import, click the link to Review a List of Address Book Load events. Imports that have already started cannot be removed.

Load Data As Batch Process

FootPrints also permits data to be imported into the Address Book on a batch basis without use of the web screens. You must prepare the Upload file as described in the

'Creating the Data File' section. As explained there, Batch Upload files receive no error checking – they are loaded as-is, so it is essential that your Upload file be properly setup and that it contain no errors.

The process is run on a 'command line' basis.

For loading web queue of Address Book imports the command is:

```
perl MRloadBackgroundABData.pl
```

For importing a .csv file to the Address Book, the command:

```
perl MRloadBackgroundABData.pl [args]
```

where [args] are:

- -abnumber=<address book number> (address book number for target address book)
- -file=<path to csv file> (file contains csv in correct format for FootPrints Address Book import)
- -csvEncoding=<'local' or 'utf8'> (optional; defaults to 'local') (applies only to utf8 installations of FootPrints and should be set to 'utf8' if the Upload file is in utf8)
- -updateMasterContact=1 (optional; set to 1 if updating master contact records from imported contacts)
- -updateContactsFromMasterContact=1 (optional; set to 1 if updating contacts from the updated master contact)
- -submitter=<address book submitter> (optional; defaults to 'ABLOAD' and will affect only ability to delete or edit depending on role. This can be set by contact in the file.)

The default is to not update master contact records and to not validate fields in the background except to require that the primary key value be set.

Related Topics

- Creating the Data File
- Optional Features for Address Book Imports

Creating the Address Book Data File

To import data into a **FootPrints** Address Book, the data must be contained in a flat text file. CSV files can wrap on multiple lines, with double-quotes, and with commas as the separator. The fields must be in the correct order and data (or a placeholder for optional fields) must be present for each field as outlined below. To create the text file:

- The system new line separator (i.e., the result of pressing "Enter", "Return", "^M", etc.) should appear at the end of each contact.

- The fields for each contact must be separated by a comma "," .
- The actual field names are not specified in the file (i.e., Last Name, First Name, etc.) Instead, the data must be in the order specified in the Address Book Schema. The Schema can be viewed by clicking the Review Schema link on the Load Address Book page. The pop-up window shows you the order of the fields that you must use for your file.

As an example, suppose the Address Book contains six Address Book fields, "Last Name," "First Name," "Email address", "Company", "Phone" and "Fax". The Schema would look like this:

(1) Last Name (Text)	(2) First Name (Text)
(3) Email address (Text)	(4) Company (Text)
(5) Phone (Text)	(6) Fax (Text)

Sample Address Book schema

Therefore, one line in the text file using the CSV format might look like this:

Smith,Bob,bsmith@widget.com,Widget,212-555-1234,212-555-3232

where Smith is the Last Name, Bob is the First Name, bsmith@widget.com is the Email address, the Company name is Widget, the phone number is 212-555-1234, and the fax number is 212-555-3232.

NOTE

The CHECKBOX data type can be loaded. The value for CHECKED is 'on'; for unchecked use either a null field or 'off'.

Optional Features

- Empty fields—All fields in the Schema must be delimited for each Issue. However, optional fields need not contain data. An empty field should be indicated by placing nothing between the field delimiters (commas) or at the end of the line. Suppose the previous example has no value for the "Phone" field:

  Smith=Bob=bsmith@widget.com=Widget==212-555-3232

  Notice the two equals signs, "==", where the previous example has "=212-555-1234".

  Example for a CSV file:

  Smith,Bob,bsmith@widget.com,Widget,,212-555-3232

NOTE

Mandatory fields must contain data, or the import fails, with the exception described below under **Field Count Test**. Mandatory fields are indicated in red in the Schema. To import data with missing information, temporarily make the fields optional on the Edit Address Book Fields page. After the import is complete, change the fields back to mandatory. Optional fields must still be accounted for with empty delimiters.

- **Field Count Test**—By default, each field must be accounted for for each record in the load file. During the data validation step, if any records do not have the correct number of fields (including optional fields accounted for by commas or other delimiter as described above), the load ends. There may be cases where one or more of the last fields in the Schema are optional and there is no data present in the load file, nor are there empty delimiters to represent those optional fields.

  For example, if the load file was created in Microsoft Excel, the CSV file created by Excel does not provide comma characters for null fields at the end of the data line. For this case, we have provided an option to skip the Field Count Test. If you select this option, you can submit a load file without the trailing commas normally required for optional, empty fields. By skipping this test, there is a risk that your data may not be loaded properly, so please be careful in preparing your data.

  Here is an example of an acceptable record if the Field Count Test is skipped, using the Schema above:

  ```
  Smith,Bob,bsmith@widget.com,Widget
  ```

NOTE

Notice that the trailing commas for the two final optional fields (Phone and Fax) are missing. When a CSV file is created by Excel, commas are never included for empty trailing columns, which are normally required by **FootPrints**. By skipping the Field Count Test, a CSV file created from Excel can be used without editing it to add the trailing commas.

- **Wrapped text** (embedded new lines)—Because the text file containing the data to be loaded represents each record in a single line, the records cannot include new line characters.
- **Number fields**—For Integer or Real Number fields, all values must be numeric.
- **Date fields**—Data for Date fields must be in the ISO date format, YYYY-MM-DD, e.g., 2003-09-22, even if your Date Format system or user option is set to an alternate format, such as American or European.
- **Date/Time fields**—Data for Date/Time fields must be in the ISO date format, YYYY-MM-DD HH:MM:SS, e.g., 2003-09-22 11:22:35, even if your Date Format system or user option is set to an alternate format, such as American or European.

- **Drop-down Choice Fields**—Choice field data is not verified. It is your responsibility to ensure that data for such fields matches the list of values you established when you created the choice field.
- **Multi-select Fields**—Multiple values separated by semi-colons can be imported for a multi-select field, e.g., choice1;choice2;choice3
- **Comments**—You may make your data file easier to read by using blank lines and comment lines beginning with a # sign.
- **Deleted fields**—An Address Book may have had certain fields deleted over time. These deleted fields are not displayed in the Schema; they must be ignored in the text file.

Dynamic LDAP Address Book Link

The **FootPrints** Dynamic Address Book Link feature retrieves contact data dynamically from any LDAP-compliant contact database for the Address Book. The Lightweight Directory Access Protocol (LDAP) is the standard Internet directory protocol. Examples of an LDAP-compliant database include Microsoft Exchange 5.x/2000, Sun ONE Directory Server, and Novell Directory Services. If this option is used, **FootPrints** dynamically accesses the outside database for contact information in the Address Book.

NOTE

This feature is an optional add-on module and must be activated on your **FootPrints** server for the option to appear. Please contact your Numara Software salesperson or reseller if you would like to purchase this option.

This section contains the following topics:

- Selecting an LDAP Directory for the Address Book
  - Creating a New Project
  - Convert an Existing Address Book
- LDAP Address Book Configuration
  - Name for LDAP Address Book
  - LDAP Server Name
  - LDAP Server Port
  - LDAP Search Base for Directory Entries
  - Anonymous Binding or Using Distinguished Name and Password
- LDAP Address Book Field Mapping
  - Available LDAP/Exchange Attributes

- FootPrints Field Names to Map to LDAP/Exchange
- LDAP Field Setup
  - LDAP Attributes
  - Displayed Name and Field Type
  - FootPrints Fields
  - Customer Primary Key Select
  - Organizational Unit
- Using an LDAP Address Book
  - Limitations

NOTE
Throughout this section, the names "LDAP Address Book" and "LDAP Directory" are used to refer to any LDAP-compliant contact database, including Microsoft Exchange.

Selecting an LDAP Directory for the Address Book

There are two ways to select an LDAP Directory for an Address Book:

- Create a new Project
- Convert an existing Address Book

These two options are discussed below.

Create a New Project

New projects are created by selecting to the Administration | System | Projects link on the **FootPrints** Toolbar. Only the System Administrator has access to this option.

The instructions below refer specifically to linking to an LDAP Address Book when creating a new project. For complete instructions on creating Projects, please refer to the section on Projects in the chapter on System Administration.

There are three options for creating a new project:

61. **Use the Wizard to create my project**—The System Administrator has the option to create a new **FootPrints** Address Book, Link to an existing Address Book, or link to an LDAP Address Book.
62. **Create the project on my own**—The System Administrator has the option to create a new **FootPrints** Address Book, link to an existing Address Book, or link to an LDAP Address Book.
63. **Use an existing project configuration**—Only the existing Address Book for the originating the project or a new **FootPrints** Address Book is allowed. If the

Address Book for the originating project is an LDAP one, the new project links to the same LDAP database using the same fields.

In options 1 and 2, select link to an LDAP Address Book and the next page displayed (after the other project options are selected) is the LDAP Configuration page. In option 3, to link to an LDAP Address Book, the options are: a. select FootPrints Address Book and then convert the Address Book later (see below) or b. convert the Address Book associated with the originating project to an LDAP Address Book (also see below).

Convert an Existing Address Book

An existing FootPrints Address Book can be converted to an LDAP Address Book at any time. This is done from the Address Book Administration Edit Options page under Change to LDAP/Active Directory Address Book. Click the radio button for Change to LDAP, enter your password, and click "GO". The LDAP Configuration page is displayed.

When converting from a FootPrints Address Book to an LDAP Address Book, the references between Issues and address contacts may be affected. Contacts are linked to Issues based on the primary key in the Address Book. In order to ease the transition, you can map existing Address Book fields to LDAP field attributes. Although not all fields map directly to the LDAP attributes, for those that do map directly, you can search the Address Book for a particular contact and any existing Issues with contact data that matches the primary key in the new LDAP Address Book are associated with that contact.

Dynamic Address Book Link (LDAP) Address Book Configuration

For FootPrints to access an outside contact database (e.g., Active Directory, Lotus Domino Server, etc.) for user contact information, the information described below must be entered. Please consult with your System Administrator if you need to gather some of this information. If the LDAP Address Book has been converted from a FootPrints Address Book, it may be converted back by checking a checkbox that appears at the top of the page.

Name for Address Book

This is an arbitrary name used to identify the Address Book in FootPrints, ie.g., Widget Company Users. The field in the wizard is pre-filled with the name entered during installation, but it can be changed here. The name of the Address Book is visible to users in the Address Book.

LDAP Server Name

Enter the full domain name of the machine hosting the contact database server.

LDAP Server Port

This is the port that FootPrints uses to communicate with the LDAP contact database to retrieve user contact information. In most cases, the default value of 389 should be used. However, when a machine has more than one directory, a different port number may be used. Often when port 389 has already been used, administrators set port 390 as the LDAP port. An additional option for users beside the standard LDAP port (389) is the Global Catalog port for Active Directory (3268). This enables LDAP to access additional users from trusted domains using a set of common LDAP attributes. The typical scenario in which this would be used is when a large organization has a number of offices that each maintains an Active Directory for its local users. Using the standard port, you might be able to retrieve only a local office's users. Using the Global Catalog port, you can often retrieve everyone, assuming the search base is set correctly.

LDAP Search Base for Directory Entries

LDAP (including Active Directory) stores its data in a tree structure. To enable FootPrints to retrieve user information, a search base specifying where to search in the tree, and in what order, must be specified here. The search base is formed by adding names of the root and each subsequent branch of the tree until you reach the point where a search should commence. The search base should be the branch of the tree closest to the data being searched. In most instances, all data being sought are in one branch of the LDAP tree. For instance, if the root of the LDAP Directory tree is dc=server, dc=com and the next branch to be taken is ou=Users, which contains all the directory information, the search base would be: ou=Users, dc=server, dc=com

If users exist in multiple search bases, place each on a separate line. They will be searched in order for authentication from top to bottom.

The form of the search base is different for various LDAP servers. Please speak to your LDAP administrator, refer to the product documentation for that server or contact Numara Software support for help.

NOTE

Spacing, punctuation, and capitalization must be exact for a search base to work correctly. For instance, if one of the values in your search base has spaces and/or punctuation (e.g., o=My Company, Inc.), you must place the value in quotation marks (i.e., o="My Company, Inc.") and make sure that the spacing, punctuation, and capitalization are correct.

Last Name of Any Person Known to be in the Directory

Enter the last name (surname) of a contact in the LDAP directory. This is the name that FootPrints uses to test the connection to your LDAP server. The name should contain values for all the LDAP attributes (fields) you plan to use.

Distinguished Name (Optional)

Some LDAP servers allow an anonymous login. In these cases, a distinguished name and password are needed; however, if your server requires an authenticated bind of a user to access the directory, you should enter the distinguished name and password of the Administrator user here. Specifying the distinguished name and password can also improve performance in searching and retrieving data from the LDAP server.

The distinguished name of the binding user can be obtained from the LDAP Administrator or can be found using the techniques discussed above for the LDAP Search Base. The distinguished name to use for binding is generally cn=userid (where userid is the ID for the account used for binding) followed by a comma and then the search base. For example, if the User ID is Administrator:

- **For Active Directory**:

  If the search base is: cn=Recipients,ou=organization,o=company

  Then the distinguished name will be: cn=Administrator,cn=Recipients,ou=organization,o=company

  Active Directory also provides some alternatives in lieu of a distinguished name. For example, if you know the domain and userid of a user, you could place in the distinguished name field: DOMAIN\userid

  An additional alternative for Active Directory is to use the userprincipalname of a user, which is typically of the form: userid@domain.com

- **For Exchange 2000**:

  If the search base is: cn=Users, DC=NTdomain,DC=internetName,DC=com

  Then the distinguished name will be: cn=Administrator,cn=Users, DC=NTdomain,DC=internetName,DC=com

Be sure to leave all information of the user in the distinguished name. Do not omit such information as a CN or UID as you would with a search base. Leave blank if binding anonymously.

> **NOTE**
> Active Directory normally does not support anonymous binding. If you have Active Directory, you may need to fill in the distinguished name and password.

Password (Optional)

Place the password of the binding user here. This is the password of the Administrator specified in the distinguished name above. Leave blank if binding anonymously.

After all of the information is entered for Step 2, click **GO**. **FootPrints** attempts to connect to your LDAP/Active Directory server and search for the contact specified above using the search base and other information entered. If the connection is successful, the Address Book Field Mapping page is displayed. If FootPrints is not able to connect to your LDAP server, an error is displayed or the browser times out. You can contact your LDAP administrator or Numara Software Support is you need assistance.

LDAP Address Book Field Mapping

The LDAP Address Book Field Mapping screen appears after LDAP Address Book Configuration is complete only if an existing Address Book is being converted. New Address Books do not require this step. This screen is also displayed if the LDAP configuration for an Address Book is altered.

When an LDAP Address Book configuration has been changed, the administrator can minimize the disruption to the database caused by the change. When creating new Issues, contact information is stored according to the Address Book fields selected. Were these fields to change, part of the contact information would be lost. By mapping the new LDAP Address Book fields to previously existing Address Book fields, disruption is minimized.

Available LDAP Attributes

A list of available LDAP Attributes is in the left column at the bottom of the page. These are attributes found on the LDAP server based upon the search base provided in your LDAP configuration. Each of these attributes is available to match to the current schema, as described below.

FootPrints Field Names to Map to LDAP

The second column at the bottom of the page contains a table, which contains two columns. The first column is a list of all fields in the current schema. The second column contains a drop-down select box for each of those fields. This select box allows the administrator to delete the field or to map the field to any of the LDAP attributes which were listed as available for use. Although some LDAP attributes are obvious in how they relate to the FootPrints fields, others are not. The LDAP administrator should assist in mapping LDAP attributes to FootPrints fields.

It is important that a proper mapping is made so that the contact information previously entered in the ticket entries matches the Address Book and you are required to delete or map every field.

Once all selections have been made and the  GO button is pressed, the Administrator enters the LDAP Field Setup page.

LDAP Field Setup

System or Project Administrators can get to the LDAP Field Setup page in one of two ways:

- Following the Field Mapping page after a change in LDAP configuration.

- Selecting Administration | Address Book | Field Maintenance from the **FootPrints** Toolbar.

The sections on the LDAP Field Setup page should be filled in as described below.

Fields on this page are set and edited in the same fashion as the fields in the Project Field Maintenance page, with the exception of the LDAP Attributes field. Refer to the Adding Fields topic in the Project Field Maintenance section of this document for details.

LDAP Attributes

A list of available LDAP Attributes is provided in a drop-down field. These attributes, found on the LDAP server, are based on the search base provided in your LDAP configuration. You cannot use the same attribute for more than one field. The LDAP "manager" field is available only if the address book field type is "Supervisor."

Using an LDAP Address Book

Once the LDAP Address Book is fully configured, the contact data in the Address Book is automatically pulled from the LDAP directory. The LDAP Address Book looks virtually the same as a **FootPrints** Address Book. LDAP Address Book data is not stored in a **FootPrints** Address Book table; it is always taken directly from the LDAP directory. However, the contact data for a particular customer, when chosen using the Select Contact button on the Create Issue or Edit Issue pages, will be saved along with the history of the Issue.

The contact data saved in an Issue is a snapshot of the data taken from the LDAP database at the time the Select Contact was performed. If the customer's data changes at a later date (e.g., the customer's phone number changes), it is not reflected in the history of the Issue. It will be reflected the next time that contact data is accessed from the LDAP directory.

Limitations of LDAP Address Book

Using an LDAP directory, once properly configured, is no different than using a **FootPrints** Address Book, with the following exceptions:

- **FootPrints** permits only read access to an LDAP directory. Write access is not available in the current release.
- If a server limit is set on the number of contacts to be returned for an LDAP query and one is attempting to look at any query that would return a number of results greater than the server limit, some of the results are missing and the missing results may be randomly dispersed throughout. This most commonly appears when browsing through the entire Address Book. Any more specific search for a contact work correctly even if the contact does not appear when browsing the Address Book. To correct this problem, the number of results

returned for an LDAP query can be raised on the LDAP server (Active Directory, Sun ONE Directory Server, etc.)

- The Address Book Homepage and the Select Contact page do not allow browsing using A-Z links. In addition, the Address Book Homepage does not list the first fifty contacts in the Address Book; instead, it displays the Address Book search. Because LDAP does not support browsing of contacts, and many users have large LDAP Address Books with various response times, the browsing options were removed from the interface to prevent time-outs. To find a contact, fill in one or more fields and click **GO**. The non-LDAP **FootPrints** Address Book is not affected.

Dynamic SQL Address Book Link

The**FootPrints** Dynamic SQL Address Book Link feature retrieves contact data dynamically from supported contact databases for the Address Book via ODBC. Open DataBase Connectivity, or ODBC, is a standard relational database access method developed by Microsoft Corporation. The goal of ODBC is to make it possible to access any data from any application, regardless of which database management system (DBMS) is handling the data. **FootPrints** harnesses this power by providing access to existing ODBC-compliant contact data without requiring that the records be loaded into a separate **FootPrints** Address Book. The supported ODBC-compliant databases include Oracle, SQL Server, Access, MySQL, and DB2.

NOTE

If a customer process has an Access database open, **Footprints** may not be able to read that Access database until the customer process closes. If you encounter this situation, check the permissions for the folder in which the database (.mdb) file is located and make sure that the folder is enabled for read and write permissions for everyone. When the folder is enabled with read and write permissions for everyone, the database should be available to **FootPrints** and the customer process at the same time.

FootPrints dynamically accesses the outside database for contact information in the Address Book. This feature is an optional add-on module and must be activated on your **FootPrints** server for the option to appear. Please contact your Numara Software salesperson or reseller if you would like to purchase this option.

NOTE

This feature is part of the Dynamic SQL Database Link add-on module and must be licensed. Please contact your salesperson for more information on obtaining a license to enable this feature.

This section contains the following topics:

- Selecting a data source for the Address Book

- Linking to an Existing Address Book
- Convert an Existing Address Book

- Naming the Data Source
- Dynamic SQL Address Book Configuration
  - Linking to the Data Source
  - Selecting the table used from the Data Source
  - Data Source Table Mapping
  - Address Book Field Setup
    - Displayed Name and Field Type
    - FootPrints Fields
    - Customer Primary Key Select
    - Organizational Unit
- Using a Dynamic SQL Address Book
  - Limitations

Selecting a Data Source for the Address Book

There are two ways to link to a data source for an Address Book:

- Create a new Project
- Convert an existing Address Book

These two options are discussed below.

Create a New Project

New projects are created by selecting the Administration | System | Projects link on the **FootPrints** Toolbar. Only the System Administrator has access to this option.

The instructions below refer specifically to linking to an ODBC Address Book when creating a new Project. For complete instructions on creating Projects, please refer to Projects in the chapter on System Administration.

There are two options for creating a new project:

64. **Create the project on my own**—The System Administrator can create a new **FootPrints** Address Book, link to an existing Address Book, or link to an ODBC Address Book.
65. **Use an existing project configuration**—Only the existing Address Book for the originating Project or a new **FootPrints** Address Book is allowed. If the Address

Book for the originating project is in ODBC format, the new project links to the same ODBC database using the same fields.

In option 1 select the Create a Dynamic SQL Address Book Link and the next page that is displayed (after the other Project options are selected) is the ODBC Configuration page. In option 2, if you would like to link to an ODBC Address Book, the options are: a. select **FootPrints** Address Book and then convert the Address Book later (see below), or b. convert the Address Book associated with the originating project to an ODBC Address Book (also see below).

Converting an Existing Address Book

An existing **FootPrints** Address Book can be converted to a Dynamic SQL Address Book at any time. This is done from the Address Book Administration Address Book Type page. Under Select Address Book Type, click the radio button for Dynamic SQL Address Book Link (SQL Server, Oracle, MySQL or Access), enter your password, and click **GO**. The Configure Address Book Connection to Dynamic SQL Address Book (Step 1) page is displayed. For more information about configuring the Address Book, please review Setting up a Relational Database.

When converting from a **FootPrints** Address Book to a Dynamic SQL Address Book, the references between Issues and Address contacts may be affected. Contacts are linked to Issues based on the primary key in the Address Book. In order to ease the transition, you can map existing Address Book fields to ODBC field attributes. Although not all fields map directly to the ODBC attributes, for those that do map directly you may still search the Address Book for a particular contact and any existing Issues with contact data that matches the primary key in the new ODBC Address Book is associated with that contact.

Naming the Data Source

Data sources must be named before **FootPrints** can link to them. On Windows, ODBC data sources are configured by selecting Data Sources from the Windows Administrative Tools, which opens the ODBC Data Source Administrator. Your System Administrator can help you with this task if necessary. You must have the proper ODBC drivers installed on your system. **FootPrints** currently supports Access, SQL Server, MySQL, and Oracle.

66. Select System DSN, which allows the data source to be visible to all the system users, including **FootPrints**.
67. Select Add. A list of available drivers pops up.
68. Select the driver that corresponds to the correct data source.
69. Select Finish.
70. In the next pop-up, enter a descriptive name under Data Source Name.

71. Depending on the type of data source you selected, select the location of the database.
72. Configure any necessary security options, including specifying the name and password that FootPrints will use to access the data source.

Special Notes for Access Users

73. Open Access.
74. Select Tools/Options. The View tab should be in the front.
75. Near the top under the section called Show, check the System objects checkbox.
76. Open the database file using Access.
77. Select Tools/Security/User and Group Permissions. Make sure that the user with which you log into the database is highlighted (by default this is Admin).
78. Highlight the MSysObjects database located on the right side (if you don't see it, you probably didn't do Step 1 correctly)
79. Check the box for Read Data. Read Design is checked automatically as well.
80. Press the Apply button. The setup should work correctly.

NOTE

FootPrints supports linking to table queries for Access and table views for other databases that have this feature. Your database administrator can help you determine how your external databases are configured.

Dynamic SQL Address Book Configuration

For FootPrints to access an external database for the Address Book, information about the external data source must be entered. If you don't have this information, check with your Database or System Administrator. This section describes how to configure the link to the external data source. To access the configuration wizard, select Administration | Address Book | Configure Dynamic SQL Address Book.

Topics included in this section are:

- Linking to the data source
- Selecting the table that will be used from the data source
- Mapping fields from the data source to FootPrints
- Adding additional fields from the table to FootPrints

Linking to the Data Source (Windows version)

Step 1 of Address Book Configuration is as follows:

- **Name for Address Book**—This is an arbitrary name used to identify the Address Book in FootPrints, e.g., Widget Company Users. The field in the wizard is pre-filled with the name entered during installation, but it can be changed here. The name of the Address Book is visible to users in the Address Book.
- **Data Source Name**—From the drop-down list of databases available to you, select the one you want your FootPrints Project to use as the Address Book. If you don't see the one you need, you may need to name the data source.
- **Database Typ**e—The database types currently supported for FootPrints running on Windows include SQL Server, Access, MySQL, and Oracle. Based on the Data Source Name you selected, FootPrints places a default value in this field based on data drivers associated with the data source.
- **Server User**—This is the name of the database login ID for the data source. If you do not have this information, check with your System or Database Administrator. If you configured the data source name, use the server user ID that you specified.
- **Server Password**—This is the password of the server user. If you configured the data source name, use the server user password that you specified. Your Database Administrator should have this information.

When you have finished with Step 1, click Next.

Linking to the Data Source (UNIX version)

Step 1 of Address Book Configuration is as follows:

- **Name for Address Book**—This is an arbitrary name used to identify the Address Book in **FootPrints**, e.g., Widget Company Users. The field in the wizard is pre-filled with the name entered during installation, but it can be changed here. The name of the Address Book is visible to users in the Address Book.
- **Hosting Server**—From the drop-down list of databases available to you, select the one you want your **FootPrints** Project to use as the Address Book. You can only connect to the same database type that **FootPrints** is using
- **Oracle SID** or **MySQL Database**—The database types currently supported for **FootPrints** running on Windows include SQL Server, Access, MySQL, and Oracle. Based on the Hosting Server you selected, **FootPrints** places a default value in this field based on data drivers associated with the data source.
- **Server User**—This is the name of the database login ID for the data source. If you do not have this information, check with your System or Database Administrator. If you configured the data source name, use the server user ID that you specified.

- **Server Password**—This is the password of the server user. If you configured the data source name, use the server user password that you specified. Your Database Administrator should have this information.

When you have finished with Step 1, click Next.

Selecting the Table That Will Be Used from the Data Source

In Step 2 of Address Book Configuration, you define the table in the data source that you use for the Address Book.

- **Select a Table**—Click on the drop-down list of tables for the data source and select the table that contains the data you want to use in your project.

When you have finished with Step 2, click Next.

Mapping Fields from the Data Source to FootPrints

In Step 3, you associate fields in your external data source with the fields that are displayed in the Contact Information section of your Issue. For example, to map Last Name, First Name, and User ID to fields in your external data source, you must:

- **Last Name**—Select the field from the drop-down list of fields in the external data source that corresponds to the Last Name in the Address Book.
- **First Name**—Select the field from the drop-down list of fields in the external data source that corresponds to the First Name in the Address Book.
- **User ID**—Select the field from the drop-down list of fields in the external data source that corresponds to the User ID in the Address Book.

Continue mapping fields from the external data source to **FootPrints** contact information. When you have finished click Next.

NOTE

Your list of fields will vary depending upon your Project. For example, depending on what your Project is tracking, you might be mapping employee information or facilities information.

Adding Additional Fields from the Table to FootPrints

In Step 4, the last step in the configuration process, you can add additional fields to the Address Book that are available in the external data source table. The final page for configuring the additional fields is identical to the page you use to add new fields to a **FootPrints** Address Book or a **FootPrints** Project, with the addition of the External Database Field drop-down list.

To configure additional fields for the Address Book:

1. Click on the drop-down list of fields in External Database Field.

2. In the **Name** field, enter the name that **FootPrints** uses for this information. You can use the same name used in the external data source.
3. Define the Permissions for **FootPrints** users.
4. Click **Create Field**. The field is added to the Field List.
5. Continue adding fields until you have all the fields from the external data source that you want to include in the Address Book.
6. Select a Primary Key from the field list to be used to find issues related to the specified contact.

NOTE FOR ACCESS USERS
If any records in the external database are missing data in the Primary Key field you select, FootPrints cannot find that record. This is a specific characteristic of Access.

7. If required, select a field to be used as the Organizational Unit. This is useful for reporting and searching.
8. When you have finished, click **Finish**.

Using a SQL Address Book

Once the Dynamic SQL Address Book is fully configured, the contact data in the Address Book is automatically pulled from the external directory. The SQL Address Book looks the same as a **FootPrints** Address Book. The SQL Address Book data is not stored in a **FootPrints** Address Book table; it is always taken directly from the external directory. However, the contact data for a particular customer, when chosen using the Select Contact button on the Create Issue or Edit Issue pages, is saved along with the history of the Issue.

NOTE FOR ACCESS USERS
If any records in the external database are missing data in the Primary Key field you select, **FootPrints** cannot find that record. This is a specific characteristic of Access.

The contact data saved in an Issue is a snapshot of the data taken from the SQL database at the time the Select Contact was performed. If the customer's data changes at a later date (for example, the customer's phone number changes), it is not reflected in the history of the Issue. It is reflected the next time the customer's contact data is accessed from the SQL directory.

Limitations of SQL Address Book

Using a SQL directory, once properly configured, is no different than using a **FootPrints** Address Book, with the following exceptions:

- **FootPrints** permits only read access to an external directory. Write access is not available in the current release.

- If a server limit is set on the number of contacts to be returned for a SQL query and if you are attempting to look at any query that would return a number of results greater than the server limit, some of the results are missing and the missing results may be randomly dispersed throughout. This most commonly appears when browsing through the entire Address Book. A more specific search for a contact works correctly even if that contact does not appear when browsing the Address Book. To correct this problem, the number of results returned for a SQL query can be raised on the external server (Exchange, Sun ONE Directory Server, etc.)

Chapter 8: Perform Global Administration

Configure System-wide Settings

General system preferences can be configured on this page. To access this page, select Administration | System | Appearance | System Preferences from the **FootPrints** Toolbar.

The directory on the server where **FootPrints** is located on your system is displayed at the top of the screen.

The following options are also available:

- **Define the SMTP server** (originally defined during installation)—This is the email server to which email notifications are sent.
- **FootPrints Base URL**—This is the URL for the **FootPrints** server. Change this if the server address of the **FootPrints** server changes or if **FootPrints** is installed to an SSL-enabled server (e.g., https).
- Choose the name for **FootPrints** records, e.g., Issue, Entry, Ticket, etc.
- Choose the name for **Address Book** records. We recommend keeping this as the default (Contact).
- Select the default font for **FootPrints**.
- **Maximum Incoming Body Size**—Define the largest body size in bytes for any incoming email.

- Search Frame Logo—By default, the FootPrints logo is displayed in the top left corner of every FootPrints page. This can be changed here to your company logo. The image must be no larger than 180x68 pixels. In addition, by default the logo is a clickable link that connects to the Numara Software web site (www.numarasoftware.com). You can change the destination of this link to your own web site or disable the link altogether. Logos can also be defined per project on the Project Options screen.
- Login Screen Logo—This image can also be customized. It can be any size.
- Currency Symbol—Change the default currency symbol displayed in Time Tracking reports. Any symbol can be entered and you can select to display the symbol before or after the currency amount.
- Multi-line text field size—Optionally change the default height and width of multi-line text field input boxes throughout FootPrints, including the Description field, and custom multi-line text fields. These fields can also be individually defined by the Project Administrator.
- System administrator to refer users to when error messages are displayed—Select an administrator for users to contact when they encounter an error.

When you are finished making changes, click GO to submit the changes.

Configure Multiple Language Support

FootPrints provides a number of system language options. You can create your own language directory and translate FootPrints into your language of choice for localization. No programming is required; only plain text files need to be translated. In addition, you can use this feature to change only some of the embedded text in the FootPrints pages without translating the whole program. For example, it can be used to change the title of the built-in field Description to Notes in every page in which that field appears. For complete information on multiple language support, refer to the Numara FootPrints Reference Manual.

Change the Display Colors for FootPrints

You can change the background colors, table colors, and some text colors in FootPrints from this page. The Color Editor lets you select the colors for eight different areas within FootPrints, including:

- Body Background—Background color of FootPrints (defaults to off-white).

- **Table**—All tables throughout **FootPrints** (defaults to light green).
- **Highlighted Text**—Any highlighted text throughout **FootPrints** (defaults to red).
- **Page Header Text**—All header and title text (defaults to dark blue).
- **Dialog Heading**—Heading bars of most **FootPrints** pages.
- **Dialog Heading Text**—All header text that appears in the dialog heading bars (defaults to light blue).
- **Home page List 1**—One of two alternating colors for the Homepage list of Issues (defaults to light blue).
- **Home page List 2**—One of two alternating colors for the Homepage list of Issues (defaults to light green).
- **Home page Text 1**—One of two text colors use throughout **FootPrints** pages, including the Toolbar text (defaults to dark blue).
- **Home page Text 2**—The other of two text colors use throughout **FootPrints** pages, including the Toolbar text (defaults to dark green).

NOTE

To get maximum value from the Color Editor, make sure your browser can display all of the colors at your disposal. To change your color palette, go to Start | Settings | Control Panel, choose Display and go to Settings to make sure your monitor can display more than 256 colors (Windows only).

To change colors:

1. Select one of the ten choices listed above.

2. Either:

- Select a color in the Color Palette or
- Type the hex value of a color (in hex code format, i.e., 000000-FFFFFF) in the Hex color value field, then click **Apply**.

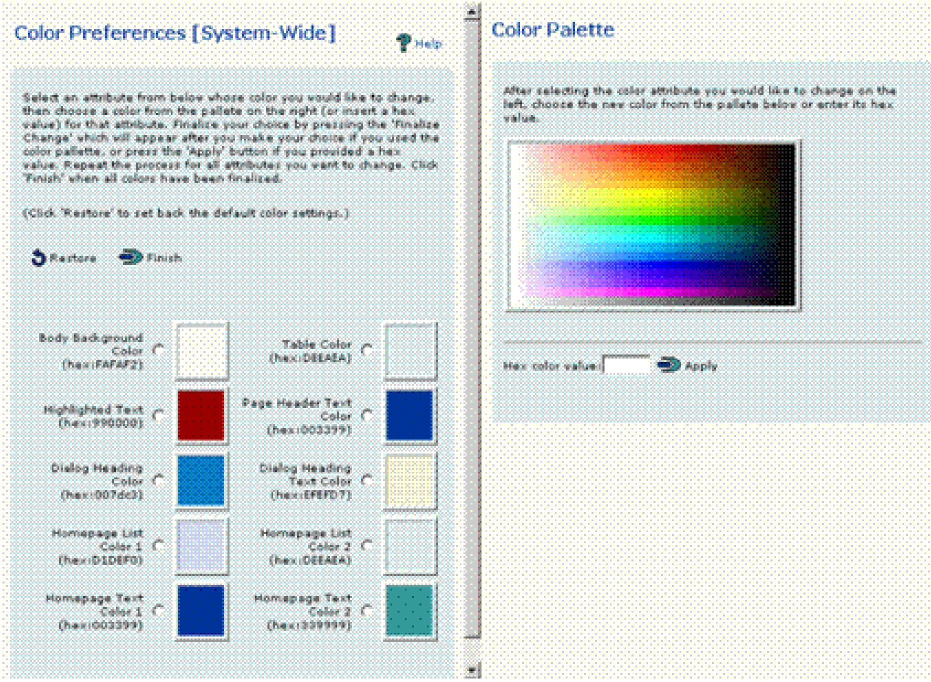
A box is displayed below the Color Palette showing the old and new colors.

3. You can adjust the color choice at any time before you click the **Finalize Change** button to implement the color change. You can continue to change other colors on this page

4. When you are satisfied with all of your changes, click **Finalize Changes** to apply them.

5. To restore all colors to their default values, click the **Restore** button.

To insure proper functionality, you may have to clear out your browser's cache, refresh the screen, and/or close and re-open the browser to see all of the new colors correctly.



Customize the system colors

Choose the Date Format

This option determines how dates are represented throughout FootPrints. Users can also set a personal preference for dates. This affects all projects and can be changed at any time. It does not affect the internal format FootPrints uses to store dates, only how dates are displayed.The options are:

- American—MM/DD/YYYY
- European—DD/MM/YYYY
- ISO—YYYY/MM/DD

To specify the date format:

1. Select Administration | System | Date Format. The Date Format page is displayed.
2. Select the format you want by clicking one of the radio buttons.
3. Enter your administrator password and then click the SAVE button.

Rename FootPrints Fields

FootPrints comes with a number of built-in fields and options that, while they can be customized, cannot be removed. The fields can be customized in that the labels for these fields can be changed for display throughout the system or Project. When a change is made to a field label, it is displayed dynamically in all FootPrints forms, including Create Issue, Edit Issue, Advanced Search, and Advanced Reports. Customizable internal fields include:

- Title
- Status
- Priority
- Description—The Description field can also have its size (the number of rows and columns) customized.
- Assignee
- Request

Along with changing the names of FootPrints fields, the default names of the following built-in statuses can also be changed from the System Administration option:

- Open
- Closed

NOTE

Open and Closed can be changed per Project on the Status Administration page.

Change FootPrints Fields for a Project

81. Select Administration | Project | Fields | FootPrints Fields from the FootPrints Toolbar.
82. Enter new names for one or more fields. Include both the both the singular and plural names for each field changed.
83. Once completed, enter your password to save and click GO.

Change FootPrints Fields System-Wide

84. Select Administration | System | Appearance | FootPrints Fields from the FootPrints Toolbar.
85. Enter new names for one or more fields. Include both the both the singular and plural names for each field changed.
86. Once completed, enter your password to save and click GO.

NOTE
These settings are system-wide; however, project settings override system settings.

Create an Archive Project to Save Old Data

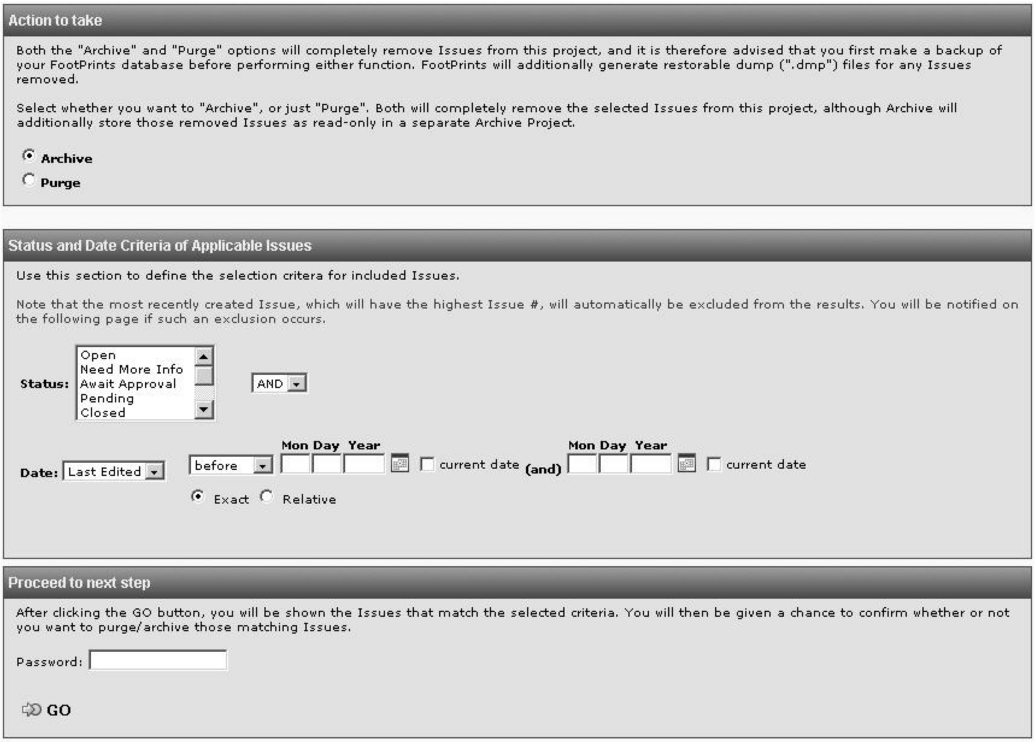
Selected issues can be completely removed from a **FootPrints** Project using the Database Maintenance feature. Specifically, issues that have been changed to the Deleted status are good candidates for archiving since Issues that have spent significant time as Deleted are no longer needed on a regular basis, but can be stored for reference information. These issues can be stored as read-only in a separate archive Project, which is useful for cleaning up the database by removing obsolete issues from a Project. Fewer issues in a Project leads to faster searching and reporting times, speeding up database access times.

IMPORTANT
Make a backup of your **FootPrints** database before performing any purge function.

NOTE
This feature is not available in the **FootPrints** database versions. To get the benefit of this feature, you must upgrade to one of the SQL/ODBC-based versions for Windows (MS SQL Server, Access, etc.) or DBD/DBI-database versions for UNIX/Linux (Oracle, MySQL, Postgres, etc.)

1. Select Administration | System | Projects, then click the **GO** button in the Database Maintenance section.
2. Select the Archive option as the Action to Take.
3. The Status and Date Criteria of Applicable Issues section allows you to define the selection criteria for Purge. This can be based on either the Issue's current status, the date it was last edited/created, or a combination of both.
   a. By default, only the Deletedstatus is highlighted.
   b. Highlight additional statuses as needed.
   c. Choose issues based on one specific date that they were created or last edited or choose all issues before or after a particular date.
   d. Choose AND to select issues that must meet both the status and date criteria
   e. Choose OR to select issues that meet either the status or the date criteria.

TIP
Set up an escalation rule that automatically changes the status of closed issues to Deleted for issues that are a certain age. Then you can skip this step and just use the default highlighted status of Deleted.



4. Type in your password and click **GO**.
5. **Matching Issues For Purge**—All issues that meet the Purge search criteria are listed here and highlighted. Review the list to ensure you are purging issues that meet your intended criteria. You can deselect issues by holding the CTRL key and left clicking the issue with your mouse. Only highlighted issues are purged.
6. **SQL Query**—**FootPrints** displays the query that was used to retrieve the issues that have met the archive search criteria for your review.
7. **Archive Location**—Each "source" Project has a designated "destination" archive project. The first time you archive Issues, you must provide a name for the archive Project.
   a. **Name of new archive project**—The first time you archive Issues from a given Project, you must set up some archive Project information. Give your archive

Project a name. It is suggested that you use a name that is similar to the original Project for your archive Project, but not too similar. If your Project's name is Helpdesk try using Archived Helpdesk instead of Helpdesk (Archive). This tells you which Project is archived, but does not confuse people by starting with the same name.

b. **Name of new project's address book**—You can choose to create a new Address Book for the archive Project or link to the existing one. You must provide a Project name if you are creating a new one. If linking to an existing Project, check the Link to current project's address book instead box if you do not want to create and archive the Address Book. We suggest you link to the original.

c. All subsequent archive attempts from the same Project present an option to use the same archive Project or create a new one. Your business needs determine whether you want one or multiple archive Projects for a single source Project. If you are reporting on data by year, you might consider creating separate archive Projects for each year, especially if you have many issues to archive that you use for reporting.

8. **Scheduled Run-Time**—Archive jobs can be run immediately or at a time when server activity is light (if you have a large job with many issues to archive).
   a. **Start Immediately**—Run immediately. Immediately means the archive begins the next time the **FootPrints** scheduled service runs, which could be up to one minute from the time you enter your password and click **GO**.
   b. **Start at the following data and time**—Enter the date and time you want to run the job. Since the entire process could take a long time to finish, depending on the number of records selected, you may want to schedule large jobs when there is little server activity to avoid server overload, e.g., on weekends or late at night.
9. **Scheduled Jobs Pending In Current Project**—This section lists those jobs scheduled to run in the future, as configured in the previous step.
10. Type in your password and click **GO**. After clicking the **GO** button, click OK when asked to confirm that you want to complete the purge. After clicking OK, **FootPrints** schedules the purge to run as a background process based on the time set up in the Scheduled Run-Time step. This include jobs scheduled to run immediately.
11. When the purge runs, **FootPrints** generates a dump (.dmp) file for any Issues removed so that they can be easily restored. **FootPrints** saves this file in the Project's directory on the server. For example, Project #1's recovery files are stored in the footprints\db\MASTER1\MR\DumpsFromPurgesdirectory.

Chapter 9: Perform High-level Project Administration

Project Administrators can set options on a per project basis. You can create custom project fields, add users to a project, etc. The Project Setup Wizard configures most of the quick start features. Additional customizations can be made, and FootPrints can be further refined by selecting Administration | Project from the FootPrints Toolbar. This section lists some of the options you might want to configure soon after installation. These options are:

- Configure project appearance
- Define the Priority field
- Enable and define time-tracking
- Validate email addresses
- Configure add–on modules :
- Configure miscellaneous project options

Configure Project Appearance

Project appearance encompasses specifying things like the Project name, the order in which the Issue, Contact, and other sections are displayed, the number of columns that are displayed on the Create Issue and Edit Issue pages, etc.

To configure the Project appearance, select Administration | Project | Project Options. The Project Options page is displayed. The following sections discuss the options you can change from the Appearance section of the Project Options page.

Project Name

This feature allows you to change the current project's name, which was given when the project was first created. To change the name, erase it and replace it with the new name. This does not affect the project's data or database directory.

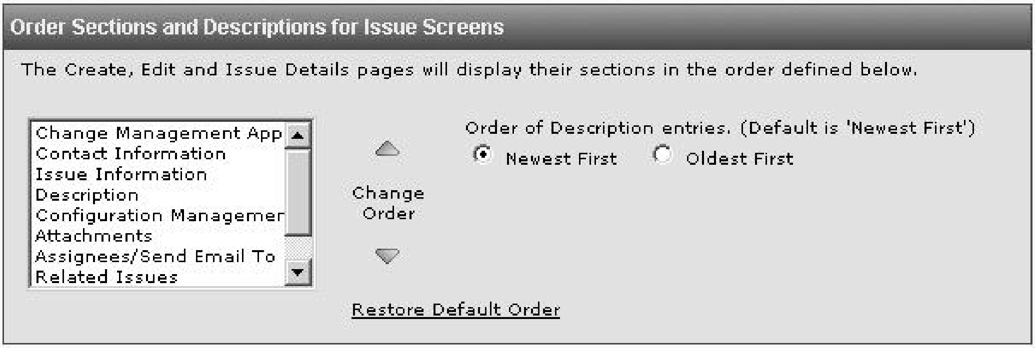
Order Sections for Create/Edit Issue and Details Pages

This option allows the Project Administrator to change the display order of the sections of the Create/Edit Issues and Details pages. The defaults are:

- Change Management Approval (if you have the add-on module)
- Contact Information
- Issue Information
- Description
- Configuration Management (if you have the add-on module)
- Attachments
- Assignees/Send Email To
- Related Issues
- Time Spent
- History

To change the display order of the sections, highlight a section name and use the up and down arrows to move the section. When you are finished, click GO at the bottom of the page.

By default, the most recent Description appears first in the Descriptions section of the Issue Details page. You can change this so that Descriptions are displayed in order with the Oldest Description at the top down to the most recent Description at the bottom. Check the appropriate radio button to select the order in which you want Descriptions displayed.



Order sections on the Create/Edit Issue and Details pages

Number of Columns on Create and Edit Page

The Create Entry and Edit Entry pages display project and address book fields in columns to save space. Choosing more columns reduces the amount of scrolling you need to do on these pages. Choosing fewer columns better accommodates large field names and small screen resolutions. Choices are 1-6 columns. This option also determines the number of columns displayed on the Details page.

Drop-down/Multi-Select Field Width /Assignee Picker Field Width

To achieve visual flow and alignment within Issue forms, all user-defined choice fields are drawn with the same fixed width. Sometimes, however, choices for these fields are too long to fit into the drop-down or multi-select and are displayed as truncated. If you this is a problem in your organization, you can configure the width to allow each drop-down and multi-select field to be exactly as long as it needs to be to accommodate its longest choice. The drawback to this configuration option is that disabling the formatting is likely to disrupt the formatting of the form layout.

In the case of the Assignee Picker Field Width option, you can specify the width of the assignee picker field in pixels. The default size is 170 pixels wide.

Default Language

FootPrints supports multiple languages for display. If multiple languages are available in the current installation, this option allows you to choose a default language for the current project. If Use System Default, is selected, then System Administrator's default setting applies for this project. This option can be overridden by individual user preferences.

For information on multiple language support, please refer to *Language* under *System Administration* in the Numara FootPrints Reference Manual.

FootPrints Terminology

The name for records in the current project can be changed here. For example, in a Help Desk project, a record might be called "Case", while in a Software Development project, a record might be called "Change Request". Both the singular and plural forms can be specified. The name chosen here is reflected throughout the project. The default name for records is the system-wide preference.

Project Logo

Each project can have be customized with any image in the top left-hand corner. Browse for the image on your local machine or network. The image's size should not be larger than 180x68 pixels. In addition, the logo image can, optionally, be set as a hyperlink to a URL of your specification. The default image is the system-wide preference. Finally, you can specify text that will appear as a pop-up when the cursor is moved over the logo image in the field labeled "If yes, alt text is".

HTML Description Editor

The standard Description input area can be replaced by a WYSIWYG editor that allows the Description to contain HTML formatting, allowing you to make text bold or use different fonts and colors. Internet Explorer v5.5 or greater is required for this feature to work. This feature defaults to enabled, and individual agents can disable it or enable it in their preferences. If you would like to disable it for all users in the project (i.e., make this feature unavailable to users), uncheck this option.

Display Total Number of Matching Issues on Homepage and Searches

When enabled, the total number of matches to a search or Homepage is displayed, e.g., Matches 1 - 20 displayed of 150 total matching Issues. To speed up searches in a large project, it can be disabled to not include the total number, e.g., Matches 1 - 20 displayed.

Define the Priority Field

The Priority field is used to rate Issues by importance or impact. Options for priority include:

The Priority field is used to rate Issues by importance or impact. Options for priority include:

- **Maximum Priority**—The number selected here defines the range or number of priorities available for Agents to select when creating an Issue. Any number from 1—100 can be selected. This defaults to the number assigned by the project template.
- **Default Priority**—This is the default Priority assigned when users create new Issues. If 2 is selected, new Issues are created with a priority of 2 unless the Agent or an automated escalation rule changes it. If words are assigned to the Issue (see below), the corresponding word is the default (for example, Medium).
- **Priority Words and Colors**—Words and colors can be assigned to Priorities. Rather than selecting 1, 2, 3, etc., Agents can select Urgent, High, Medium, etc. If colors are selected, they appear on the **FootPrints** Homepage. Words are assigned by the Project Setup Wizard. To change the words, to add a word or words for additional priorities, and to select colors, click the link to Assign Words and/or Colors to Priorities.

NOTE

Some other project options may need to be changed after you add a new priority.

Enable and Define Time Tracking

The Time Tracking field is used to track the time that Agents spend working on Issues. Time can be tracked automatically by the system or manually by the Agent. Agents can be assigned hourly billing rates to be used in tracking the cost of Issues in addition to the time spent. Time can be tracked for any Agent when creating Issues and when editing Issues. The total time counted over all sessions is accumulated and stored for the Issue. If this feature is not needed, it can be disabled for the project.

Time Tracking data can be included in reports or exported to a billing system. For more information on creating Time Tracking reports, please refer to *Time Tracking Reports* in the **Numara FootPrints Reference Manual**.

To configure the Time Tracking feature, select Administration | Project | Project Options. The Project Options page is displayed. The following sections discuss the options you can change from the Time Tracking section within the Fields section of the Project Options page.

Options for Time Tracking

- Automatic—If this is selected, a visible clock automatically tracks the time spent by Agents working on Issues. This is useful for a call center or service desk where the Agents do most of their work at their desks. A "Pause" button is displayed on the Issue form to allow the Agent to temporarily pause the clock.
- Manual—If this is selected, Agents manually enter the amount of time worked on an Issue. This is useful for desktop support teams or projects where users will do much of their work away from FootPrints. There are 2 sub-options:
  - Permissions
    - Optional—Agents have the option to fill in time spent when creating or editing Issues.
    - Mandatory—Agents are required to fill in time spent each time an Issue is created or edited.
  - Start Date/Time
    - Always use current date & time—By default, the date and time at which the Agent enters the information is automatically recorded by FootPrints.
    - Manually enter start date & time—If this option is selected, the Agent can fill in the date and time work began manually. This is useful if Agents often do their work away from FootPrints, and only update their Issues at a later time.
- Disable—If this is selected, Time Tracking is disabled for the project.

Validation of Email Addresses

If enabled, the values given to all project fields of type Email are required to contain the "." and "@" characters. To configure the email address validation feature, select Administration | Project | Project Options. The Project Options page is displayed. Select the Enabled radio button in the Validation of Email Address Fields section of the Fields section of the Project Options page.

Configure Add-on Modules

If you have purchased add-on modules, you set basic configuration options from the Administration | Project | Project Options page. Select this page and scroll down to the Add-on Modules section.

Knowledge-Paks Online

Knowledge-Paks® OnLine, a product of RightAnswers, contain thousands of solutions to common desktop and other IT Issues. Refer to *Enabling Knowledge-Paks* in the Numara FootPrints Reference Manual for more information.

CRM Bridge

The FootPrints CRM Bridge is a set of integrations between FootPrints and several of the leading sales automation tools. The CRM Bridge integrates with:

- Microsoft CRM
- Salesforce.com
- Salesnet

There are two parts to the CRM Bridge integration. The contact database from the sales automation database is dynamically linked to the FootPrints Address Book, enabling support agents in FootPrints to access customer contact information entered by the sales representative that resides in the sales automation tool. This enables the support representative to use the latest contact data for a customer. If customer self-service is enabled, customer requests in FootPrints are pre-filled with the customer's latest information from the sales automation database. In this way, the organization only needs to maintain one customer contact database.

In addition, sales representatives can view active customers' support issues residing in FootPrints via a hypertext link or button from within the sales automation tool. This gives the sales representative read-only access to his or her customer's support history at a glance.

Configure Miscellaneous Project Options

There are some miscellaneous Project options to be defined from the Miscellaneous section of the Project Options page, which are discussed in following sections of this document. For all of these miscellaneous options, select Administration | Project | Project Options and then scroll down the page to the Miscellaneous section.

Disable the Address Book

If this project does not require it, the Address Book feature can be disabled, simplifying many FootPrints forms for the members of this project. If the Address Book is disabled, the Address Book link is removed from the FootPrints Toolbar and Address Book fields no longer appear in any FootPrints forms, including the Create Issue page, Edit Issue page, and Search page.

Hide Address Book Fields

If the Address Book has not been disabled, you can select Address Book fields to exclude from the Create and Edit Issue pages. Excluded fields are also excluded from the Select Contact search. However, these fields are available from the Address Book. Excluded fields can be specified for each project that uses an Address Book.

Create a Splash Screen for Agents and/or Customers

An optional splash screen can be displayed when users first log into FootPrints. This page can be customized (in HTML) to contain project information, updates, important messages, etc. One page can be created just for internal users and, simultaneously, a different page can be displayed for Customers.

To add a splash page:

1. Select Administration | Project |Project Options | General tab and then go to the Splash Screen/Project Info section.
2. Enter plain text or HTML into the box provided. To make this easier, you can create an HTML page in an HTML editor, copy the HTML, and then paste it into this box.
3. Choose Agent User to display the page to internal users or Customer to display the page to Customers.
4. Check Splash Screen to have the page displayed in a separate window when users log into FootPrints.
5. Check Linked on Home page to have a link on the Project Homepage to the splash page (the Project name in the upper right corner of the home page becomes a link to the page).
6. If you select Linked on Homepage, you have the option to choose an icon to display next to the Project name on the home page (this icon links to the splash page).
7. Enter your password and click GO.

Enable/Disable Global Issues

The use of Global Issues may be enabled on a project-by-project basis. Change your preference to enable or disable the use of Global Issues for this project. For more information, refer to the Numara FootPrints Reference Manual.

Chapter 10: Configure Fields

The fields found in **FootPrints** forms are highly customizable by Project. Custom Project and Address Book fields are defined by the Project Administrator. Other built-in **FootPrints** fields, such as Title, Status, and Description, can be further defined as well. All fields dynamically appear in all **FootPrints** forms, including Create Issue, Edit Issue, Advanced Search, and Advanced Reports.

Before any custom Project or Address Book fields are created, you should decide which information you want associated with the Customer record in the Address Book and which will be entered on a per-Issue basis. Information that would remain fairly constant for the Customer, such as last name, first name, email address, and phone number should become Address Book fields. Information that pertains to an individual Issue, such as problem type, call type, etc. should become Project fields.

The field options available are:

- **Field Maintenance**—Manage Project fields.
- **Statuses**—Add/edit a custom status
- **Priorities**—Set priority options
- **Dependencies**—Set fields to be dependent on the values of other fields
- **FootPrints Fields**—Rename **FootPrints** fields (Title, Status, Priority, etc.)
- **Titles**—Define drop down choices for the **Title** field
- **Schema**—Show the Project's schema
- **Language of Project and Address Book Fields**— Manage the language of the labels of Project and Address Book Fields.
- **Quick Descriptions**—Manage Quick Descriptions.
- **InstaCalc**—Configure fields for performing mathematical calculations in FootPrints Issues.

Not all options are discussed in this Getting Started document.

Project Field Maintenance

The page for adding fields to a Project is accessed by selecting Administration | Project | Field Maintenance from the FootPrints Toolbar.

The following information describes the various options on the Field Maintenance page and the pages that you access from the Field Maintenance page when you are adding a field.

8. Name—Enter a name for the field. This is the name of the field in all FootPrints forms.
9. Field Type—This defines the type of data the field accepts. Refer to <u>Field Types</u> for descriptions.
10. Permissions—The permission level chosen here determines both the access and requirement for users for the field.

- Access—This option determines who can see the field and who can write to it.
    - Internal—Only internal Agent and administrator users (including custom Agent roles) can view and enter data in the field. The field appears in the Create Issue and Edit Issue pages for internal users only.
    - Public Read-Only—Same as internal, plus Customers can view the field data but not write to the field. The field appears in the Create Issue and Edit Issue pages for internal users. Customers only see the data in their Requests when it is entered by an internal user.
    - Public Read-Write—Same as Internal, plus Customers can view the field data and enter data in the field when creating a new Request. The field appears in the Create Issue and Edit Issue pages for internal users and in the Customer Submit Request form.
    - Public Read-Write-Edit—Same as Public Read-Write, plus Customers with edit access can also update the field. This option is only available if the Customer Edit license is purchased.
- Required—The second drop-down determines whether the field is required.
    - Optional—The user has the option to enter or not enter data in the field.
    - Mandatory—The user must enter data into the field in order for the page to be accepted if it is submitted. If a user tries to submit an Issue without data in a mandatory field, an error message is displayed to the user, along with instructions to go back and enter the information. Mandatory fields appear

in red on the Create Issue and Edit Issue pages for internal users and in the Customer Submit Request form.

11. **Field Length**—This option applies to character single-line, integer, and real number fields only. For these fields, the administrator has the option of defining a field length. If defined, users must enter data of the specified number of characters when creating or editing an Issue or Request. Choices for defining field length are:

- **Unrestricted**—No field length restriction (the default).
- **Exactly**—Enter a number in the first box for the exact number of characters users must enter in the field. Leave the second input box blank.
- **At least**—Enter a number in the first box for the minimum number of characters field data must contain. Leave the second input box blank.
- **At most**—Enter a number in the first box for the maximum number of characters field data can contain. Leave the second input box blank.
- **Between**—Enter two numbers defining a range of the number of characters accepted for field data.

12. **Field Size**—Only applies to multi-line character fields. Define the number of rows and column for the text box. Refer to Display of Multi-line Fields[8] for additional information.
13. **Define Choices**—For drop-down and multi-select field types, choices are defined in a pop-up after adding the field (refer to Drop-down and Multi-select Fields for additional information).
14. **Default calendar link**—Only applies to Date/Time fields. From the drop-down, select whether the field will, by default, have no link to the personal or project calendars, be linked to the personal calendar only, or be linked to both the personal and project calendars.

When you have completed making your selections, click Add Field. The field is added to the Field dialog box on the right. The field is not added to the Project until you enter you password and click **GO**.

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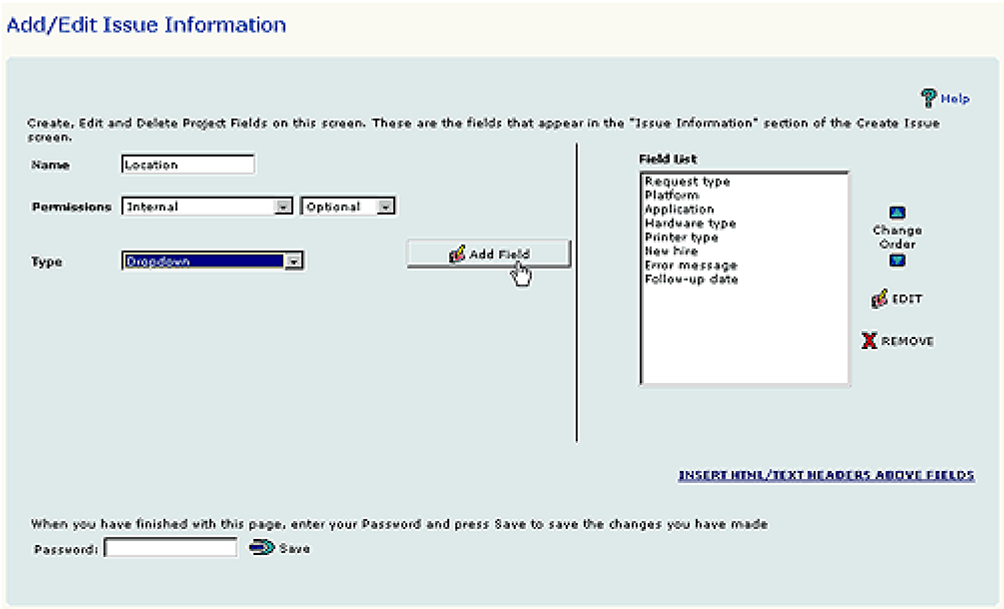
[8]. Multi-line fields are displayed in the same row with other fields based on field size: Fields 69+ columns wide remain alone in a row; fields 46-68 columns wide will occupy a row with 1 other field (2 fields total); fields that are 45 columns or less wide are treated like other fields, and will be displayed with 2 other fields in a row (2 fields total). To force a multi-line character field to take up a whole row regardless of size, insert a
 tag in the field header for that field and/or the field after it.



Manage fields

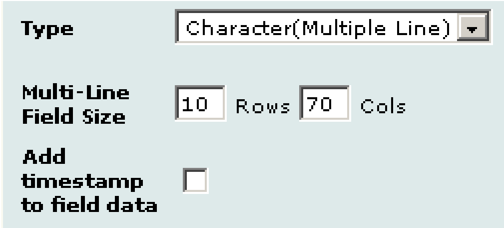
NOTE

Restrictions on the number of fields in the Project being added depend on the database being used. Refer to Field Limit Specification in the chapter on Database Administration. The FootPrints database only allows 100 fields per project. To add contact fields, refer to Address Book Field Maintenance.

Adding a Date/Time Stamp to Internal Fields

You can add a date/time stamp to multi-line character fields. The date/ time stamp is displayed beside the field when you edit the Issue or view the Issue on the Details page. When you create a multi-line character field by selecting Character (Multiple Line) as the Type or edit an existing multi-line character field, a checkbox labeled "Add timestamp to field data" is displayed. Checking the box adds the date/time stamp.

If you use the date/time stamp option, the field acts like the Description field in that you cannot edit existing data in the field, only add to it.



Drop-Down and Multi-Select Fields

A drop-down field offers the user a list of choices from which to select. A multi-select field allows the user to select multiple choices from a dialog box. An unlimited number of choices can be defined per drop-down or multi-select field. After adding one of these fields, a pop-up window appears where the choices and options for the field are defined.

To define choices:

15. Add choices—Type the first choice to appear in the field under Actions and click the Add () button. The choice is displayed in the Choices field. Continue to add as many choices (up to 1000) as desired.
16. Re-order choices (optional)—To reorder the choices, highlight a choice and click the up or down arrow to move it through the list.
17. Resort Ascending—Automatically re-orders the values in the list alphabetically from A to Z. Values with an integer as the first character are sorted before those beginning with a letter in the order 0-9.
18. Resort Descending—Automatically re-orders the values in list alphabetically from Z to A and 9-0.
19. Reuse Choice List—Select this option to reuse the choices from another drop-down field, either in this Project or another Project. This selection copies the choices but there is no link between the fields.
20. Import Choice List—If you have many choices, you may want to create a text file outside of FootPrints (for example, in Notepad or Excel) and import them here. The file should contain one choice on each line. For example:

```
Hardware
Software
Network
Printer
etc.
```

Browse for the file in the pop-up that appears and click Open. After you click GO, the choices are displayed in the dialog box.

21. Remove—To delete a choice from the list, highlight it and click Remove.

22. **Reset**—To delete all choices and start over, click Reset.
23. **Default Choice**—Optionally select a default for the field. This is the choice that is pre-selected when a user creates a new Issue. It is only available for drop-down fields.
24. After all choices are added, click **GO**. The values are saved.

The field is not added to the Project until you enter you password and click **SAVE** on the Field Maintenance page.

The choices can be changed later by editing the field and selecting Edit Field Choices.

Edit Field

The page for editing fields in a Project is accessed by selecting Administration | Project | Field Maintenance from the **FootPrints** Toolbar.

To edit a field:

25. Select the field to be edited from the dialog box on the Fields Maintenance page and click **Edit**.
26. The Field Maintenance dialog is highlighted in a darker color until the edit is complete.
27. Make any needed changes to the field.
28. If the field is a drop-down or multi-select field and you would like to edit the choices in the field, click Edit Field Choices.
29. Click **Complete Edit** to complete the edit or Cancel Edit to cancel the changes.
30. Enter you password and click **GO**.

NOTE ON DATA

Editing a field does not affect the data in existing Issues.

NOTE ON CHANGING FIELD NAMES AND TYPES

FootPrints does not allow you to change the field type and does not allow you to change the field name except for SQL Server or MySQL databases. For all other databases, if you want to change the field type or field name, you must delete the field and create a new one.

Delete Field

The page for deleting fields in a Project is accessed by selecting Administration | Project | Field Maintenance from the **FootPrints** Toolbar.

To delete a field:

31. Select the field in the dialog box (it will be highlighted in blue).
32. Click **Remove**. The field is removed from the dialog, and is no longer included in the Project.
33. Enter your password and click **GO**.

NOTE

Deleted data fields are no longer viewable, and **FootPrints** forms no longer contain that field. The column is also deleted and the data no longer accessible. To undelete a field (assuming you've made a backup of your database), contact Numara Software for instructions.

Re-order Project Fields

The page for re-ordering fields in a Project is accessed by selecting Administration | Project | Field Maintenance from the **FootPrints** Toolbar.

To re-order the fields:

34. Select a field in the dialog box (it will be highlighted in blue).
35. Use the Up and Down arrow buttons to move a field up and down in the list.
36. Continue to re-order the fields as desired. This is the order in which they will appear in the Project.
37. Enter you password and click **SAVE**.

NOTE

Changing the order of the Project fields on this page does not affect the database. It only affects the display of fields in the **FootPrints** forms.

Advanced Field Permissions

The page for setting advanced field permissions (otherwise referred to as "field-level permission") in a Project is accessed by selecting Administration | Project | Field Maintenance from the **FootPrints** Toolbar. Any field-level permissions that you set via the Field Maintenance page apply to either all Agents or all Customers. To set field-level permissions for specific roles (e.g., to set permissions for just Read-Only Customers or a set of Agents you might have designated as Networking Agents), you use a different part of the interface. Refer to the field-level permissions topics under User Roles for details.

To set field-level permissions:

38. Select the field to be edited from the dialog box on the Fields Maintenance page and click **Edit**.

39. The Field Maintenance dialog is highlighted in a darker color until the edit is complete.
40. Select the **Advanced Field Permissions** link. The Choose Role Type page is displayed.
41. Click a link to set the permissions on this field for All Agent Roles or All Customer Roles. If you select All Agent Roles, the permissions you set for the field apply to all internal agent roles, including system and project administrators. If you select All Customer Roles, the permissions you set for the field apply to all Customer roles. If you want a specific role to have a different set of permissions for a particular field, you can always change it in the Administration | Project | User Roles page (refer to Field-level Permissions for Built-in Fields and Field-level Permissions for Custom Fields for details). When you click the link, a Custom Field Permissions page is displayed.
42. Use the radio buttons to set whether to hide the field on all screens or to set a permission level based on the status of the Issue.
43. If you chose to set permissions based on status, specify the permission you wish to apply to each status. That is, when the Issue is assigned a status, the permission you select here applies to the field while it is in that status. The roles that will be affected by your choices are listed at the bottom of the window.
44. Enter your administrator password and click the **GO** button. The permission settings are saved.

NOTE

If you have HTML/text inserted above a field, hiding the field with field-level permissions can also hide the HTML/text that you inserted. There are situations in which you may want that HTML/text insertion to still be shown. Refer to Insert HTML/TEXT Headers for details on setting whether the insertion is shown or not shown.

Insert HTML/Text Headers

If you would like to include instructions or other information about Project fields in the Create Issue, Edit Issue, and Submit Request pages, you can optionally insert text or HTML headers above any field. This feature is also available for Address Book Fields. In addition, if any of the fields are set to be hidden fields, you can choose to display the HTML/text header even if the field is hidden. You may want to display the HTML/text header even when the field is hidden if, for instance:

- You use field headers to break up the Issue Information section into different subsections. The field may be associated with the first field in this section even though it really applies to all the fields in that section.

- You use field headers to put an additional GO button(s) throughout a long Issue Information section.
- A field header must be associated with the first field in a row if you want all three fields to remain on that row. The field header is really above the third field. If the first field disappears, the field header above the third field disappears.

To include custom headers:

45. Click the Insert HTML/Text Headers Above Fields link. Each Project field is listed in the table in the pop-up that appears.
46. Insert text or HTML code before one or more fields as needed.
47. Click in the checkbox for each field for which you want the text or HTML code to be displayed. The text or HTML code is not displayed if the checkbox is not checked. This feature allows the user to create text or HTML code and leave it for later to be displayed or to temporarily disable the text or HTML code.
48. In the Display column, if you have any fields that are hidden for a particular status, select from the displayed drop-down field. A drop-down is displayed for fields on the Create & Edit Issue pages and a second drop-down provides the same options for the Issue Details page. The drop-down field has the following options:

- **always**—Always show the inserted header regardless of whether the field is hidden.
- **if field is shown**—Show the inserted field header only when the field is visible.
- **if row is shown**—Show the inserted field header only when the row in which the field appears is visible.

49. After you finish adding headers, click GO. The page is dismissed and you are returned to the Field Maintenance page.
50. Enter your password and click GO.

Notes on the Field Headers Page

The Field Name field displays the name of the field.

- Check the box in the Enabled field to include the header. If you don't check the box, the content you entered for the field header remains in this form, but is not displayed when you access the Create Issue, Edit Issue, or Submit Request page.
- The Alignment drop-down allows you to align the header left, center, or right.
- Enter plain text or HTML code in the Text or HTML to Insert Above Field field.

- To start the field associated with the header on a new line, enter a line break **
** at the end of the header.
- With respect to %%Variable%% expressions, some field data from the Issue can also be used in the field headers, as follows:
    - Issue Number—%%MRID%%
    - Title—%%TITLE%%
    - Priority—%%PRIORITY%%
    - Status—%%STATUS%%
    - Submitter—%%SUBMITTER%%
    - Project ID—%%PROJID%%
    - Project and Address Book fields—%%FIELD NAME%% where "FIELD NAME" is the name of the field in upper case.

Link a Field Header to a URL

When the following sample Javascripts are entered in the Text or HTML to Insert Above Field field, the field header becomes a link to the URL and the data in the field is passed to the URL.

The following script works for drop-down fields only. The following sample script uses a field named "Product" for this example. Use your own field name in place of the word "Product", "url =" must point to the URL to which you want to pass the value, and use the "+prod" where you want to place the value of the field into the URL.

```
<SCRIPT LANGUAGE="JavaScript"> function ProductInfo(){var
prod=document.regform.Product.options[document.regform.Product.selectedIndex].value; var url =
'/MRcgi/product.pl?PROD='+prod; var ProductInfo=window.open(url);}</SCRIPT><a
href=javascript:ProductInfo();>Click for Product info</a>
```

The following field works for single-line character fields only. The example field name is "Company Documentation", and the value of variable "CompanyVal" is what is passed from the text field. Again, "url =" must point to the URL to which you want to pass the value.

```
<SCRIPT LANGUAGE="JavaScript"> function CompanyInfo(){ var CompanyVal
=document.regform.Company__bDocumentation.value; var url = '/tmp/Attachments/Project7/' +
CompanyVal; var CompanyInfo=window.open(url);}</SCRIPT><a
href=javascript:CompanyInfo();>Click for Document</a>
```

Statuses

The Status field is used to define the workflow of Issues or the stages that an Issue moves through from beginning to end. Statuses can be added, deleted, and reordered here. The dialog is pre-filled with the Statuses defined by the Project template.

NOTE

Open and Closed are built-in and cannot be changed or re-ordered. You can change the words that represent them from within **FootPrints** on the FootPrints Fields administration page. In addition, there are other special, built-in statuses used by **FootPrints** that are not displayed here, including Deleted and Request. You can change the name displayed for a Request from this administration page.

Managing Statuses

To add a status:

51. Select Administration | Project | Statuses.
52. Enter a name for the new status.
53. Click the **Add Status** button. By default, the new status is listed in the List of Statuses field one position above Closed.
54. If you are finished working on this page, enter your password and click **GO**. The new status is not actually added to the Project until you have entered your password and clicked **GO**.

To re-order statuses:

55. Select Administration | Project | Statuses.
56. Select a status in the dialog box (it will be highlighted in blue).
57. Use the Up and Down arrow buttons to move a status up and down in the list.
58. If you are finished working on this page, enter your password and click **GO**. Changes to status order are not actually made in the Project until you have entered your password and clicked **GO**.

To delete a status:

59. Select Administration | Project | Statuses.
60. Select the status in the dialog box (it will be highlighted in blue).
61. Click **Delete Status**. The status is removed from the List of Statuses field.
62. If you are finished working on this page, enter your password and click **GO**. Deletions are not actually made in the Project until you have entered your password and clicked **GO**.

NOTE

Deleting a status does not affect the data in your existing **FootPrints** Issues. To change the status of an Issue whose status has been deleted to another status, you must edit the Issue. If there are many Issues with this status, first search for all Issues with the status that you are going to delete. Change the status of these Issues, then delete the unwanted status as described above.

Along with adding custom statuses, you can change names of the following built-in statuses:

- Open
- Closed
- Request

Homepage Project Totals

The Status counts displayed on the Homepage can be specified from the Administration | Project | Statuses page. This option controls the statuses displayed in the Project Totals dialog for all internal users in the current Project. The defaults are: Open, Active, Closed, Request, Internal Solution, and Public Solution. "Active" refers to all statuses except for Closed, Deleted, and all Solution-based statuses.

NOTE

This feature is not available in the **FootPrints** database versions.

To add a status to the Project Totals:

63. Select Administration | Project | Statuses.
64. Select the status from the All Statuses dialog box and click **Add Status**.
65. If you are finished working on this page, enter your password and click **GO**. Changes are not actually made in the Project until you have entered your password and clicked **GO**.

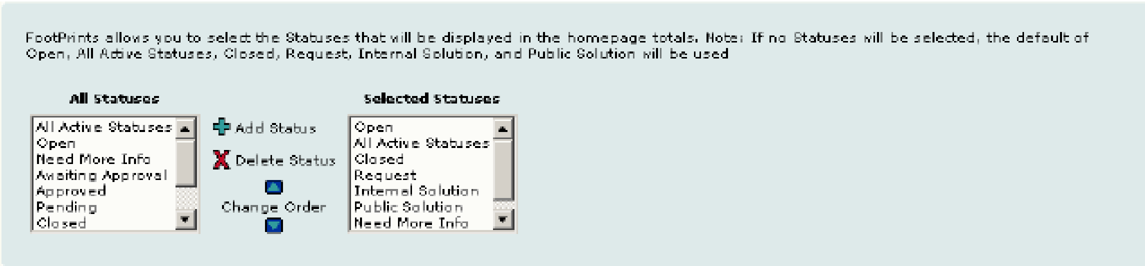
To re-order statuses in the Project Totals:

66. Select the status in the Selected Status dialog box (it will be highlighted in blue).
67. Use the Up and Down arrow buttons to move a status up and down in the list.
68. If you are finished working on this page, enter your password and click **GO**. Changes are not actually made in the Project until you have entered your password and clicked **GO**.

To remove a status from the Project Totals:

69. Select the Status in the Selected Status dialog box (it will be highlighted in blue).
70. Click **Delete Status**.
71. If you are finished working on this page, enter your password and click **GO**. Changes are not actually made in the Project until you have entered your password and clicked **GO**.

NOTE
The changes made in this dialog do not affect the statuses in the database or Issue forms; they only affect the Project Totals dialog on the Homepage for the current Project.



Select statuses for Project Totals scoreboard on Homepage

Priorities

The Priority field is used to rate Issues by importance or impact. Options for priority include:

- **Maximum Priority**—The number selected here defines the range or number of priorities available for Agents to select when creating an Issue. Any number from 1—100 can be selected. This defaults to the number assigned by the Project template.
- **Default Priority**—This is the default priority assigned when users create new Issues. If, for example, 2 is selected, new Issues are created with a priority of 2 unless the Agent or an automated escalation rule changes it. If words are assigned to the Issue, the corresponding word is the default (for example, Medium).
- **Priority Words and Colors**—Words and colors can be assigned to priorities. Rather than selecting 1, 2, 3, etc., Agents can select Urgent, High, Medium, etc. If colors are selected, they are displayed on the **FootPrints** Homepage. Words are assigned by the Project Setup Wizard. To change the words, to add word for additional priorities, and to select colors, click the link called To link Priority numbers to words, and to color code Priorities, click here.

To map priority words and colors:

72. Select Administration | Project | Priorities.
73. Click the link called To link Priority numbers to words, and to color code Priorities, click here. A pop-up window is displayed. In the pop-up window there are input boxes for each priority level.

74. Enter a word or phrase for each priority level that is blank, or change the existing word.
75. To select a color, click Pick next to a priority level. Another pop-up window is displayed with a color map.
76. Select a color. The hex code for that color is displayed in the color box for the priority.
77. Click **GO** to save your changes. You are returned to the Project Options page.
78. After completing any activities you may be conducting on this page, enter your password and click **GO** at the bottom of the Project Options screen to activate them.

Field Dependencies

By default, all Project fields in a **FootPrints** Project are displayed in the Issue Information section of the Create Issue and Edit Issue pages. Depending on your needs, you may, for example, prefer to have some fields only appear depending on the problem type selected, or you might want to have the list of choices in a drop-down restricted by the choice made in the preceding drop-down. Both of these options are available in **FootPrints** and can be used alone or in combination. Multiple dependencies can be configured per Project, and multi-level "dependency groups" can be created to funnel the user to categories and sub-categories with different choices, depending on what is selected for each drop-down.

There are two kinds of field dependencies supported in **FootPrints**:

- **Pop-up Window Containing Dependent Fields**—Designate a drop-down choice field as a *decision field* which, depending on the user's choice, displays a pop-up window with fields that are specific to that choice. For example, a field called Error Message can be displayed in a pop-up window only if the user selects Software Error from a Problem Type field.
- **Dynamic Drop-down Dependency Groups**—Designate a set of drop-down choice fields to create an unlimited number of categories and sub-categories for which the available choices are restricted in each field based on what was selected in the previous field. This feature can be used for simple two-field dependencies (e.g., a software application with dependent version numbers), or complex, multi-level groups of dependent fields that guide the user to drill-down and select more and more granular data to define the problem. For example, if a user selects Hardware from a Problem Type field, the next drop-down displays a list of hardware types (PC, NIC, Mouse, Keyboard, etc.) If the user picks NIC, the next drop-down lists known network card problems, etc.

Pop-Up Window Dependent Fields

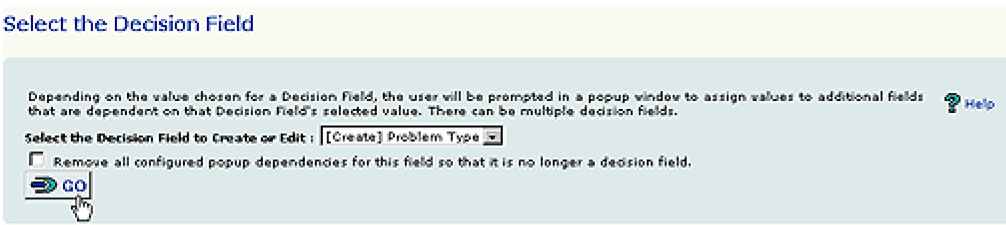
This feature allows you to designate a drop-down choice field as a decision field which, depending on what choice is selected by the user, displays a pop-up window with fields that are specific to that choice. For example, a field called Error Message can be displayed in a pop-up window only if the user selects Software Error from a Problem Type field.

Before you begin:

- Before setting up the Pop-up Window Dependent Fields, you must first create the decision field and all of the fields that appear in the dependent pop-up windows. All fields for all dependencies must exist (create new fields on the Administration | Project | Field Maintenance page) before you can create dependencies. In addition, a single drop-down field should be created to be the key decision field.
- If one of the "subset" fields appears for multiple dependencies but with different values in each instance of dependency, create one choice field containing all values for all dependencies. For example, a field called Version number can be made containing all of the possible version numbers for Hardware, Software, and Network problems. The different values for Version number can be assigned to the different key decision values of Hardware, Software, and Network. This step is optional.

To designate the decision field:

79. Once the drop down field is created, select Administration | Project | Dependencies from the **FootPrints** Toolbar.
80. On the main Dependencies page, select Popup Window Containing Dependent Fields. A new page is displayed with a drop-down menu.
81. From the drop-down menu, select a decision field from all of the available drop-down fields in the project and click GO.

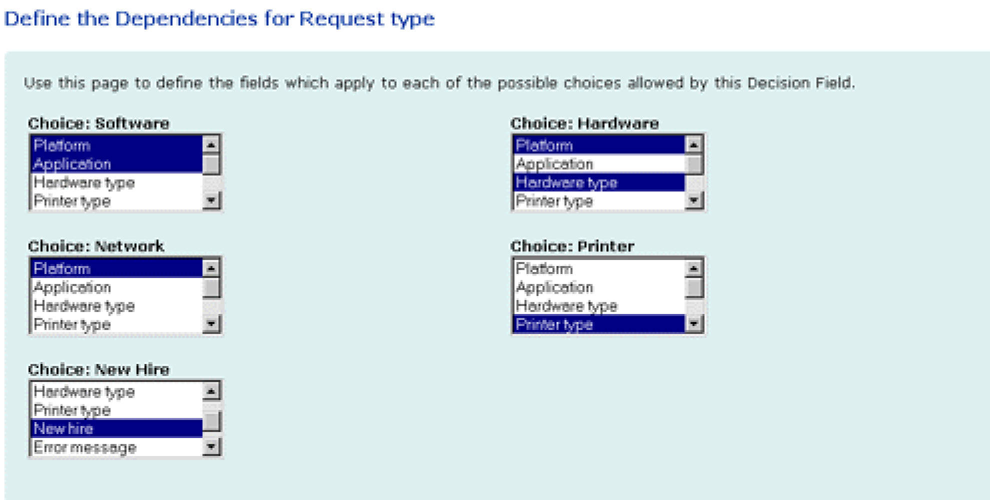


Select a decision field for the pop-up window

82. To clear the contents of an already created decision field, select the checkbox next to Remove all configured pop-up dependencies and click GO. The top half of the next page allows you to define the dependent fields. If your decision

field has three possible values, a choice box for each value is displayed, each choice box containing a list of all project fields.

83. Highlight the fields to include for each key value (use the CTRL key to highlight multiple fields). Only select the fields for each choice that you want to appear in the pop-up window. Fields that are not selected continue to appear on the main Create Issue screen.



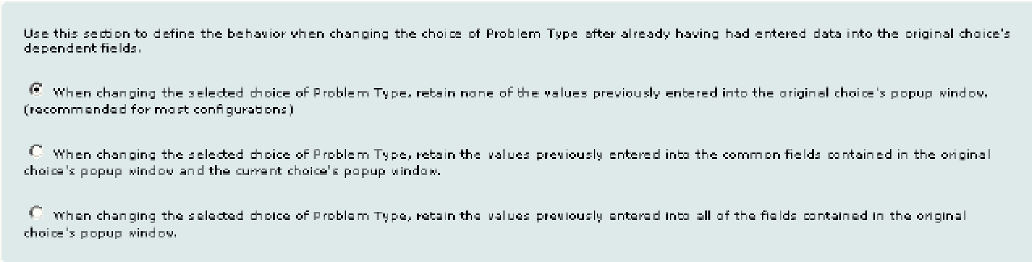
Configure field dependencies

The bottom section of this page allows you to define the behavior of these fields under special circumstances. That is, the choice you make in the bottom section controls what happens when a user changes a choice in the decision field after already entering data into the dependent fields.

84. Select one of the following options:

- When changing the selected choice of the decision field, retain none of the values previously entered into the original choice's pop-up window. (the default, recommended for most configurations)
- When changing the selected choice of the decision field, retain the values previously entered into the common fields contained in the original choice's pop-up window and the current choice's pop-up window.

When changing the selected choice of decision field, retain the values previously entered into all of the fields contained in the original choice's pop-up window.



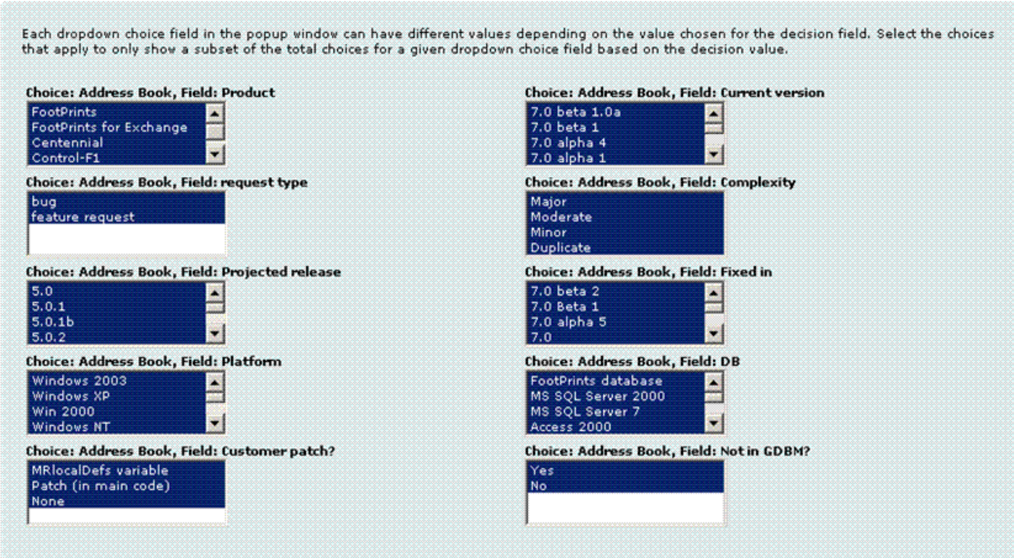
This next step is optional. For additional drop-down fields found in the project (not including the main decision field), a series of choice boxes for each of your possible values is displayed in the bottom half of the page. Continuing with the above example, for each of your three key values in the decision field there is a choice box for each choice field in the project. If there are four choice fields defined (other than the decision field) in the project, there are twelve choice boxes (four for each of the three decision values).

By default, all values are selected. You can optionally use one or more of the fields displayed here to pick different values of the same choice field for the different values of the decision field. Only de-select the values for a particular set of fields that you want to limit (use the CTRL key to highlight multiple fields). Otherwise, do no de-select any values.

85. Select or de-select the values for those fields that you want to appear in the choice boxes, depending on the value the user chooses for the key field. For example, if the key decision field is Problem type and the sub-field Version number is displayed for all three of the decision field values, different values of Version number can be associated with Hardware, Software, and Network. For example, if version number contains six values, 97, 2000, 2.5, 8.7, 4.x, and 5.x, the following associations might be made:

- **Choice: Hardware, Field: Version number**—select 2.5 and 8.7
- **Choice: Software, Field: Version number**—select 97 and 2000
- **Choice: Network, Field: Version number**—select 4.x and 5.x

All other values for Version number for each of the three choices above should be de-selected. All other values for any other fields should remain selected.

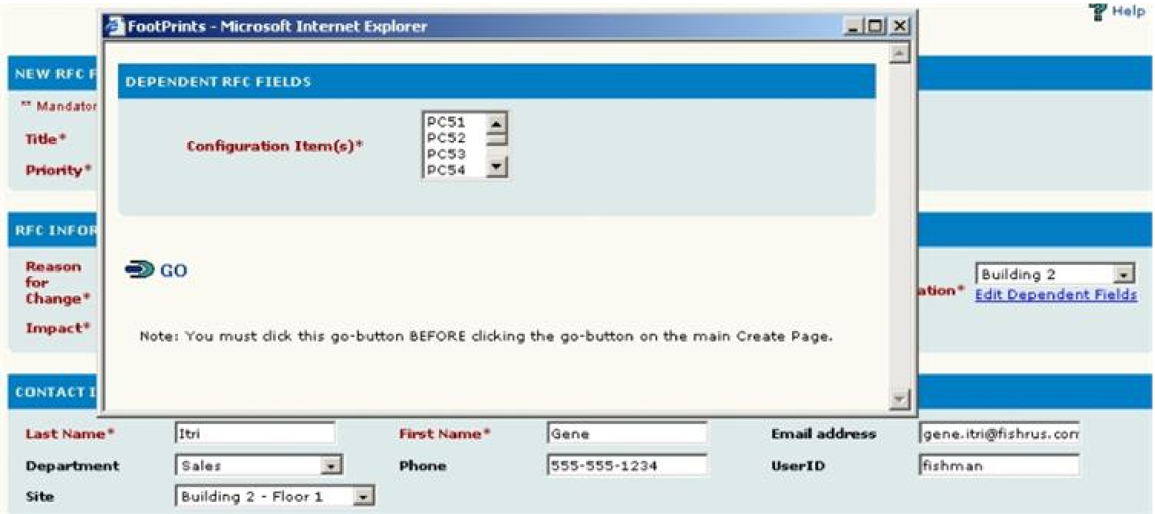


Configure Field Dependencies, part2

86. After selecting the values that will appear for each of the choice fields, click  "GO".

Multiple decision fields can be created using the method above.

Now when you create an Issue, the Issue Information section contains the decision field. When a value is selected in a decision field, a pop-up box is displayed, containing the additional dependent fields for that value. Using our example, if Software is chosen, Version number is displayed with the only options being 97 and 2000. In addition, any other fields associated with Software (chosen in the top section of the Dependencies screen) are displayed.



Different fields will appear in the pop-up window depending on the "Problem Type"

Dynamic Drop-down Dependency Groups

The Dynamic Drop-down Dependency Group option allows you to designate a set of drop-down choice fields that display a number of categories and sub-categories of which the choices are restricted in each field based on what was selected in the previous field. It can be used for simple two-field dependencies (for example, a software application with dependent version numbers) or complex, multi-level groups of dependent fields that guide the user to drill-down, selecting more and more granular data to define the problem.

For example, if a user selects Hardware for Problem Type, the next drop-down displays a list of hardware types (PC, NIC, Mouse, Keyboard, etc.) If the user picks NIC, the next drop-down lists known network card problems, etc. There is no limit to the number of fields that can be a part of a dependency group.

Before setting up the Dynamic Drop-down Dependency Groups:

- You must first create the drop-down fields that will be part of the dependency group with all of the possible choices for each field. You create new fields on the Administration | Project | Field Maintenance page. As an example:

NOTE ON EXAMPLES

The examples here outline setting up a group of three dependent fields for Problem Type, Issue Type, and Root Cause for a standard IT help desk. Dependency groups can be created for any type of process, with any number of fields and choices.

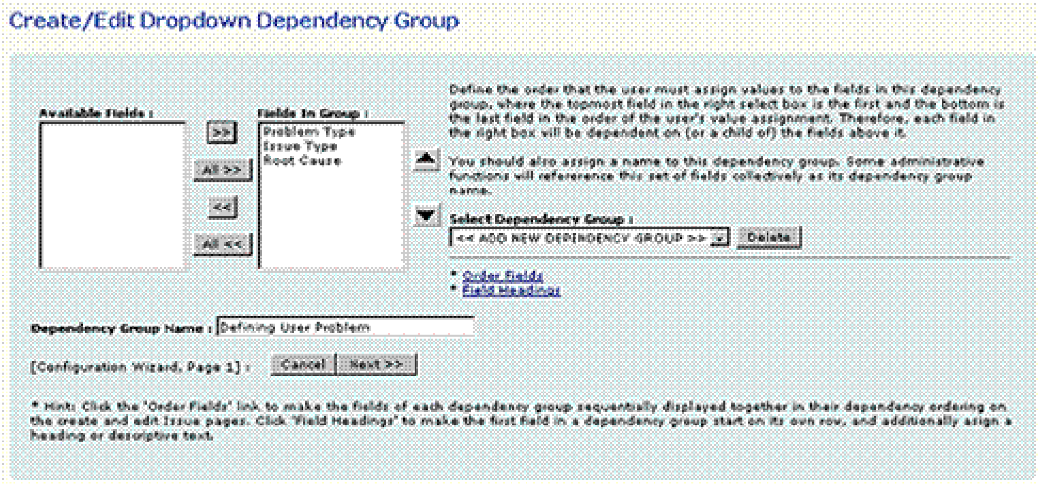
87. You could make three drop-down fields called Problem Type, Issue Type, and Root Cause.

88. For Problem Type, the choices could be Hardware, Software, Network, and Printer.
89. The Issue Type field would contain all of the possible sub-categories for each of those choices: Hardware types like CD-ROM, Mouse, Phone, etc., Software types like Acrobat, Word, etc., Network Issue types like Reset Password, Can't connect to network, etc.
90. The Root Cause field would contain any further categorization needed for each of the Issue types. For CD-ROM, the choice might be Can't open tray, Can't access drive, etc.

- The fields for the dependency group must all be of type public or internal. We recommend all fields are all either mandatory or optional. If the fields are mixed mandatory and optional, the earlier fields in the group should be mandatory, while the later one are optional.
- The fields should be arranged in the order of the desired dependency.
- You may want to map all of the possible choices and paths out on paper before you create the fields.

To create a Dynamic Drop-down Dependency Group:

91. After creating the fields you need to complete this procedure, select Administration | Project | Dependencies.
92. Select Dynamic Drop-down Dependency Groups. The Create/Edit Drop-down Dependency Group page is displayed. This page contains two dialog boxes: Available Fields and Fields in Group. The Available Fields are any drop-down fields in the project that aren't already part of a dependency group. The Fields in Group are the fields that are to be part of the dependency.
93. Select the first field you want in the dependency group and click the >> arrow button.
94. Continue to select the other fields for the dependency group. There is no maximum number of fields in a group, but the minimum requirement is two. It is recommended that you order the fields in the project in the same order as selected above by selecting Order Fields before you continue. This places the dependent fields in the group in the correct order.
95. Enter a name for the Dependency Group and click Next >>. The next page displays a multi-select box for each value in the first field in the group. For example, if the field is Problem Type, there is one box each for Hardware, Software, Network, and Printer.

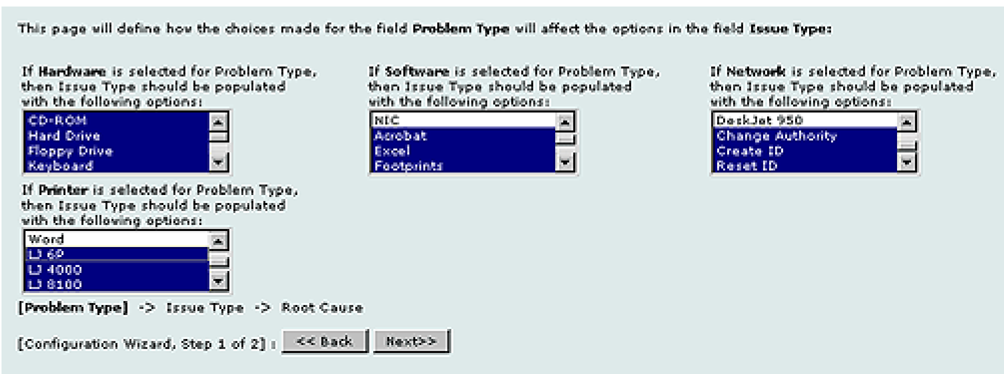


Define the fields for the dependency group

96. All of the values for the second field in the group, Issue Type, are listed in each multi-select box. For each problem type, select the values that should appear in the Issue Type field if the user selects that problem type. For example, in the Hardware box, select CD-ROM, Mouse, Phone, etc., in the Software box, select Acrobat, Word, etc. Hold down the CTRL key to select multiple values.

Issue Type values can be selected for more than one Problem Type. Issue Type values must be selected for at least one Problem Type or they will never appear in the Issue form.

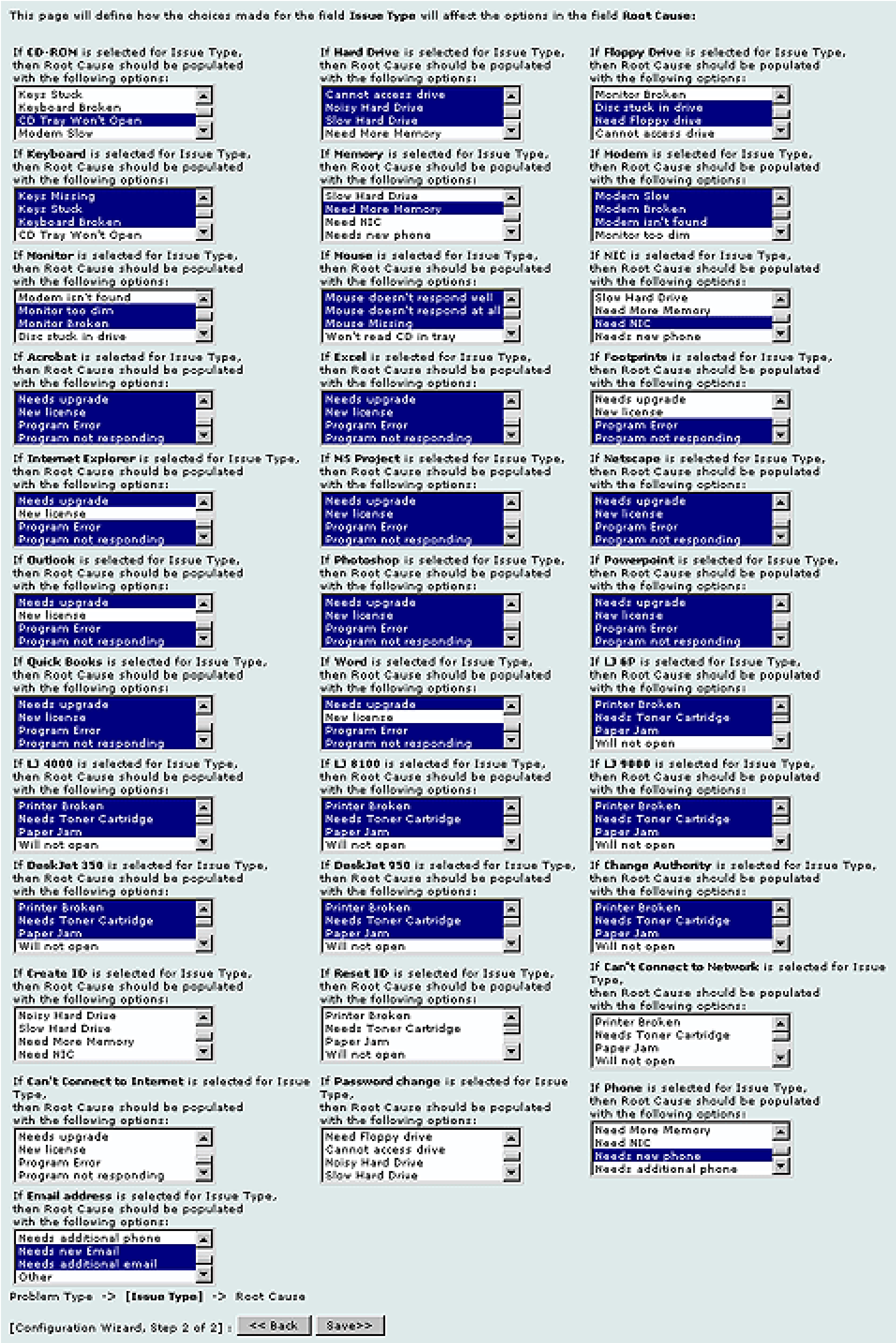
97. When all items have been selected, click Next >>. The next screen contains a multi-select box for each Issue Type. The boxes each contain all of the possible Root Causes.



Define Issue Types for each Problem Type

98. Select the Root Causes for each Issue Type. For Issue Types that have no defined Root Cause, do not select anything. The Root Cause field will not appear for those Issue Types.

99. When you are finished, click SAVE.


This page will define how the choices made for the field Issue Type will affect the options in the field Root Cause:
If CD-ROM is selected for Issue Type, then Root Cause should be populated with the following options:
Keys Stuck
Keyboard Broken
CD Tray Won't Open
Modem Slow
If Hard Drive is selected for Issue Type, then Root Cause should be populated with the following options:
Cannot access drive
Noisy Hard Drive
Slow Hard Drive
Need More Memory
If Floppy Drive is selected for Issue Type, then Root Cause should be populated with the following options:
Monitor Broken
Disc stuck in drive
Need Floppy drive
Cannot access drive
If Keyboard is selected for Issue Type, then Root Cause should be populated with the following options:
Keys Missing
Keys Stuck
Keyboard Broken
CD Tray Won't Open
If Memory is selected for Issue Type, then Root Cause should be populated with the following options:
Slow Hard Drive
Need More Memory
Need NIC
Needs new phone
If Modem is selected for Issue Type, then Root Cause should be populated with the following options:
Modem Slow
Modem Broken
Modem isn't found
Monitor too dim
If Monitor is selected for Issue Type, then Root Cause should be populated with the following options:
Modem isn't found
Monitor too dim
Monitor Broken
Disc stuck in drive
If Mouse is selected for Issue Type, then Root Cause should be populated with the following options:
Mouse doesn't respond well
Mouse doesn't respond at all
Mouse Missing
Won't read CD in tray
If NIC is selected for Issue Type, then Root Cause should be populated with the following options:
Slow Hard Drive
Need More Memory
Need NIC
Needs new phone
If Acrobat is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If Excel is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If Footprints is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If Internet Explorer is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If MS Project is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If Netscape is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If Outlook is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If Photoshop is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If Powerpoint is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If Quick Books is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If Word is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If LJ 6P is selected for Issue Type, then Root Cause should be populated with the following options:
Printer Broken
Needs Toner Cartridge
Paper Jam
Will not open
If LJ 4000 is selected for Issue Type, then Root Cause should be populated with the following options:
Printer Broken
Needs Toner Cartridge
Paper Jam
Will not open
If LJ 8100 is selected for Issue Type, then Root Cause should be populated with the following options:
Printer Broken
Needs Toner Cartridge
Paper Jam
Will not open
If LJ 9000 is selected for Issue Type, then Root Cause should be populated with the following options:
Printer Broken
Needs Toner Cartridge
Paper Jam
Will not open
If DeskJet 350 is selected for Issue Type, then Root Cause should be populated with the following options:
Printer Broken
Needs Toner Cartridge
Paper Jam
Will not open
If DeskJet 950 is selected for Issue Type, then Root Cause should be populated with the following options:
Printer Broken
Needs Toner Cartridge
Paper Jam
Will not open
If Change Authority is selected for Issue Type, then Root Cause should be populated with the following options:
Printer Broken
Needs Toner Cartridge
Paper Jam
Will not open
If Create ID is selected for Issue Type, then Root Cause should be populated with the following options:
Noisy Hard Drive
Slow Hard Drive
Need More Memory
Need NIC
If Reset ID is selected for Issue Type, then Root Cause should be populated with the following options:
Printer Broken
Needs Toner Cartridge
Paper Jam
Will not open
If Can't Connect to Network is selected for Issue Type, then Root Cause should be populated with the following options:
Printer Broken
Needs Toner Cartridge
Paper Jam
Will not open
If Can't Connect to Internet is selected for Issue Type, then Root Cause should be populated with the following options:
Needs upgrade
New license
Program Error
Program not responding
If Password change is selected for Issue Type, then Root Cause should be populated with the following options:
Need Floppy drive
Cannot access drive
Noisy Hard Drive
Slow Hard Drive
If Phone is selected for Issue Type, then Root Cause should be populated with the following options:
Need More Memory
Need NIC
Needs new phone
Needs additional phone
If Email address is selected for Issue Type, then Root Cause should be populated with the following options:
Needs additional phone
Needs new Email
Needs additional email
Other
Problem Type -> [Issue Type] -> Root Cause
[Configuration Wizard, Step 2 of 2] : << Back Save>>

Select Root Causes for each Issue Type

The View Button

The Create/Edit Drop-down Dependency Groups page contains a View button. Clicking the View button displays the Drop-down Dependency View, which provides a visual illustration of the dependency tree for the dependency groups that you are editing. Fields are listed in columns. When you click on a field name, the field is highlighted. In addition, the field that precedes and field(s) that succeed the selected field are also highlighted, thus showing the dependencies..

If, having selected a field, you click the Display Selected link, a the Drop-down Dependency View page is displayed. This page provides a further illustration of the selected field's dependencies in the tree structure. You can click a button to print the structure from the pop-up window or click a button to close the window.

Dynamic SQL Field Mapper

This feature enables data from an external table to be populated in an Issue into one or more fields. The lookup is performed by clicking a "Select" button and is based on a "lookup key" field, such as "User ID", "Asset Name", etc.

One or more lookup key fields can be designated within a Project. The lookup key field can be either an Issue Information or Address Book field. Associated Issue Information or Address Book fields can then be designated to be populated with data from the external database.

Refer to the Numara FootPrints Reference Manual for complete information on the Dynamic SQL Field Mapper.

Chapter 11: Configure Users and Customers

Users & Roles

This set of functions is intended for user management on a project-wide basis. There are also some system-wide user management options; these are detailed in the chapter on System Administration.

The project-wide user options include:

- Agents
    - Add Agents—Add new Agents/Administrators to this project.
    - Edit Agents—Edit the properties of Agents.
    - Teams—Create and edit Teams of Agents for assignment in this project.
    - Customers
        - Add Customers—Add new Customers to this project.
        - Edit Customers—Edit the properties of Customers.
        - Customer Options—Configure options for Customers.
    - Roles
        - User Roles—Define and manage permission roles for Agents and Customers.
- Agent User Types—Explains the different types of Agents.

- Add Agents—Add new Agents and existing Agents from other projects to the current project.
- Editing Agents
  - Edit Agent—Change a user's Role, password, etc.
  - Delete Agent—Remove the user from the current project.
  - Billing Rates—Define multiple billing rates for the user to be used in conjunction with the Time Tracking feature.
  - Change to Customer—Make the Agent user a Customer in the current project.

Agents

Agents are the standard, default users of FootPrints. These users can potentially create Issues, be assigned to Issues, search and add to the Knowledge Base, run Reports, and more. The term "Agent" is used to refer to both a type of license and to a specific, built-in user role.

Agent User Types

The term "Agent" in FootPrints is used to refer to both a type of license, and to a specific built-in user Role that is applied to users. For a complete description of Agents and Agent roles, including built-in Agent roles, refer to the Numara FootPrints Reference Manual.

Add Agents

To add a new user to a FootPrints project, select Administration | Project | Users | Add Agents from the FootPrints Toolbar. From the resulting page, you can create new FootPrints Agent and administrator users, as well as add existing FootPrints users to the current project.

Add a New User to the Current Project

NOTE
If the user is already a member of another FootPrints project, refer to *Add an Existing FootPrints User to the Current Project*.

1. Enter the new user's name. When you enter the name, use the full name, e.g., Jill Smith.
2. Enter a FootPrints user ID. This is the ID used to log into FootPrints, e.g., jsmith. The user ID must be a single word with no spaces.
3. Enter the user's email address.
4. Choose a Role[9] for the user.
5. Optionally select a Supervisor for the user from the list of agents in the project. Supervisors can be used to designate where emails are sent when escalating Issues.
6. If the System administrator has defined only a single authentication method, and it is a non-FootPrints authentication method, be sure that the user ID you select corresponds to a user ID on the system against which you are authenticating. If two authentication methods are available, you can select the method the agent is to use to log into FootPrints. A FootPrints user ID is required even if you are using non-FootPrints authentication.
7. Choose a password for the new user (this is requested twice for accuracy).
8. Enter a value for Billing Rate if you want to calculate a fee based on time spent by the user working on Issues. This is the hourly rate in dollars. This field is optional.
9. If the system supports both concurrent and fixed licenses, there is a choice to select the type of license for the user.
10. Check the Accessibility checkbox if the Agent that you are adding is vision-impaired and will be using a screen reader.
11. Enter the user's time zone. This is an optional field.
12. Enter a date format. This is an optional field.
13. Enter a language preference. This is an optional field.
14. Enter your password and click GO.

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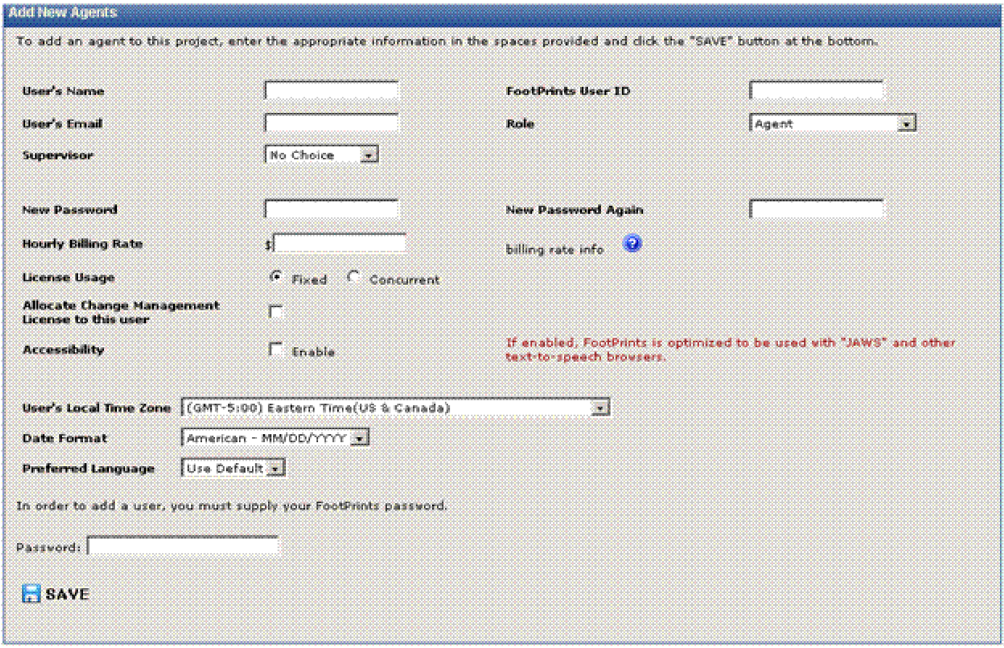
[9] A user type assigned to one or more users to define permissions. Both built-in roles and custom roles can be assigned to users. Examples of built-in roles include Agent, Customer Read/Submit, and Project Administrator.



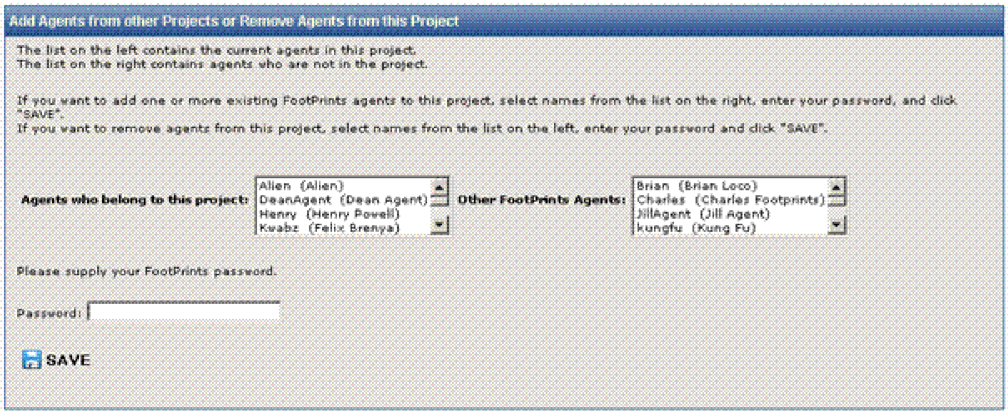
Add a new Agent to the Project

Add an Existing FootPrints User to the Current Project

1. Choose the users you want to add from the Other FootPrints Agents list (hold down the CTRL key to highlight multiple users).
2. Enter your **FootPrints** password.
3. Click the **GO** button. The users are added to the Users who belong to this project list.

NOTE

Adding an existing Agent, Project Administrator, or System Administrator to a project does not require an additional license. A user with a fixed license can participate in any number of projects within a single **FootPrints** *installation using the same license.*



Add an Agent from another Project

Adding Users to Multiple FootPrints Projects

An Agent or Project Administrator can belong to multiple projects. You can add a user to a new project from the Add Agent User page for that project. System Administrators are automatically members of all FootPrints projects. Adding an Agent to multiple projects does not affect the number of licenses available. That is, an Agent who is a member of multiple projects still only uses one individual license.

Teams

For assignment purposes, Agents can be organized into Teams, such as "Application Support", "Network Support", "Development". Issues can be assigned to the whole Team or to individual users within the Team. This allows an Agent to assign an Issue to a group of people, such as a development Team, without needing to know the individual person who will work on the Issue.

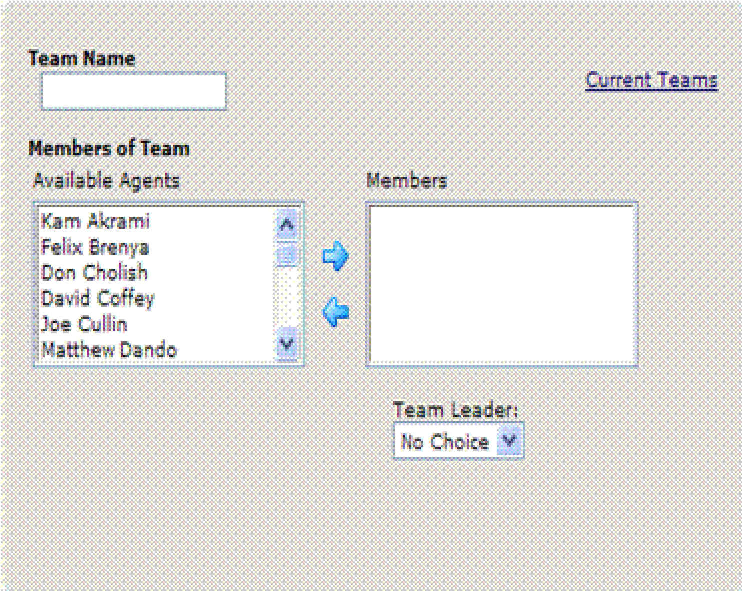
Various assignment options are available to handle automatic Team assignments, including round-robin assignment. Issues can be reported on by Team and custom user roles can be created to handle access to Issues by members of a Team. Agents can be organized into Teams by selecting **Administration | Project | Teams** from the **FootPrints** Toolbar. The Agents must first be created and be members of the Project before they can be added to a Team. Round robin and the other team assignment rules are only applied if no member of that team is already assigned to the ticket or is being assigned to the ticket along with the team.

Creating Teams

4. Select Administration | Project | Teams from the **FootPrints** Toolbar.
5. Select the **GO** button to create a new team. The Create a New Team page is displayed.
6. Enter a name for the Team in the Team Name field. Example names might be "Developers" or "Level 1 Support Team".
7. Select members for the Team from the Available Agents multi-select field. The individuals listed in the Available Agents field include the Project's administrators. To select a member, highlight a user's name and click the right arrow button to add the user to the Members field. An unlimited number of users can be added to a Team and users can belong to multiple Teams. The pool of potential team members comes from the list of agents who are members of the current project.
8. If you wish to designate someone as a Team leader, after you have selected the Team members, select the Team leader from the Team Leader drop-down field.

NOTE

To see a list of current Team Membership for all teams, click the link for Current Teams.



Assign users to a Team

9. You can select the assignment method for Team members on this page as well. The options are:

- Leave assigned to Team—This is the default. When a Team is assigned to an Issue, the Team name appears in the Assignee field for that Issue (on the Homepage, in reports, etc.) Individual Team members can still be assigned by taking the Issue or via auto-assignment, escalation, or manual assignment.
- Assign individual member(s)—Select one or more Team members to assign to each new Issue that is assigned to the Team. The user(s) selected here are assigned to every new Issue that is assigned to the Team. If you want different Team members assigned to Issues based on another field, such as Problem Type or Location, use the Auto Assignment or Escalation feature.
- Assign all members—If this option is selected, all Team members are assigned individually to each new Issue that is assigned to the Team.
- Dynamically assign based on round-robin rule—When a Team is created with this assignment option, the first Issue assigned to the Team is assigned to the first individual in the Team list. Each subsequent issue is assigned to the next Team member, and so on, restarting at the first position when the last person in the list has been assigned. This option is applied to Issues that are assigned to a Team manually, via auto-assignment, or via an Escalation rule. This is useful for balancing the workload of Agents within a Team.

- Agent availability within the round-robin assignment is determined by one or both of the following options:
  - **Use agent availability based on an assignment time or a date field**—If selected, the Agent is considered available if shown as available in the Availability Matrix for the time and date selected here (for example, "Work Scheduled Date"), including Agent Work Schedule and Project Calendar appointments to which the Agent is invited. If "Assignment Time" is selected, the time that the auto-assignment rule is applied is used to determine availability.

NOTE

When selecting a date in a round-robin Team assignment, the date must be specified in the Project's work schedule.

  - **Use personal appointments in determining Agent availability**—In addition to taking the Agent's Work Schedule and Project Calendar appointments into account, appointments that only appear on the Agent's Personal Calendar are taken into account when assigning if this is checked.

NOTE

Assignment options are not applied until the Issue is actually submitted.

NOTE

Additional assignment options are available using the Auto Assign and Escalation features. To use round-robin assignment in conjunction with these, enable the options above and select the Team name in the Auto-assignment or Escalation rule.

10. Choose how email notifications are to work in the Member Privileges section of the page. There are three options:

- **Always**—All Team members receive email notification about Issues whether they are assigned only to the Team or to the Team and one or more members of the Team.
- **Only when no individual agents are assigned**—Team members only receive email notification about Issues when the Issues are assigned to the Team only and not assigned to individual Team Members.
- **Never**—Team members do not receive email notification about Issues assigned to the Team.

The frequency and content of the emails sent are regulated by the Project Mail Preferences. If the Project Mail Preferences are set to send mail to Agents on Open and Closed statuses, but not in Pending Status, and Always is selected in the option above, then Team members receive email notification about all Team Issues when they are in Open and Closed statuses, but not when they are in Pending status.

Agents assigned individually to an Issue receive email according to the Project Mail Preferences, regardless of the rule above or whether the Team is assigned.

11. When you are finished configuring the Team, enter your password and click **GO**.

The Team is now created and Issues can be assigned to Teams from the Create and Edit Issue pages. Additional Teams can be created using the same method, with users as members of only one Team or multiple Teams.

Customers

Customers in **FootPrints** have access to many self-service features. Depending on their permission level, Customers can submit Requests, track the status of their Requests, search the Knowledge Base, etc. The Customer user type is appropriate for both employee and external Customers of your organization.

Customers have a number of components:

- **User Account**—This is the ID and password of the Customer. Users can have unique IDs and passwords or they can share a generic ID and password. This record is kept in the password file.
- **Contact Record**—The contact information for the user is kept in the **FootPrints** Address Book (or dynamically read from an LDAP or other External Database/SQL source). The data kept depends on the fields in the Address Book.
- **Primary Key**—The Customer User Account and Contact record are linked via the Primary Key field. This is a field in the Address Book, such as **User ID** or **Email Address**, that uniquely identifies the user.
- **Role**—The permission level for the user. Built-in and custom roles are available.

Built-in Customer Roles

- **Read KB**—View and search the Knowledge Base.
- **Read KB/Requests**—View and search the Knowledge Base and check the status on Customer's own Requests (entered by an internal Agent user, or via email).
- **Read/Submit**—In addition to Read KB/Requests functionality, can submit Requests via the web interface. This is the most popular Customer role.
- **Read/Submit/Edit**—In addition to Read/Submit functionality, these users have limited edit privileges of their own Requests (only available if the Customer Edit license is purchased).

Add a New Customer

To add a new Customer to a **FootPrints** project, select Administration | Project | Customers | Add Customers from the **FootPrints** Toolbar. From this page, you can create new **FootPrints** Customers as well as add existing **FootPrints** users to the current project.

To add a new Customer to the current project

12. Choose the account type. A Shared account can be used by many people (who identify themselves with a unique key, such as email address). A Unique account is intended for one user only and allows you to specify a unique password for the user.

NOTE
If the user is already a member of another **FootPrints** project, refer to <u>Add Existing Customer User to Current Project</u>.

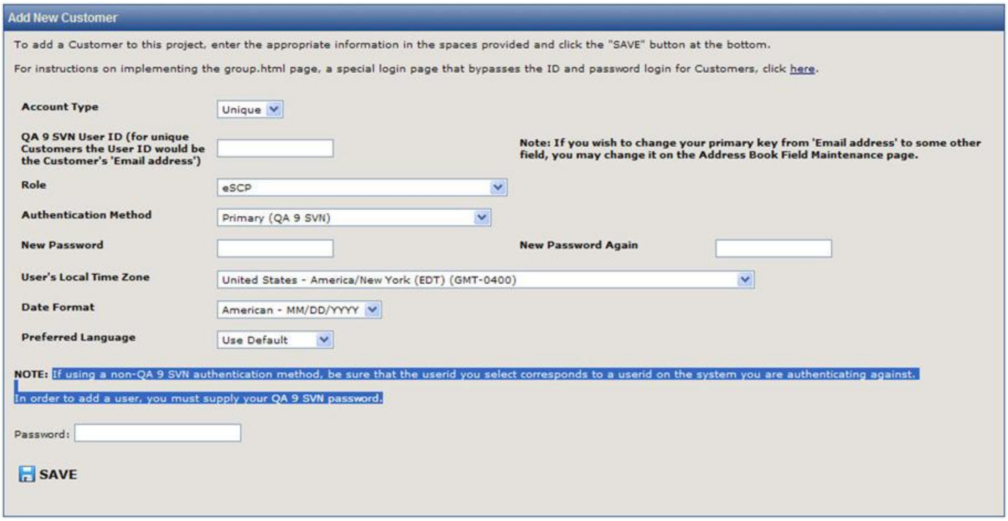
13. Create a **FootPrints** user ID. This is the ID entered to log into **FootPrints**. The format of the ID depends on the account type:

- **Shared account**—The ID can be any string with no spaces, such as “customer”, “guest” or “accounting”.
- **Unique account**—The ID must be in the format of the Primary Key for the Address Book associated with the current Project. This is set under <u>Address Book Field Maintenance</u>. For example, if Email address is the primary key, the ID should be in the form of the user’s email address, e.g., jsmith@widget.com. If the Address Book field Customer ID is the primary key, then the ID might be in the form jsmith.

NOTE
If the System administrator has defined only a single authentication method and it is a non-**FootPrints** authentication method, be sure that the user ID you select corresponds to a user ID on the system against which you are authenticating. If two authentication methods are available, you can select the method the agent uses to log into **FootPrints**.

14. Choose a <u>Role</u> for the user.
15. Select the customer's authentication method
16. Enter a password for the new user (this is requested twice for accuracy). A password is not required if the authentication method is not FootPrints authentication.
17. Enter customer preferences for time zone, date format, and language.
18. Enter your password and click **GO**.

19. If a Unique user is created, a Contact Information page is displayed. Enter the contact information for the user. This creates a contact record in the Address Book. If the user already has a contact record in the Address Book (based on their primary key), the page is not displayed, but the user account is automatically linked to that contact record via the primary key[10].



Customers can also be automatically added to the system from a network password or LDAP source, or they can create their own accounts. These features are detailed in the topic on Auto Add Customers under *System Administration*.

Add Existing Customer User to Current Project

Customers can belong to multiple Projects. Customers from other Projects can be added to the current Project from the Add Customer page. The Projects must share the same Address Book and primary key.

To add an existing Customer to the current Project:

20. Select Administration | Project | Customers | Add Customers from the **FootPrints** Toolbar. Users from other Projects can be added in the top section of the page.

[10]The key field in the FootPrints Address Book that is used by FootPrints as a reference to identify the customer contact. Examples include "Email Address" and "User ID".

21. If you know the user ID, enter it in the field provided.
22. To browse from a list of users, click Select Customer. A pop-up window is displayed. If there are a large number of Customers in the system, the pop-up window may take a long time to display.

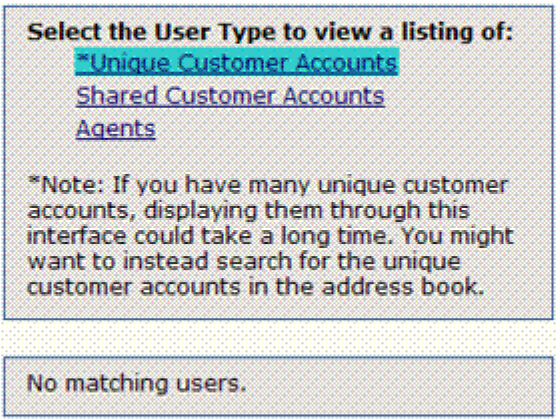
    There are three options in the pop-up:

- **Unique Customers**—Customers from other Projects with unique IDs.
- **Shared Customers**—Shared, generic customer IDs.
- **Agents**—Agents from other projects can be added as Customers to the current project. Agents added as Customers from this dialog receive Unique Read/Submit Customer access. This can be changed later under Edit Customer.

NOTE

Only Customers from Projects that share the same Address Book with the current Project are listed.

23. To add a user to the Project, click the user ID in the pop-up. It is added to the User ID dialog box. Multiple IDs can be entered space-separated either manually or by using the Select Customer dialog.
24. When you are finished adding Customers to the Project, enter your password and click GO.



Add Customer to the current project

Notes on Customers in Multiple Projects

- Customers who belong to multiple Projects can change Projects using the Change Project icon on the **FootPrints** Toolbar. To give Customers a drop-down of available Projects when they first log into **FootPrints**, enable the Project Menu Customer option.

- If you need to associate an existing Project with an existing Address Book from another Project in order to allow Customers to access both Projects, please contact Numara Software Support for instructions on linking the new Project to another Address Book.
- Adding or removing a Unique Customer account that was created with the Auto Add Customer feature removes that user from the group of Customers who were Auto-Added, including any defaults set for the Auto-Added Customers. Refer to the chapter on <u>System Administration</u> for more information on this option.

Customer Options

Project–wide options for Customers are configured in the "Customer Options" page. These options affect all Customers in the current project. For more information on Customers, please refer to the online help or the Numara FootPrints Reference Manual.

Customer Service Portal

The Customer Service Portal allows customers to access FootPrints and search the Knowledge Base without first logging in. Some available options, such as submitting and viewing Requests, require identification by the customer. This is a simplified way of providing customer self-service, and it is primarily geared for external customer support.

NOTE

If this option is enabled for the project, it will supersede all customer roles defined for the Project. It also means that the customers who are members of the Project where single–frame is defined cannot access other projects through this interface.

Enabling Customer Service Portal

FootPrints is set to the traditional FootPrints interface by default. Enabling the Customer Service Portal is done in the first section of the Customer Options page.

1. Select Administration | Project | Customer Options to get to the Customer Options page.
2. Click the Customer Service Portal radio button to enable the feature for customers of this Project. Users may also achieve this same result if they clicked the Customer Service Portal button from the final step of the Project Setup Wizard. When you click the Customer Service Portal radio button, the page changes to provide you with the appropriate options.

The following options are available for the portal:

- **Defining Login Type** – Specify whether Customers will be required to enter a unique ID and password or just a primary key, such as an email address, with no authentication.
- Define the Available Options
- Define the Initial Content
- Create a Welcome Message
- Switch Project Menu
- Editing Requests
- Color
- Define the Entry Point for the Customer Service Portal
-
- **Show or hide the FootPrints Logo**

For more information about configuring the eService Customer Portal, see the online help or the **Numara FootPrints Reference Manual**.

Another way to add customers to FootPrints is with the Auto Add Customer feature. This feature gives customers access to the system automatically and without the administrator creating or pre-loading account information. A default Project, additional Project membership, and the customer role type can be specified for new users added automatically. This feature is useful if you have a large employee customer or external customer user base that needs access to **FootPrints** and you want them to have individual IDs and passwords. For details on the Auto-add feature, refer to the **Numara FootPrints Reference Manual**.

User Roles

FootPrints comes with a number of built-in permission roles (also called "user types") to assign to users of the system. Each role includes a variety of permission options that dictate what users can and cannot do within a **FootPrints** Project. Options include creating and editing Issues, access to searches and reports, adding to the Knowledge Base, and more. The administrator can define and change which actions users of that role type can perform. In addition, an unlimited number of custom roles can be created.

There are two categories of roles in **FootPrints**. They are:

- **Agents**—These roles apply to full-strength users of **FootPrints**, such as help desk agents, customer service representatives, technicians, developers, project managers, etc. Users that can be added to an Agent-based role must have an Agent or administrator-strength license, either fixed or concurrent.

- **Customers**—These roles apply to end-users of **FootPrints**, such as external customers, internal clients, employees, outside vendors, etc.

NOTE

This feature is optional. If you do not want to set permissions for different sets of users (for example, if you have a small department using the Project, all of whom fit into one or two categories), then the built-in roles that come with **FootPrints** may be sufficient. This feature is useful for creating very detailed permissions for different levels of users or can be used to change just one or two options for a set of users. It can also be used to create special permissions for a single user.

Creating System vs. Project Roles

Roles can be defined at both the project and system level. System roles are not automatically assigned to users. Instead, they can be created by the System Administrator to be used by Project Administrators in their projects. This is an easy way to create standard roles that can be maintained in one place and are constant throughout the system.

- To create a system role, select Administration | System | User Roles from the **FootPrints** Toolbar. Once a system role is created, it can be linked from the Project User Role page.
- To create a Project role, select Administration | Project | User Roles from the **FootPrints** Toolbar. Once a role is created, one or more users can be assigned to that role on the Add/Edit Agent or Customer pages.

Other topics in this section:

- Built-in Roles
- Create a Role
- Agent Permission Options
- Field-level Permissions
- Customer Permission Options
- Assign Roles to Users
- How Roles and Teams Work Together

Built-in Roles

On the User Roles administration page, a list of roles is listed in a drop-down box. If no custom roles have been created, the list only includes the built-in roles. These are the roles that come with **FootPrints**.

They include:

- Agents
  - o Agent
  - o Project Administrator
  - o System Administrator
- **Customers** (only available if an unlimited Customer license was purchased).
  - o Read Knowledge Base
  - o Read Knowledge Base and Requests
  - o Read/Submit
  - o Read/Submit/Edit (Only available if the Customer Edit license is enabled).

Refer to the *User Types and Roles* topic in this document for an explanation of these built-in roles.

Create a Role

To create a new role, click the **Create New Role** button from the System or Project Administration **User Roles** page.

- To create a system role, select **Administration | System | User Roles** from the **FootPrints** Toolbar. Once a system role is created, it can be linked to from the Project **User Role** page.
- To create a Project role, select **Administration | Project | User Roles** from the **FootPrints** Toolbar. Once a role is created, one or more users can be assigned to that role on the **Add/Edit Agent** or **Customer** pages.

This topic discusses the following:

- **Create a New Role from Scratch**—Create a new custom role type to apply to one or more Agents or Customers.
- **Copy an Existing Role**—Copy the properties of an existing role (custom or built-in) to use as the template for a new custom role.
- **Link to a System Default Role**—Use a system role in the current Project (not available on the System Administration **User Roles** page).

Create a New Role from Scratch

1. Select Administration | System | User Roles or Administration | Project | User Roles from the FootPrints Toolbar.
2. Enter the name for the role in the Name of role field. This is the name displayed on the Add Agent or Add User pages when selecting a role for a user.
3. Select the role type (Agent or Customer) by clicking the appropriate radio button. The role created can be applied to either Agents or Customers. An Agent is

anyone with a full-strength license (fixed or concurrent). These users can potentially create, update, and close Issues, get assigned to and change the status of Issues, add to the Knowledge Base, etc. A Customer is a user of the Customer Self-service interface, i.e., someone who has a problem or question that needs attention. These users can potentially submit and track their own Issues and search the Knowledge Base. Refer to *User Types and Roles* on page **Error! Bookmark not defined.** for more information.

4. Enter your administrator password and then click GO. The User Role Properties page is displayed, pre-filled with the options from the originating role or with the default values.
5. Select the permission options desired for the role. The options available are different for Agents and Customers.

   Details for setting Agent permission options can be found in Agent Permission Options. Details for setting Customer permission options can be found in Customer Permission Options.
6. When you are finished selecting permission options, enter your password and click SAVE. All users who are assigned the role inherit the permissions selected for that role.

Copy an Existing Role

The properties of an existing role (custom or built-in) can be used as a template for a new custom role. This is useful if you want to make a new role that is similar to an existing role, with only a few changes.

To copy a role:

1. Select Administration | System | User Roles or Administration | Project | User Roles from the FootPrints Toolbar.
2. Select a role from the Role to copy drop-down list in the Copy an Existing Role section of the page. All roles, including system roles, those from the current Project, and those from other Projects are listed.
3. Enter the name for the role in the Name of New Role field. This is the name displayed on the Add Agent or Add User pages when selecting a role for a user. The name entered must be different from the originating role.
4. Enter your administrator password and then click GO. The User Role Properties page is displayed, pre-filled with the options from the originating role or with the default values.
5. Modify the permissions for the new role as needed. Modifying the permissions for this role does not affect the originating role; it is used as a template only.

   Details for setting Agent permission options can be found in Agent Permission Options. Details for setting Customer permission options can be found in Customer Permission Options.

6. When you are finished, enter your password and click SAVE. All users who are assigned the role inherit the permissions selected for that role.

NOTE
The new role and the original role used as a template are not linked in any way. Changes made to one do not affect the other. The exception to this is linking to system default roles.

Link to a System Default Role

NOTE
This option is not available on the System Administration User Roles page.

The System Administrator can define system roles that remain constant throughout all Projects. For example, a standard "Director" role can be created for the system that gives the same level of permission to users assigned to that role no matter which Project they are in.

While system roles are created by the System Administrator, they are not put into use until a Project Administrator links to one from his or her Project.

To link to a system role:

1. Select Administration | System | User Roles or Administration | Project | User Roles from the FootPrints Toolbar.
2. In the Link to a System Default Role section, select a system role from the drop-down list. All system roles that are not yet linked to from the current Project are listed.
3. Enter your administrator password and then click SAVE. The role is now available in the Project and can be selected when creating or editing a user.

Editing a Linked System Default Role

To keep a system role constant throughout all projects, it should only be edited by the System Administrator on the system User Roles page. A linked role can be edited by the Project Administrator from the Project User Roles page, but this unlinks the role from the system. Refer to *Edit Roles* in the Numara FootPrints Reference Manual or on-line help for more information.

Agent Permission Options

The permission options available for Agents can only be modified by an administrator. The page from which these permissions are modified is accessed by selecting Administration | Project | User Roles or Administration | System | User Roles, then selecting an Agent role from the drop-down list, and then clicking the Edit Role Properties button. This topic in the document describes the sections of the page and the options for each section.

NOTE

Some of these options were formerly available on the Project Options page (v5.6.1 and below), where they applied to all Agents.

1. **Read Permissions**—These options determine which Issues the user can view and search in the Project. There are three options:

- **Can only view their own assigned Issues**—The user can only view Issues to which he is assigned.

NOTE

Users can also always see Solutions and Customer Requests.

- **Can only view Issues that are assigned to them or to their team**—The user can view Issues that are assigned to him and those Issues that are assigned to his Team (only applies if the user is a member of a Team).
- **Can view all Issues in the project**—The user can view all Issues in the Project regardless of assignment.

3. **Field Permissions**—The Field Permissions section of this page is described in detail in the Field-level Permissions section of this document.
4. **Issue Creation**—These options all concern Issue creation.

- **Creating New Issues**—This option determines if the user can create new Issues from scratch, including regular Issues and Quick Issues.
- **Copy/Move Issues**—If this is allowed, the user can copy Issues within the same Project or copy or move Issues to another Project. This is useful in creating an Issue in which the information is repeated.
- **Creating New Global Issues**—If this is allowed, the user can create Global Issues for important or frequently reported Issues.
- **Can use the following quick Issue templates**—Optionally exclude some Quick Issues from Agents. By default, all defined Quick Issues are defined for Agent access.

5. **Edit Permissions**—These options relate to the editing of Issues, Requests, and other Issue types by the user.

- **Editing Issues**—Which Issues can the user edit:

Can only edit their own assignments—The user can only edit Issues assigned to him.

Can edit Issues that are assigned to their own Team—The user can edit Issues assigned to him and those assigned to his Team (if he belongs to a Team).

Can edit any Issue without being assigned—The user can edit all Issues in the Project regardless of assignment.

- **Editing Requests**—The user can edit Customer Requests (those that haven't been assigned yet) without actually taking them (i.e., without assigning themselves).
- **Editing Public Solutions**—The user can edit existing Solutions in the public Knowledge Base.
- **Editing Internal Solutions**—The user can edit existing Solutions in the internal Knowledge Base.

NOTE

The two previous options do not apply to Pending Solutions, only to published Solutions. Whether an Agent can edit a Pending Solution is based on whether the Agent is an Approver and whether the Agent is the one who submitted the Solution for approval. Refer to Knowledge Base Approvals for more information.

- **Taking Issues**—"Taking" refers to an Agent editing an Issue to which he is not assigned and assigning that Issue to himself. There are three options:

Cannot take any Issues—Taking is not allowed for the user.

Can take Issues that are assigned to their own Team—The user can take Issues that are assigned to his Team (if he is a member of a Team).

Can take any Issue—The user can take any Issue in the Project.

NOTE

If a user has edit rights to Issues, this overrides the Taking option.

- **Taking Requests**—If this is allowed, then the user can take new Requests submitted by Customers and work on them (and at the same time assign himself).
- **Deleting Issues**:

Agents cannot delete any Issues

Agents can only delete Issues that they submitted

Agents can delete any Issue

6. **Knowledge Base**—These options determine whether the user can create Solutions in the Knowledge Base. There are two types of Solution: Public (which Customers and Agents can view) and internal (only Agent users can view)

- There are **two permission options**, one for each Solution type:

Ability to add to the Public Knowledge Base

Ability to add to the Internal Knowledge Base

- For each type of Solution, there are three options:

  Yes—User can create Solutions which are published immediately.

  Needs Approval—User can create Solutions, but they need to be approved by an Approver (an Administrator or other Project Member) before they can be published to the Knowledge Base.

  No—User cannot create Solutions of this type.

NOTE

If Needs Approval is selected for one of the Solution types, you must designate one or more Knowledge Base Approvers for the Project. This is done on the Project Administration | Knowledge Base page.

7. Address Book—These permission options relate to creating and editing contacts in the **FootPrints** Address Book.

NOTE

These options do not apply if an LDAP or SQL Address Book is used in the Project.

- Creating new Contacts—The user can create new contact records in the Address Book for the current project.
- Can Edit—If All Contacts is selected, the user can edit any contact record in the Address Book for the current project. If Only Contacts that they created is selected, the user can only edit contact records that they originally created in the Address Book. If the user cannot create new contacts and Only Contacts that they created is selected, the user cannot edit any contacts.

  Can View Contacts

  Can view all contacts in the Address Book

  Can view only contacts with the same organizational unit as the Agent. The Agent must be added to the Address Book in order for this role property to work correctly. The organizational unit field must be populated for the Agent and the Agent's account ID must match the User ID field in the Address Book.

  Cannot view contacts

- Creating new Master Contacts—Options are Allowed or Not Allowed.
- Editing Master Contacts—Options are Allowed or Not Allowed.

8. Searching and Reporting—This set of permission options determines what access the user has to searches and reports. Depending on what is selected, the user's

toolbar is updated to show only permitted report and query options. Also, the data returned in the searches and reports is determined by their Read Permissions (see above). The following options are available:

- Custom Reports
  - No Access—User cannot access custom reports.
  - Personal Reports Only—User can create, run and save reports for himself, but has no access to Shared reported created by other users.
  - Run Shared Reports Only—User cannot create, run, or save their own custom reports, but can run shared reported created by other users.
  - Personal Reports (Full Access) and Run Shared Reports—User can create, run, and save their own custom reports and can run shared reported created by other users.
  - Personal and Shared Reports Full Access—User can create, run, and save their own custom reports and can create, run and save shared reports for other users.

NOTE
The data that is returned in these reports is based on the user's Read Permissions. For example, if the user can only view his own Team's Issues, any custom reports he runs (personal or shared) returns only his Team's data.

- **Cross-project Reports**—Same options as Custom Reports. User can run cross-project reports that include data from any project to which the user belongs.

NOTE
This option applies to the current project. If Cross-project Reports are not allowed for the user in the current Project but are allowed in another one of his projects, the user can run a cross-project report from the other Project that contains data from this Project.

- **Address Book Reports**—Same options as Custom Reports.

  Issue Searches

  - Personal Searches Only—User can only run, save, and edit personal searches.
  - Personal Searches and Run Shared Searches—User can run, save, and edit personal searches, and can run shared searches created by other users.
  - Personal and Shared Searches Full Access—The user can run, save, and edit personal searches and shared searches for other users.

- **Cross Project Issue Searches**—Search Issues across the Projects to which the Agent has access. Same options as Issue Searches.

NOTE
The data that is returned in these searches is based on the user's Read Permissions. For example, if the user can only view his own Team's Issues, any custom searches he runs (personal or shared) only returns his Team's data.

- **Address Book Searches**—Same options as Issue Searches.
  - Time Tracking Reports
    - **No Access**—User has no access to Time Tracking reports.
    - **Full Access**—User has full access to Time Tracking reports.
- **Metric Reports**—Same options as Time Tracking reports.
- **Flashboard**—User has access to the personal flashboard, the Project flashboard, or both.

NOTE

This option is not dependent on the user's Read Permissions. The user can access all data in the Project for Metric reports.

Time Tracking

- o See Time Tracking Info for Other Users—User has access to time tracking information for other internal users.
- o See Rate and Cost Info—User has access to rate and cost information for other internal users.
- o Edit existing Time Tracking entries—Choices are Allowed or Not Allowed.

Change Management

- View all change management history—The user has access to the change management history information.
- Ability to override approval/disapproval voting—The user can override the votes in any phase of any change management process and end the phase immediately. This removes the override ability from the Issue pages, but Project Administrators can still override votes by selecting Administration | Project | Change Management, then selecting the Issue Approval States link on the Change Management page, and then selecting a voting option from the drop-down menu in the Override column of the table. This Project Administration function is not a true voting function, but an administration function to move an Issue within a phase.

Miscellaneous

- Instant Talk—If Instant Talk is enabled for the Project and this option is enabled, the user can initiate a chat session with other users.
- Numara Remote—If this add-on module is licensed, enable or disable the use of it for the role.
- Project Administration—Project Administration rights can optionally be given to the users of this custom role.
- Project Administration Rights—Check the boxes to specify the functions that this role can administer as a Project Administrator.
- CMDB Access—If this add-on module is licensed, disabling this for the role means the CMDB button is not displayed in the FootPrints toolbar, effectively preventing any access to the CMDB homepage and any functions that page provides.
- Project Calendar—User can create and edit appointments in the Project Calendar. Users can always create and edit appointments in their Personal Calendars. In addition, users can edit an appointment in the Project Calendar if they are an invitee of the appointment, regardless of this permission option.

- **Change Personal Preferences**—Choose Yes to allow users with this role to set their own password, time zone, date format, screen size setting, and language and delete their login cookie from the "My Preferences" page or choose No to deny the privilege.
- **FootPrints Sync**—Select whether users with this role can download the FootPrints Sync client.
- **FootPrints Dashboard**—Specify the maximum number of dashboard components for Agents in this Project. The maximum number that an administrator can specify is 10 and the minimum is 1.

When you are satisfied with the permissions selected for the role, enter your password and click GO . All users who are assigned the role inherit the permissions defined.

Field-level Permissions

Field-level permissions, as a rule, are not likely to be created as part of an initial design. Rather, it is expected that the Issues page will be created first, and then a need for field-level permissions will be found. At that point, an administrator will go back and either create a new field that is to be restricted to specific roles or restrict an existing field to certain roles. In addition, it is not expected that new roles will be created to accommodate field-level permissions. However, while adding roles to accommodate field-level permissions is not expected, this section describes how permissions are applied to existing fields, creating new fields to be restricted with field-level permissions, and creation of new roles to accommodate field-level permissions, just so that all the bases are covered.

Customer Permission Options

Customer permissions can be set if you have a Customer license. You can define multiple roles for your Customers using the built-in Customer roles and then define different permission sets for each role. Note that roles are not available if you are using the Customer Service Portal.

The permission options available for Customers can only be modified by an administrator. The page from which these permissions are modified is accessed by selecting Administration | Project | User Roles or Administration | System | User Roles, then selecting a Customer role from the drop-down list, and then clicking the Edit Role Properties button. This topic in the document describes the sections of the page and the options for each section.

> **NOTE**
> Some of these options were formerly available on the Customer Options screen (v5.6.1 and below), where they applied to all Customers.

2. **Requests**—These options determine what the user can do with Requests.

- **Viewing Requests**—There are three options:
  - Can only view their own Requests—The user can only view his own Requests, including those entered by him via the web, email, or entered by an Agent for him (based on the user's primary key).
  - Can view their own Requests and their Organization's Requests—The user can view his own Requests and those of his Organizational Unit (only applies if an Organizational Unit field is enabled in the Address Book).
  - Cannot view Requests—The user has no access to Requests. This option is appropriate if the user only needs to search the Knowledge Base.
- **Creating Requests**—There are several options:
  - Creating Requests—User can create new Requests via the web interface for himself only. This is the default for Customer Read/Submit and Customer Edit roles.

NOTE
Customers cannot enter Requests for other users. If you would like to create a role that allows the user to create Requests for other users, be assigned to Issues, etc., you must create an Agent role.

- Entering Priority of Requests—Customer users can optionally enter a priority when creating Requests (disabled by default). If this is not allowed, the default priority for the project is assigned automatically when the user submits a Request. This option only applies if the user is allowed to create Requests.
- Update Contact Info—User can update his own contact information when submitting a Request, which then updates the Address Book. This option only applies if the user is allowed to create Requests and if the FootPrints Address Book is used (does not apply to LDAP or Dynamic SQL Address Books, which are read-only).
- Can add CC: addresses to Requests—Customers can add email addresses that FootPrints includes in the list of Request recipients. They do not have to be email addresses of FootPrints users.
- Can use the following quick Issue templates—Customers can use specified Quick Issue templates, like Password Reset. Customers do not have access to Master/Subtask Quick Issues.
- Editing Requests—With a Customer Edit License, customers can edit public Read/Write/Edit fields as defined by the Project Administrator.
- Closing Requests—Allow customers to change their own request status to Closed.

- Global Issues—Customer can subscribe to Global Issues created by Agents or administrators.

Miscellaneous

- Instant Talk—If Instant Talk is enabled for the Project and this option is enabled, the user can initiate an Instant Talk chat session with an available Agent. If it is disabled, the Instant Talk option is not available for the Customer on the FootPrints Toolbar.
- Knowledge Base—User can search the public Knowledge Base and has access to the public FAQs. Customers can never view internal Solutions.
- Default Homepage—The Homepage that Customers see when they first log into FootPrints can be customized per role. The options are:
  - My Requests—A list of the user's personal Requests is displayed.

- My Organization's Requests—A list of the user's Organizational Unit's Requests is displayed.
- Submit Request—The Submit Request form is displayed.
- Global Issues—A list of Global Issues is displayed.
- Knowledge Base Categories—Select the Knowledge Base category. The list of Issues that are in that category is displayed.
- FAQ Page—A list of the Frequently Asked Question categories is displayed.

- **Customer Welcome Message**—The Welcome message displayed at the top of the Homepage can be customized per role. This is a good place to communicate to users of that role what they can do in **FootPrints**, how they can get help, important messages, etc. The message can contain any text and can also contain the following variables for the user's name, etc.:

Variable	Description
FROMNAME	Email “from” name (if different from “FootPrints”)
USERNAME	User's name
ADMINEMAIL	Project Administrator's email address
PROJNAME	Project Name

Customer Welcome message variables

- **Change Personal Preferences**—User can change his own preferences, including changing password, time zone for date/time display, date format, screen size setting, and language. A **My Preferences** icon is displayed in the **FootPrints** Toolbar.

NOTE

This only applies to unique customer accounts; shared accounts do not display **My Preferences** on the Toolbar.

When you are satisfied with the permissions selected for the role, enter your password and click **GO**. All Customers who are assigned the role inherit the permissions selected.

Assign Roles to Users

Once a custom role is created, users can be assigned to the role in the following ways:

- **Edit Role Membership** (described below)—From the Roles Administration page, you can assign one or more users to a role.

- **Add Agent**—On the Add Agent page, all Agent roles are available to assign to a newly created Agent.
- **Edit Agent**—On the Edit Agent page, all Agent roles are available to assign to an existing Agent.
- **Add Customer**—On the Add Customer page, all Customer roles are available to assign to a newly created Customer.
- **Edit Customer**—On the Edit Customer page, all Customer roles are available to assign to the existing Customer.
- **Auto-Add Customers**—Auto-added Customers can be assigned to any custom or built-in role.
- **User Import**—Users imported from a comma-delimited text file can be assigned any built-in or custom role.

Refer to the individual topics listed above for complete instructions on adding/editing users with the various methods.

Edit Role Membership

Once you have created a role, you can assign one or more users to that role from the Edit Role Membership page. This allows you to quickly assign and re-assign multiple users at once to a role.

To use this feature:

1. Select Administration | Project | User Roles from the **FootPrints** Toolbar.
2. On the User Roles administration page, select a role from the drop-down list and click Edit Role Membership. The Role Membership page is displayed. This page lists the current users who belong to the role on the left in the Members field and other Project members on the right in the Other Project Members field. The other Project members are listed with their current assigned Role.
3. To:
   - **Assign a user to this role**, select the name from the Other Project Members field and click the left arrow button. The user's name is displayed in the Members field.
   - **Unassign a user from this role**, select the name from the Members field and click the right arrow button. You are prompted to reassign roles on the next page for any users unassigned on this page.

   A summary of the changes you've made are listed in the box below for your reference.
4. When you are finished assigning and unassigning users to and from this role, enter you password and click **GO**.

5. If any users were unassigned from the role on the previous screen, a list of users is displayed, each with a drop-down list of roles. Select the new role for each user, then click GO.

The users now have the permissions of the new roles assigned to them. You can change their role at any time from this page or from the Edit Agent page.

Chapter 12: Email Management

Define Mail Preferences

FootPrints' Email Management feature gives you many of the capabilities to use in conjunction with the web interface. The system can send customized email notifications to users and process incoming email submissions and updates. Users can submit, track, update, and query Issues from any email client, including Microsoft Outlook and Lotus Notes.

The email notification feature includes extensive rules for when notification mail is sent to users regarding their Issues, what the emails contain, notification to Agents and administrators regarding automatic escalation, etc. Outgoing email notification requires an SMTP mail server that is accessible to the FootPrints server. The incoming email feature allows users to send email to FootPrints, which are converted into new Issues, allows users to update their Issues via email, and supports email queries. This feature requires at least one POP3 or IMAP account set up for the exclusive use of FootPrints.

Because this is a Getting Started manual, some of the more advanced features of FootPrints email management are not discussed. For complete details on email management, refer to *Email Management* in the Numara FootPrints Reference Manual.

This chapter contains the following sections:

- System Administration
  - Incoming Email Management
- Project Administration
  - Outgoing Email Management
  - Incoming Email Management
  - Email Filters

System Administration

System email notification settings are configured under Administration | System | Features | Email | Email Notification.

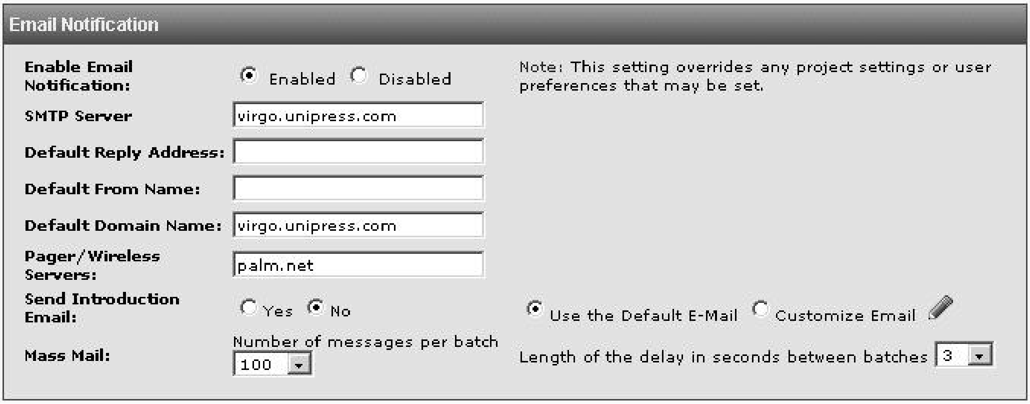
- Enable Email Notification—When disabled, no email notification is sent by FootPrints. This overrides any Project settings or user preferences that may be set. This option is useful if you can't connect to a mail server.
- SMTP Server—Specify the SMTP server (Windows only).
- Default Reply Address—This is the address that is displayed in the From and Reply to fields of all outgoing notification email sent by FootPrints. Any direct replies to FootPrints notification email go this address. Individual replay addresses can also be specified for individual Projects.
- Default "From" Name—Specify a name here for mail sent by FootPrints. This is the name displayed in the From field of email notification. By default, this is FootPrints. This name can be changed, for example, to your company or department name. Different From names can be defined for individual Projects. Refer to *Incoming Mail Setup* on page 186 for additional information.
- Default "Domain" Name—Specify a domain for mail sent by FootPrints. This is the email domain that is added on to email addresses where the user has no domain specified. For example, if customers are configured to only enter their email ID names (e.g., jsmith) and your organization's email domain is @widget.com, enter widget.com here and FootPrints appends that domain when sending an email to a user, e.g., jsmith@widget.com.
- Default Sendmail Command (UNIX/Linux only) —Specify a sendmail command here for mail sent by FootPrints (UNIX and Linux only). This is the sendmail command FootPrints uses if you use something other than the Unix/Linux sendmail program for email processing.

NOTE FOR FREEBSD USERS
Do not specify a sendmail command if you use agent /usr/lib/sendmail or /usr/sbin/sendmail.

- Pager/Wireless Servers—Define certain email domains that should receive shortened email notification. Enter the email domains that FootPrints should recognize for sending mail to wireless devices. Any email notification that goes to these domains follows the email format defined on the Email Preferences page (in Project Administration) for pager/wireless. Enter a space-separated list of domains, e.g., palm.net skytel.net motorola.com.
- Send Introduction Email—If this option is selected, users can receive an introductory email the first time a notification email is sent to their email address. Formatting Introduction Email

- **Mass Mail**—The Mass Email feature allows you to send a broadcast email to contacts in the Address Book. Mass Mail Settings

Once you finish updating the **Mail Preferences** page, enter your password and click **SAVE** to activate the changes.



Incoming Email Management

FootPrints Incoming Email Management can be configured to process incoming email submissions. Users can create Issues, update Issues, and submit queries via email. At least one POP or IMAP email account must be created on your email server for the exclusive use of **FootPrints**. One email account can also be specified for each Project. This section describes how to set up the incoming email feature for Windows and UNIX.

Incoming email is configured for the entire system by selecting **Administration | System | Features | Email** from the **FootPrints** Toolbar. Some incoming email preferences can also be configured per Project.

The following options are covered in this topic:

- System Incoming Email Preferences
  - System Incoming Email Preferences
  - Incoming Email Setup
  - Other System Incoming Email Preferences
    - Customer Response flag
    - Incoming mail size
    - Recovering Lost Incoming Email
- Project Incoming Email Preferences
  - Project Incoming Email Preferences

NOTE

You must have a FootPrints Customer License to enable incoming email for external users. Otherwise, FootPrints deletes the mail from the POP account, but won't enter it as a request. Any such email is lost.

System Incoming Email Preferences

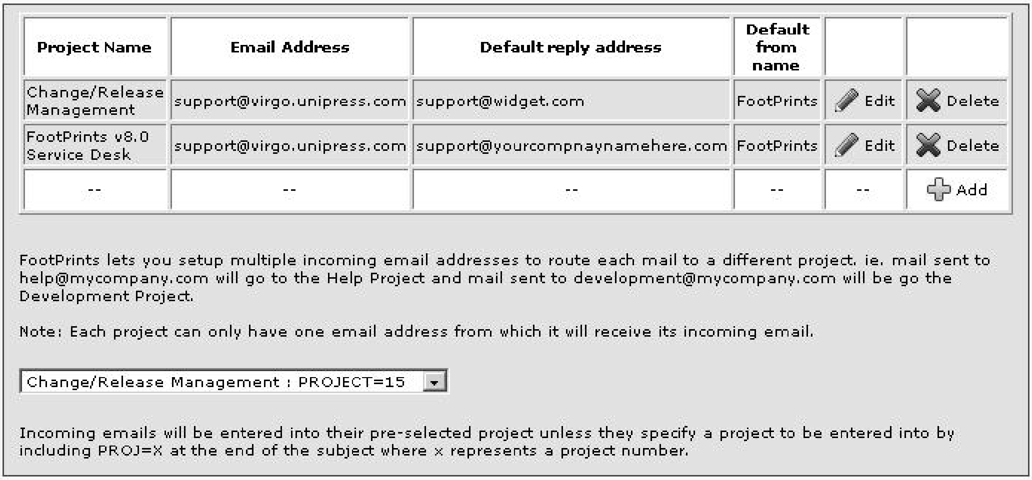
- Configure Incoming Email—Define email account(s) for processing incoming email submissions from users (see below).
- Debug Incoming Mail—This option enables incoming email debugging, allowing Numara Software Support to assist you in finding configuration or other incoming email problems.
- Choose Error Notification Address—When an incoming mail processing error occurs, an error message is sent to the submitter of the email. In addition, an email is sent to a System Administrator and the text of the original submitted email is saved to a file on the server. In this section, choose which administrator should receive these emails. If Ignore Errors is selected, an error message is still sent to the submitter, but no error message is sent to a System Administrator and the mail is not saved.
- Vacation Mail Filters—Optionally create a list of phrases which are used to reject incoming email messages, as in "vacation" messages. Configuring Vacation Mail Filters
- Spam Catcher—The system can check for email messages that may be a result of Spam mail, or an email loop between FootPrints email notification and an automated email daemon.

After you finish updating the Mail Preferences page, enter your password and click SAVE to activate the changes.

Incoming Mail Setup

Incoming email must be configured before users can submit Issues via email, update Issues via email, reply to Issues via email, or submit email queries to the database. At least one POP3 or IMAP email account must be set up for the exclusive use of FootPrints. In addition, a FootPrints Customer License must be purchased. Otherwise, FootPrints deletes the mail from the POP3 account, but won't enter it as a request the mail is lost.

To configure email, select Administration | System | Features | Email from the FootPrints Toolbar. In the section entitled Incoming Mail Setup Feature, click Configure Incoming Email. One email account can be configured for the whole system or individual email accounts can be associated with each Project on this page.



Project Name	Email Address	Default reply address	Default from name		
Change/Release Management	support@virgo.unipress.com	support@widget.com	FootPrints	Edit	Delete
FootPrints v8.0 Service Desk	support@virgo.unipress.com	support@yourcompnaynamehere.com	FootPrints	Edit	Delete
--	--	--	--	--	Add

FootPrints lets you setup multiple incoming email addresses to route each mail to a different project. ie. mail sent to help@mycompany.com will go to the Help Project and mail sent to development@mycompany.com will be go the Development Project.

Note: Each project can only have one email address from which it will receive its incoming email.

Change/Release Management : PROJECT=15

Incoming emails will be entered into their pre-selected project unless they specify a project to be entered into by including PROJ=X at the end of the subject where x represents a project number.

Create mailboxes for FootPrints projects

Configure Incoming Email

1. Select Administration | System | Features | Email from the **FootPrints** Toolbar.
2. In the Incoming Email section, click the Configure Incoming Email button.
3. Click **Add** on the Incoming Email Setup for FootPrints page.
4. Select the mail retrieval protocol: IMAP (Internet Message Access Protocol) or POP (Post Office Protocol).
5. Enter the POP/IMAP mail server name for your organization either as a DNS name or IP address, e.g., mail.myserver.com or 123.33.44.55.
6. Enter the support email account name, e.g., support.

IMPORTANT

Do not enter your own email account in this field. Any email sent to the account specified here is processed by **FootPrints** as incoming email. If you enter your own email address, any email sent to your account, regardless of the source, will be processed by **FootPrints** automatically.

7. Enter the password for the email account (must be entered twice).
8. Enter the default reply address for this account. We recommend entering the full email address of the account specified above, e.g., support@myserver.com.
9. Enter the From name for this account. This name is used to populate the From of email notifications, e.g., FootPrints or Widget Support.
10. Select a Project for this account. This is the default Project for incoming email for the account specified above. If this is the only account defined for incoming email for **FootPrints**, then all email goes into the Project selected here (unless the Project is defined in the email subject in the form PROJ=n).

11. Enter your password and click **GO**.

Additional accounts for other projects can be specified following the instructions above.

In order for incoming email to work properly, you must open the TCP Port associated with the mail server and provide the Port numbers for IMAP and POP3. IMAP needs Port 143 and the POP3 server needs Port 110.

NOTE
Incoming and Outgoing Email are processed by the **FootPrints** scheduling service. On Windows, **FPSchedule.exe** is automatically set as a service on the **FootPrints** server. This service handles incoming email, outgoing email notification, escalations, mass emails, and scheduled reports.

Editing and Deleting Email Accounts

Incoming email accounts can be changed and deleted from the Incoming Email Setup screen, which is accessed by selecting **Administration | System | Features | Email** from the **FootPrints** Toolbar and then, in the Incoming Email section, clicking the **Configure Incoming Email** button.

- To change the properties of an account, click **Edit** for that account and change the values as desired.
- To delete an account, click **Delete** for that account. The account is deleted. For UNIX, the corresponding .forward file must also be deleted.

Define a From Name for Projects with No Incoming Email Address

If you want to specify which project is sending a notification email to your customers, but you don't want them to be able to reply to those email messages, you can specify a "From Name" without incoming email.

NOTE
When you don't have an incoming email address setup for a project, the system defaults for notifications are used for the reply name and email address. If no system wide default reply address has been specified, replying to an email from FootPrints will be sent to the agent responsible for sending out the email.

To define which project in FootPrints is sending the notification email:

1. From Administration | System | Projects | Email, click on Configure Incoming Email.
2. In the space next to "Support email account id", type "no-incoming"
3. Optionally, you can enter a "reply address" in case you want a place to store replies from your customers. These replies will not be stored in the Issue.
4. In the space next to "From Name", type the name you want to appear when FootPrints sends an email from this project
5. Select the appropriate Project from the drop-down Project Selection list.
6. Type your password and click SAVE.

Vacation Mail Filters

Optionally create a list of phrases which are used to reject incoming email messages, as in 'vacation' messages. Messages with these phrases in their subjects are not accepted by the incoming email system. This is in addition the other Email Filters defined above.

1. There are three options:
   - Do not screen mail for vacation words.
   - Screen all mail for vacation words.
   - Screen all mail from Agents/Administrators for vacation words. Do NOT screen mail from Customers.
2. The text box is pre-filled with some standard 'Vacation' message words ("Out of Office, "On Vacation"). You can use this list or modify it.
3. To revert to the standard words, check the box.
4. Click SAVE to save your changes.

Spam Catcher

The system can check for email messages that may be a result of Spam mail, or an email loop between **FootPrints** email notification and an automated email daemon. If an email account is found to be spamming FootPrints, that account is placed in both the “no_send” and “no_accept” files for the system, preventing a barrage of unwanted Issues. This feature is enabled automatically.

The default criteria for the Spam Catcher are:

- Number of emails to check against – 20
- Number of matches necessary to be considered Spam – 5
- Number of characters to check against – 50

If 5 out of the last 20 incoming email submissions to **FootPrints** are from the same account, with the same content in the first 50 characters, that account will be blocked from **FootPrints**. If you would like to stop blocking the account, you must remove it from the "no_send" and "no_accept" files (see topic on Email Filters).

Integrating with SpamAssassin

You can also integrate **FootPrints** with SpamAssassin, so that email to your **FootPrints** system will be checked by SpamAssassin and those that are spam will be marked for deletion. You can get SpamAssassin for UNIX and Linux at spamassassin.org and for Windows at http://dl.bloomba.com/SAproxyInstaller.exe.

1. Go to Administration | System | Email.
2. Check the **ON** button if you want FootPrints to ignore all incoming email that has an 'X-Spam-Warning' header.
3. Click **SAVE** to save your changes.

Spam mail will be caught and deleted from the mailbox, but information about the mail will be written to the mail log.

Other System Incoming Email Options

Customer Append Flag

When a high volume of **FootPrints** notification email is being sent, it may be desirable to flag email notifications that are generated by a customer responding to an email. This can be accomplished with the following change:

1. Edit the C:\FootPrints\cgi\MRlocalDefs file (using WordPad).
2. Add the following line to the file:

   $CUSTOMER_PREPEND_EMAIL_SUBJECT = 'Customer Response:';
3. Save the file, but do not save it with a .txt extension.

Now all email notifications received by Agents and administrators that are the result of a customer response contain the words **Customer Response** in the subject of the mail.

Size Limits for Incoming Email

The size of incoming email, and email attachments, can be limited. This limit can be kept low to handle possible email loops that may occur when an assignee's vacation message is enabled. The default limit is 200K.

To set limits for incoming email:

1. Select Administration | System | System Preferences from the **FootPrints** Toolbar.
2. To change the size limit for emails (not including attachments), enter a new value in the Maximum Incoming Body Size field (in bytes).

3. After changing the value, click SAVE.
4. File attachment sizes can be restricted under System | Features | Attachments.

Recovering Incoming Email

If FootPrints processes an incoming mail and fails while writing to the database, it generates an error message similar to the following (the message is saved in the system log and possibly also emailed to the System Administrator):

1. An email message submitted to FootPrints by mmarrison@test.com was not posted, due to an error code of '78' . The sender has been notified. The contents of the email have been saved for you in the file

   /usr/local/footprints/temp/IncomingMailErr_3511

   Once you have resolved the problem and FootPrints is able to handle incoming mails again, you can reintroduce the lost messages to FootPrints manually by following these steps:
2. Open up a command prompt.
3. If your are running Windows, add perl to your path:

   set path=c:\footprints\bin\perl\bin;%path%

Once you have completed these steps, perform the following:

- On UNIX:

  /usr/local/footprints/cgi/MRincoming.pl <
  /usr/local/footprints/temp/IncomingMailErr_3511
- On Windows:

  perl c:\footprints\cgi\MRincoming.pl <
  c:\footprints\temp\IncomingMailErr_3511

Project Administration

Outgoing Email Management

The Project Administrator can control the contents of notification email sent by FootPrints. Different templates can be configured for internal users, customers, and CCs. Rules defining when email is sent can also be configured.

Email notification is configured per Project. To set up email for a Project, select Administration | Project | General | Mail Preferences from the FootPrints Toolbar. In addition, some system-wide preferences can be set for email notification.

The following outgoing email management options are covered in this section:

- Configure Email Templates
- Custom Email Templates
- Email Notification Rules
- Default Email Address for Users

Configure Email Templates

Email notifications can be customized to include any Issue information, as well as custom canned messages. Different templates can be created for assignees, customers, and people copied on Issues. A special template can also be created for emails sent to wireless devices, such as pagers, cell phones, or PDAs.

The standard **FootPrints** Email templates can be changed by selecting from the checkboxes and options in the Contents of Mail grid. Completely custom templates designed in HTML or text are also supported.

To configure email templates, select Administration | Project | General | Mail Preferences from the **FootPrints** Toolbar. Next to the heading Email Templates, click **Configure Email Notification Templates**. A grid is displayed. It consists of many different options that can be included in notification email (represented by rows) and five columns that indicate the type of user/situation in which the option is to be enabled.

The columns are:

- **Field Name/Attribute**—Lists the field types and options available to be included in notification email.
- **Assignee**—Options checked in this column are included in notification email sent to internal users, including Agents, Project Administrators, and System Administrators.
- **Customer**—Options checked in this column are included in notification email sent to customers.
- **CC**—Options checked in this column are included in emails sent to anyone specified in the CC box of an Issue.
- **Wireless/Pager**—Options checked in this column are included in mail sent to pager/wireless email addresses.

Any field or option checked in a particular column is included in all notification email sent to that level of user/situation. Some of the options include an **Edit** button; this indicates that the feature has further options.

The options available on this page are:

- **Customize subject of email**—The information you want to appear in the subject line of the email. Data keywords can be used, as well as static text.
- **Short list of what just changed**—A summary of what was changed in the Issue that caused the email to be sent. If you click the icon in each of the columns, a pop-up window is displayed that allows you to specify whether to include changes to internal Issues or Employee fields.
- **Text at top of message**—Customizable message that is displayed near the top of the notification email. A different message can be made for each type of user class by clicking the icon in that column, entering the message in the text box, and clicking **SAVE**. The checkbox must also be checked in that column. In addition, variables can be placed in the greeting to include the subject of the email, the user's name, etc. Refer to Mail Variables in the Custom Email Templates section for additional information.
- **Project Name**—The name of the Project is displayed in the body of the notification email.
- **Title**—The Title of the Issue is displayed in the body of the notification email.
- **Number**—The Issue number is displayed in the body of the notification email.
- **Link to Details Page**—A hyperlink to the Details page of the Issue in **FootPrints** (requires password authentication).

NOTE

If you are using a custom login page for customers (e.g., group.html), that URL can be specified for Customers by clicking the icon in the customer column and entering the URL. This does not automatically bring the Customers to the Details page of their Issue; after entering their email address, the main customer page is displayed. Contact Numara Software for details on turning the custom customer login page into a Perl script that directly displays the details of their Request when using the hyperlink.

- **Last Edit Date**—The last date the Issue was edited.
- **Last Edit Time**—The last time the Issue was edited.
- **Priority**—The priority of the Issue.
- **Status**—The current status of the Issue.
- **Creation Date**—The date on which the Issue was created.
- **Creation Time**—The time at which the Issue was created.
- **Creator**—The submitter of the Issue.
- **Show Subtask or Global Entry Relationship**—If the Issue is a Master, Subtask, Global, or GlobalLink, include this reference in the email.

- **Description**—The Issue's description, with time/date/user stamps. Two options are available by clicking the icon: Most Recent Description and All Descriptions.
- **Assignees**—The list of users/Teams assigned to the Issue.
- **CC's**—Any email addresses that are listed in the CC section of the Issue. Both permanent and one-time CCs are shown, denoted by one of these labels: (permanent); (permanent, but not CC'd on this edit); (this edit only)
- **Issue Information**—Project field data. By default, customers only see Public fields and internal users see all fields. Individual fields can be selected for inclusion by clicking .
- **Address Book Fields**—Address Book data. By default, customers only see Public fields and internal users see all fields. Individual fields can be selected for inclusion by clicking .
- **List attached files**—A list of files attached to the Issue are displayed in the body of the email.
- **Attach attached files**—Attached files are sent with the notification email. Rules regarding attachments can be set by clicking the icon in the Field Name/Attribute column. They are:
    - *Never send any attachment over n kilobytes*—Where *n* is the maximum number of kilobytes.
    - *Send each attached file on every edit*—All attached files are included with all notification email for the Issue.
    - *Send each attached file only on the first time the file is attached*—Attached files are only included with notification mail when they are initially attached to the Issue.
    - *Allow the user performing the edit to override these settings*—Internal users can choose whether or not to include attachments upon editing an Issue.
- **Complete Issue History**—A summary of the Issue's history appears in the body of the notification email.
- **Text at bottom of message**—Customizable message that appears at the end of the notification email. A different message can be made for each type of mail by clicking the icon in that column, entering the message in the text box, and clicking SAVE. The checkbox must also be checked in the column. In addition, variables can be placed in the greeting to include the subject of the email, the user's name, etc. Refer to <u>Mail Variables</u> in the Custom Email Templates section for additional information.
- **Send mail as text**—Notification mail is sent as plain text.

- **Send mail as html**—Notification mail is sent in HTML format.

NOTE
If both text and html are checked, **FootPrints** includes both formats in the message. For most Windows-type email readers (Outlook, Lotus Notes, etc.), only the HTML is seen.

- **Custom formatting for text message**—Create a custom email template for **FootPrints** notification email layout and custom formatting in plain text (refer to Custom Email Templates).
- **Custom formatting for HTML message**—Create a custom email template for **FootPrints** notification email layout and custom formatting in HTML (refer to Custom Email Templates).

NOTE
For Issue Information and Address Book fields, custom email template settings override settings you specify on this page, regardless of whether the custom formatting is for text or HTML messages. For example, if your Specify Email Content page specifies that the message is to contain only public fields in the Issue Information section and you specify an internal field in the custom email template, the custom email template overrides the other settings. refer to Custom Email Templates for details on how to include the settings on this page with the custom email.

Custom Email Templates

As an alternative to using the layout options in the Contents of Mail grid for email notification, custom email templates can be created using plain text or HTML. The template can contain any combination of **FootPrints** fields using special keywords, and any custom text, in any layout desired. Different templates can be created for each mail notification type: Assignee, Customer, CC, and Wireless/Pager. If a custom email template is enabled, it overrides most of the other options selected in the Contents of Mail grid (exceptions are listed below).

To create a custom email template:

3. Select Administration | Project | General | Mail Preferences | Configure Email Templates from the **FootPrints** Toolbar.
4. Select the column for which you want to create a template: Assignee, Customer, CC or Wireless/Pager.
5. Check the box in that column for one of the two following options: Custom formatting for text message or Custom formatting for HTML message. These can be found at the bottom of the grid.
6. For whichever option you checked, click **Edit**.
7. In the pop-up window, click the link to see a list of keywords for this Project. Each field has a corresponding keyword, including built-in fields, Project fields, and Address Book fields. These can be inserted into the email template. When the email is sent, the value for that field is inserted into the mail for that field.
8. Use any text or HTML editor to create the email template.
9. For a text email template:
    - Only ASCII text can be used. Boldface, colors, underlining, etc. are not accepted. We recommend using "Notepad" on Windows, or an editor like "emacs" or "Pico" on UNIX/Linux to create the template.
    - Use your own text, formatted in any way supported in ASCII.
    - Keywords must be in the exact format specified to work correctly.
10. For an HTML email template:
    - An HTML editor can be used (Dreamweaver, etc.), or a text editor can be used if you are comfortable writing HTML.
    - Use your own text, formatting, bold, underlining, colors, hypertext links, etc. To include a field from **FootPrints** in the email, simply insert the corresponding keyword.
    - Keywords must be in the exact format specified to work correctly.

Example:

To insert the Issue Number into a sentence:

The reference number for your Issue is %%ATTRIB__NUMBER%%.

So, when an email notification is sent for Issue Number 3486, the sentence above displays as follows:

The reference number for your Issue is 3486.

11. When you finished creating the template, save the file.
12. Back in the custom template pop-up window (step 5), use the Browsebutton to upload the new email template from your local machine.
13. Click GO.
14. On the main Contents of Mail screen, click GO. Ensure that the box is checked for the template created and uploaded.
15. Now email notification for the current Project is in the new format for the selected user type. A different custom template can be created for each type by following these instructions.

Sample Template (Text)

Hi %%FIRST-NAME%%!

This is an email notification regarding your Issue “%%ATTRIB__TITLE%%”.

The reference number for this Issue is %%ATTRIB__NUMBER%%.

Notes:

%%ATTRIB__DESCRIPTION%%

Sample Email Generated from the Template Above

<u>When replying, type your text above this line.</u>

Hi Bob!

This is an email notification regarding your Issue “Forgot password”.

The reference number for this Issue is 5429.

Notes:

Entered on 1/16/2001 at 11:48:50 by Jill Smith:

Customer cannot receive email. A technician is scheduled to call Monday, September 22 @ 2pm PST.

NOTE

The message “When replying, type your text above this line” is inserted even though it in not part of the template. This message is inserted automatically by FootPrints for all “Assignee”, “Customer”, and “CC" email notifications. “Wireless/Pager” mail templates do not contain this sentence.

Exceptions

Enabling a custom email template overrides most of the other settings selected in the Contents of Mail grid for that email type. There are a few exceptions:

- Description—If the Description variable (%%ATTRIB__DESCRIPTION%%) is included in the template, select the descriptions to include in the "Description" row of the grid by clicking the Edit button. The options include "All Descriptions" and "Most Recent Only".

  Keywords also include %%ATTRIB__FIRST_DESCRIPTION%% and %%ATTRIB__ALL_DESCRIPTION%%. If you use these keywords, you do not need to use the edit button and select the "All Descriptions" or "Most Recent Only" options. %%ATTRIB_FIRST_DESCRIPTIONS%% provides the most first description entered, %%ATTRIB__MOST_RECENT_DESCRIPTION%% provides the most recent description, and %%ATTRIB_ALL_DESCRIPTIONS%% provides all of the descriptions.

- Link to Details Page—If a custom URL is defined for this option and the variable is included in the template (%%ATTRIB__LINK_TO_DETAILS%%), the custom URL is included in the email link. In addition, in HTML email templates, the words Click here to view Issue in Browser are included as part of the link. In text email, only the URL is included.
- Project Fields—While individual Project fields can be specified in a template, they can also be included a group with the variable %%ATTRIB__PROJFIELDS%%. If this is used, the selection of Project fields chosen under Edit Email Attribute is included. Any Project fields you specified on the Specify Email Content page are included when the custom email template message is sent.
- Address Book Fields—While individual Address Book fields can be specified in a template, they can also be included a group with the variable %%ATTRIB__ABFIELDS%%. If this is used, the selection of Address Book fields chosen under Edit Email Attribute is included. Any Address Book fields you specified on the Specify Email Content page are included when the custom email template message is sent.
- Attach attached files—To include file attachments when using a custom email template, you must check the box for this option in the grid. Various options for file attachments can also be set by clicking the Edit button in this section of the grid. To list file attachments, use the %%ATTRIB__ATTACHED_FILE_LIST%% attribute.
- Send mail as Text—This must be selected to send text email notification.
- Send mail as HTML—This must be selected to send HTML email notification.

Mail Variables

If the custom email template is not used, some variables can still be inserted into the canned message placed at the top or bottom of the email notification, such as the user name, subject, etc. When one of these variables in placed in the greeting message composed under Text at top of message or Text at bottom of message, emails sent by FootPrints include the dynamic data specified.

The table below contains the list of valid keywords:

Variable Name	Description
WHONAME	Name of user who created/edited Issue
WHOMAIL	Email of user who created/edited Issue
PROJECTNAME	Project Name
ISSUETITLE	Title of Issue

Email variables

Here is a sample greeting which includes 2 variables:

> Hi _WHONAME_! Thank you for registering your request _ISSUETITLE_ with us using FootPrints. Your request is very important to us, and we will respond as soon as possible. To respond to this message, simply reply and type your message at the top. If you experience any problems using FootPrints, please send email directly to support@widget.com.

In the example above, the user's name is substituted for _WHONAME_ and the subject of the email (i.e., the title of the Issue) is substituted for _ISSUETITLE_.

NOTE

These variables only work in the canned email messages; they do not work for the custom email templates described in the last topic.

Email Notification Rules

Project Email Notification Rules for outgoing emails are configured by selecting Administration | Project, then clicking the Mail Preferences link in the General section of the main frame.

This section allows you to choose the criteria for email notification sent to users regarding their Issues. It is split into three sections: Assignees, Customers, and CCs. Different rules for email notification can be defined for each group. For example, you may want email notification sent to the Agent assigned to an Issue for all statuses, but you may only want email notification to go to the customer who submitted the Issue when it is opened and when it is closed.

For each of the two categories, the options include:

- **Never send mail**—If this option is chosen, no notification email is ever sent automatically.
- **Send mail only for creation**—If this option is chosen, notification email is automatically sent on creation of a new Issue only.
- **Always send mail for every creation/edit**—Email is sent to all assignees for each change to an Issue.
- **Send mail only for Issues with the following Priorities and/or Statuses.**—If this option is chosen, the lists of priorities and statuses is expanded, allowing the user to select one or more in each category. In addition, boolean operators AND and OR are supported.
  - **Priority**—Mail is only sent to the assignees/CCs when the Issue's priority falls into the range chosen here.
  - **Status**—Mail is only sent to the assignees/CCs when the Issue's status matches one of the statuses defined here. Multiple statuses can be selected (hold down the CTRL key to highlight multiple statuses).

NOTE

The email notification rules selected here can be overridden for a particular Issue by the Agent assigned to that Issue (upon manual edit). These are simply defaults.

In addition to the rules specified above, three other rules can be defined:

- **Send Email Notification for Every Issue**—Email addresses entered here receive email notification for every change to every Issue in the current Project, i.e., any time any Issue is created or edited in any way. This is in addition to the criteria chosen above. Multiple email addresses should be separated by a space. If an agent account is removed but that agent's address is still in this list, that agent address will continue to receive emails from FootPrints.

NOTE

The email format used for this feature is that chosen for assignees under Contents of Mail.

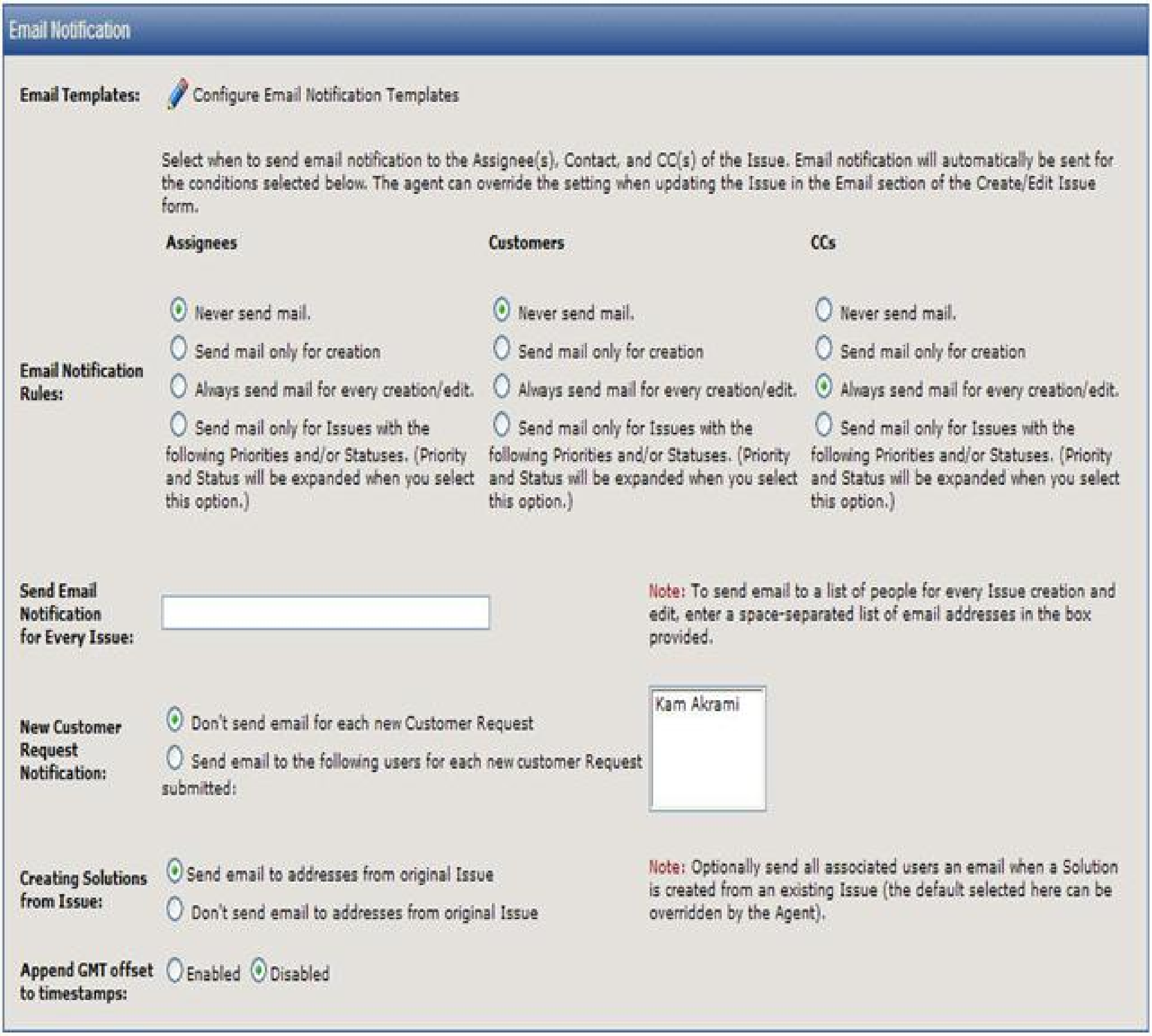
- **New Customer RequestNotification**—You can exclude email responses for customer requests or, alternatively, send email notification to one or more Project members whenever a customer submits a new Request. To prohibit email from being sent when customer requests are submitted, select the Don't send email for each new Customer Request radio button. To enable notification, choose Send email to the following users for each new customer Request submitted radio button and highlight the user's name in the list. Hold down the CTRL key to highlight multiple users. If an agent's account is removed, you must also remove that agent from this list in order to stop the sending of customer request notifications.

NOTE

The email format used for this feature is that chosen for assignees under Contents of Mail.

- **Creating Solutions from Issues**—When a new Solution is created from an existing Issue, users associated with the originating Issue are emailed by default. If Don't send mail to addresses from original Issue is selected, these users are not copied on the Solution.
- **Append GMT offset to timestamps**—Enable this feature to show the Greenwich Mean Time offset to the timestamp in the email.

After you finish updating the Mail Preferences page, you must enter your password and click **GO** to activate the changes.



Define email notification rules

Default Email Address for Internal and External Users

Email notification to internal and external users are handled differently:

- Internal Users—By default, the email address entered when the Project or System Administrator created the user on the Add Userscreen is used for email notification for the user. Two additional email addresses can be defined for pager and other wireless services on the Edit Agent page (or on the user's My Preferences page). Users can change their default email address or choose to have mail sent to more than one address on the My Preferences page as well.

- Customers—Outgoing email to customers on their own Requests is based on the Email address field in the Address Book. This field is mandatory if customers are to receive email and must be of type Email. Customers receive updates regarding their Requests automatically, based on the rules defined by the Project Administrator.

Incoming Email Management

Most incoming email options are defined by the System Administrator. There are a few options that can be configured on a per Project basis by the Project Administrator. They are found under Administration | Project | General | Mail Preferences | Incoming Email.

- Create Issues—Determine whether customers and/or agents can create new Issues via incoming email.
- Edit Issue Via Email—By default, only users associated with Issues and administrators can update Issues via email for a Project. This includes the assignees, the contact, and CCed users for the Issue. You can override this by selecting Anyone can update any Issue via email for this option. Any user can then update an Issue via email for this Project.
- Mandatory Fields for Incoming Email—By default, all users, including Agents, administrators, and customers, must include mandatory Project field data in incoming email submissions. Agents and administrators must include both internal and public mandatory Project field data, while customers must include public mandatory Project field data.

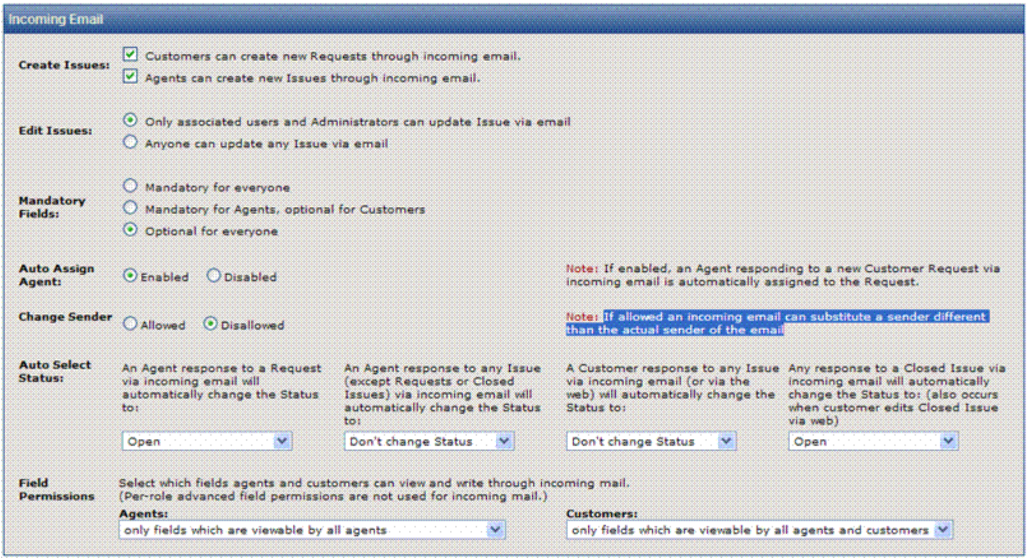
  This option allows users to submit email to **FootPrints** without mandatory field data while still having to enter the data when submitting an Issue via the web interface. In this way, customers are free to send free-form emails to **FootPrints** to submit a Request, but must still give more detailed data when filling out a Request via the Customer Self-service web interface. There are three choices for this option:

  - Mandatory fields are mandatory for everyone—This is the default. Users must include mandatory Project field data (in the form *fieldname=data* or using the HTML Form) in all incoming email submissions.
  - Mandatory fields for agents, optional for customers—If this option is selected, internal (Agent and administrator) users are still required to include both public and internal mandatory field data when submitting an Issue via email, but customers can submit Requests via email with missing mandatory field data. We recommend this option if you would like to make it easier for customers to submit their Requests via email, but require internal users to give more detail. All users must still fill out mandatory fields when using the web interface.

    - **Optional for everyone**—All users, including Agents, administrators, and customers, can submit new Issues via free-form email to **FootPrints** without including any field data. All users must still fill out mandatory fields when using the web interface.

- **Auto Assign Agent**—If enabled, an Agent responding to a new customer Request via email is assigned to that Request automatically. This does not apply to Issues already assigned; it only applies to new Requests submitted by customers via email or via the Customer Self-service web interface.
- **Change Sender**—If allowed an incoming email can substitute a sender different than the actual sender of the email.
- **Auto Select Status**—The status of an Issue can be changed automatically when an Agent or customer responds to an Issue via email. There are four options:
    - **Agent Response**—Select the status that customer Requests should be changed to if an Agent responds via email. This feature only applies if the Auto Assign Agent feature is enabled.
    - **Auto Assign Status**—The status of any Issue can be changed automatically when an Agent or customer responds to the Issue via email.
    - **Customer Response**—Select the status that Issues should be changed to automatically when the customer responds via incoming email.
    - **Responding to Closed Issues**—Closed Issues can be handled separately from the Customer Response option above. Customer responses to closed Issues can remain closed or can be changed to a different status.
- **Field Permissions**—Select which fields agents and customers can view and write via incoming mail. Per-role advanced field permissions are not used for incoming mail.

After you have finished updating the Mail Preferences page, enter your password and click **GO** to activate the changes.



For complete details on using FootPrints email, refer to the **Numara FootPrints Reference Manual** or the **FootPrints User Guide**.

Chapter 13: Configure Workflow

Automating your workflow takes the longest time to implement because you must determine how to best make FootPrints reflect your business rules. It also relies on most of the preceding features, so most of the other features must be set up in advance before workflow can be automated. As with all FootPrints configuration, workflow rules can be configured at a later time.

Topics in this section are:

- Auto-assign
- Escalation and Business Rules
- Service Level Management
- Quick Issue Templates
- Issue Workflow
- Scheduling and Availability
- Customer Surveys

Auto-Assign

Default Assignment

When an Agent opens a new Issue, you can control who is assigned by default to that Issue with the options described below. The option selected here determines who is listed in the Assignees dialog box on the Create Issue page when an Agent opens a new Issue.

There are five options:

- **Assign to creator**—The Agent creating the Issue is assigned.
- **Assign to creator's Team**—The Agent's Team is assigned automatically. If the Agent belongs to multiple Teams, the first Team in the list is selected.
- **Assign to creator's Team and creator**—The Agent is assigned along with the Agent's Team to the Issue.
- **Assign to none**—The Assignees box is blank when an Issue is created by an Agent. This option should be selected if Auto-Assignment is configured for most or all possible choices for at least one field.
- **Assign to all**—All users are assigned. This is appropriate if the Project only contains a small group of Agents.

The default assignment option only affects who is listed as the Assignee when an Agent first creates an Issue. The option selected here can be overridden by the Auto Assignment options selected below, manually by the Agent (with permissions), by Team assignment rules, or by an Escalation rule.

Field-Based Auto Assign

To configure Auto-Assignment:

4. Select Administration | Project | Auto Assign from the **FootPrints** Toolbar.
5. **Create or modify an assignment rule**—To create or modify an assignment rule, select the field you want to modify or for which you want to create a rule from the drop-down field, then click the **GO** button. The Choose Assignees page is displayed. Select the assignees for each choice int he selected drop-down field, then enter your password and click the **SAVE** button. When an incident/problem is submitted with that specified value in that field, the incident/problem is assigned to the specified agent(s) or team(s).
6. **Current Auto Assignment** Summary—The Current Auto Assignment Summary displays a summary of the current auto assignment rule(s).
7. **General auto assign options**

- Auto assign on create/edit
    - Create only—Auto Assignment only occurs when the Issue is first created. Any subsequent changes to the Auto Assign field(s) have no effect on assignment.
    - Create and Edit—Each time an Auto Assignment field is edited, Auto Assignment rules are re-applied. This is useful if Auto Assignment is being used to assign an Issue from one group to another, for example, from Support to Development, then to QA, etc.

- Add to or replace existing assignees
  - Add new assignees—Any users assigned manually will remain assigned in addition to any users auto-assigned.
  - Unassign existing assignees—When users are Auto Assigned, any users added manually or Auto Assigned by a previous edit are removed. This is useful if Auto Assignment is being used to assign an Issue from one group to another, for example, from Support to Development, then to QA, etc.

NOTE

If Auto Assign is configured for more than one drop-down field, the Add New Assignees option is recommended. If the Unassign option is selected, the Auto Assignment rule for one field may unassign users who were assigned by another field choice. Therefore, to assign Issues based on multiple criteria, use Escalation rules. In addition, auto assignment occurs during the ticket creation; if dynamic drop-downs are used, escalation rules, which occur at the end of the ticket creation or edit, should be used to do these kinds of assignments

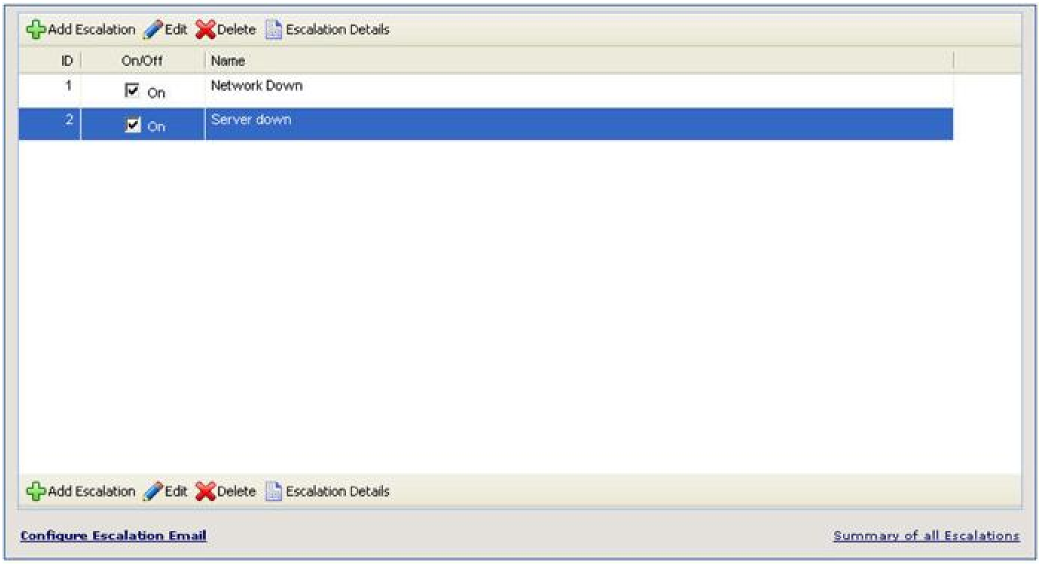
8. **Drop-Down Fields**—This section contains one sub-section for each drop-down Project field in the current Project. Each section is broken down into each choice for the field, with a list of Project members and Teams for each choice.
9. For each choice, you can choose to Auto Assign Issues to one or more users or Teams. Highlight a user's ID or Team name in the list for that value. Use the CTRL key to highlight more than one user or Team.
10. It is not necessary to configure Auto Assignment for each choice in a single field or for more than one drop-down field. It is completely optional. More complex assignment based on multiple criteria, including contact fields, time, etc., can be accomplished with Escalation rules.
11. When you are finished, click **GO**.
12. New Issues for which a configured value is selected are automatically assigned to the users or Teams specified on the "Auto Assign" screen. The users receive notification email, and the Issue appears in their Assignments lists.
13. If the Auto Assignment feature is enabled for a public field, Requests submitted by Customers are also automatically assigned and given a status of Open. They skip the Request bin.
14. Auto Assignment is done in addition to any assignees chosen manually on the Create Issue or Edit Issue page. Auto Assignment rules are applied directly on the Create Issue and Edit Issue pages for Issues created by Agents. Requests submitted by Customers are assigned instantly when the Customer submits the Request via the Customer Self-service interface. Assignment for Email submissions is processed when the email is received by **FootPrints**.

Escalation and Business Rules

Escalation rules are created under Administration | Project | Escalation from the **FootPrints** Toolbar. A list of existing escalations (if any) is displayed. You have several options from this page:

- **Create a new escalation**—To set up a new escalation, click **Add Escalation**. A number of steps for setting up a new escalation rule are displayed.
- **Edit**—Highlight an existing escalation in the list and then click **Edit** to change it.
- **Delete**—Highlight an existing escalation in the list and then click **Delete** to delete the escalation.
- **Escalation Details**— Highlight an existing escalation in the list and then click **Escalation Details** to view summary of the escalation criteria and actions.
- **On/Off**—Turn existing escalations on or off without going to the Escalation Setup page.
- **Save**—If you've turned one or more escalations on or off, you must click **Save** to save those changes.
- **Configure Escalation Email**—Define templates for escalations. You can perform this either before or after you've created the escalation rules.
- **Summary of all Escalations**—View a pop-up that lists all the properties of all escalations in the project by clicking this link. Print the summary by clicking the Print button at the bottom of the page.

The order of escalation rules on the escalation page determines which rules take precedence. The order can be changed by dragging and dropping the rules. When you drag and drop a rule in the list, you must place the dragged rule on top of the rule you want to replace in the order. The rule you are replacing is moved and the dragged rule replaces it. This type of move requires that you enter your password the first time you move an escalation rule, but subsequent moves during the same session do not require the password.



Setting up an Escalation Rule

This section covers the following steps to create an escalation:

- **Step 1: Basic Escalation Options**—Name the escalation rule and specify if it should be turned on.
- **Step 2: Escalation Type**—Define the type of escalation.
- **Step 3: Additional Criteria**—Select criteria used to escalate Issues.
- **Step 4: Escalation Action(s)**—Select one or more actions to occur when an Issue meets the escalation criteria.
- **Step 5: When to Run Escalation**—Choose when an Issue should be checked to see if it meets the escalation criteria.
- **Step 6: Create New Escalation**—Save the escalation information.

NOTE

Master Issues cannot be closed by an escalation rule.

Step 1: Basic Escalation Options

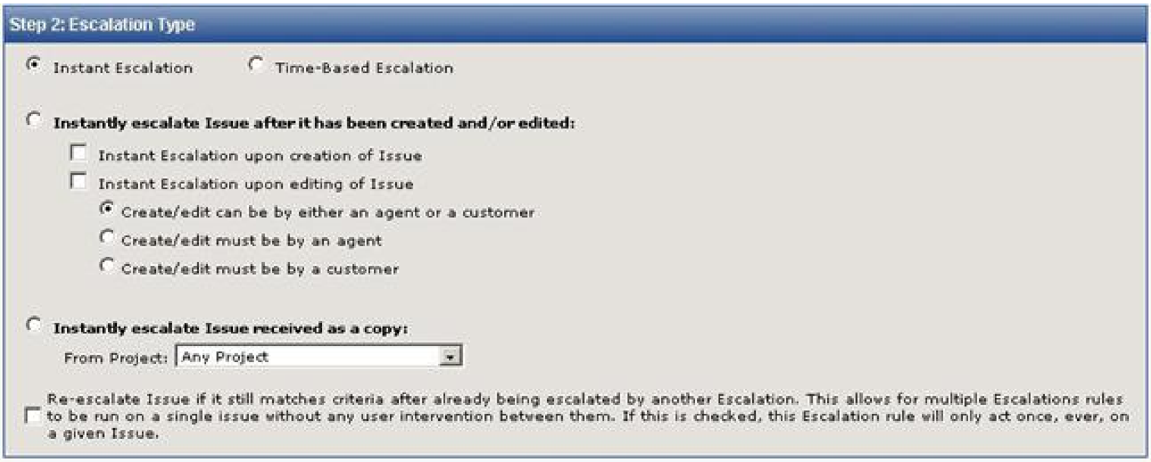
- **Escalation Name**—Give a name to the escalation rule, for example, Gold Level Issues.

- **Escalation On/Off**—To activate this escalation rule, the On radio button must be selected (the default). If an escalation rule is turned off, the settings are saved until the rule is re-activated or deleted.

Step 2: Escalation Type

There are two kinds of escalation rules: instant and time-based. Instant escalation rules are run at the time an Issue is created,edited, or both. Time-based escalations are only applied after an Issue has remained open or unedited for a specified amount of time. Depending on which option is chosen, a number of sub-options are available.

- **Instant Escalation**—If you select this option, one of the following additional options can be selected. Note that, when an escalation is based on a status change, if there is a status change for a Global Issue and it changes all of the linked Issues, this is problematic when the escalation is instant. Therefore, that type of escalation must be time-based not instant:
  - **Instantly escalate Issue after it has been created and/or edited**—Choose one or both of the following:
    - Instant Escalation upon creation of Issue
    - Instant Escalation upon editing of Issue
  - **Instantly escalate Issue received as a copy**:
    - **From Project**—Specify the project from which the Issue is being received to trigger the escalation.

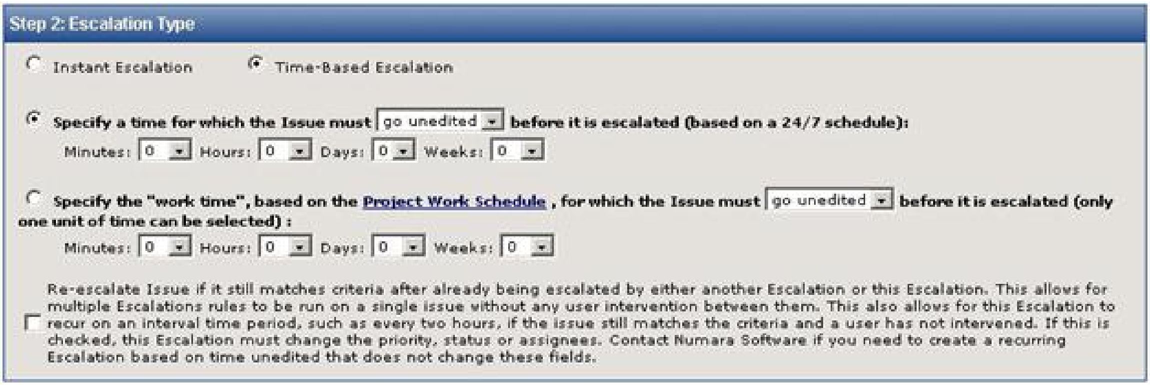


- Time-Based Escalation—If you select this option, the following additional options become available (only one can be selected):
  - Time unedited/Age—Select the amount of time that must pass since the Issue was created (Age) or since anyone edited it (Time unedited) before it is escalated. Minute, hour, day, and week increments are available. Combinations of hours, minutes, days, and weeks can be selected. The time is based on a 24/7 schedule.

NOTE

The "Age" option is not available in the FootPrints database versions.

  - Time unedited/Age based on "Work Time"—This option also counts the time since an Issue was created or last edited, but uses the project Work Calendar rather than the standard 24/7 schedule. Regular working days and hours, as well as holidays, can be configured for the organization by clicking the link for Work time or by selecting Work Calendar from the Project Administration page. When using the Work Calendar, only one unit of time can be chosen (minutes, hours, or days). Complete instructions for the Work Calendar can be found earlier in this chapter.



- Re-escalate Issue—This option applies to both types of escalations. When selected, the system will apply or re-apply the escalation rule to an already escalated Issue. Recurring age-based escalations are also allowed; each escalation will only run once when the Issue sufficiently ages. So, for example, you can create separate age-based recurring escalation rules for 5 minutes, 10 minutes, 1 hour, 2 hours, and 1 week, and each escalation rule will only be applied once to an Issue when it is sufficiently aged for that rule.

Example:

- The support hours are Monday-Friday from 8am to 6pm (as configured in the project Work Calendar).
- An escalation rule states that an Issue must be unedited for 6 hours before it is escalated.
- A new Issue comes in at 4pm on Friday.

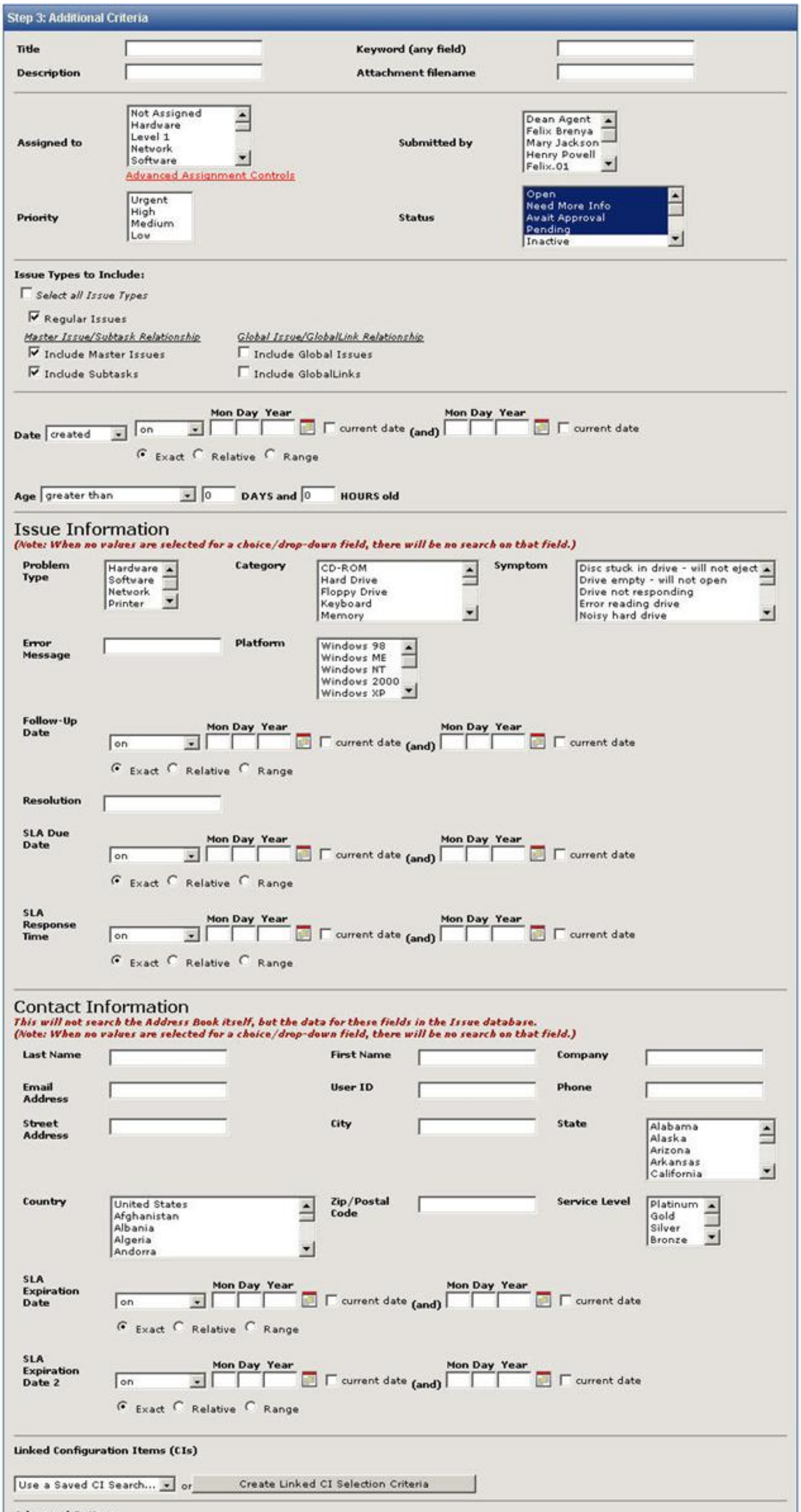
In the above case, the Issue will be escalated at 12pm on Monday (6 working hours later).

Step 3: Additional Criteria

The criteria chosen here determine which Issues are automatically escalated. Available criteria include virtually all options that appears on the Advanced Search page, including Status, Priority, Assignee, Project fields, Address Book fields, etc. (see the section on Advanced Search for more information).

NOTE

If your rule requires that Create/edit must be by an agent, but a Customer Request status (such as Request) is used as a criterion for escalating an Issue, then it becomes possible for Customer Requests to be escalated (i.e., an escalation created by a Customer).


Step 3: Additional Criteria
Title
Keyword (any field)
Description
Attachment filename
Assigned to
Not Assigned
Hardware
Level 1
Network
Software
Advanced Assignment Controls
Submitted by
Dean Agent
Felix Brenya
Mary Jackson
Henry Powell
Felix.01
Priority
Urgent
High
Medium
Low
Status
Open
Need More Info
Await Approval
Pending
Inactive
Issue Types to Include:
Select all Issue Types
Regular Issues
Master Issue/Subtask Relationship
Include Master Issues
Include Subtasks
Global Issue/GlobalLink Relationship
Include Global Issues
Include GlobalLinks
Date created on Mon Day Year current date (and) Mon Day Year current date
Exact Relative Range
Age greater than 0 DAYS and 0 HOURS old
Issue Information
(Note: When no values are selected for a choice/drop-down field, there will be no search on that field.)
Problem Type
Hardware
Software
Network
Printer
Category
CD-ROM
Hard Drive
Floppy Drive
Keyboard
Memory
Symptom
Disc stuck in drive - will not eject
Drive empty - will not open
Drive not responding
Error reading drive
Noisy hard drive
Error Message
Platform
Windows 98
Windows ME
Windows NT
Windows 2000
Windows XP
Follow-Up Date
Resolution
SLA Due Date
SLA Response Time
Contact Information
This will not search the Address Book itself, but the data for these fields in the Issue database.
(Note: When no values are selected for a choice/drop-down field, there will be no search on that field.)
Last Name
First Name
Company
Email Address
User ID
Phone
Street Address
City
State
Alabama
Alaska
Arizona
Arkansas
California
Country
United States
Afghanistan
Albania
Algeria
Andorra
Zip/Postal Code
Service Level
Platinum
Gold
Silver
Bronze
SLA Expiration Date
SLA Expiration Date 2
Linked Configuration Items (CIs)
Use a Saved CI Search... or Create Linked CI Selection Criteria
Advanced Options

Select the criteria for this escalation rule

Step 4: Escalation Actions

1. Notifications

a. Email-One or more email actions can be selected.

- **Send a summary mail**—When the escalation routine is run and matches are found, an email is sent to the specified addresses. The email contains a summary of escalated Issues for the Project. If you enter multiple email addresses, separate the addresses with a space. Summary mails are not coded to use uploaded custom formatted files. To use an uploaded mail template, edit the escalation to modify Email Notification from "Send a summary mail to ...." to "Send Single Issue notification mail to ..."
- **Send mail to Assignees**—When an Issues is escalated, an email is sent to all Assignees of each escalated Issue. Select the email address type to use for this escalation rule:
  - **Agent**—the Agent's agent email address.
  - **Pager**—the Agent's pager email address.
  - **Wireless**—the Agent's wireless email address.

NOTE

The different email address types are defined for each user on the Edit Agent Administration page, or on the My Preferences page by the Agent.

- **Send mail to the Supervisor of each Assignee**—An email is sent to the Assignees' Supervisor(s). Refer to Add Agents or Edit Agent User for information on designating Supervisors.
- **Send mail to the Team Leader of each Team**—An email is sent to each Team's Team Leader. Refer to Creating Teams for information on designating Team Leaders.
- **Send mail to Contact**—An email is sent to the Customer contact for the escalated Issue.
- **Send mail to the last agent to edit (or submitter if none) if last edit was by an agent**—An email is sent to either the last agent to edit the Issue or, if no editing has been done on the Issue, send mail to the person who submitted the Issue.
- **Send single-Issue notification mail to the following space-separated email addresses**—Send an email to the specified email addresses only once for this escalation.

- o **Email Template**—Select or define an email template to be used for this escalation. If you elect to configure an email template, you can refer to Escalation Email for further instructions.
- o **Broadcast Message**—One or more broadcast message types can be selected.
  - **Display pop-up notification to the following users**—Specify a user or users to receive a broadcast message from **FootPrints**.
  - **Display pop-up notification to the Assignees**—Agents assigned to the escalated Issues receive a broadcast message from **FootPrints**.

2. **Workflow**—One or more workflow actions can be selected.

    16. **Priority**—Automatically raises or lowers the Issue's priority as specified. You can also change the priority of all escalated Issues to a specific priority.
    17. **Status**—Automatically change the status of the escalated Issue.
    18. **Project/Address Book Fields**—Automatically change specified Project/Address Book fields. If you check this box, you must click the Click here to configure field edits link to specify the changes.

Click here to configure field edits—This page allows you to update Project and Address Book fields via an escalation. In addition to editing other fields, you can change the Title field or append a description to the Description field. Fill in the fields with the appropriate data and then click the "GO" button.

- **Add field variables on left to target fields on right**—This feature allows you to populate a field with the value from another field upon escalation. Select a field from the left drop-down and then select a field from the right drop-down. When an Issue is escalated, the field in the right drop-down is populated with the value of the field in the left drop-down.
- **Address Book Fields**—Specify the changes to be made to Address Book fields upon escalation, i.e., select the data that is to populate the field after the escalation. If you do not change a field, it is unchanged after the escalation.
- **Project Fields**—Specify the changes to be made to Project fields upon escalation, i.e., select the data that is to populate the field after the escalation. If you do not change a field, it is unchanged after the escalation.

NOTE

If you notice that dependent fields are being displayed with a null value when an escalated Issue is edited, it may be that the dependent field was configured with an incorrect value in the escalation rule. If you configure a dependent field to be changed to an invalid choice as a result of an escalation, the dependent field is populated with null data. For example, if the first field were set to Software and the dependent field were changed to Printer when escalated, and Printer is not a valid choice for the Software dependent drop-down, when the Issue is edited, the dependent field will show no selection. The drop-down for the dependent field will contain the normal, valid choices, so it can be corrected at that time. To correct the problem at its source, edit the escalation rule and replace the incorrect choice with the correct choice.

- **Assignment**—Highlighted users are assigned to the escalated Issue. If Add Selected Users is chosen, the original assignees of the Issue remain assigned. If Re-Assign is chosen, the original assignees are unassigned. Teams and/or individual users can be selected. Re-assignment can also automatically be made to Team Leaders or Assignees' Supervisor(s) by checking the appropriate box.
- **Sub-tasks for this Issue**—Automatically creates sub-tasks for the Issue using the Master Quick Issue template that you select from the drop-down list.

NOTE

Sub-tasks are not created for an escalated Issue if the Issue is itself a sub-task, a GlobalLink, a Global Issue, or a Solution.

- **Cross-project**—The Issue is automatically copied or moved to the Project specified. If Copy with a Dynamic Link is selected, the Issues update each other when field data changes. If Include Related Subtasks is checked, then when a Master Issue is copied or moved across Projects, the related subtasks are also copied or moved.

NOTE

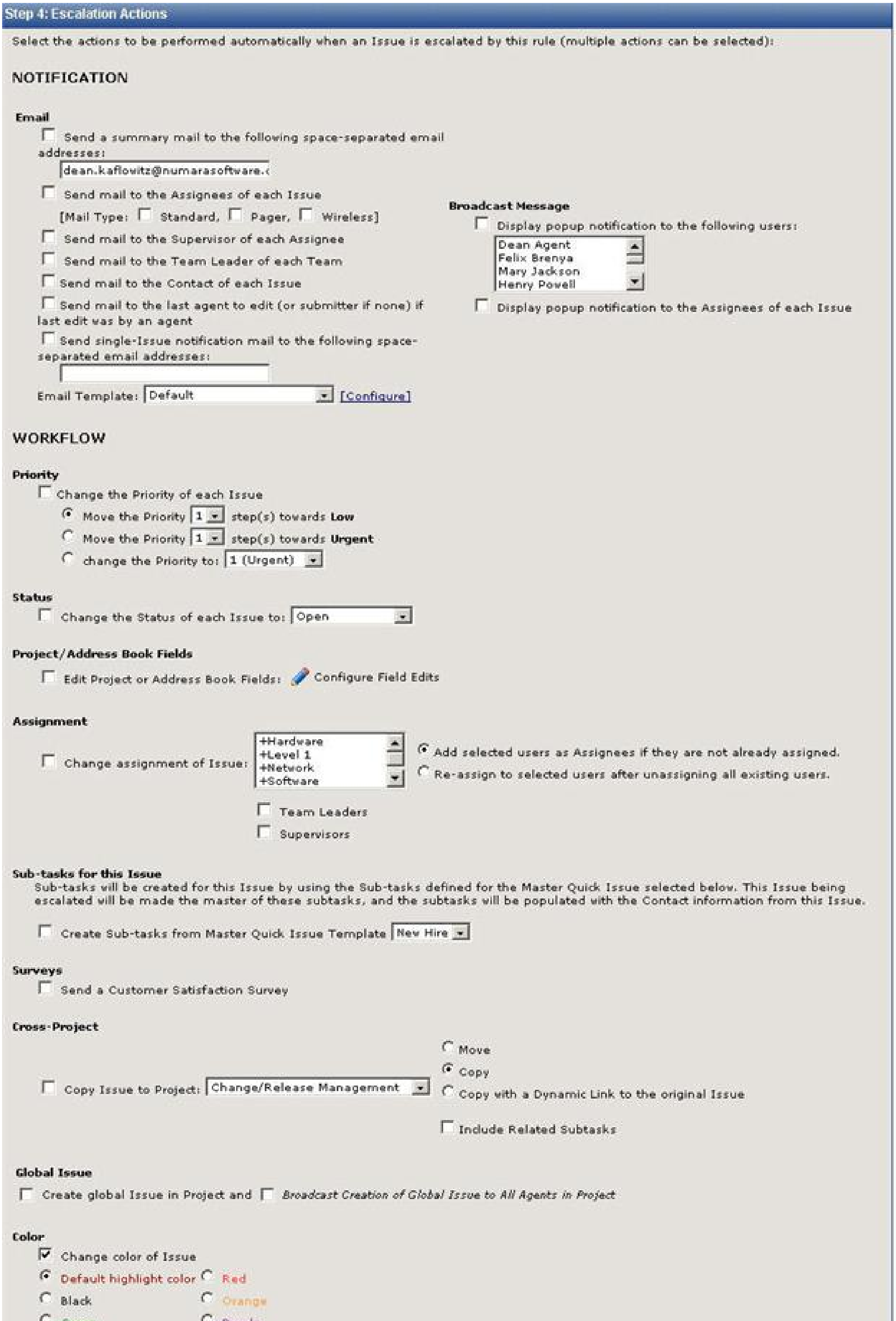
Subtasks are not accepted by the receiving Project unless the receiving Project is configured for Cross-project copy/move of subtasks. Refer to the topic for Issue Workflow for more information on setting this option.

- **Color**—The Issue is displayed on the **FootPrints** Homepage with the specified color.
- **External Action**—An external application can be run by the rule. This feature is especially useful for running scripts. The application must be one that can run and stop on its own without any user intervention. In addition, if the program involves running a graphical user interface (GUI), it may not be able to display the interface to a screen, which could cause the application to hang and fail. Therefore, the application should also be one that can run from a command line rather than a GUI. Enter the full path to the program, e.g., D:\Programs\AppLite\applite.exe. Some field data from the escalated Issue can also be passed to the program as arguments:

- **Issue Number**—%%MRID%%
- **Title**—%%Title%%
- **Priority**—%%Priority%%
- **Status**—%%Status%%
- **Submitter**—%%SUBMITTER%%
- **Project ID**—%%PROJID%%
- **Project and Address Book fields**—%%FIELD NAME%% where "FIELD NAME" is the name of the field in upper case.

External actions run applications from the CGI directory. Make sure that directory has permission to run the application or the external action will fail.

- **Surveys**—If checked, a customer satisfaction survey is sent to the contact when the escalation occurs.
- When to Run Escalation
  - **Any Time**—Escalate the Issue at the moment the Issue is found to match escalation criteria.
  - **Follow-the-Sun**—Run at the time and on the days specified. You can also specify multiple times.


Step 4: Escalation Actions
Select the actions to be performed automatically when an Issue is escalated by this rule (multiple actions can be selected):
NOTIFICATION
Email
Send a summary mail to the following space-separated email addresses:
dean.kaflowitz@numarasoftware.c
Send mail to the Assignees of each Issue
[Mail Type: Standard, Pager, Wireless]
Send mail to the Supervisor of each Assignee
Send mail to the Team Leader of each Team
Send mail to the Contact of each Issue
Send mail to the last agent to edit (or submitter if none) if last edit was by an agent
Send single-Issue notification mail to the following space-separated email addresses:
Email Template: Default
[Configure]
Broadcast Message
Display popup notification to the following users:
Dean Agent
Felix Brenya
Mary Jackson
Henry Powell
Display popup notification to the Assignees of each Issue
WORKFLOW
Priority
Change the Priority of each Issue
Move the Priority 1 step(s) towards Low
Move the Priority 1 step(s) towards Urgent
change the Priority to: 1 (Urgent)
Status
Change the Status of each Issue to: Open
Project/Address Book Fields
Edit Project or Address Book Fields:
Configure Field Edits
Assignment
Change assignment of Issue:
+Hardware
+Level 1
+Network
+Software
Add selected users as Assignees if they are not already assigned.
Re-assign to selected users after unassigning all existing users.
Team Leaders
Supervisors
Sub-tasks for this Issue
Sub-tasks will be created for this Issue by using the Sub-tasks defined for the Master Quick Issue selected below. This Issue being escalated will be made the master of these subtasks, and the subtasks will be populated with the Contact information from this Issue.
Create Sub-tasks from Master Quick Issue Template New Hire
Surveys
Send a Customer Satisfaction Survey
Cross-Project
Copy Issue to Project: Change/Release Management
Move
Copy
Copy with a Dynamic Link to the original Issue
Include Related Subtasks
Global Issue
Create global Issue in Project and
Broadcast Creation of Global Issue to All Agents in Project
Color
Change color of Issue
Default highlight color
Red
Black
Orange

Unassigning One Agent While Keeping the Rest Assigned

The administrator may need to build an escalation in which one agent, who is always the same agent, is removed from the assignments list while others, who vary from Issue to Issue, remain assigned to the Issue. In this instance, it would not be possible to use the standard escalations page to unassign everyone and then re-assign the Issue because the agents who are to remain would vary from Issue to Issue. An example where this might be needed is in the case of an Issue requiring an approval. The approver might be the same agent every time, but the other assignees could vary. This re-assignment can be accomplished via an escalation, but not by using the Assigment section of Step 4: Escalation Actions. Instead, you would use the External Action function to run a command from FootPrints' API. To do so, specify the following as an external action:

> C:\footprints\bin\perl\bin\perl C:\footprints\bin\mrUnassign.pl %%MRID%% userID

Step 5: When to Run Escalation

Choose when to check an Issue against escalation criteria. There are two options:

- **Anytime**—The escalation can be run at any time (the default).
- **Follow the Sun**—"Follow the Sun" escalations allows you to assign or reassign Issues to Agents in different locations and time zones depending on the time of day or day of the week that the Issue is created or escalated. The time and day specified here are based on the **FootPrints** server time. This integrates the escalation time on the server with when the escalation rule is to be applied. Some examples are:
  - Escalate Issues received off hours to someone's pager (time intervals when support team is not available).
  - Escalate Issues and route them based on the time of day, e.g., Issues submitted 9am-5pm EST are routed to the East Coast US Help Desk; those submitted 5pm-1am EST are routed to the Tokyo Help Desk; those received 1am-9am EST are routed to the London Help Desk.

To set Follow the Sun criteria:

1. Select Follow the Sun.
2. Select the time range for the escalation rule.
3. If this escalation should run during a span of time that includes a change of date, you must specify the time spanned during both dates in order to cover the entire period. For example, the four hours between 8:00pm and 2:00am can be covered by selecting 8:00pm-11:59pm above and, additionally, Midnight-2:00am in the second set of time criteria.

4. Check the boxes corresponding to the days of the week that the escalation is required to run.

Step 6: Create New Escalation

After criteria and actions are chosen, enter your password and click **GO**; the escalation rule is enabled. When an Issue matches the criteria of the rule, the specified actions occur. If an escalation rule fails for any reason, the Project Administrator receives an email notification.

NOTE

Escalated Issues lose their urgent status once they are edited. If an Issue is reported as escalated, it is not escalated again until it has lost its urgency (by being edited) and then becomes urgent again. The exception to this is if Re-escalate Issue is selected under the Time criteria.

Scheduler Service

Escalations are run by the **FootPrints** Scheduler service. On Windows, FPSchedule.exe is automatically set as a service on the **FootPrints** server. On UNIX, a cron job is automatically created that runs the MRrunScheduledScripts.pl file. This service handles incoming email, outgoing email notification, escalations, mass emails, and scheduled reports.

Escalation Email

The information that is included in escalation email can be configured to include certain fields. To configure the default escalation email for a Project, select Administration | Project | Escalation from the **FootPrints** Toolbar, then click the Configure Escalation Email link on the main Escalation Setup page. To configure the email template for a particular rule (doing this for a particular rule does not affect the template), select Configure in Step 4: Escalation Actions on the Set Up Escalation page. The form you use to set up the escalation email is the same regardless of whether you are configuring the email for a template or for a particular rule.

NOTE

The Specify Email Content for Escalations page was changed significantly in the 7.0 release of **FootPrints**. However, **FootPrints** is entirely backwards compatible with earlier releases and, if you have escalation email templates from an earlier release, they work exactly as before in release 7.0+. If you upgrade to a 7.0+ release and make any changes to the existing default template, you must access each escalation rule and re-save it. In this instance, where you have changed the default template following an upgrade, existing escalation rules will not work unless you re-save them.

1. Either select Administration | Project | Escalation from the **FootPrints** Toolbar, then click the Configure Escalation Email link on the main Escalation Setup page to configure the email template, or select the Configure link in Step 4: Escalation Actions on the Set Up Escalation page. A pop-up window is displayed.

2. If previous templates have been created, you can select one to edit or delete by clicking the appropriate radio button and then selecting the template from the drop-down list. To create a new template, click the Create radio button and then click GO using the Default selection, or choose an existing template, making that the basis for the new template, and click GO.

- **Subject of Mail**—Click the icon to configure the information that appears in the Subject line of the email. The following options are displayed.
    - o *Single Issue notification mail*—Applies to single Issue notifications that go to Assignees or contacts.
    - o *Summary report mail*—Applies to summary email notifications (which may list multiple Issues).
    - o *Allow replies to escalations*—If the box is checked, the Issue number and project ID are included in the subject, allowing users to respond to the email.
- **Short list of what just changed**—A summary of what was changed in the Issue that caused the email to be sent. If you click the icon in each of the columns, a pop-up window is displayed that allows you to specify whether to include changes to internal Issues or Employee fields.
- **Text at top of message**—Customizable message that is displayed near the top of the notification email. Click the icon to display the page to create the message. The checkbox must also be checked in that column. The following variables can be placed in the greeting to include the subject of the email, the user's name, etc.:

· _WHONAME_ : Name of user who created/edited Issue

· _WHOMAIL_ : Email address of user who created/edited Issue

· _PROJECTNAME_ : Project Name

· _ENTRYTITLE_ : Title of Issue

· _ENTRYNUMBER_ : Issue number

- **Project Name**—The name of the Project is displayed in the body of the notification email.
- **Project ID**—Each Project is assigned a number within **FootPrints**. You can include that number.
- **Title**—The Title of the Issue is displayed in the body of the notification email.
- **Issue Number**—The Issue number is displayed in the body of the notification email.
- **Link to Details Page**—A hyperlink to the Details page of the Issue in **FootPrints** (requires password authentication).

NOTE

If you are using a custom login page for customers (e.g., group.html), that URL can be specified for Customers by clicking the icon in the customer column and entering the URL. This does not automatically bring the Customers to the Details page of their Issue; after entering their email address, the main customer page is displayed. Contact Numara Software for details on turning the custom customer login page into a Perl script that directly displays the details of their Request when using the hyperlink.

- **Last Edit Date**—The last date the Issue was edited.
- **Last Edit Time**—The last time the Issue was edited.
- **Priority**—The priority of the Issue.
- **Status**—The current status of the Issue.
- **Creation Date**—The date on which the Issue was created.
- **Creation Time**—The time at which the Issue was created.
- **Creator**—The submitter of the Issue.
- **Show Subtask or Global Entry Relationship**—If the Issue is a Master, Subtask, Global, or GlobalLink, include this reference in the email.
- **Description**—The Issue's description, with time/date/user stamps. Two options are available by clicking the icon: Most Recent Description and All Descriptions.

- **Assignees**—The list of users/Teams assigned to the Issue.
- **CC's**—Any email addresses that are listed in the CC section of the Issue. Both permanent and one-time CCs are shown, denoted by one of these labels: (permanent); (permanent, but not CC'd on this edit); (this edit only)
- **Issue Information**—Project field data. By default, customers only see Public fields and internal users see all fields. Individual fields can be selected for inclusion by clicking .
- **Address Book Fields**—Address Book data. By default, customers only see Public fields and internal users see all fields. Individual fields can be selected for inclusion by clicking .
- **List attached files**—A list of files attached to the Issue are displayed in the body of the email.
- **Attach attached files**—Attached files are sent with the escalation email.
- **Complete Issue History**—A summary of the Issue's history appears in the body of the escalation email.
- **Text at bottom of message**—Customizable message that appears at the end of the escalation email. A different message can be made for each type of mail by clicking the icon in that column, entering the message in the text box, and clicking **GO**. The checkbox must also be checked in the column. In addition, variables can be placed in the greeting to include the subject of the email, the user's name, etc. The **Text at top of message** option above describes the variables.
- **Send mail as text**—Notification mail is sent as plain text.
- **Send mail as html**—Notification mail is sent in HTML format.

NOTE

If both text and html are checked, **FootPrints** includes both formats in the message. For most Windows-type email readers (Outlook, Lotus Notes, etc.), only the HTML is seen.

- **Custom formatting for text message**—Create a custom email template for **FootPrints** escalation email layout and custom formatting in plain text (refer to Custom Email Templates).
- **Custom formatting for HTML message**—Create a custom email template for **FootPrints** escalation email layout and custom formatting in HTML (refer to Custom Email Templates).

NOTE

For Issue Information and Address Book fields, custom email template settings override settings you specify on this page, regardless of whether the custom formatting is for text or HTML messages. For example, if your Specify Email Content page specifies that the message is to contain only public fields in the Issue Information section and you specify an internal field in the custom email template, the custom email template overrides the other settings. Refer to Custom Email Templates for details on how to include the settings on this page with the custom email.

3. Enter a name at the bottom of the page under which this escalation email is to be saved.

4. When you are finished configuring the template, click SAVE.

When you have finished configuring the escalation email template, it includes the fields and other options selected for the escalation rules that use this template. Escalation email notifications are flagged with the "Urgent" flag (**!**) in Microsoft Outlook and Lotus Notes.

Per-Issue Reminders

This escalation feature can be used to create reminders on a per-Issue basis. This allows an Agent, for example, to set a follow-up date for an Issue and receive an email reminder on that date.

To set up per-Issue reminders:

1. Create an internal optional Project field called Follow-Up Date of type date field.
2. Create an escalation with the following criteria (may be slightly different depending on your system):

- **Name:** Per-Issue Reminders
- **Escalation On/Off:** Choose On
- **Actions:** Send mail to the Assignees checked, select one or more email types, Color=Red
- **Time Unedited:** 5 minutes
- **Criteria:**
    - Status=Highlight "Request", "Open", and any custom statuses to get reminders on active Issues, or "Closed" to get reminders on Closed Issues (or highlight all statuses except for "Solution" to get reminders on any status Issue).
    - For Follow Up Date, choose equal to and check the box for Current Date (do not fill in any dates).

3. Enter your password and click SAVE.

To set a reminder, simply edit an Issue and fill in a follow-up date. On the day of the follow-up date, the Agent receives an email reminder and the Issue is highlighted in red on the Homepage.

Reminders can also be sent by the **FootPrints** Calendar based on the data in a date/time field. Refer to FootPrints Calendar for more information.

Viewing/Printing a Summary of Escalations

You can view a summary list of the properties of all of the escalation rules and send the summary to a printer.

To view the summary:

1. Select Administration | Project | Escalation from the **FootPrints** Toolbar. A list of existing escalations is displayed.
2. Click the Summary of all Escalations link in the lower right corner of the section. A pop-up displays tables of the escalations and their properties.
3. To print the summary, scroll down the page and click the Print button at the bottom of the page. Click the Close button to close the page.

Service Level Management

Creating the Service Level Field

Service Level Management provides the means for integrating your service level agreements (SLAs) into FootPrints. If you need an SLA to be based on multiple fields, please use the AutoField feature.

To create a Service Level field, select Administration | Project from the **FootPrints** Toolbar, then select Service Level Management from the main frame in the Automated Workflow section. If this is the first time service levels are being configured for this project, the Initial Service Level Management Setup screen is displayed.

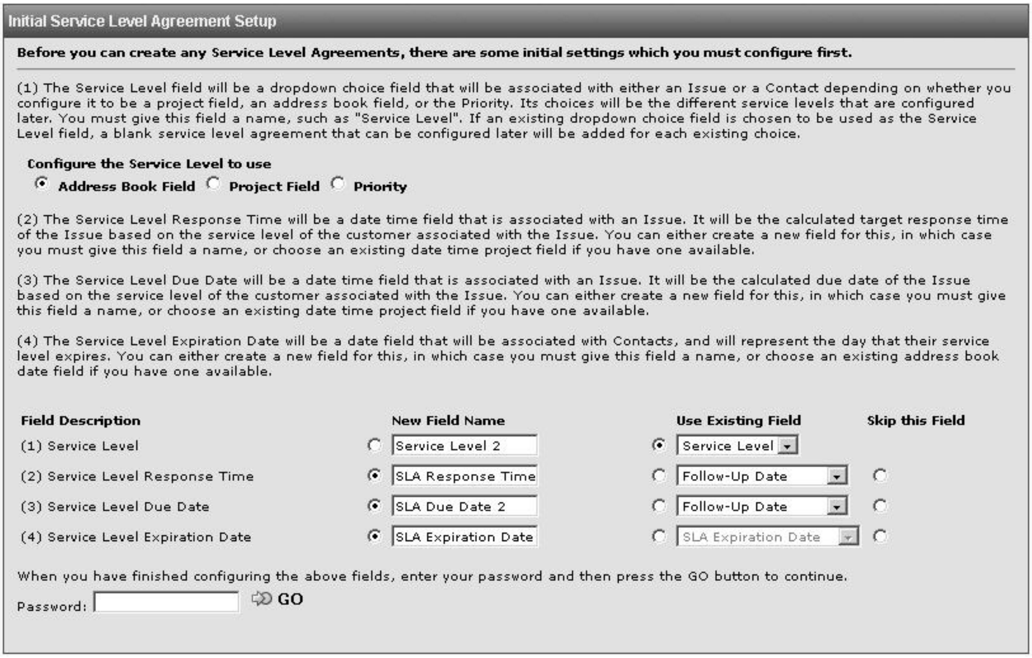
1. Select a field type to be used to track service levels:
   - **Address Book field**—Select this option if you would like to associate service levels with customers (i.e., contacts in the Address Book). For example, Gold, Silver and Bronze levels can be created, guaranteeing customers a certain level of service. This option is good for eService projects or for projects where a VIP flag needs to be set for certain customers.
   - **Project field**—Select this option if you would like to associate service levels with incident type or another issue-based field. For example, network outage can have a different resolution time than request for new monitor. This option is

good for help desk Projects, or for eService Projects where the product or service involved in the incident (defined in a Project field) determines the level of service.

- Priority—Select this option if you would like to associate service levels with an Issue's priority. Consequently, higher priority levels can have different resolution times than lower levels.

2. In the Field Description section, the three fields associated with Service Levels are defined. For each field, a new field can be created or an existing field can be used.
   - Service Level Field—Assign a name for the main service level field (the default is Service Level). This field is a drop-down field (choices are defined later). To select an existing field, click the radio button on the right and select from the drop-down. If this option is grayed out, no drop-down fields are available and a new field must be created.
   - Service Level Response Time—Assign a name for this field (the default is SLA Response time). This date/time field represents the time by which a response must be made to the Issue. This is not the same as resolution, but instead acknowledges the Issue.
   - Service Level Expiration Date—Enter a name for this field (the default is SLA Expiration Date). This is the date the service contract expires for the associated customer or incident type. This field (a date field) is for reference only, but escalation rules can be created to notify the Customer or Agent when the contract expires. An existing date field can also be selected, if one is available.
   - Service Level Due Date—Assign a name for this field (the default is SLA Due Date). This date/time field represents the date and time by which an Issue must be resolved. The due date is calculated for each new issue automatically by the system based on the service level and time of issue creation. An existing date/time field can also be selected if available.
3. After defining the three fields, enter your password and click GO. The individual service level agreements can now be defined. Before defining the Service Level Agreements, set the Pending Statuses List.
4. Pending statuses are excluded from SLA reports. Any events that occur or time spent in a pending status is excluded from Service Level Reporting. To specify the pending statuses:
   a. Click the Edit button of the Pending Statuses List.
   b. Choose the statuses you want to set as pending in the Available Statuses field. You cannot select Open and Closed statuses as pending, but you can select any other statuses.
   c. Click the Add Status button. The pending statuses are displayed in the Selected Statuses field. To remove a status from the pending list, click on the status in the Selected Statuses field and then click the Delete Status button.

This only removes the status from the list of pending statuses; it does not delete the status from the Project.



Initial Service Level Agreement Setup screen

Defining Service Level Agreements

Service Level Management provides the means for integrating your service level agreements (SLAs) into FootPrints. If you need an SLA to be based on multiple fields, please use the AutoField feature.

To create a Service Level field, select Administration | Project from the **FootPrints** Toolbar, then select Service Level Management from the main frame in the Automated Workflow section. If this is the first time service levels are being configured for this project, the Initial Service Level Management Setup screen is displayed.

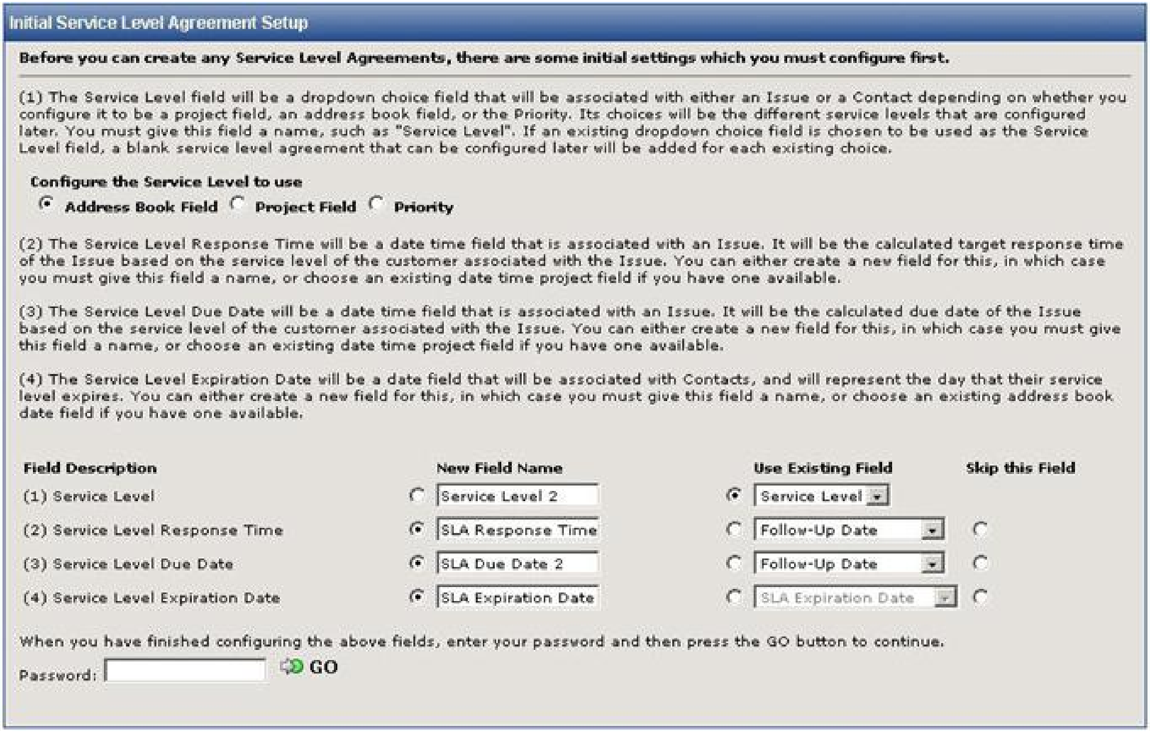
1. Select a field type to be used to track service levels:

- **Address Book field**—Select this option if you would like to associate service levels with customers (i.e., contacts in the Address Book). For example, Gold, Silver and Bronze levels can be created, guaranteeing customers a certain level of service. This option is good for Customer Service Portal projects or for projects where a VIP flag needs to be set for certain customers.

- **Project field**—Select this option if you would like to associate service levels with incident type or another issue-based field. For example, network outage can have a different resolution time than request for new monitor. This option is good for help desk Projects, or for Customer Service Portal Projects where the product or service involved in the incident (defined in a Project field) determines the level of service.
- **Priority**—Select this option if you would like to associate service levels with an Issue's priority. Consequently, higher priority levels can have different resolution times than lower levels.

2. In the Field Description section, the three fields associated with Service Levels are defined. For each field, a new field can be created or an existing field can be used.
    - **Service Level Field**—Assign a name for the main service level field (the default is Service Level). This field is a drop-down field (choices are defined later). To select an existing field, click the radio button on the right and select from the drop-down. If this option is grayed out, no drop-down fields are available and a new field must be created.
    - **Service Level Response Time**—Assign a name for this field (the default is SLA Response time). This date/time field represents the time by which a response must be made to the Issue. This is not the same as resolution, but instead acknowledges the Issue.
    - **Service Level Expiration Date**—Enter a name for this field (the default is SLA Expiration Date). This is the date the service contract expires for the associated customer or incident type. This field (a date field) is for reference only, but escalation rules can be created to notify the Customer or Agent when the contract expires. An existing date field can also be selected, if one is available.
    - **Service Level Due Date**—Assign a name for this field (the default is SLA Due Date). This date/time field represents the date and time by which an Issue must be resolved. The due date is calculated for each new issue automatically by the system based on the service level and time of issue creation. An existing date/time field can also be selected if available.
3. After defining the three fields, enter your password and click **GO**. The individual service level agreements can now be <u>defined</u>. Before defining the Service Level Agreements, set the Pending Statuses List.
4. Pending statuses are excluded from SLA reports. Any events that occur or time spent in a pending status is excluded from Service Level Reporting. To specify the pending statuses:
5. Click the Edit button of the Pending Statuses List.

6. Choose the statuses you want to set as pending in the Available Statuses field. You cannot select Open and Closed statuses as pending, but you can select any other statuses.
7. Click the Add Status button. The pending statuses are displayed in the Selected Statuses field. To remove a status from the pending list, click on the status in the Selected Statuses field and then click the Delete Status button. This only removes the status from the list of pending statuses; it does not delete the status from the Project.



Initial Service Level Agreement Setup screen

Creating the Service Level Field

Service Level Management provides the means for integrating your service level agreements (SLAs) into FootPrints. If you need an SLA to be based on multiple fields, please use the AutoField feature.

To create a Service Level field, select Administration | Project from the **FootPrints** Toolbar, then select Service Level Management from the main frame in the Automated Workflow section. If this is the first time service levels are being configured for this project, the Initial Service Level Management Setup screen is displayed.

1. Select a field type to be used to track service levels:

- **Address Book field**—Select this option if you would like to associate service levels with customers (i.e., contacts in the Address Book). For example, Gold, Silver and Bronze levels can be created, guaranteeing customers a certain level of service. This option is good for Customer Service Portal projects or for projects where a VIP flag needs to be set for certain customers.
- **Project field**—Select this option if you would like to associate service levels with incident type or another issue-based field. For example, network outage can have a different resolution time than request for new monitor. This option is good for help desk Projects, or for Customer Service Portal Projects where the product or service involved in the incident (defined in a Project field) determines the level of service.
- **Priority**—Select this option if you would like to associate service levels with an Issue's priority. Consequently, higher priority levels can have different resolution times than lower levels.

2. In the Field Description section, the three fields associated with Service Levels are defined. For each field, a new field can be created or an existing field can be used.

- **Service Level Field**—Assign a name for the main service level field (the default is Service Level). This field is a drop-down field (choices are defined later). To select an existing field, click the radio button on the right and select from the drop-down. If this option is grayed out, no drop-down fields are available and a new field must be created.
- **Service Level Response Time**—Assign a name for this field (the default is SLA Response time). This date/time field represents the time by which a response must be made to the Issue. This is not the same as resolution, but instead acknowledges the Issue.
- **Service Level Expiration Date**—Enter a name for this field (the default is SLA Expiration Date). This is the date the service contract expires for the associated customer or incident type. This field (a date field) is for reference only, but escalation rules can be created to notify the Customer or Agent when the contract expires. An existing date field can also be selected, if one is available.
- **Service Level Due Date**—Assign a name for this field (the default is SLA Due Date). This date/time field represents the date and time by which an Issue must be resolved. The due date is calculated for each new issue automatically by the system based on the service level and time of issue creation. An existing date/time field can also be selected if available.

3. After defining the three fields, enter your password and click **GO**. The individual service level agreements can now be defined. Before defining the Service Level Agreements, set the Pending Statuses List.

4. Pending statuses are excluded from SLA reports. Any events that occur or time spent in a pending status is excluded from Service Level Reporting. To specify the pending statuses:

- Click the Edit button of the Pending Statuses List.
- Choose the statuses you want to set as pending in the Available Statuses field. You cannot select Open and Closed statuses as pending, but you can select any other statuses.
- Click the Add Status button. The pending statuses are displayed in the Selected Statuses field. To remove a status from the pending list, click on the status in the Selected Statuses field and then click the Delete Status button. This only removes the status from the list of pending statuses; it does not delete the status from the Project.

Creating Escalation Rules for Service Levels

One or more escalation rules can be created for each service level. Rules can be created to auto-assign Issues, change the priority or status, send email notification, and more. An unlimited number of escalation rules can be created for each service level.

To create an escalation rule:

1. Select Project | Administration | Service Level Agreements. Under Existing Service Level Agreements, select Add a New Escalation under the desired service level. The escalation setup page is displayed. Please refer to the topic on Escalation for more information on the options on this page.
2. As an example to clarify your next actions, if requests from "Gold" level users should be escalated to high priority immediately and assigned to the Project Administrator, the following escalation might be created:

- Name: Gold Level
- Escalation On/Off: Choose On.
- Escalation Time: Check Instant Escalation.
- Actions:
  - Send Email to Project Administrator
  - Priority—Change to High
  - Color code—Red
  - Status—Change to Open (assuming Issues may be submitted by Customers as Requests or may be entered by an internal user)
  - Assignment—Re-assign to Project Administrator.

- **Criteria:** Status="Request" or "Open" (highlight both), Service Level=Gold

NOTE
The associated service level in the Service Level field is highlighted by default.

3. Now all new Requests and Issues submitted where the SLA level is Gold in the Address Book immediately receive a priority of High and are assigned to the Project Administrator. The Administrator also receives an email (or page) and the Issue appears in red on the **FootPrints** Homepage.
4. One or more escalation rules can be made for each service level (or no rules can be created). If you want an Issue's priority to escalate as the Issue ages, you can create multiple rules based on age using the re-escalate Issue checkbox.

NOTE
To make a rule based on Due Date, use the Age rather than the Due Date field.

Editing Service Levels

Service levels can be edited or removed, associated escalation rules can be edited or removed, or the entire service level configuration can be removed.

5. Select Administration | Project | Service Level Management to see the existing service levels that are listed under Existing Service Level Agreements.
6. To edit the properties of a service level, click the Edit icon in the right column under SLA Configuration Actions (or, alternatively, click the name of the service level). The name, response time, resolution time, and other properties can be changed here.
7. To delete a service level, click the **Delete** icon under SLA Configuration Actions.
8. To move a service level, use the up and down arrows. This changes the order in which the service levels are displayed in the service level drop-down field.
9. To edit an escalation rule associated with a service level, select the rule under that service level.
10. To change the Pending Statuses of the SLA, click the Edit button of the Pending Statuses List.

Remove Service Level Configuration

The entire service level configuration for this project can be removed by entering your password and clicking Remove Entire SLA Configuration. This deletes all choices, properties, and escalation rules associated with service levels. The associated fields are not automatically deleted, but can be deleted manually from the Address Book and Project Field Maintenance pages. This option is useful if you would like to start over with configuring service levels for the current Project.

Quick Issues

Creating Quick Issue Templates

To create a new Quick Issue template:

19. Select Administration | Project from the FootPrints Toolbar, then select Quick Issue under the Automated Tasks section of the Project Administration page.
20. If this is the first Quick Issue template, in the top section of the Quick Issue Administration page, enter a name for the template (this is displayed in the FootPrints Toolbar) and click GO. The name is limited to 20 characters. A longer Title can be given in the actual template.
21. When creating subsequent templates, the Manage Quick Issue Templates dialog is displayed in the top section of the administration page. To create a new template, select the radio button for Create a new Quick Issue Template, enter the name, and click GO.
22. The Create Quick Issue template page is displayed. This page is similar to the regular Create Issue page, but with fewer fields. Address Book fields, time tracking, etc. will be filled in by the Agent when an Issue is created with the template.
23. The available fields are:

- Title—This is the Title of the Issue. It can be as long as needed.
- Priority—This is the default priority for Issues created with the template. It can be changed by the Agent when creating the Issue, as needed.
- Status—This is the default status of Issues created with the template. It can be changed by the Agent when creating the Issue. If the type of Issue the template relates to is usually resolved during the initial call, Closed can be selected as the Status for the template.
- Issue Information—One or more Project fields can be set here for the template. Any fields not filled out here can still be filled out by the Agent when creating a new Issue from the template. Mandatory fields do not have to be populated when creating the template (although they can be), but must be filled out

when the Agent creates an Issue. For example, you may have a mandatory field for Follow-up Date that depends on when the Issue is created. Do not fill this field out when creating the template; instead, it is mandatory for the Agent to fill out when creating an Issue with template. A field like Problem Type, however, would be appropriate to set in the template, as this remains constant for Issues created with the template. **Exception**: Date fields (but not Date/Time fields) contain a checkbox for Current Date. If this is checked in the template, it is pre-filled with the current date when an Agent creates an Issue. This would be useful for a field like Date Reported.

- **Description**—This can contain a pre-filled description of the problem and/or Solution. The Knowledge Base can be used in the template to select the Solution if it already exists there.
- **Attachments**—One or more files can be attached to the template. New Issues created with the template automatically contain links to the attachments. This is useful for standard Request types for procedures, patches, or other documents.
- **Assignees**—Optionally select one or more Assignees or Teams to be assigned to Issues created with the template. If no assignees are selected, the default Auto Assignment rules apply to Issues created with the template. For example, if the default rule is to assign an Issue to the Agent creating it, an Issue created by an Agent using the template is assigned to the Agent.
- **Email** settings follow the rules for the Project.

24. When you are done populating fields, click **GO**.
25. The template is created. The Quick Issue Administration page is displayed. From here, you can edit or delete the template or create new templates.
26. The template appears on the **FootPrints** Toolbar for all Agents under the new heading **Quick Issue**.

Master Quick Issue

Sometimes an Issue should be split into separate Subtasks with different properties, perhaps to be completed by different users. For example, the process to set up a new employee may consist of many steps, each performed by a different user. **FootPrints** Master Issue/Subtasks allow you to create parent-child relationships between Issues for complex processes, such as the new hire process, change management, and more. Subtasks can be created manually by an Agent or can be created automatically by a Master Quick Issue Template.

This feature combines two other features of **FootPrints**: Quick Issue templates and Master Issues/Subtasks. This topic describes how to set up Master Quick Issue templates. For more information on Master Issues and Subtasks, refer to *Creating Master Quick Issue Templates* (below).

Creating Master Quick Issue Templates

Master Quick Issue templates are created by the Project Administrator. To create a template, select **Administration | Project** from the **FootPrints** Toolbar, then select **Quick Issue** under the **Automated Tasks** section of the **Project Administration** page. The second section on this page is entitled **Manage Master Quick Issue Templates**. From here, you can create, edit, and delete Master Quick Issue and Subtask Templates.

Creating a Master Quick Issue template involves multiple steps. First you create a Master Issue template. This is the template that is available on the **FootPrints** Toolbar that Agents use to create a new Master Quick Issue. You also design one or more Subtask templates associated with the Master Issue. When an Agent creates an Issue with a Master Quick Issue template, the subtasks are created automatically by the system.

The Master Quick Issue templates section contains two dialog boxes:

- **Master Templates**—This contains all Master templates. Controls to the right of the box allow you to create, edit, and delete Master templates.
- **Subtask Templates**—Displays the Subtask templates associated with the Master template selected in the preceding dialog. Controls to the right of the dialog allow you to create, edit, and delete Subtask templates.

Create a Master Quick Issue Template

Creating a Master Quick Issue template involves multiple steps. First you create a Master Issue template. This is the template that is available on the **FootPrints** Toolbar that Agents use to create a new Master Quick Issue. You also design one or more Subtask templates associated with the Master Issue. When an Agent creates an Issue with a Master Quick Issue template, the subtasks are created automatically by the system.

To create a the Master Quick Issue template:

27. On the Project Administration page, select Quick Issue from the Automated Tasks section. Scroll to the second section of this page, Manage Master Quick Issue Templates.
28. In the Create a Master Quick Template section, enter a name for the template, then enter you rpassword and click the **SAVE** button.
29. The Create Master Quick Issue Template page is displayed. This page is similar to the regular Create Issue page, but with fewer fields. Address Book fields, time tracking, etc. are filled in by the Agent when a Master Issue is created with the template.
30. The available fields are:

- **Title**—This is the Title of the Master Issue. It can be as long as needed, for example, New Hire Process.

- Priority—This is the default priority for Master Issues created with the template. It can be changed by the Agent when creating the Issue, as needed.
- Status—This the is the default status of Issues created with the template. Because Master Issues are usually not closed until all of the related Subtasks are completed, Master Issue templates should not be created with the Closed status. Open, Working, Assigned, etc. would be appropriate statuses.
- Issue Information—One or more Project fields can be set here for the template. Any fields not filled out here can still be filled out by the Agent when creating a new Issue from the template. Mandatory fields do not have to be filled in when creating the template (although they can be), but must be filled out when the Agent creates an Issue. For example, you may have a mandatory field for Follow-up Date that will be dependent on when the Issue is created. Do not fill this out when creating the template; instead, it is mandatory when creating an Issue with the template. A field like Problem Type, however, would be appropriate to set in the template (i.e., to New Hire, because this remains constant for Issues created with the template. Exception: Date fields (but not Date/Time fields) contain a checkbox for Current Date. If this is checked in the template, it is pre-filled with the current date when an Agent creates an Issue. This is useful for a field like Date Reported.
- Description—This can contain a canned description of the problem or process. The Knowledge Base can be used in the template to select a Solution for the template if it already exists there.
- Attachments—One or more files can be attached to the template. New Master Issues created with the template automatically contain links to the attachments. This is useful for standard request types for procedures, patches, or other documents.
- Assignees—Optionally select one or more assignees or Teams to be assigned to Issues created with the template. If no assignees are selected, the default Auto Assignment rules apply to Issues created with the template. For example, if the default rule is to assign an Issue to the Agent creating it, an Issue created by an Agent using the template is assigned to the Agent. Escalation rules can also be created that specifically address Master Issue workflow (for assignment, etc.)
- Email settings follow the rules for the Project.

31. When all fields that you want pre-filled have been completed, click GO.

Create Subtask Templates

After the Master Issue template is created, one or more Subtask templates can be created. To create a Subtask:

32. In the Master Templates field, highlight the Master Issue template for which you would like to create Subtasks.

33. To the right of the Subtask Template field, select the radio button for Create a New Subtask Template, enter the name of the Subtask template and click **GO**. For example, to create a Subtask to assign a network ID to a new hire, enter the name Create ID. The field is limited to 20 characters. This restriction does not apply to the Title field when you complete fields in the actual template.
34. The Create Subtask Quick Issue Template page is displayed. This page is similar to the regular Create Issue page, but with fewer fields. Address Book fields, time tracking, etc. are filled in by the Agent when a Master Issue is created with the template.
35. The available fields are:

- **Title**—This is the Title of the Master Issue. It can be as long as needed.
- **Priority**—This is the default priority for the Subtask created with the template.
- **Status**—This is the default status of the Subtask created with the template. Because these Subtasks are created by the system automatically and are usually not closed until the task is completed, Subtask Issue templates should not be created with the Closed status. Open, Working, Assigned, etc. would be appropriate statuses.
- **Issue Information**—One or more Project fields can be set here for the template. Any fields not filled out here can still be filled out by the Agent when creating a new Issue from the template. Mandatory fields do not have to be filled in when creating the template (although they can be), but must be filled out when the Agent creates an Issue. For example, you may have a mandatory field for Date Completed that depends on when the Subtask is completed by the Agent assigned. Do not fill this out when creating the template; instead, it is mandatory for the Agent to fill out when working on the Subtask. A field like Problem Type, however, would be appropriate to set in the template (e.g., to Create ID, as this will remain constant for Issues created with the template). **Exception**: Date fields (but not Date/Time fields) contain a checkbox for Current Date. If this is checked in the template, it is pre-filled with the current date when the Subtask is created. This would be useful for a field like Date Assigned.
- **Description**—This can contain a canned description of the problem or process. The Knowledge Base can be used in the template to select a Solution for the template if it already exists there.
- **Attachments**—One or more files can be attached to the template. New Subtasks Issues created with the template automatically contain links to the attachments. This is useful for standard request types for procedures, patches, or other documents.
- **Assignees**—Optionally select one or more assignees or Teams to be assigned to Subtasks created with the template. For example, if the network administrator

is responsible for creating new IDs, then the New ID Subtask of the New Hire process should be assigned to her. If no assignees are selected, the default Auto Assignment rules apply to Issues created with the template. For example, if the default rule is to assign an Issue to the Agent creating it, an Issue created by an Agent using the template is assigned to the Agent. Escalation rules can also be created that specifically address Master Issue workflow (for assignment, etc.)

- **Email** settings follow the rules for the Project.

36. When all fields that you want pre-filled have been completed, click **GO**.

Issue Workflow

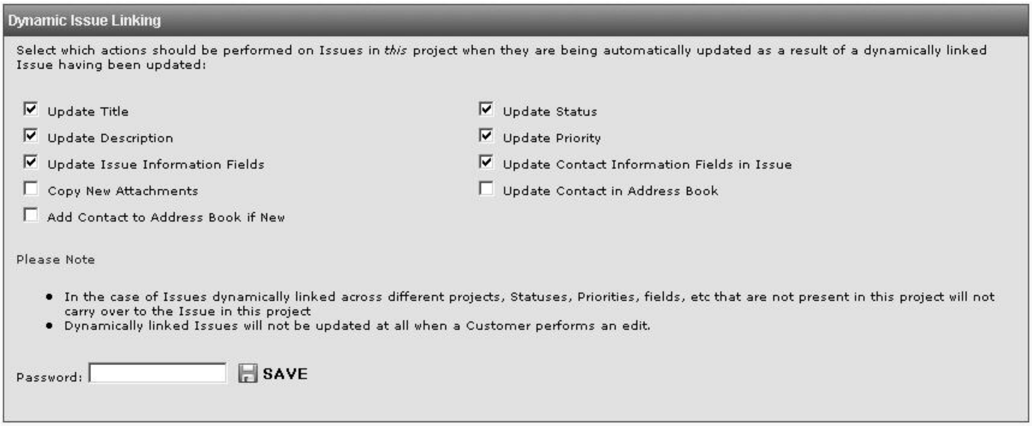
The Issue Workflow page allows you to define project-wide options for Issue behavior under specific circumstances, e.g., subtask creation and closure, linking and moving issues. You reach the Issue Workflow page by selecting **Administration | Project | Issue Workflow**.

The options are:

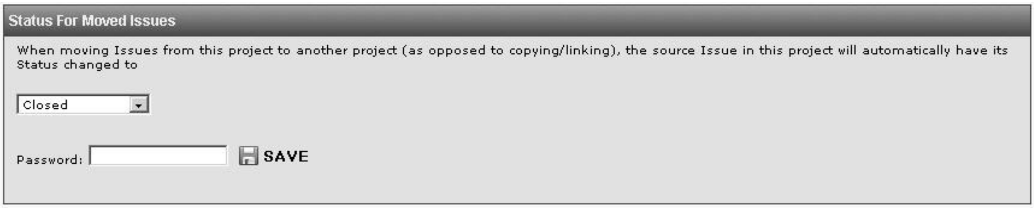
- **Dynamic Issue Linking**—Select which actions should be performed on Issues in this project when they are being automatically updated as a result of a dynamically linked Issue having been updated. The options available are:
  - **Update Title**—Checked by default
  - **Update Status**—Checked by default
  - **Update Description**—Checked by default
  - **Update Priority**—Checked by default
  - **Update Issue Information Fields**—Checked by default
  - **Update Contact Information Fields in Issue**—Checked by default
  - **Copy New Attachments**
  - **Update Contact in Address Book**
  - **Add Contact to Address Book if New**

NOTE

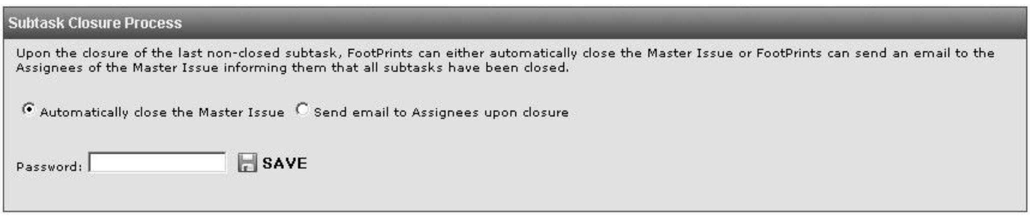
In the case of Issues dynamically linked across different projects, statuses, priorities, fields, etc. that are not present in this project do not carry over to the Issue in this project. Dynamically linked Issues are not updated at all when a Customer performs an edit.



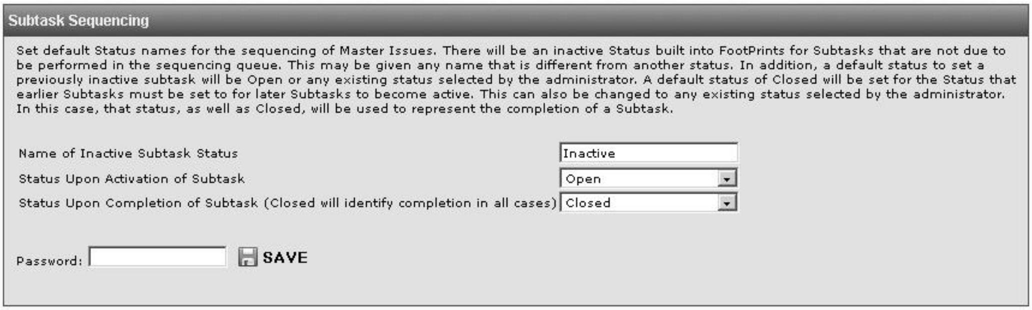
- **Status for Moved Issues**—Select the status for the source Issue when moving an Issue from the current Project to another Project. The default is **Closed**.



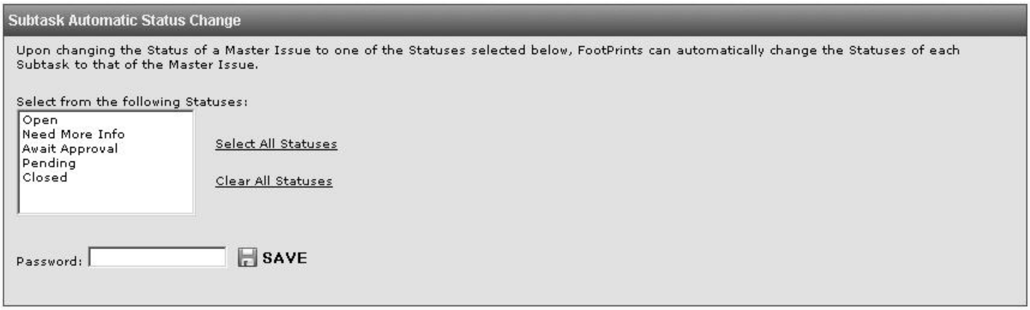
- **Subtask Closure Process**—Upon the closure of the last non-closed subtask, **FootPrints** can either automatically close the Master Issue or send an email to the assignees of the Master Issue informing them that all subtasks have been closed without changing the Master Issue status. The default is to automatically change the status to **Closed**.



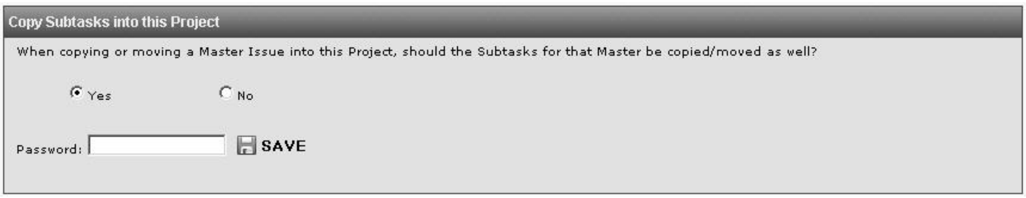
- **Subtask Sequencing**— Set default Status names for the sequencing of Master Issues. There will be an inactive Status built into FootPrints for Subtasks that are not due to be performed in the sequencing queue. This may be given any name that is different from another status. In addition, a default status to set a previously inactive subtask will be Open or any existing status selected by the administrator. A default status of Closed will be set for the Status that earlier Subtasks must be set to for later Subtasks to become active. This can also be changed to any existing status selected by the administrator. In this case, that status, as well as Closed, will be used to represent the completion of a Subtask.



- **Subtask Automatic Status Change**—Upon changing the status of a Master Issue to one of the statuses selected below, **FootPrints** can automatically change the statuses of each subtask to that of the Master Issue.



- **Copy Subtasks Into This Project**—When performing a cross-project copy of a Master Issue, FootPrints can either copy or not copy the subtasks as well.



Copy subtasks into This Project

When you have selected the necessary Issue workflow options, type in your password and click SAVE.

Mobile Options

The Numara FootPrints Mobile add-on module combines real-time, dynamic access to Numara FootPrints via a web browser on Microsoft® Windows Mobile, RIM®

Blackberry®, and Apple® iPhone® devices, with Numara FootPrints Sync functionality for calendar, task and contact synchronization. This module allows agents to manage their assignments, search the knowledge base, etc. on the go and without the need of a PC.

The inherent drawback of mobile devices is the small viewing area. Configuration of the Mobile Options page, therefore, is concerned with selecting the fields you want to be viewed via the mobile device. When users view a FootPrints Issue on their mobile devices, they will see only the fields selected here for the create or edit page. However, users will be able to view both the limited number of fields selected here on the details page as well as the full details.

With the exception of dependent fields, all field types (text fields, date/time fields, etc.) are available for the mobile device.

NOTE

Auto-assign does not work for the mobile interface. Autofield works on mobile, so that could be used as an alternative to Auto-assign.

To configure mobile device options:

37. From the FootPrints Toolbar, select Administration | Project, then select Mobile Options from the Other options section of the main frame. The Mobile Interface Fields page is displayed.
38. The Mobile Interface Fields page contains four multi-select fields:
    - Create/Edit Contact Information
    - Create/Edit Issue Information
    - Details Contact Information
    - Details Issue Information
39. The multi-select fields display all of the fields that are present in a full FootPrints display on a Create/Edit or Details page. Highlight the fields that you want displayed on the mobile device for each of the pages using the normal multi-select controls (i.e., mouse clicks combined with the CTRL or SHIFT key). For example, when displaying contact information, you might only want to display the contact's first and last name, phone number, and email address and exclude such information as his or her department, employee number, and job title.
40. When you have finished selecting fields, enter your password and click **SAVE**.

Be sure to test your selections after you've made them. You'll want to see how everything looks on a mobile device before making this available to other users and it might require some adjustment along the way.

Scheduling and Availability

A Project Work Schedule can be defined for a Project and for individual Agents. Regular working hours, days off, and holidays can be defined by the Project Administrator. Escalation rules can be configured to follow the calendar. Holidays and exceptions to the regular schedule are also defined here. In addition, administrators can set a schedule for a second shift.

Select Administration | Project | Calendar and Scheduling | Work Schedule to access the administrative options for these features.

Schedules are created for the entire Project and for individual Agents. The corporate schedule, as reflected in the Project Work Schedule, can be tied to the Agent schedule for company holidays, or separated if Agents need to be available to work when the organization is officially closed. These options can be defined as follows:

- Define Work Schedule for Project and Individual Agents—The work schedule for the Project default and for individual Agents can be defined here, including normal working days and hours, vacations, and holidays. Select the Project or an agent from the drop-down, click GO, and proceed to:
  - Manage the Project Scheduler
  - Manage the Agent Schedule
- Define options for Availability—The following options are available for determining availability of Agents throughout FootPrints:
  - Auto Check Availability—If enabled, the availability of assigned Agents is automatically checked when creating or editing Issues based on the current date/time or based on the value in a date/time field (such as Work Scheduled Date)
  - Date Fields for Availability—When viewing the availability matrix from the Create Issue, Edit Issue, or Appointment page, one or more date or date/time fields can be used as criteria for determining Agent availability in addition to the current date/time. Select the fields to be included.

NOTE

If no date fields are highlighted here or no date fields exist in the project, the current date/time at the time of assignment is used to determine availability when assigning Issues.

Using Availability with Round-robin Team Assignment

In addition to using Agent availability when creating appointments or assigning Agents to Issues manually, Agent availability can be taken into account when auto-assigning Issues using the Round-robin Team Assignment feature. When enabled, this option assigns each Issue that is assigned to the Team to the next available Team member in the list. It is applied when Issues that are assigned to a Team manually, via auto-assignment, and via an Escalation rule. Refer to *Round-robin Team Assignment* in the **Numara FootPrints Reference Manual** or on-line help for more information.

Manage Project Schedule

The work schedule can be defined for the Project as a whole or for individuals in the Project, including normal working days and hours, vacations, and holidays, by selecting Administration | Project | Calendar and Scheduling. In addition, a second shift can be defined for the entire Project or for individuals in the Project.

To define the work schedule:

41. Select Administration | Project | Calendar and Scheduling. The Calendar and Scheduling page is displayed.
42. The current Project name is displayed in the drop-down in the Work Schedule section. If other schedules were created in the current Project, they are also displayed in the drop-down. The Project radio button is populated by default. If you wish to set a schedule for an Agent in the Project, you must select the Agent radio button. To set the work schedule for a different Project, select the Project from the drop-down field. The drop-down displays all of the schedules created under the current Project only.

NOTE

If a work schedule is defined for an Agent, the Agent's work schedule is used in determining availability. If there is no work schedule for an Agent, the Project work schedule is used.

43. Click the **Add** or the **Edit** button. The Work Schedule page is displayed.
44. FootPrints allows you to define more than one work schedule per project. In the Custom Work Schedule section, name this schedule.
45. To define the Project Work Schedule, select options in the following sections on this screen:

- **Normal Work Week**—Define the normal work days and working hours for the Project. For each day of the week, do the following:
    - For each day worked, check the Work Day box and select a time range by entering start and stop times in the drop-down boxes.
    - For 24-hour work days, check the 24 Hour Day option.

- Use the Toggle shift button to set a second shift work schedule. The Toggle shift button displays a second set of work schedule times for the selected day.

- **Holidays/Exceptions**—Define special days when the normal work days and hours are not in effect.
  - Add New Holiday/Exception—To add a new holiday or exception to the Project calendar, specify the following:
    - **Type**—For days off, such as a holiday, select Day Off. For extended closing periods, select Date Range. For half-days or other exceptions (including, for example, a special Saturday that is worked), select Partial Day.
    - **Name**—Give the holiday or exception a name, like Independence Day, Closed for Inventory, etc.
    - **New Date**—Provide the date of the holiday or exception.
    - **End Date**—When Date Range is selected, also provide the date when the holiday ends (this should be the last day of the holiday, not the first day back).
    - **Start Time/End Time**—When Partial Day is selected, you must provide the start and end time of the special time that is included in the work schedule (not the time that will not be worked). This is useful when you need to define additional work days for a busy season or to define a half-day. For example, if 8am-12pm is selected on a day where the normal work hours are 8am-5pm, the default Agent's schedule only shows availability for 8am-12pm for that day.
    - Click **Add New** to add the holiday or exception.
  - Modify Existing Holiday/Exception—To modify an existing holiday or exception, select it from the list and click Modify. The characteristics of the holiday/exception populate the options in that section. Make the changes.
  - Delete Existing Holiday/Exception—Select the holiday/exception to delete and click Delete.

- **Reporting Options**—Using these reporting options only make sense when you have the same number of work hours defined for each day in the week.
  - Make this the default work schedule—If you wish to use the schedule you've defined for the Project when calculating the age of issues for reporting purposes, check this box.

- o Time Format—Define the format for presenting time-based calculations for reporting.
- o Define Work Day—Define the number of hours in a work day for reporting calculations. If the Time Format is specified as "Days, Hours, Minutes" and the work schedule is in effect, then a work day is defined as the number of hours you specify in the Define Work Day field.

- **SLA Options**
  - o **Define Work Day**—Define the number of hours in a work day for reporting purposed when defining reports for SLAs. One day of work schedule time is configured to be equal to this many hours of the work schedule time calculating the SLA due date, not the next day for which work is scheduled.

46. To apply any changes made in this section, enter your password and click  **GO**.

Manage Agent Schedule

The Project Administrator can create and manage Agents' work schedules. If their role permissions allow, Agents can also create and modify their own schedules through the **FootPrints** personal Calendar.

To manage your personal schedule as an Agent:

47. To manage an individual Agent's work schedule as an Agent, select Calendar | Personal | Work Schedule from the **FootPrints** Toolbar.
48. To manage an individual Agent's work schedule as an Administrator, under Administration | Project | Other Options | Calendar and Scheduling | Work Schedule, click the Agent radio button, select an Agent from the drop-down list, then click the **Add** or the **Edit** button. The Work Schedule page is displayed.

NOTE

If a work schedule is defined for an Agent, the Agent's version of the work schedule is used in determining availability. If there is no work schedule for an Agent, the Project work schedule is used.

The Agent's work schedule can be defined here, including normal working days and hours, vacations, and holidays. If an Agent does not have a work schedule defined, the Project schedule is used to determine availability.

The following options are available:

- **Normal Work Week**—Define the normal work days and working hours for the Agent. For each day of the week, do the following:

- For each day worked, check the Work Day box and select a time range by entering start and stop times in the drop-down boxes.
- For 24-hour work days, check the 24 Hour Day option.

- Holidays/Exceptions—Define special days when the normal work days and hours are not in effect.
  - Add New Holiday/Exception—To add a new holiday or exception to the schedule, specify the following:
    - Type—For days off, such as a holiday, select Day Off. For vacations and extended leaves, select Date Range. For half-days or other exceptions (including, for example, a special Saturday that is worked), select Partial Day.
    - Name—Give the holiday or exception a name, like Independence Day, Closed for Inventory, etc.
    - New Date—Provide the date of the holiday or exception.
    - End Date—When Date Range is selected, also provide the date when the holiday ends (this should be the last day of the holiday, not the first day back).
    - Start Time/End Time—When Partial Day is selected, you must provide the start and end time of the special time that is included in the work schedule (not the time that will not be worked). This is useful when you need to define additional work days for a busy season or to define a half-day. For example, if 8am-12pm is selected on a day where the normal work hours are 8am-5pm, the default Agent's schedule only shows availability for 8am-12pm for that day.
    - Click Add New to add the holiday or exception.
  - Modify Existing Holiday/Exception—To modify an existing holiday or exception, select it from the list and click Modify. The characteristics of the holiday/exception populate the options in that section. Make the changes.
  - Delete Existing Holiday/Exception—Select the holiday/exception to delete and click Delete.

49. To apply any changes made in this section, enter your password and click GO.

Customer Surveys

When this feature is enabled, a customer satisfaction survey can be automatically emailed to customers when their Issues are closed. The email, with the survey attached, is sent to the customer according to the rules specified under Administration | Project | Automated Workflow | Customer Surveys.

IMPORTANT
Check local laws governing automated surveys before enabling the feature.

Surveys contain field data from the originating project (as opposed to the Customer Survey project), but the field names in the survey are all from the Customer Survey project and should be set there.

NOTE
For the survey option to work correctly, outgoing email notification must be enabled for the system (under Administration | System | Email).

To enabled this feature:

50. Select Administration | Project | Automated Workflow | Survey from the **FootPrints** Toolbar.
51. Place a check in the box to enable this project to send Customer surveys.
52. Choose whether you want to have surveys tracked in a **FootPrints** project associated with this project or if you want to create and use your own survey.

NOTE
If you wish to use a **FootPrints** Project, you must create that Project in advance using the Project Setup Wizard and selecting the Customer Surveys template.

- **Track Surveys in a FootPrints Project**—If you select this option, a drop-down list of survey projects that have been created and associated with this project is displayed in the Step 2: Configuration section.
    - **Choose a Project to Send the Surveys to**—You must have another **FootPrints** Project already in built if you want **FootPrints** to track the survey results. Use the Customer Survey project template from the Project Setup Wizard to create this project. You can create a new project using the Administration | System | Projects | Create A New Project option. Step 4b of the Project Setup Wizard allows you to setup all the survey options for this project. A template is created for the survey project that is attached to the survey email. When the customer fills this template out and submits it, the results automatically go into the survey project.
- **Create and track your own survey**—If you select this option, you have the following option in the Step 2: Configuration section:

- **Reply address for survey email**—Enter the email address to which replies to survey emails should be sent. In Step 4 you may have set up the survey results to go into another Project. You may also want the replies to the survey email to go into this Project. In that case, use the email address for this other Project. Incoming email address can be set up on the Administration | System | Email page. Also, you may not want **FootPrints** to track the survey results at all. Enter the email address to which you want people to send email when they reply to the survey email. This address can belong to a person who is responsible for reading the survey results or to another application's email address.
- **Attach File**—You may not be tracking your survey results in another **FootPrints** Project. You must create the survey outside of **FootPrints** and then attach it here if you want a survey attached to your survey email. Only .txt and .html files are supported. Options are also provided to replace the attachment you've attached previously or to delete the attachment.

53. **Step 2: Configuration**

- **Subject of the survey email**—Enter a subject line for the survey email.
- **Custom Message**—The text entered here is included in the body of the survey email. Certain keywords can be used that are automatically replaced by their associated values once the email is sent. Click the Click here link to view a list of keywords.

54. **Step 3: Survey Criteria**—Select when to send customer surveys:

- Send surveys for Issues with Closed Status - When selected, Step 4: Frequency displays options that are appropriate for sending surveys based on the Issue status.
- Send surveys for Issues based on Escalation Rule(s) - When selected, Step 4: Frequency displays options appropriate for sending surveys based on an escalation rule.
- An Add New Escalation link allows you to create an escalation rule on the fly. Clicking the link displays the page for setting up an escalation rule.

55. **Step 4: Frequency**

- If sending surveys based on status.
  - Send surveys each time Issues get Closed
  - Customers have a 1 in X chance of receiving a survey if they haven't received a survey in the last Y months. Select the values for X and Y.
    - **For X**: Choosing a value of 2 for X does not mean that a survey email is sent for every other issue that is closed. It means that each issue closed has a 1 in 2 (50%) chance of resulting in a survey email.

- **For Y**: Indicate how often customers are allowed to receive surveys. You may not want the same customer to receive more than one survey in a 1, 3, 6, or 12 month period.

o **Allow on demand surveys** - Checking this box adds a checkbox to the create/edit Issue screen to send the survey when the Issue is submitted regardless of other choices in this section and regardless of status.

NOTE

You may want to send a survey for every issue that is closed, but only if that person has not received one in the past 1, 3, 6, or 12 months. Use the second option and set the value of Y to 1 so that each closed issue has a 1 in 1 chance of sending a survey email.

56. **Step 5: Miscellaneous**

- **Send surveys to customers and agents**- Leave unchecked to send surveys to customers only or check this box to have surveys sent to both customers and agents.
- **Send surveys to all linked customers when a Global Issue is resolved.** This option can be selected regardless of when surveys are being sent out.
- **Include Javascript data validation on surveys and HTML Forms.** This option can be turned off so that the Javascript validation is not included.
- **Allow anonymous survey submissions** - When the survey is returned, it comes back with the original issue information deleted.

57. Enter your password in the Apply Changes section and click **GO**.

Add Survey Question

If you've chosen to track surveys in a **FootPrints** project, you must create the survey questions to be sent out. To create the survey questions:

58. Change to the survey project.
59. Select Administration | Project from the FootPrints Toolbar and then select Survey Question Configuration from the Fields section of the main frame. The Survey Question Configuration page is displayed. In other, non-survey projects, the link in this position is labeled "Field Maintenance".
60. You can **Add**, **Edit**, or **Delete** a survey question from this page. Click the **Add Question** button. The Question Setup section is displayed.

- **Type Question**- Enter the survey question in this field. Responses are in the form of selecting a value from a set of numbers or words, so the question should be appropriate to that form of survey. Some examples might be:

My experience with Widgets International was helpful:

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

On a scale of 1 to 6, with 6 being the highest, how highly do you rate our speed of response?
1 2 3 4 5 6

- **Make this question mandatory** - Checking this box makes answering the question a requirement. If the question is made mandatory and the customer or agent tries to return the survey without answering a mandatory question, the customer or agent is notified that the question must be answered prior to returning the survey.
- **Define Scale** - This drop-down field allows you to reuse the answer scale from another question.
- **Max Scale Value** - Sets the number of values in the answer scale. The maximum allowable number of values in the scale is 10.
- **Enter the caption that will be associated with each value** - By default, answer scale is populated with numeric values. You can change those to words or a combination of words and numbers.
- **Caption alignment** - Choose whether to place the caption for the answer scale to the right, left, above, or below the field for entering the value.
- **Include a comments box with this question?** - Check the box to include a field for entering comments with the question. If you check the box, drop-downs are displayed for you to select the size of the box that is displayed in the survey. The answers given by the customer are not limited to the size of the box. The column and row drop-downs only determine what size box is visible.
- **Include a question header?** - Check the box to include a heading with the question. If you check the box, a multi-line character field is displayed for you to enter the text for the header and a drop-down is displayed for you to choose whether to align the heading flush left, flush right, or centered above the question.

61. Click the **Finish Question** button to add the question to the survey. Repeat these steps to add more questions to the survey.
62. When you have finished adding questions, enter your password in the Apply Changes field and click the **GO** button. If you skip this step, the questions are not added to the survey.

Using Scaled Surveys to Get Averages

Because integers represent the responses to survey questions, you can run a Metric Report to determine averages for answers. To do so you would need to:

63. Create at least one survey scaled report, for example, "Rate the service you received on a scale of 1-5, with 1 being Excellent and 5 being Poor".

64. Create a Custom Metric and Graphics Report. Refer to Custom Reports for details on how to create the report. Additinal information for Metric Reports can be found in Metrics and Graphics.
65. When building the report, in Step 3, choose to get an Average of your survey question.
66. You can get a subtotal of these values. For example, you might choose to subtotal them by "Original Assignee".

For Upgrade Customers

If you already have a survey Project when you upgrade to Numara FootPrints 8.0+, your existing survey Project will not contain any scale questions. For this reason, FootPrints 8.0+ displays the Field Maintenance page when you try to access the Survey Question Configuration page for the first time and includes a link to the Scale Question page.

Once scale questions are added, each visit to the Survey question configuration screen displays the scale question setup page, which also contains a link to the traditional Field Maintenance page. Scale and comment boxes are available on the new page. Drop-down, date, date time,and other fields are available on traditional field maintenance page. "Q1, Q2..., Q*n*" are noted in parentheses next to the scale questions to avoid confusion when visiting the Field Maintenance page.

Change Survey Question Order

When you have more than one question in your survey, the questions are displayed in order of appearance on the Survey Question Configuration page.

To change the order in which survey questions are displayed:

1. Change to the survey project.
2. Select Administration | Project from the FootPrints Toolbar and then select Survey Question Configuration from the Fields section of the main frame. The Survey Question Configuration page is displayed.
3. Click on the survey question in the Current Questions list.
4. Click the Move Up or Move Down arrow buttons to move the question up and down in the order.

Chapter 14: Configure Reporting

FootPrints is capable of producing a variety of report types. This Getting Started document only describes the custom reporting function in detail. For details on reporting and other report types, as well as how to set up the Auto Run feature to automatically run reports at desired times or intervals, refer to the **Numara FootPrints Reference Manual**. A detailed description of the Reporting function can also be found in the **FootPrints User Guide**.

To create a custom report, select Reports | Custom from the **FootPrints** Toolbar. The first screen of the Custom Report Wizard is displayed:

1. **Step 1: Style**—Select the output style of the report. Choices are:
   - **Columns**—Issue data is displayed in fixed columns. One Issue is displayed per row. Columns can be selected from any available fields.
   - **Wrapped**—Each Issue returned is displayed in its own mini-table. Line breaks can be used to wrap data to multiple rows, for example, to place the Description in its own row. This style is useful for printing reports that contain many fields.
   - **Metrics and Graphics**—Create custom metrics and graphs of counts, averages and sums on any field. Single and two-level metrics are supported. Output options include table, bar, and pie charts.
   - **Export**—Export data to atext file that can be saved to your local desktop. Use this format to import **FootPrints** data into a spreadsheet or other programs
   - **Include metrics...**—Column and Wrapped reports can also contain metric charts and graphs. Check this box to include metrics in a Column or Wrapped report (not available for Export option).

2. Click **GO** to display the rest of the report options. The steps on the next page depend on the report style selected in Step 1.

3. **Step 2: Heading**—Define what is included in the heading at the top of the report output. Available for all styles except Export. Options include:

- **Title**—This is displayed at the top of the report.
- **Date**—The date the report is run (updates each time the report template is re-run).
- **Time**—The time the report is run (updates each time the report template is re-run).
- **Project name**—The name of the Project.
- **Logo graphic**—The logo image displayed in the current Project.

4. **There are two possible steps 3.** One is for column and wrapped reports and the other is for metric reports and combo reports.

    a. **Step 3: Fields Displayed**—Select the columns to display in the report. All fields are available. This option is available for all styles except Metrics. For example, to display Title:

    - For Type of Field, choose FootPrints Fields.
    - Highlight Title under Fields.
    - Click Add Field. Title now is added to the Selected Fields box.
    - **History**—The History field is a special field that includes the Issue history in the report. This provides an audit trail in reporting. Because this type of report searches every record of every change to the Issues that are being reported, using this field can cause a slowdown in the reporting.
    - **Re-order**—To change the order of fields to be displayed, highlight a field in the Selected Fields box and click the up or down arrow to move it.
    - **Line Break**—Insert a line break (Wrapped style only).
    - **Description**—Choose which descriptions to include in the report and when to wrap the data (only applies if Description is included in the Selected Fields box). You can include the original, newest, two most recent, or three most recent descriptions in your report.

NOTE

An Original Description option is not available for the **FootPrints** database.

- **Assignees**—If Assignees is selected, the full names of the assignees are displayed in the report (e.g., Bob Smith). This is not suitable for importing the report output into another Project, as user ID's must be specified in a data import file. To create a file that includes assignees user IDs (e.g., Bob Smith), use the System Administration Export Project Data option.

b. **Metrics and Graphics**—Create custom metrics and graphs of counts, averages, and sums on any field. The option is available for Metric style, and for Column and Wrapped style if the Combo checkbox is checked.

NOTE

This section only determines which fields to display; it does not determine the selection criteria for the report. The criteria are chosen later in the report.

5. **There are two possible steps 4.** The first is for reports to be displayed in the FootPrints interface and the second is for reports that are to be exported to a file.

   a. **Step 4: Sort Order**—Define how Issues are sorted in the report output. This option is available for all styles except Metrics. The default is by Issue number in ascending order (from lowest to highest). Optionally sort on up to any three fields, ascending or descending. Issues are sub-sorted within each field based on the sort order. Clicking the Heading box separates Issues into groups with the field name as header. For example, if sorting by Status with Heading checked, all Open Issues are grouped under the heading Open, Closed Issues are grouped under the heading Closed, etc.

   b. **Step 4: Text File Format**—Select the format for text file output. This only applies to Export style. Choices are comma-delimited file (.csv), tab delimited (.tsv), or your custom delimited (.txt).

6. **Step 5: Select Report Criteria**—With metric reports, this is Step 4. Choose the criteria for the report. Only select the criteria you want to search on. The **FootPrints** Advanced Reporting criteria section uses the same mechanism as the Advanced Search. Refer to section above on *Advanced Search* for detailed explanation of criteria.

NOTE

It is important to understand the meaning of relative periods and aging in order to obtain accurate information, especially as the searching and reporting functions of **FootPrints** rely on the same types of criteria. If a search is requested on Issues for "the previous three months," and the date is the 15th of May, then the period searched or reported on will be from February 15th through May 14th, inclusive. That is, the report or search will exclude the current date and give the three month period prior to the current date. This is to ensure that reports and searches yield consistent results. If reports and searches included the current date, then the results might differ depending on the time of day at which the search or report was performed.

7. **Step 6: Run Report**—Click **GO** to run the report. To save the report, enter a name before you run it. Choose Personal to save the report for yourself. Choose Shared/Internal to share your report template with other internal **FootPrints** users. Shared/Public reports are available to all users including customers (the report only contains data the user is allowed to see). Shared/Public reports appear on the customer Pre-Defined Reports page. Each time a saved report template is run, it returns the latest matching data.

NOTE

Saving the report here only saves the report formatting options and criteria chosen in this form, notthe results of the report. This feature can be used to run the same report in the future, for example, once a week. Each time the report is run, it returns the latest data from the current Project. Saving report output is covered in the topic on *Saving and Printing Report Data*.

After clicking **GO**, the report is displayed in a separate browser window. Large reports sometimes take a few minutes to run. To view the details of an Issue, click the Issue number (or whatever field is in the first column) in the report. This displays the Details page for that Issue in the main **FootPrints** frame.

The report can be saved or printed from the browser window. If the Export style was selected, a Save As dialog box is displayed. Save and name the report to your local hard drive.

NOTE ON PERMISSIONS

Reports can be restricted based on a user's Role. Custom Reports may not be available or some options may not appear if your role does not allow access. Please consult your **FootPrints** administrator for more information.

Chapter 15: Configure the Knowledge Base

The Knowledge Base is a place to record, organize, and manage important information for a **FootPrints** Project. This can include, but is not limited to: Solutions to common problems, answers to Frequently Asked Questions, patches, and documents. By utilizing the **FootPrints** Knowledge Base feature, you can turn the past experiences of individual customers and Agents into a database of Solutions for all Project members. This can assist in Agents in finding resolutions to recurring problems and in empowering customers to find answers to their questions without submitting a Request.

The following administration options are available for the Knowledge Base:

- **Categories**—Define categories for solutions.
- **Knowledge Base Approvals**—Require Solutions to be approved before being published.
- **Manage External Knowledge Bases**—Add, edit, and re-order the external Knowledge Bases available for searching by Agents.
- **Exclude Fields from Solutions**—Exclude some fields from the Solution form.

Categories

The FAQ (Frequently Asked Questions) categories are available to the Agent when searching the Knowledge Base. FAQs are also available to customers who have access to **FootPrints**. These categories are created and maintained by the Project Administrator for each Project. The categories are defined by advanced search criteria and named and saved by the administrator. Each time a category is accessed, it returns the latest Solutions that match the criteria defined for that category.

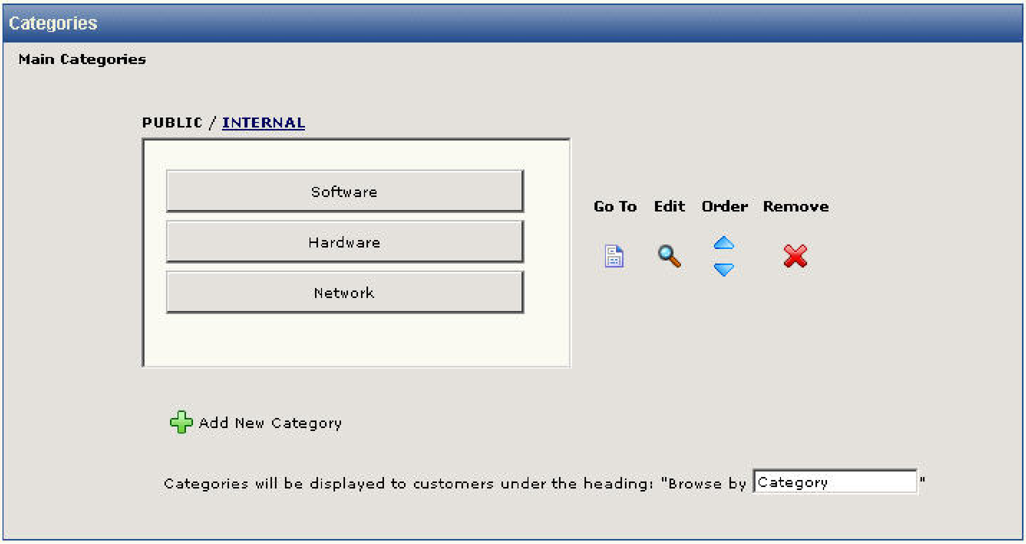
Administrators can create sub-categories to a depth of 555 levels of sub-category.

Create FAQ Category

To create an FAQ category:

1. Select Administration | Project, then select Knowledge Base in the mainframe under Other Options. The Knowledge Base administration page is displayed. The FAQ Setup section is the first section on the Knowledge Base administration page.
2. To make a public FAQ category, i.e., accessible to both agents and customers, select the PUBLIC link. To make an internal FAQ category, i.e., accessible to agents only, select the INTERNAL link.
3. To add the FAQ category, click the Add New Category button. The Search Criteria page is displayed.
4. Select the criteria for the FAQ. Options include Title, Description, Keyword, Date and Age, and all Project fields for the current Project. For example, to return Solutions with the word "password" in the Solution, enter password for the keyword.
5. Select the Advanced options, which allow you to determine the order of display for the Solutions within the category. The Solutions that are returned can be ordered by virtually any field, including popularity.
6. At the bottom of the form, name the FAQ and click GO.
7. The current matching Solutions are displayed in the main frame. In addition, the category appears in the FAQ list for Agents and customers in the current Project. Each time someone accesses the FAQ, the latest Solutions that match the criteria selected are returned.

NOTE
On all FAQ administrative pages, as you descend or ascend through categories and sub-categories, a "trail of breadcumbs" is left to assist you in navigating the different levels of the categories. The breadcrumbs are live links and you can ascend through category levels by clicking on the breadcrumbs. The figure below illustrates this.



Create FAQ Sub-categories

To create an FAQ sub-category:

1. Select Administration | Project, then select Knowledge Base in the mainframe under Other Options. The Knowledge Base administration page is displayed. The FAQ Setup section is the first section on the Knowledge Base administration page.
2. To create a sub-category to a public FAQ category, select the **PUBLIC** link. To create a sub-category to an internal FAQ category, select the **INTERNAL** link.
3. Click on the name of the FAQ category in the list of FAQ categories underneath the **PUBLIC/INTERNAL**.
4. Click the **GO TO** button. A list of sub-categories, if there are any, is displayed.
5. To add a sub-category, click on the **Add New Sub-category** button. To add an additional level of sub-category to an existing sub-category, click on the existing sub-category, click the **GO TO** button again, then click on the **Add New Sub-category** button. The Search Criteria page is displayed.
6. Select the criteria for the sub-category. Options include Title, Description, Keyword, Date and Age, and all Project fields for the current Project. For example, to return Solutions with the word “password” in the Solution, enter password for the keyword.

7. Select the Advanced options, which allow you to determine the order of display for the Solutions within the sub-category. The Solutions that are returned can be ordered by virtually any field, including popularity.
8. At the bottom of the form, name the sub-category and click GO. The sub-category is created and you are returned to the previous page. The new sub-category is displayed in the list.

Change the Order of FAQ Categories/Sub-categories

To change the order in which FAQ categories/sub-categories are displayed:

1. Select Administration | Project, then select Knowledge Base in the mainframe under Other Options. The Knowledge Base administration page is displayed. The FAQ Setup section is the first section on the Knowledge Base administration page.
2. Select the appropriate link, PUBLIC or INTERNAL, to display the FAQ category or sub-category that is to be edited.
3. Click on the category in the list of FAQ categories. If you want to edit a sub-category, click on the GO TO button. Continue to select sub-categories and click the GO TO button as necessary to navigate to the category that you want to edit.
4. Click on the category or sub-category that you want to edit in the list of categories/sub-categories.

Knowledge Base Approvals

By default, Agents in FootPrints can submit Solutions to both the Public and Internal Knowledge Bases. Using role permissions, you can limit certain users from submitting to the Knowledge Bases and/or require some users to receive approval before their Solutions are published. This allows the administrator to have better control over what information is published to customers and to review Solutions before customers see them.

The following topics are in this section:

- Knowledge Base Role Permissions for Agents
- Knowledge Base Role Permissions for Customers
- External Knowledge Bases
- Exclude Fields from Solutions

- FAQ Administration
- Knowledge-Paks

Knowledge Base Role Permissions for Agents

To limit users from creating Solutions or to require them to first get approval, you must change the permissions for the users' Role. For details on editing user roles, refer to *Create a Role* on page 168. When using that procedure, note the following:

1. In the Knowledge Base section of the Agent Role Properties page, there are two permission options:
   - Ability to add to the Public Knowledge BaseFor creating Public Solutions.
   - Ability to add to the Internal Knowledge BaseFor creating Internal Solutions.
2. For each type of Solution, there are three options:
   - Yes—User can create Solutions that are published immediately.
   - Needs Approval—User can create Solutions, but they must be approved by an approver (an administrator or other Project member designated as an approver; refer to *Selecting Approvers* on page 264 for more information) before they can be published to the Knowledge Base.
   - No—User cannot create Solutions of this type.
3. If Needs Approval is selected for one of the Solution types for at least one role, then you must designate one or more Knowledge Base Approvers for the Project. This is done on the Project Administration | Knowledge Base page (see below).
4. In the Edit section of the Roles page, there are two additional permission options for Solutions:
   - Editing Public Solutions—If this is enabled, the user can edit existing Solutions in the Public Knowledge Base.
   - Editing Internal Solutions—If this is enabled, the user can edit existing Solutions in the Internal Knowledge Base.

   These two options do not apply to approvals of pending Solutions, only to published Solutions. Whether or not a user can edit a pending Solution is based on whether the user is an approver and whether the user is the one who submitted the Solution for approval.

The permissions selected above only apply to creating and editing Solutions. Agents can always view and search the Knowledge Base, both Internal and Public.

Selecting Approvers

When Agents are required to receive approval before publishing Solutions, one or more users must be designated as approvers. These users (usually administrators) receive email each time a Solution is submitted for approval and can approve, edit, or reject the Solution.

To select Approvers:

1. Select Administration | Project | Knowledge Base from the **FootPrints** Toolbar.
2. A list of all internal users in the Project is displayed in the Knowledge Base Approvals section. Select the users that you want to be approvers for the Knowledge Base from this list. Multiple users may be selected by holding down the CTRL key.
3. By default, any administrators in the Project are pre-selected as approvers. You can leave them selected, designate only one or more of them, or select a completely different user or users.
4. Users selected as approvers should have permission to submit Solutions without approval.
5. Users selected as approvers can approve all pending Public Solutions and pending Internal Solutions for the Project for all users that require approval. You cannot designate certain approvers for certain users or different approvers for Internal and Public Solutions.
6. When you are finished selecting the Knowledge Base approvers, scroll to the bottom of the screen, enter your password, and click **SAVE**.

Knowledge Base Role Permissions for Customers

Customer users cannot create, edit or submit Solutions for approval. Customers can only view Solutions in the Public Knowledge Base, and view Public FAQs. There *is* a permission option for Customer Roles that determines whether those Customers can view the Public Knowledge Base and FAQs.

To configure Knowledge Base permissions for a Customer User Role:

1. Select Administration | Project | User Roles from the FootPrints Toolbar.
2. Select the customer role from the drop-down and click Edit Role Properties.
3. If you have never configured roles for this Project, you can select the default Customer Read/Submit role to apply the permission to all Customer Read/Submit users in the Project.
4. If you are using multiple built-in or custom customer roles, you can apply the permission to one or more of these roles. Refer to *User Roles* on page 166 for complete information.
5. There is an option for Knowledge Base in the Miscellaneous section of the Customer Role Properties page. If Yes is selected, users can view and search the Public Knowledge Base and FAQs. If No is selected, the Public Knowledge Base is hidden from the users. Customers can never view the Internal Knowledge Base or FAQs.
6. The next option, Default home page, can be configured to display Solutions or FAQs to the customers when they first log into FootPrints (assuming they have permission to view the Knowledge Base), or to display their Requests or the New Request form (if they are not allowed to view the Knowledge Base).
7. When you are finished changing the Knowledge Base permissions, scroll to the bottom of the screen, enter your password, and click SAVE.
8. If the users of that role are not allowed to view the Public Knowledge Base, the Search Knowledge Base options are removed from their interface.

External Knowledge Bases

Agents can search external Knowledge Bases from the Search Knowledge Base option in the Create Issue and Edit Issue pages and from the FootPrints Toolbar. When a user enters a keyword and submits the search to an external Knowledge Base, the results are displayed in a new browser window.

FootPrints comes with a number of popular external Knowledge Bases pre-configured. The Project Administrator has the ability to remove or re-order these selections and to add the list of external Knowledge Bases. For complete instructions on managing external knowledge bases, refer to the Numara FootPrints Reference Manual.

Exclude Fields from Solutions

By default, Solutions contain many of the same fields found in Issues, including Title, Description, and Issue Information (Project) fields. Some other fields that are never included in Solutions, including Contact Information, Time Tracking, and Assignment, as they do not apply to Solutions.

There may be some Project fields that also do not apply to Solutions, such as Follow-up Date. You can exclude these fields from appearing in Solutions, both on the Create Solution screen and in the Details of a Solution.

To exclude some Project fields from Solutions:

1. Select Administration | Project | Knowledge Base from the FootPrints Toolbar. There is a dialog box containing all Project fields in the Exclude Project Fields from Solutions section.
2. Highlight the field to be excluded from Solutions. To highlight multiple fields, hold down the CTRL key.
3. Enter your password and click SAVE.

Solutions in the Knowledge Base no longer contain the fields excluded.

Notes and Restrictions

- Excluded fields are excluded from both Internal and Public Solutions.
- Project fields that are part of a dynamic dependency group or that normally appear in a pop-up dependency window cannot be excluded.
- Public fields that are excluded are no longer visible to Customers when they view Public Solutions or to Agents when creating and viewing Public Solutions.
- Internal fields that are excluded do not appear for Agents when creating and viewing both Internal and Public Solutions (internal fields are never visible to customers).
- Existing Solutions that contain data for the excluded fields no longer display the data.

Knowledge-Paks

To give support teams and customers immediate access to known solutions to technical issues, Numara Software offers integrated Knowledge-Paks® from Right Answers. For complete information on using Knowledge-Paks from Right Answers, refer to the Numara FootPrints Reference Manual.

Chapter 16: Additional Tasks

There are three additional tasks that may be performed as part of the initial FootPrints setup. These are:

- Import Issue Data
- Asset Management Setup
- Change Management Setup

Import Issue Data

You can optionally import data from another system into a FootPrints project under Administration | System | Projects. The data fields must be in the order of the project's schema and the import file must be in comma-delimited form (.CSV). Refer to the FootPrints Reference Manual for more information.

Configuration Management Setup

Configuration Management is an add-on module for FootPrints and must be purchased in addition to the FootPrints product. It is ITIL-compatible and provides Service Catalog functions as well as a wide range of configuration management functions. In addition, it can be integrated with Numara Asset Manager to provide a highly ITIL-compatible solution. Refer to the Numara FootPrints Reference Manual for complete details of configuring Numara Configuration Management. The material on configuration management includes planning suggestions as well as detailed instructions on the Numara Configuration Management software.

Change Management Setup

Change Management is an add-on module for FootPrints and must be purchased in addition to the FootPrints product. Change Management is accessed by selecting Administration | Project from the FootPrints toolbar, then selecting Change Management from the Automated Workflow section fo the main frame of the interface.

When setting up a change management process and phases in FootPrints, you should plan ahead by deciding:

- The criteria for automatically setting off an approval process (including all built-in and custom fields)
- Who approves the various phases of the process
- Whether to grant super-approver status to anyone and to whom to grant it
- The rules for meeting an approval (i.e., whether an Issue is approved or rejected based on one vote, a majority vote, or a unanimous vote)
- What to do when the Issue is approved or rejected (place the Issue in phase of the process, change the Issue status, re-assign the Issue, etc.)
- The email notifications for various stages of approval
- Who has permission to access approval information
- Whether to allow anonymous approvals

Refer to the Numara FootPrints Reference Manual or the FootPrints Change Management Guide for more information.

Asset Management Setup

Asset Management for the help desk gives you the ability to track users' desktop configurations, including hardware, software, and network information, and to access that information in real-time while working on a user's Issue.

FootPrints offers five options for Asset Management:

- FootPrints Asset Management powered by Centennial Discovery™
- Integration with Microsoft® Systems Management Server (SMS) Inventory
- FootPrints Integration with LANDesk (Windows only)
- FootPrints Deploy powered by Prism

For complete details on all aspects of Asset Management, refer to the online help or the *Numara FootPrints Reference Manual*.

Glossary

Address Book

FootPrints table used to keep customer contact and configuration information. For example, the Project Administrator may have set up the Address Book to hold a customer's name, email address, phone number, location, etc. Multiple Address Books can be created within FootPrints, each associated with one or more Projects.

Agent

A standard, full-strength user of FootPrints. Common uses for this user type include: Help Desk Agent, Call Center Agent, Developer, Engineer, Manager and Project Member. Agent users have the ability to use all of the basic functions of FootPrints, including creating, viewing, editing Issues, and running queries.

Appointment

A record of the FootPrints Calendar. Used to schedule meetings, service calls, and other types of appointments for FootPrints Agents. Can be optionally synced to the user's Outlook Calendar.

Assignees

FootPrints users assigned to work on an Issue.

Contact

The default name given to a record in the FootPrints Address Book. Normally contains a customer's name, email address, phone number, etc.

Customer

A user account type in FootPrints. This type of account is intended for both internal and external customers, and other groups of people who require only partial access to the data. A A Customer account is very cost-effective, and allow customer users to submit and track their own Requests via the Customer Self-service interface, and to search the Knowledge Base. The word "Customer" is used throughout this documentation to refer to both employee customers and external customers who access FootPrints.

Customer Read KB

Customer role that only allows the user to view and search the Knowledge Base.

Customer Read KB/Requests

Customer role that only allows the user to view and search the Knowledge Base, and track the status of his/her Requests.

Customer Read/Submit

Customer role that only allows the user to submit and track his/her own Requests, and search the Knowledge Base.

Customer Read/Submit/Edit

Customer role that only allows the user to submit, track and edit his/her own Requests, and search the Knowledge Base.

Decision field

The single drop-down field that, when a value is selected, determines whether certain project fields appear in a pop-up window when creating or editing an Issue. This only applies when the "Field Dependencies" Pop-up Window option is enabled in a project.

Description

The built-in FootPrints field that contains all notes entered by users regarding an Issue. It is a multi-line text field, and acts as a journal for an Issue. Each addition to the description includes a time/date/user stamp. The Description can be displayed on the FootPrints Homepage, on an Issue's Details screen, and in reports. A full-text search can also be performed on the Description field.

Details

The Details Screen displays all the information about a FootPrints Issue. The details are displayed by clicking the title of an Issue from the FootPrints Homepage. Data can include Title, Status, Priority, Creator, Date and Time submitted, Description, Project field data, Contact data, and file attachments.

Display drop-down

A dialog on the FootPrints home page that contains built-in and custom queues and searches, such as "My Assignments". By selecting an option, the list of Issues on the home page is updated to that queue.

Drop-down field

A type of custom Project and Address Book field. A drop-down choice field offers the user a drop-down list of choices from which to pick. An unlimited number of values can be defined per drop-down choice field.

Dynamic Address Book Link

The FootPrints feature that allows any LDAP-compliant contact database to be linked to FootPrints. Supported contact databases include Microsoft Exchange 5.x/2000, Netscape iPlanet, Lotus Notes and Novell Directory Services.

Global Issue

A special FootPrints Issue type used to designate important or frequently reported Issues that will affect many users. Global Issues can be broadcast to all Agents, are displayed on the Agent Home page, and can optionally be displayed for Customers to subscribe to. Whenever a new Issue is reported with the same problem, the Agent (and optionally the Customer) can link the Issue to the known Global Issue (called GlobalLinks). Global Issues can be closed with the GlobalLinks together at one time.

GlobalLink

The child or related Issue linked to a Global Issue. A Global Issue is a special FootPrints Issue type used to designate important or frequently reported Issues that will affect many users. Global Issues can be broadcast to allAgents, are displayed on the Agent Home page, and can optionally be displayed for Customers to subscribe to. Whenever a new Issue is reported with the same problem,the Agent (and optionally the Customer) can link the Issue to the known Global Issue (called GlobalLinks). Global Issues can be closed with the GlobalLinks together atone time.

Individual user

A full-strength user of FootPrints. Built-in types include Agent, Project Administrator, and System Administrator. Custom Roles can also be created to assign different permissions to different groups of users. Each individual user is assigned an individual account and password and is the only person using that account. This type of account is intended for internal users of the system, such as Help Desk Agents, Customer Service Representatives, Engineers, and Administrators.

Issue

The default name given to a FootPrints record. Each Issue is a numbered record in the FootPrints database around which all help desk and problem tracking activity centers. The name for this may be different (Ticket, Entry, etc.) depending on how your system is configured. An Issue can be opened, assigned, worked on, and closed by Agent users and Administrators.

Knowledge Base

The Knowledge Base is a place to record, organize and manage important information for a FootPrints project database. This can include, but is not limited to: solutions to common problems, answers to frequently asked questions, patches, and documents. By utilizing the FootPrints Knowledge Base feature, you can turn the past experiences of individual customers and agents into a database of solutions for all project members. This can assist in Agents finding quicker resolutions to recurring problems, and in empowering Customers to find the answers to their questions without submitting a request.

LDAP Address Book

Any LDAP-compliant contact database linked to using the FootPrints Dynamic Address Book link feature. Supported contact databases include Microsoft Exchange 5.x/2000, Netscape iPlanet, Lotus Notes and Novell Directory Services.

Login

The first page that FootPrints displays when the URL for your FootPrints system is requested by a user's web browser. Also, the act of starting a FootPrints session.

Master Issue

A type of FootPrints Issue that contain Subtasks, each with a different task that must be completed before the Master Issue is Closed. The Master issue is the "parent" in a parent/child relationship between the Master Issue and its Subtasks.

Multi-select field

A type of custom Project and Address Book field. A multi-select field offers the user a dialog box from which they can select multiple, pre-defined choices. An unlimited number of values can be defined per multi-select field.

Organizational Unit

An Address Book field used to organize contacts, such as “Department” , “Company Name”, “Business Unit”, or “Location”. Must be enabled by the Administrator.

Personal Calendar

A web-based calendar for a FootPrints Agent that can contain appointments, meetings, and jobs for that user.

Primary key

The key field in the FootPrints Address Book that is used by FootPrints as a reference to identify the customer contact. Examples include "Email Address" and "User ID".

Priority

A built-in field in FootPrints used to determine the severity or impact of an Issue. Priorities are customizable, and may include numbers (1,2,3) or words (High, Medium, Low).

Project

FootPrints stores and tracks information in projects. A project is a separate sub-database within the system, which can have its own custom fields, options and users. There is no limit to the number of projects that you can create within FootPrints. You may choose to keep all of your data in a single project, or you can create multiple projects. For example, one project can be used for help desk activity, while a second project is used for internal bug tracking.

Project Administrator

A built-in User Role in FootPrints . In addition to all Agent user privileges, the Project Administrator can administer a project, including adding custom fields, setting options, and adding users.

Project Calendar

A web-based calendar for a FootPrints Project that can contain appointments, meetings, and jobs for members of that Project.

Project field

Custom field created by the Project Administrator to store information about a particular Issue. There is no limit to the number of fields allowed per project.

NOTE
The FootPrints database only allows 100 fields per project.

Quick Issue

Quick Issues are templates that contain pre-filled information for frequently reported Customer Issues, such as "Password Reset", "Service Request", etc. For example, a Quick Issue template for "Password Reset" would start out pre-filled with a description of the problem, the problem categories pre-filled with "Network" and "Password Reset",and perhaps a Status of "Closed". The Agent only needs to fill in the user's contact information to submit the Issue. The Project Administrator can create an unlimited number of templates, which are available to all Agents from the FootPrints Toolbar.

Request

An Issue submitted by a Customer that has not yet been assigned. Also the Status assigned to Issues submitted by Customers. Agent users can then "Take" the Request to work on it, or Requests can be automatically assigned to one or more Agent users by the system. Your FootPrints Administrator can tell you how Requests are to be handled in your organization.

Role

A user type assigned to one or more users to define permissions. Both built-in roles and custom roles can be assigned to users. Examples of built-in roles include Agent, Customer Read/Submit, and Project Administrator.

Solution

A record in the FootPrints Knowledge Base. Can be a solution to a common problem, frequently asked question, patch, or step-by-step procedure. Solutions can be created from scratch, or from existing Issues. Solutions are public, and can be viewed/searched by Customers (as well as Internal users).

SQL Field Mapper

A FootPrints add-on module that that allows the user to use Issue or Address Book fields as lookup keys in an external database.

Status

The state of a FootPrints Issue. Each Issue has a Status field, which tracks the workflow of an Issue from "Open" status, the default state of a new Issue, to "Closed" status. The Project Administrator can easily add new statuses to a project database, such as "Assigned", "Pending" or "Testing".

Subtask

A type of FootPrints issue that is a "child" of a related "parent", called a Master Issue. Multiple subtasks can be created to define different tasks to be completed for a larger Master Issue. The Master Issue cannot be closed until all Subtasks are completed.

System Administrator

A built-in User Role in FootPrints. In addition to Agent user and Project Administrator privileges for all projects, the System Administrator has control over the whole FootPrints system, including administration of any project, adding new projects, and administering licenses.

Taking

The option of allowing Agent users to assign themselves to a given FootPrints Issue. This is a Role option set by the Project Administrator for a particular Role.

Team

A organizational unit used to organize Agent users for assignment purposes, such as “Application Support”, “Network Support”, “Development”, etc. Issues can be assigned to the whole team, or to individual users within the Team. This allows an Agent to assign an Issue to a group of people, such as a Development Team, without needing to know the individual person who will work on the Issue.

User ID

The FootPrints user name which, when entered with the proper password during login, permits access to the FootPrints system.

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