

BMC Remedy IT Service Management 7.0

# Data Management Administrator's Guide



November 2007

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- Operating system and environment information
  - Machine type
  - Operating system type, version, and service pack
  - System hardware configuration
  - Serial numbers
  - Related software (database, application, and communication) including type, version, and service pack or maintenance level
- Sequence of events leading to the problem
- Commands and options that you used
- Messages received (and the time and date that you received them)
  - Product error messages
  - Messages from the operating system, such as `file system full`
  - Messages from related software



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- In the United States and Canada, call 800 537 1813. Outside the United States and Canada, contact your local support center for assistance.
- Submit a new issue at [http://www.bmc.com/support\\_home](http://www.bmc.com/support_home).

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# Preface

The *BMC Remedy IT Service Management 7.0 Data Management Administrator's Guide* describes how to install and use the BMC Remedy ITSM Data Management (ITSM Data Management) tool.

The BMC Remedy IT Service Management Suite (ITSM) includes the following applications and solutions:

- The BMC Remedy Asset Management application
- The BMC Remedy Change Management application
- The BMC Remedy Service Desk solution (which includes the BMC Remedy Incident Management application and the BMC Remedy Problem Management application)

ITSM can be integrated with the following applications:

- The BMC Service Request Management application
- The BMC Service Level Management application

The applications run in conjunction with the BMC Remedy Action Request System platform (AR System) and share a common database. All five applications consume data from the BMC Atrium Configuration Management Database (CMDB) application.

# About the BMC Remedy IT Service Management Suite

The following sections provide an overview of IT Service Management products.

## BMC Atrium CMDB 2.0.1

The BMC Atrium CMDB 2.0.1 is installed prior to Asset Management, Change Management, and Service Desk (including Incident Management and Problem Management). It stores information about configuration items (CIs) and their relationships in an inheritance-based data model, and has the ability to reconcile data from different sources. The BMC Atrium CMDB 2.0.1 provides a “single source of truth” about your IT environment, enabling other BMC applications to manage CIs, predict the impact of configuration changes, and perform other Business Service Management (BSM) functions.

For more information, see the *BMC Atrium CMDB 2.0.1 User's Guide*.

## BMC Remedy Asset Management 7.0

The BMC Remedy Asset Management application lets IT professionals track and manage enterprise configuration items (CIs)—and their changing relationships—throughout the entire asset life cycle. As part of the BMC Remedy ITSM Suite, Asset Management is integrated with BMC Remedy Service Desk (which contains the BMC Remedy Incident Management and BMC Remedy Problem Management applications), BMC Remedy Change Management, and BMC Service Level Management, and offers flexibility to support customized business processes.

For more information, see the *BMC Remedy Asset Management 7.0 User's Guide*.

## BMC Remedy Change Management 7.0

Using ITIL®-compatible best practices, BMC Remedy Change Management provides IT organizations with the ability to manage changes by enabling them to assess impact, risk, and resource requirements, and then create plans and automate approval functions for implementing changes. It provides scheduling and task assignment functionality, and reporting capabilities for reviewing performance and improving processes. Because Change Management is integrated with the BMC Atrium CMDB, Change Management lets you relate changes to other records, such as CIs (including services) and incidents.

For more information, see the *BMC Remedy Change Management 7.0 User's Guide*.



## BMC Remedy Incident Management 7.0

BMC Remedy Incident Management is used to manage incidents. Incident management is reactive, and is typically initiated in response to a customer call or automated event. An example of an automated event might be an alert from a monitoring system, such as BMC Service Impact Management (BMC SIM). The primary goal of the incident management process, according to ITIL standards, is “to restore normal service operation as quickly as possible with minimum disruption to the business, thus ensuring that the best achievable levels of availability and service are maintained.”

An incident is any event that is not part of the standard operation of a service and that causes an interruption to or a reduction in the quality of that service. Normal service operation is the operation of services within the limits specified by Service Level Management (SLM).

For more information, see the *BMC Service Desk: Incident Management 7.0 User's Guide*.

## BMC Remedy Problem Management 7.0

BMC Remedy Problem Management is used to manage problem investigations, known errors, and solution database entries. Problem management can proactively prevent the occurrence of incidents, errors, and additional problems. A problem investigation helps an IT organization get to the root cause of incidents. It initiates actions that help to improve or correct the situation, preventing the incident from recurring.

After a problem investigation identifies the cause, this information can result in either a known error or a solution database entry. A known error is a problem that has been successfully diagnosed and for which a temporary workaround or permanent solution has been identified. A solution database entry contains information that might be required to provide or restore a service.

For more information, see the *BMC Service Desk: Problem Management 7.0 User's Guide*.

## BMC Service Request Management

BMC Service Request Management (SRM) allows IT to define offered services, publish those services in a service catalog, and automate the fulfillment of those services for their users. With SRM, users have the ability to help themselves, which reduces the requests coming into the service desk. This enables IT to focus on more mission-critical activities, such as resolving incidents related to service failures and restoring critical services. SRM also provides the ability to automate workflow for each service, enforcing consistency of process and faster fulfillment of the request.

For more information, see the *BMC Service Request Management 2.0 Administrator's and User's Guide*.

## BMC Service Level Management 7.0

BMC Service Level Management enables a service provider, such as an IT organization, a customer support group, or an external service provider, to formally document the needs of its customers or lines of business using service level agreements, and provide the correct level of service to meet those needs.

Service Level Management also provides a means to review, enforce, and report on the level of service provided. It streamlines the most important task of all, which is the communication between a service provider and its customers. Multiple service targets can be defined and monitored, acting as a bridge between IT service support and IT operations. This enables costs to be controlled and helps to provide a consistent level of service in support of key business services.

For more information, see the *BMC Service Level Management 7.0 User's Guide*.

## Audience

This document is intended for the following IT professionals:

- Application administrators
- AR System administrators

## Related documentation

Table 1 lists the available documentation for IT Service Management. It also lists other documents referenced within the *BMC Remedy ITSM 7.0 Data Management Administrator's Guide* and within the instructions in the spreadsheets.

Unless otherwise noted, online documentation in Adobe Acrobat (PDF) format is available on the product installation distribution media, on the Customer Support website ([http://www.bmc.com/support\\_home](http://www.bmc.com/support_home)), or both. You can order printed documentation from the Customer Support website. A complete list of documents available for the ITSM 7.0 applications is available from the Customer Support website.

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### NOTE

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To access the support website, you must have a support contract.

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**Table 1: Related documentation**

Title	Description	Audience	Format
<i>BMC Atrium CMDB 2.0.1 User's Guide</i>	Information about using the BMC Atrium CMDB, including searching for CIs and relationships, launching federated data, reporting, and running reconciliation jobs.	Users	Print and PDF
<i>BMC Remedy Asset Management 7.0 User's Guide</i>	Procedures for using the BMC Remedy Asset Management application; includes new features and overview.	Everyone	Print and PDF
<i>BMC Remedy Change Management 7.0 User's Guide</i>	Procedures for using the BMC Remedy Change Management application; includes new features and overview.	Everyone	Print and PDF
BMC Remedy Import Help	Procedures for using BMC Remedy Import.	Administrators	Help file
<i>BMC Remedy IT Service Management 7.0 Configuration Guide</i>	Procedures for configuring the BMC Remedy IT Service Management applications.	Administrators	Print and PDF
<i>BMC Remedy ITSM 7.0 Data Management Administrator's Guide.</i>	Installation and usage instructions for the ITSM Data Management tool.	Administrators	PDF
<i>BMC Remedy ITSM 7.0 Data Management Release Notes</i>	Information about known issues in the ITSM Data Management tool.	Administrators	PDF
<i>BMC Remedy Service Desk: Incident Management 7.0 User's Guide.</i>	Procedures for using the BMC Remedy Service Desk: Incident Management application; includes new features and overview.	Everyone	Print and PDF
<i>BMC Remedy Service Desk: Problem Management 7.0 User's Guide</i>	Procedures for using the BMC Remedy Service Desk: Problem Management application; includes new features and overview.	Everyone	Print and PDF

**Table 1: Related documentation (Continued)**

Title	Description	Audience	Format
<i>BMC Service Level Management 7.0 User's Guide</i>	Procedures for using the BMC Service Level Management application; includes new features and overview.	Everyone	Print and PDF
<i>BMC Service Request Management 2.0 Administrator's and User's Guide</i>	Procedures for administrating and using the BMC Service Request Management application.	Administrators and users	PDF

# Introduction

You can use the ITSM Data Management tool to import foundation data into ITSM 7.0.

The following topics are provided:

- When to use the ITSM Data Management tool (page 14)
- Overview of the bulk load process (page 16)
- Components of the tool (page 17)
- Hardware and software prerequisites (page 19)
- Performance benchmarks (page 19)

# When to use the ITSM Data Management tool

You can use the ITSM Data Management tool whenever you wish to import foundation data, such as in the following scenarios:

- A new installation of ITSM
- An existing installation of ITSM to which another company, business unit, department, or other group is being added
- Migration from a previous version of ITSM

Foundation data refers to configuration data that applies to all of the ITSM applications, such as companies, sites, people, and categorization. Figure 1-1 illustrates the three levels of data in ITSM.

**Figure 1-1: Levels of data in ITSM**

	Service Desk	Change Management	Asset Management
Transactional Data	Incidents, problems	Change requests	Configuration items, contracts, purchase requests
Process Setup Data	Decision trees, scripts, assignment mapping	Change templates, approvals, assignment mapping	Approvals, configurations
Foundation Data	Companies, sites, people, categorization		

**NOTE**

At this time, only foundation data can be loaded with the ITSM Data Management tool.

## Using the ITSM Data Management tool for migration

Migration scenarios for using the ITSM Data Management tool include:

- **Migrating from a version earlier than 6.0**—If you use automated migrations, you would have to run more than one migration, to first migrate to 6.0, and then to 7.0. The procedure using the ITSM Data Management tool can eliminate steps.
- **Migrating in a phased approach**—You can load different portions of data at different times. For example, if you have both Help Desk and Change Management 6.0, you might choose to initially install Service Desk, and bulk load the appropriate foundation data. At a later date, you could install Change Management and bulk load the appropriate foundation data.
- **Migrating as a fresh install**—You might wish to treat migration as a fresh install, for example if your earlier version of ITSM includes many customizations, or if the existing data is of questionable quality. In this case, you can bulk load your quality foundation data.

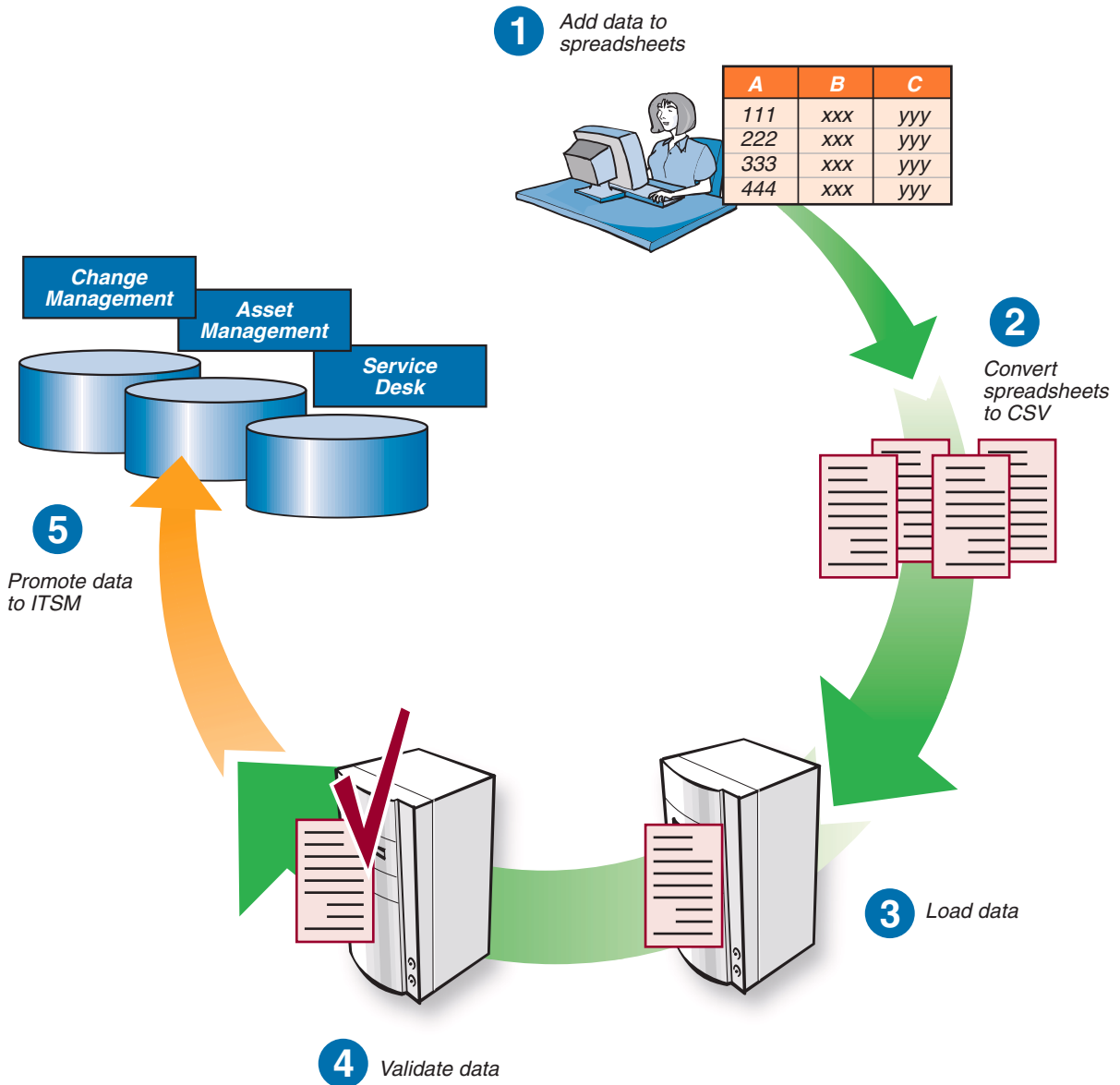
In each of these scenarios, you must do the following steps:

- Step 1 Install ITSM 7.0.
- Step 2 Export data from your earlier version of ITSM.
- Step 3 Import the data into the spreadsheets.
- Step 4 Clean up the data in the spreadsheets. This might include adding newly required information that is missing.
- Step 5 Run the ITSM Data Management tool to import the data into ITSM 7.0.

# Overview of the bulk load process

This section provides an overview of the bulk load process. The following chapters provide detailed instructions.

Figure 1-2: Overview of the bulk load process





The bulk load process consists of the following steps:

**Step 1** Add data to spreadsheets.

The ITSM Data Management tool includes Excel workbooks. Each tab on the Excel workbook corresponds to a form in ITSM 7.0, as described in Appendix A, “How tabs map from spreadsheet to target form.”

For instructions, see Chapter 3, “Completing the spreadsheets.”

**Step 2** Convert data in spreadsheets to CSV files.

The tool includes macros to convert the spreadsheet data to the appropriate CSV files, as described in “Creating the CSV files” on page 36.

**Step 3** Load the data.

You must perform steps to load the data. For instructions, see “Editing the data load batch file” on page 36, and “Running the batch file” on page 37.

**Step 4** Validate the data.

**Step 5** Promote the data into ITSM.

For instructions, see “Validating and promoting the data” on page 38.

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**NOTE**

If you have customized ITSM, see Chapter 5, “Managing customizations.”

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## Components of the tool

The ITSM Data Management tool includes the following components:

- **Excel workbook files for loading data**—Each of these workbook files has individual tabs that correspond to the different foundation data structures that can be imported. The following workbook files are included:

- Company.xls
- Financials.xls
- GenericCatalog.xls
- Geography.xls
- Location.xls
- OperationalCatalog.xls
- People.xls
- PeopleOrg.xls
- ProductCatalog.xls
- SupportGroup.xls
- SystemSetup.xls

- **Excel conversion files**—Each data load workbook has a corresponding conversion file. Each conversion file contains a macro to convert the individual tabs in the data load workbook into separate files in CSV format. The following conversion files are included:
  - CompanyCSV.xls
  - FinancialsCSV.xls
  - GenericCatalogCSV.xls
  - GeographyCSV.xls
  - LocationCSV.xls
  - OperationalCatalogCSV.xls
  - PeopleCSV.xls
  - PeopleOrgCSV.xls
  - ProductCatalogCSV.xls
  - SupportGroupCSV.xls
  - SystemSetupCSV.xls
- **Definition files**—The DEF files contain the necessary AR System staging forms and AR System workflow to manage, validate, and promote the data that you are importing into the appropriate ITSM forms.
- **Mapping file list**—Foundation.lst lists the mapping files that are used during the automated import.
- **Data load batch file**—Foundation.bat automates the importing of the data in the CSV files and makes sure that they are imported in the correct order. Data is imported into a staging area for validation before you promote the data into the target forms.
- **ARX files**—These files contain back-end data required by the ITSM Data Management tool.
- **Import mapping files**—Files with the extension .arm (AR Mapping) are import mapping files used by the ITSM Data Management tool.

# Hardware and software prerequisites

The ITSM Data Management tool has two sets of hardware and software prerequisites, as listed in Table 1-1.

**Table 1-1: ITSM Data Management requirements**

System	Requirements
Server running AR System and ITSM 7.0	<ul style="list-style-type: none"> <li>■ AR System server 7.0.01 patch 004 or later.</li> </ul> <p><b>Note:</b> BMC recommends using AR System server 7.1 or later due to performance enhancements.</p> <ul style="list-style-type: none"> <li>■ ITSM 7.0 patch 006 or later.</li> <li>■ Hardware and software requirements for the ITSM 7.0 server, as described in the <i>BMC Remedy IT Service Management 7.0 Installation Guide</i>.</li> </ul> <p><b>Note:</b> For compatibility information, see the compatibility matrix for BMC Remedy IT Service Management at the product availability and compatibility area of the Customer Support website (<a href="http://www.bmc.com/support_home">http://www.bmc.com/support_home</a>).</p>
Workstation from which you are running the tool	<ul style="list-style-type: none"> <li>■ Microsoft Windows</li> <li>■ Microsoft Excel</li> <li>■ BMC Remedy Administrator 7.0</li> <li>■ 87 Mb free disk space</li> </ul> <p><b>Note:</b> The Excel spreadsheets and the batch files are supported only in this environment.</p>

## Performance benchmarks

The following table shows how many records per hour were processed by the ITSM Data Management tool in BMC Software's performance lab.

**Table 1-2: Performance benchmarks for foundation data**

Task	Throughput (records per hour)
Load people data from the CSV file to staging forms	225,000
Validate people data in staging forms	1,000,000
Promote people data into ITSM forms	220,000

The test data for these performance benchmarks consisted of 238,000 People records, which included 1,200 support staff.

**Hardware environment**

The performance benchmarks were performed on two Dell PowerEdge 1850 servers connected to a LAN with 100M Bps network interface card. Each server has two 3.8Ghz Intel Xenon processors, 4Gb RAM and two local hard drives (10K rpm).

**Software environment**

The following table indicates the software environment for the two servers.

**Table 1-3: Software environment for performance benchmark lab**

Server	Component	Version	Running on
A	Windows 2003 server	Enterprise Edition SP1	Dell PowerEdge 1850
A	AR Server	7.0.1 patch 004	Windows 2003 Server
A	BMC Remedy ITSM applications	7.0.2 patch 005	
B	Redhat Linux®	2.6.9-55.ELsmp	Dell PowerEdge 1850
B	Oracle® 10g R2	10.2.0.3	Redhat Linux

The AR System server was configured for multi-threading, as described in “Configuring performance enhancements” on page 25.

For Oracle configuration, the initialization parameters were set as follows:

- cursor\_share=force
- optimizer\_index\_cost\_adj=25
- optimizer\_index\_caching=90
- sga\_target=800M
- pga\_aggregate\_target=200M
- open\_cursors=300

Data files were on one hard drive, while all the online redo log files were on another dedicated hard drive.

**NOTE**

After starting validation, and after starting promotion, the Data Load console was closed to maximize throughput.

# 2 Installing and configuring the tool

Follow these steps to install and configure the tool:

**Step 1** Turn on Development Cache Mode.

**Step 2** Run the ITSM Data Management tool installer.

BMC recommends that you run the installer on your workstation. The installer installs components, such as the Data Load Console to your AR System server. It installs other components, such as the data load spreadsheets, to your workstation.

**Step 3** Turn off Development Cache Mode.

**Step 4** Optionally, to enhance bulk data load performance, you can configure the tool to use multi-threading.

The following topics are provided:

- Turning on Development Cache Mode (page 22)
- Running the ITSM Data Management tool installer (page 22)
- Turning off Development Cache Mode (page 24)
- Configuring performance enhancements (page 25)

## Turning on Development Cache Mode

To install the ITSM Data Management tool, you must first turn on Development Cache Mode. After you do this, run the ITSM Data Management tool installer. When the installer finishes running, turn off Development Cache Mode.

---

### **NOTE**

After you turn on Development Cache Mode in the following procedure, you must restart the AR System server.

---

#### ► **To turn on Development Cache Mode**

- 1 Open BMC Remedy Administrator.
- 2 Log in to the AR System server to which you are importing data.
- 3 Select the appropriate server.
- 4 Choose File > Server Information.  
The Server Information window appears.
- 5 Click the Configuration tab.
- 6 Select Development Cache Mode.
- 7 Click OK.

The Server information window closes and the system prompts you to restart the AR System server.

- 8 Close BMC Remedy Administrator, and then restart the AR System server.

## Running the ITSM Data Management tool installer

Follow this procedure to install the ITSM Data Management tool.

#### ► **To install the ITSM Data Management tool**

- 1 Run `setup.exe`.

BMC recommends that you run the installer from your Windows workstation.

After the installer loads, the ITSM Data Management Tool window appears, displaying the Introduction screen of the installer.

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### **NOTE**

Depending on your Windows security settings, you might see a Windows Security Alert.

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2 Click Next to continue.

The End User License Agreement appears.

3 Accept the terms of the license agreement and click Next to continue.

You are prompted for the installation location. The default location is C:\Program Files\BMC Software\BMC Remedy ITSM Data Management Tool. You can change this location, if appropriate.

4 Click Next to continue.

After the tool is configured for your environment, you are prompted to enter connection information for your AR System server. The installer requires this information so that it can install the necessary DEF and ARX files.

**Figure 2-1: BMC Remedy ITSM Data Management Tool—Connection Information screen**

5 Complete the Connection Information screen as described in Table 2-1.

**Table 2-1: Connection information**

Field	Description
AR System Server	Enter the name of the server to which you are importing data.
AR Administrator	Enter the login name of an AR System administrator.
AR Password	Enter the password for the AR System administrator account.
AR TCP Port	If necessary, enter the AR System server's TCP port.
AR RPC Socket	If necessary, enter the AR System server's RPC socket.

6 Click Next to continue.

After the installer connects to your AR System server, the Version Summary screen appears, displaying a table of currently installed ITSM products, and their corresponding version numbers, patch levels, and installed languages.

**— IMPORTANT —**

If any of the installed applications are not at version 7.0 patch 006 or later, your system does *not* meet the prerequisites of the ITSM Data Management tool. You must cancel installation of the tool. Prerequisites for the tool are described in “Hardware and software prerequisites” on page 19.

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- 7 Click Next to continue.

The pre-installation summary displays the product name, installation folder, and disk space requirements.

- 8 Click Install to install the tool.

During installation, the progress is displayed. When the tool has been installed, the screen displays the message, “Execution complete.”

- 9 Click Next to continue.

The installer displays the status of the installation.

- 10 Click Done to exit the installer.

- 11 If you ran the installer on the server, copy the files from the installation location (default of C:\Program Files\BMC Software\BMC Remedy ITSM Data Management Tool) to the workstation on which you will run the tool.

## Turning off Development Cache Mode

After you install the tool, turn off Development Cache Mode.

**— NOTE —**

After you turn off Development Cache Mode, you must restart the AR System server.

---

### ► To turn off Development Cache Mode

- 1 Open BMC Remedy Administrator.
- 2 Log in to the AR System server to which you are importing data.
- 3 Select the appropriate server.

- 4 Choose File > Server Information.

The Server Information window appears.

- 5 Click the Configuration tab.

- 6 Clear Development Cache Mode.

- 7 Click OK.

The Server Information window closes and the system prompts you to restart the AR System server.

- 8 Close BMC Remedy Administrator, and then restart the AR System server.



# Configuring performance enhancements

If you are bulk loading significant amounts of data, you will see performance improvements by:

- Setting the Next Request ID Block Size to 40.

This setting enhances performance when importing data from the CSV files into the staging forms.

- Using multi-threading.

Multi-threading allows multiple chunks of data to be processed at the same time. You can configure multiple threads to be run simultaneously, depending on how powerful your server is.

---

## **IMPORTANT**

---

If you configure these performance enhancements, when the ITSM Data Management tool is running validation or promotion, the AR System server utilizes 100 percent CPU capacity to achieve maximum throughput. This means that during validation and promotion, the AR System server is *not* responsive to other requests.

---

To configure the tool to use multi-threading, you must:

- Step 1 Configure the AR System server information for multi-threading.
- Step 2 Configure the CAI:Plugin Registry form.
- Step 3 Set the plugin filter API threads.

## Setting the Next Request ID Block Size

You can set this performance enhancement, regardless of whether you configure multi-threading.

### ► To set the Next ID Block Size

- 1 Open BMC Remedy Administrator.
- 2 Log in to the AR System server to which you are importing data.
- 3 Select the appropriate server.
- 4 Choose File > Server Information.
- 5 Click the Configuration tab.
- 6 Set the Next Request ID Block Size to 40.
- 7 If you are configuring the AR System server for multi-threading, continue with the next procedure, which is on this screen. Otherwise, click OK to save your settings.

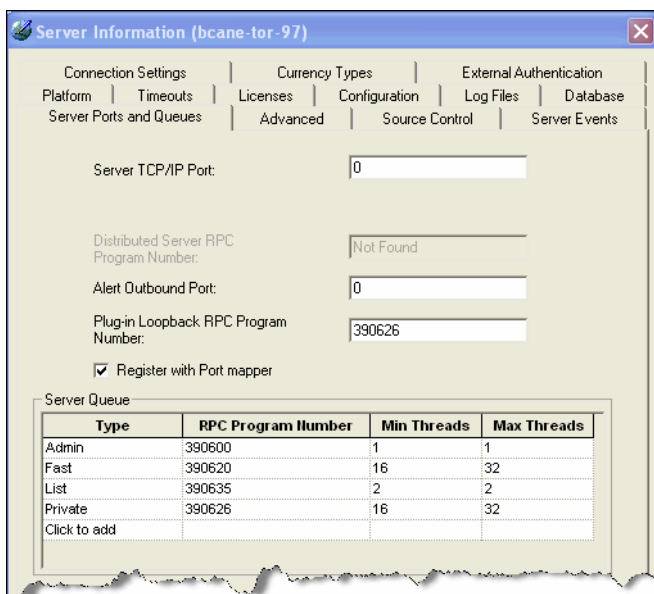
## Configuring the AR System server for multi-threading

To see performance improvements from multi-threading, you must configure several settings for AR System server information.

► **To configure multi-threading**

- 1 If it is not already open, open the Server Information window.
- 2 Click the Server Ports and Queues tab.

**Figure 2-2: Server Information window—Server Ports and Queues tab**



- 3 If no private server queue exists, create one by performing the following steps:
  - a Click the “Click to add” row.
  - b For Type, select Private.
  - c Select an available RPC Program Number.
- 4 Set (or modify) the minimum and maximum number of threads as indicated in Table 2-2.

**Table 2-2: Server queue configuration**

Queue type	Min Threads setting	Max Threads setting
Fast	16	32
Private	16	32

- 5 Make sure that the Plug-in Loopback RPC Program Number is set to the private queue's RPC Program Number.  
Take note of this number. You will need it in subsequent steps, after you close this window.
- 6 Click OK to save your changes.

## Configuring the CAI:Plugin Registry form

You must configure the CAI:Plugin Registry form as indicated in the following steps.

### ► To configure the CAI:Plugin Registry form

- 1 Open BMC Remedy User.
- 2 Log in to the AR System server as an administrator.
- 3 Open the CAI:Plugin Registry form.
- 4 Click Search to search for the record.
- 5 If no record is found, create a new record.

**Figure 2-3: CAI Plug-in Registry form**

The screenshot shows the 'CAI Plug-in Registry' form within the BMC Remedy IT Service Management - Command Automation Interface. The form has a dark blue header with the BMC Software logo. The main content area is white with a light blue border. It contains several input fields: 'Plugin ID\*' with the value 'CAIPLUGIN', 'Private Queue #' with '390626', 'Number of Threads\*' with '16', 'Submitter\*' with 'Demo', 'Last Modified By', 'Create Date', and 'Modified Date'. At the bottom, there are 'Save' and 'Close' buttons.

- 6 Set the Private Queue # to the RPC Program Number.
- 7 Set the Number of Threads to 16.  
The number of threads must be within the minimum and maximum number that you set for the Private server queue. BMC recommends 16 threads.
- 8 Click Save.

## Setting the plugin filter threads

To see performance improvements from multi-threading, you set the plugin filter threads.

### ► To set the plugin filter threads

- 1 On the server, open the AR System configuration file in a text editor.

On a Windows server, the configuration file is `ar.cfg`. On a UNIX<sup>®</sup> server, the file is `ar.conf`.

- 2 Add the following line to the end:

```
Plugin-Filter-API-Threads: 8 40
```

- 3 Save your changes.
- 4 Restart the AR System server.

# Completing the spreadsheets

Before you can import data, you must complete the appropriate data load spreadsheets.

The following topics are provided:

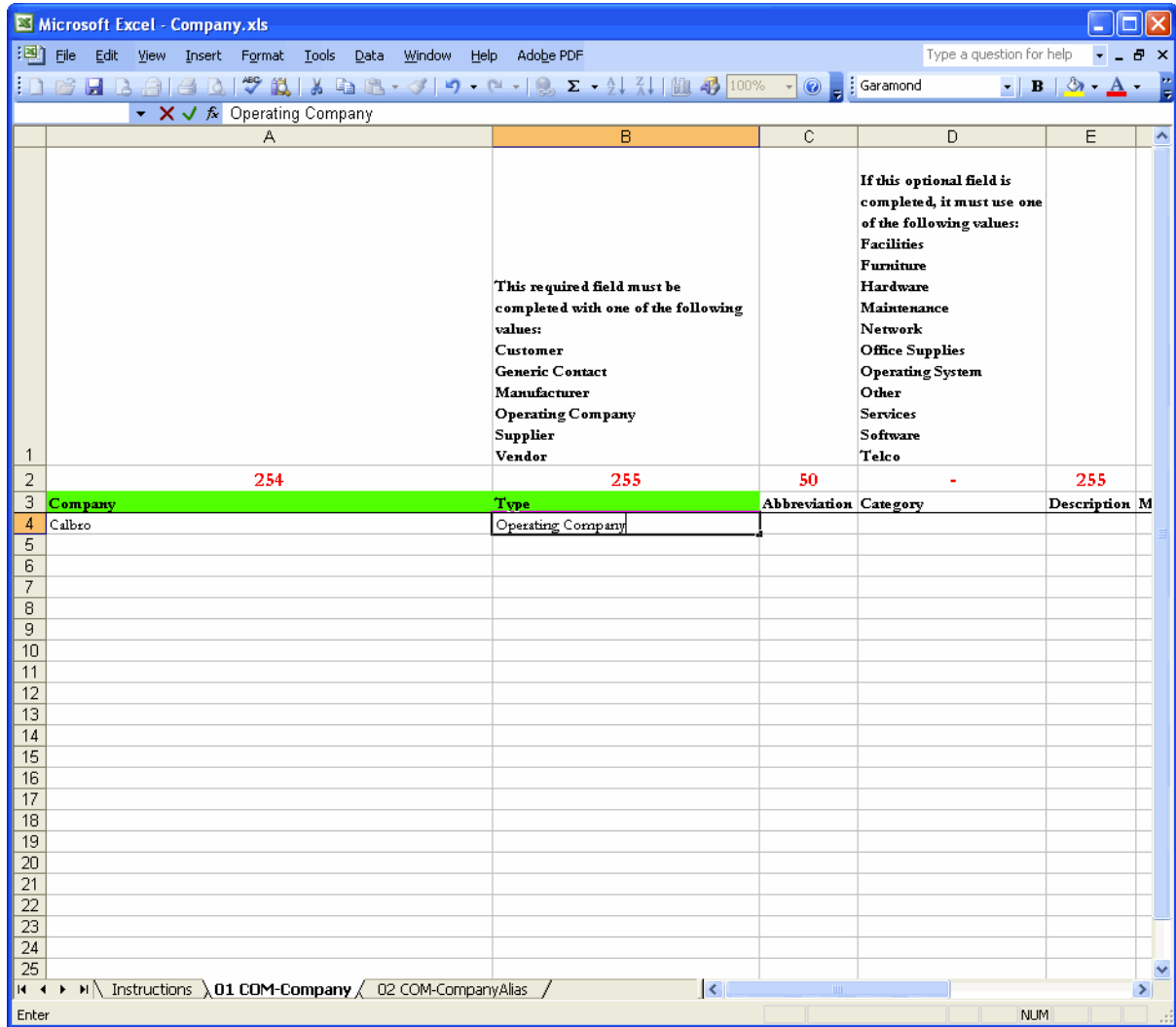
- Understanding the spreadsheets (page 30)
- Populating data in the spreadsheets (page 31)

# Understanding the spreadsheets

This section provides an overview of the data load spreadsheets. Additional instructions are provided within the spreadsheets.

Each workbook contains related spreadsheets. The first tab provides instructions for using the spreadsheet. Each of the subsequent tabs corresponds to the form into which the data is populated.

**Figure 3-1: Example spreadsheet**



Column headings provide instructions for completing that column of the spreadsheets according to the following standards:

- A green column heading indicates a required field.
- An orange column heading indicates a field that might be required, depending on a value set in another column.
- Text in the first row provides instructions for entering data in the column.

The number above each column heading is the database length of the field. This number corresponds to the number of bytes in the field. For English and other single-byte languages, the number of bytes is the same as the number of characters. Double-byte languages use two characters per byte.

Validation on each column indicates if you entered data longer than this maximum allowed length.

---

**NOTE**

---

This validation occurs only when you type in the spreadsheet cells. If you bring in data by copying and pasting from another source or by importing data into the spreadsheet, you bypass the validation.

---

## Populating data in the spreadsheets

This section provides general instructions for populating data in the data load spreadsheets. To make it easier for you to distribute the spreadsheets to others to complete, each spreadsheet includes instructions specific to the spreadsheet.

**Are all spreadsheets required?**

If you are updating an existing ITSM system, for example, loading data for a new department or location, some data already exists on your ITSM system. Do not re-enter data that is already loaded on your system. You must complete spreadsheet only for the new data that you are loading.

If you are loading data for a new ITSM 7.0 system, you might choose to configure all foundation data through the spreadsheets. To load only the minimum standard configuration, you must complete the required tabs within the required spreadsheets, which are listed in Table 3-1.

**Table 3-1: Spreadsheets and tabs required to load minimum standard configuration**

Required spreadsheets	Required tabs	Description
Company.xls	01 COM-Company	Use this tab to specify companies.
Location.xls	01 SIT-Site	Use this tab to specify sites.
	5 SIT-SiteCompanyAssociation	Use this tab to associate each site to a company. Sites are physical locations.
Supportgroup.xls	01 CTM-SupportGroup	Use this tab to specify support groups.

**Table 3-1: Spreadsheets and tabs required to load minimum standard configuration (Continued)**

Required spreadsheets	Required tabs	Description
People.xls	01 CTM-PeopleTemplate	<p>To load support staff, you must use people templates. On this tab you specify the Template Names that are referenced on the other tabs.</p> <p>Use other tabs to set the permission groups, support groups, and support group functional roles for each people template.</p> <p>People templates make it easier to load people who fulfill the same role within a given support group.</p> <p>Even support staff who fulfill a unique role within their support group, however, must be related to a people template.</p> <p>When you load people, the purpose of this tab is only to specify the Template Names. The other fields, such as Company Name, are loaded from the 02 CTM-People tab. These other fields, however, are stored in the People Template, and are used when creating individual people records through the Application Administration console.</p>
	02 CTM-People	Use this tab to load people.
	03 CTM-PeoplePermissionGroups	Use this tab to specify the ITSM application permission groups for each people template.
	04 CTM-SupportGroupAssociation	Use this tab to specify the support groups for each people template.
	05 CTM-SupportGrpFunctionalRole	Use this tab to specify the support group functional roles for each people template.

**Where do you start?**

Start with spreadsheets that are self-contained and do not have dependencies on data in other spreadsheets. BMC suggests that you start with *Company.xls*.

**What are the dependencies?**

When entering data, be aware that data in one spreadsheet can be dependent upon data that is either entered on another spreadsheet or already loaded in the system. For example, the company field, which is entered on most spreadsheets, must match a company either created in *Company.xls* or already loaded on the system. These dependencies are noted as instructions in the spreadsheets. Table 3-2 lists dependencies among spreadsheets.



The spreadsheets are listed in the order that the corresponding data is validated and promoted in the Data Load Console. You might choose to complete spreadsheets in this sequence.

**Table 3-2: Dependencies among spreadsheets**

Data entered in this spreadsheet	Depends on data entered in these spreadsheets							
	Company	Geography	System Setup	People Org	Location	Financials	Support Group	Catalogs (all)
Company								
Geography								
Location	Yes	Yes						
SystemSetup								
PeopleOrg	Yes							
SupportGroup	Yes		Yes					
Financials	Yes							
People	Yes			Yes	Yes	Yes	Yes	Yes
ProductCatalog	Yes							
OperationalCatalog	Yes							
GenericCatalog	Yes							Yes

► **To populate data in the spreadsheet**

- 1 Complete the spreadsheets according to the instructions on the Instructions tab and in the column headings.

All leading and trailing spaces and tab characters are stripped when the data is imported into staging forms.

- 2 Save the file to the ITSM Data Management tool directory.

**IMPORTANT**

Leave the tabs in their original order. Deleting, inserting, or changing the order of tabs causes errors when you perform the steps to convert the spreadsheets to CSV (comma-separated value) files.



# 4 Importing data

After the spreadsheet is complete, you must complete the following steps to import the data:

- Step 1 Create the CSV files.
- Step 2 Edit the data load batch file.
- Step 3 Run the batch file.
- Step 4 Validate and promote the data.

When appropriate, you can delete the data from the staging forms.

The following topics are provided:

- Creating the CSV files (page 36)
- Editing the data load batch file (page 36)
- Running the batch file (page 37)
- Validating and promoting the data (page 38)
- Deleting data (page 44)

# Creating the CSV files

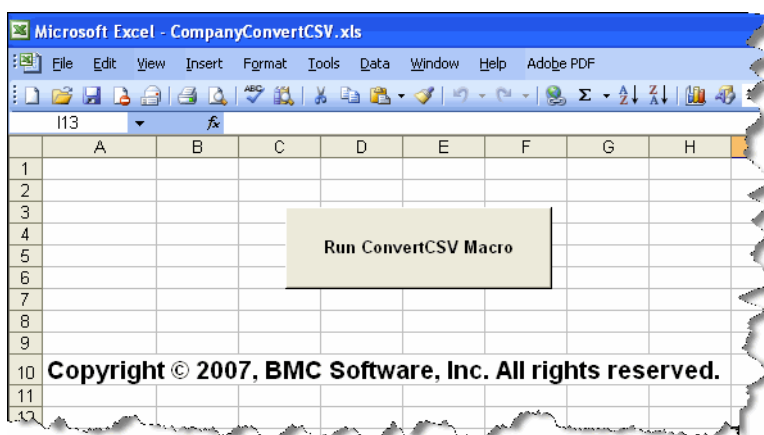
After you populate the data load spreadsheets, you must create the CSV files. The ITSM Data Management tool imports the data from the CSV file.

► **To create the CSV file**

- 1 Open the appropriate conversion spreadsheet, such as `CompanyConvertCSV.xls`.

When you open the spreadsheet, depending on your Excel security settings, you might receive a security warning. Make sure that you enable macros. The macros in the spreadsheet create the appropriate CSV files.

**Figure 4-1: Example of conversion spreadsheet**



- 2 On the first tab, click Run ConvertCSV Macro.

For each tab in the corresponding data load workbook (such as `Company.xls`), the macro creates a CSV file in the `<ITSM Data Management>\CSVs` directory.

# Editing the data load batch file

The data load batch file imports data from the CSV files into the data load staging forms. For a successful import, you must specify values in this batch file. For foundation data, this batch file is named `foundation.bat`.

► **To edit the data load batch file**

- 1 Open the data load batch file (`Foundation.bat`) in a text editor.
- 2 Complete the values in the “set” section as indicated in Table 4-1.

**Table 4-1: Values to set in the data load batch file**

Value	Description
<code>user_name</code>	The user name of an administrative user
<code>password</code>	The corresponding password

**Table 4-1: Values to set in the data load batch file (Continued)**

Value	Description
server_name	The AR System into which you are importing data
external_authentication_string	External authentication, if required by the AR System server
rpc_number	RPC number, if required by the AR System server
port_number	Port number, if a port other than the default is required
arsystem_admin_directory	The local directory for AR System commands

Make sure you have no spaces between the equal sign (=) and the value you enter.

The directories in Table 4-2 are already set to the default values. You can leave these values, unless you move the directories.

**Table 4-2: Preset values in the data load batch file**

Value	Description
mapping_file_directory	Already set to the mapping file directory
csv_file_directory	Already set to the CSV file directory
log_file_path	Already set to the log file directory

- 3 Save the file.

## Running the batch file

The data load batch file imports data from the CSV files into the data load staging forms.

### ► To run the batch file

- 1 Make sure that the following files and directories are all located in the same directory:
  - Foundation.bat—file
  - Foundation.lst—file
  - CSVs—directory
  - Mappings—directory
  - Logs—directory
- 2 Run the data load batch file (Foundation.bat).

Data is imported into staging forms.

#### — NOTE —

This import process strips all leading and trailing spaces, and all tab characters from the data.

The import process creates a log file in the `Logs` directory for each CSV file that was imported. If a CSV file is missing or has no data, an error is generated in the log file, but the data load utility continues, and loads data for CSV files that do exist and have valid data.

- 3 Examine the log files for errors.

Error messages indicated in Table 4-3 are benign and can be ignored.

**Table 4-3: Benign error messages**

Error message	Explanation
The Datafile option given does not exist. Cannot import.	The CSV file did not exist. If you did not intend to load data from the corresponding Excel workbook tab, you can ignore this error.
The Datafile type is not supported. Cannot import.	AR Import generates this error in response to files with a CSV extension. The file is successfully imported, however.

- 4 If you are using an Oracle® database, after loading large amounts of data, run the following SQL command:

```
begin
dbms_stats.gather_schema_stats(
ownname=> '"ARADMIN"' ,
cascade=> TRUE,
estimate_percent=> null,
degree=> null,
no_invalidate=> FALSE,
granularity=> 'AUTO',
method_opt=> 'FOR ALL COLUMNS SIZE AUTO',
options=> 'GATHER');
end;
```

This SQL command re-gathers Oracle Optimizer Statistics.

## Validating and promoting the data

Data is initially loaded into staging forms. To validate and promote the data you must use the Data Load Console to:

- Step 1 Validate the imported data.

- Step 2 Fix errors.

If there are licensing warnings, you must also fix those warnings.

- Step 3 Promote validated data from the staging forms into the appropriate ITSM forms.

## Understanding the Data Load Console

This section provides an overview of the Data Load Console. Instructions for using the console are provided in the following sections.

You use the Data Load Console to load data into ITSM. The current version supports loading foundation data.

**Figure 4-2: Data Load Console**

Functions provide related functions.

The table lists staging forms. The sequence number indicates the order in which forms are validated and promoted.

Sequence	Workbook Group	Workbook	Staging Status	Error Detected	Records to Promote
10	Company	Company	Unvalidated		43
20	Location	Company Alias	Unvalidated		18
30	Geography	Site	Unvalidated		8
40	Location	Postal Code	Unvalidated		8
50	System Setup	Site Alias	Unvalidated		26
60	Location	Pager Service Configuration	Unvalidated		8
70	Location	Region	Unvalidated		36
80	Location	Site Group	Unvalidated		32
90	Location	Site Company Association	Unvalidated		26
100	People Organization	People Organization	Unvalidated		36
110	Support Group	Support Group	Unvalidated		38
120	Support Group	Favorite Groups	Unvalidated		40
130	Support Group	Business Time Holiday	Unvalidated		8
140	Support Group	Support Group Alias	Unvalidated		38
150	Support Group	Business Time Workday	Unvalidated		8
160	Financial Information	Cost Center Repository	Unvalidated		14
170	People	People Template	Unvalidated		41
180	People	Support Group Association	Unvalidated		88
190	People	Permission Group	Unvalidated		242
200	People	Functional Role	Unvalidated		114
210	People	People	No Data		0
220	People	Worklog	Unvalidated		2
230	People	Notification Preference	Unvalidated		2
240	Support Group	Cost Center Association	Unvalidated		18
		On Call	Unvalidated		34

A table lists the staging forms. The default order of these forms in the table corresponds to the sequence in which they are processed.

For each form, the table indicates the staging status, whether errors were detected, and the number of records to be promoted. The table refreshes every 10 minutes. During validation and promotion, you can monitor progress by checking which forms have been validated or promoted.

### TIP

If you are loading large amounts of data, BMC recommends that you close the Data Load Console after you start validation or promotion. The table refresh affects performance. To check the progress, you can either reopen the Data Load Console or run the following SQL query:

```
select DL_STATUS,count(*) rowcnt from CTM_loadpeople group by DL_STATUS
```

## Validating imported data

Before you can promote the data, you must validate it.

---

### **NOTE**

When you proceed with validation, the max filter setting is temporarily changed to 999999999. It is changed back to its original value when validation is complete. BMC recommends that you note the current value of max filters before proceeding; if the procedure is halted before it completes, you might need to manually reset this value.

---

### ► **To validate imported data**

- 1 Access the Data Load Console.
  - a Log into BMC Remedy Administrator.
  - b From the Application Administration Console, click the Custom Configuration tab.
  - c From the Application Setting list, choose Foundation > Data Management Tool > Data Load Console.

- 2 For the category, select Foundation.

The table lists all foundation staging forms. Forms with data that you loaded from the CSV files are currently listed with a staging status of Unvalidated. A staging status of No Data indicates a form that does not have data loaded from a CSV form.

- 3 Click Validate.

After you confirm that you wish to proceed, validation is performed on all unvalidated data in staging forms. Validated data is revalidated if it appears on the list below unvalidated data.

After validation is completed for a form, its staging status changes to Validated. Validated forms might have errors.

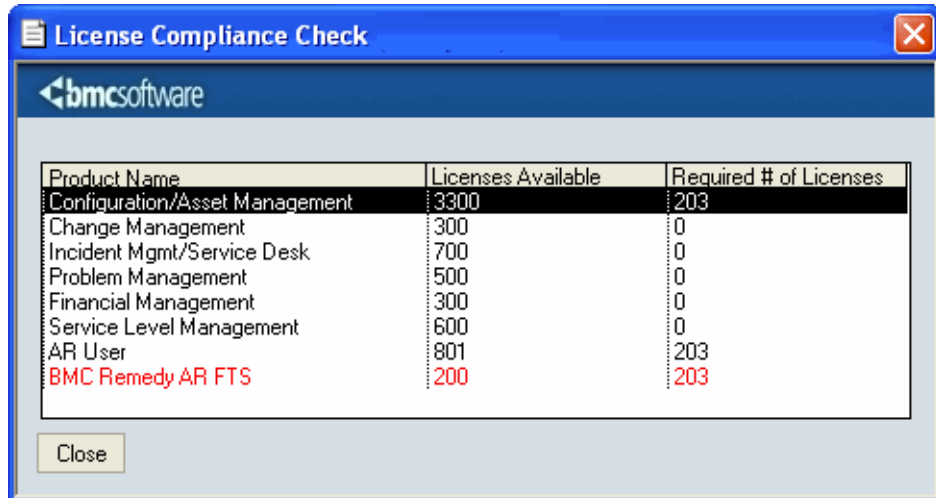
If you validate new people records, the tool validates whether sufficient licenses are available. If the number of licenses available is insufficient, an error message appears, and the data remains unvalidated. To view details of the license compliance check, choose Functions > License Compliance Check.



## About license compliance

You can load people into the system only if you have sufficient licenses. If you do not have enough licenses, an error message is displayed during validation. To view details of the license compliance check, choose Functions > License Compliance Check.

Figure 4-3: License Compliance Check window



The screenshot shows a window titled "License Compliance Check" with the BMC Software logo. It contains a table with three columns: Product Name, Licenses Available, and Required # of Licenses. The table lists various products and their corresponding license counts. A "Close" button is located at the bottom left of the window.

Product Name	Licenses Available	Required # of Licenses
Configuration/Asset Management	3300	203
Change Management	300	0
Incident Mgmt/Service Desk	700	0
Problem Management	500	0
Financial Management	300	0
Service Level Management	600	0
AR User	801	203
BMC Remedy AR FTS	200	203

To fix the license compliance, you must either:

- Add the required licenses.
- Load people only for whom you have sufficient licenses.

## Fixing errors

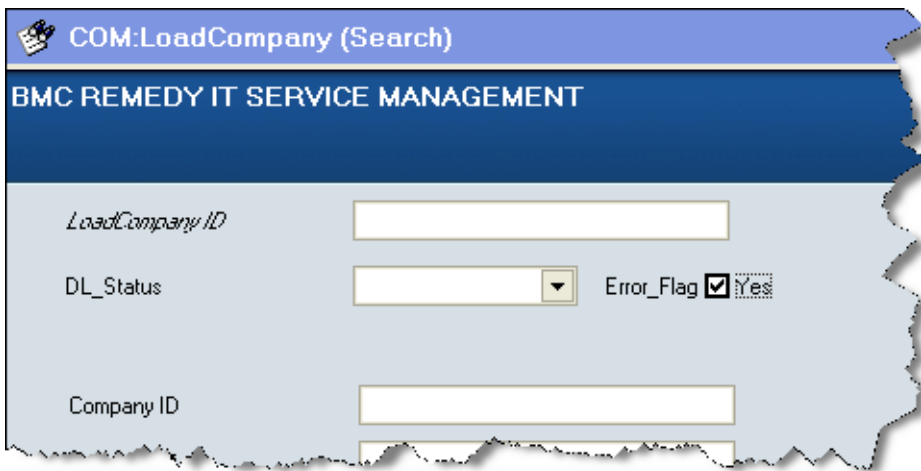
After validation is complete, the Error Detected column indicates whether an error was detected in a staging form.

► **To fix errors**

- 1 Select the form with errors, then click View.

The staging form opens in Search mode.

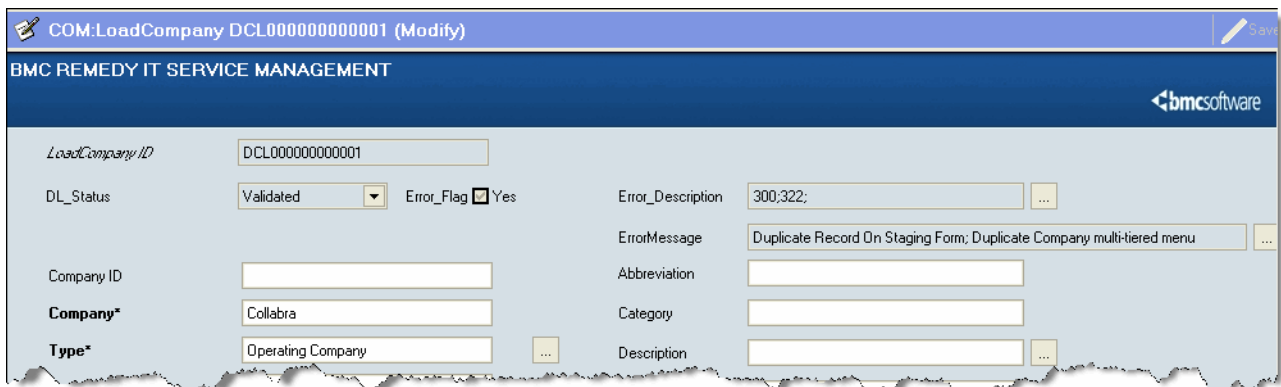
**Figure 4-4: Example of a staging form in Search mode**



- 2 To find records with errors, set Error\_Flag to Yes, then click Search.

When you open a record that has an error, the staging form includes one or more error description codes and the corresponding error messages. For example, the record in Figure 4-5 has two errors. For a listing of error messages, see Appendix C, “Error messages.”

**Figure 4-5: A staging form displaying a record with an error**



- 3 Correct the errors, then save the form.

The staging status for the form is reset to Unvalidated. Error\_Flag remains set to Yes until after you validate the data.

**TIP**

Because an error in a form can result in errors in dependent forms, you can sometimes save time by validating the data after fixing errors in one or two forms.

## 4 Click Validate.

Validation starts with the first staging form marked as Unvalidated and continues with the remaining forms in sequence. If errors are still detected, you must repeat this procedure until all the errors are corrected. You cannot promote data while errors remain.

## Promoting validated data into the ITSM forms

When all the staging forms are validated with no errors detected, you can promote the data into the ITSM forms.

### ► To promote validated data

## 1 Click Promote.

**NOTE**

When you proceed with promotion, the max filter setting is temporarily changed to 999999999. It is changed back to its original value when promotion is complete.

## 2 Confirm that you wish to continue.

After data is promoted from a staging form into the ITSM form, the staging status changes to All Data Promoted and the number of records to promote is reset to 0.

## 3 If you are using an Oracle database, after promoting large amounts of data, run the following SQL command:

```
begin
dbms_stats.gather_schema_stats(
ownname=> 'ARADMIN' ,
cascade=> TRUE,
estimate_percent=> null,
degree=> null,
no_invalidate=> FALSE,
granularity=> 'AUTO',
method_opt=> 'FOR ALL COLUMNS SIZE AUTO',
options=> 'GATHER');
end;
```

This SQL command re-gathers Oracle Optimizer Statistics.

## Recovering from halted validation or promotion

If either validation or promotion is halted before the operation is complete, an administrator must:

- Reset the maximum number of filters for an operation to the original value.
- Delete the DLD:ThreadManager records.

► **To recover from halted validation or promotion**

- 1 Reset the maximum number of filters for an operation to the original value.
  - a Open BMC Remedy Administrator.
  - b Log in to the AR System server to which you are importing data.
  - c Select the appropriate server.
  - d Choose File > Server Information.
  - e Click the Advanced tab.
  - f Change the value in the Maximum Filters for an Operation field to the original value and then click OK.

AR System is installed with this value set to 200000.
- 2 Delete the DLD:ThreadManager records.
  - a Open BMC Remedy User.
  - b Log in to the AR System server as an administrator.
  - c Open DLD:ThreadManager.
  - d Search for all records.

To do this, put % in the RequestID field and click Search.
  - e Select all the records.
  - f Choose Actions > Delete.

A message asks you to confirm whether to delete the records.
  - g Click OK.

You can now rerun validation or promotion.

## Deleting data

At any point you can delete data from staging forms.

The navigation pane on the left of the Data Load Console provides two functions:

- **Delete Promoted Staging Data**—This deletes only promoted data from all staging forms.
- **Delete All Staging Data**—This deletes all data from all staging forms, regardless of the current status.

# 5 Managing customizations

The ITSM Data Management tool is designed to load data into an out-of-the-box ITSM 7.0 product suite. The ITSM 7.0 product suite is a leap forward in terms of functionality, and the types of data being stored. Despite these capabilities, you might have customized ITSM, due to various business drivers.

To make sure that the ITSM Data Management tool functions correctly in a customized ITSM application, you must identify the customizations, analyze the impact, and make the customizations work with the tool.

The following topics are provided:

- Identifying customizations (page 46)
- Analyzing your customizations for impact (page 46)
- Making your customizations work (page 47)

## Identifying customizations

Use these tips to identify your customizations:

- **Documentation**—If your customizations are documented, you can use this information to create a list of the workflow, fields, and forms that have been added or changed within your application.
- **Naming conventions**—Application developers sometimes use a naming convention that identifies customized workflow. The workflow is then placed within a namespace reserved for this purpose. For example, if the HPD:HPD-GetPerson active link is modified, it could have been copied to HPD:CUS-GetPerson, using “CUS” in the name to indicate that it is customized workflow.

## Analyzing your customizations for impact

After you identify customizations, you must determine the impact to the data load functionality. The types of customizations to ITSM that impact the functionality of the ITSM Data Management tool are listed in this section.

The following guidelines can help with your analysis:

- **Custom fields with Required entry mode**—Whether these fields are new or are modified on existing ITSM forms, they impact the data load. You must make sure that these fields are populated with data. Otherwise, the data load will fail.
- **Fields with Optional entry mode**—If these fields have custom workflow to enforce data entry upon record creation or update, they impact the data load. If required, duplicate the custom workflow on the data load staging forms to enforce the same constraints. To determine the appropriate staging form, see Appendix A, “How tabs map from spreadsheet to target form.”
- **Custom workflow**—In most cases, workflow customizations do not impact the ITSM Data Management tool. When data is loaded by the tool, all ITSM workflow on forms targeted for the load are bypassed, with the exception of workflow firing from the tool itself.

This workflow bypass on target forms is performed by using filter workflow with goto actions. These filters fire on execution order 0 based on keywords that are received from the data load staging forms.

Some custom workflow, however, does impact the data load function. For example, the workflow might be triggered on creation of the record on the form to create other child or dependent records elsewhere.

- **New customized forms**—In most cases, new forms do not impact the data load function. If dependencies are created between this new customized form and data load target forms, however, you must perform additional evaluation.

# Making your customizations work

This section contains some detailed steps on how to incorporate your customizations into the ITSM Data Management tool.

The following topics are provided:

- “Understanding the staging forms”
- “Adding custom fields” on page 49

## Understanding the staging forms

This section describes how the workflow in the data load staging forms is structured. Use this information for customizations of the ITSM Data Management tool.

The following topics are provided:

- “Staging form filters”
- “Staging form permissions” on page 48
- “Staging form fields” on page 48

### Staging form filters

You can customize two types of filters. Both of these types of filters run on modify and only on records that have not been promoted:

- **Filters that run on validation**—The filters that perform the validations are coded in the 200-299 execution order range. For fields that must be set for use in validation, the filters with those actions are coded in this range. Validation filters look at the keyword “VALIDATE.”
- **Filters that run on promote**—The calculation filters that set the fields needed for promotion, and the filters that perform the actual promotion (push to target forms) are coded in the 700-798 execution order range. Promotion filters look at keyword “LOAD.”

The following table lists the execution order and filter actions for the staging forms.

#### **IMPORTANT**

Make customizations only in the 200 - 299 and the 700 - 798 execution order range.

**Table 5-1: Execution order and filter actions**

Execution order	Filter actions
0	Skip to execution order 1001
10 - 13	Related to error handling
200 - 200	Validation
300	Set dataload status to Validated

**Table 5-1: Execution order and filter actions (Continued)**

Execution order	Filter actions
500	If any field data is changed, set dataload status to Unvalidated
700 - 798	Calculation, promotion
799	Set dataload status to Promoted
900	Delete record

## Staging form permissions

Staging forms have Public-Hidden permission. All fields on staging forms have Public-Write permission.

## Staging form fields

Fields on staging forms are grouped in different sections, as indicated in the following illustration.

**Figure 5-1: Example of a staging form**

The screenshot displays the BMC Remedy IT Service Management staging form interface. The form is titled "BMC REMEDY IT SERVICE MANAGEMENT" and includes the BMC Software logo. The form is divided into four main sections, labeled A, B, C, and D, each containing various input fields and controls.

- Section A:** Contains fields for *LoadPeopleTemplateID* (text input), *DL\_Status* (dropdown menu), *Error\_Flag* (checkbox), *Error\_Code* (text input), and *Error\_Message* (text input).
- Section B:** Contains fields for *Template Name\**, *Profile Status\**, *Client Type*, *Job Title*, *Company*, *Organization*, *Department*, *Cost Center*, *License Type*, *Full Text License Type*, *Support Staff\**, *VIP*, *Client Sensitivity*, *Assignment Availability*, *Site*, *Desk Location*, *Mail Station*, *Default Notify Mechanism*, and *Template Status\**.
- Section C:** Contains fields for *Full Name*, *Internet E-mail*, *Locale*, *Remedy Login ID*, *Password*, *PersonID*, *PeopleAttributeLoadID*, *Group\_List*, *Application\_License*, *Assignee Groups*, *Site Street*, *Site City*, *Site State Province*, *Site Country*, *Site Zip/Postal Code*, *Time Zone*, *Site ID*, *Person Template ID*, *Region*, and *Site Group*.
- Section D:** Contains fields for *Submitter\**, *Submit Date*, *Short Description\**, *Last Modified By*, and *Last Modified Date*.

At the bottom of the form, there are "Search" and "Close" buttons.



The following table describes the types of fields in each section of the staging form.

**Table 5-2: Purpose of fields in each section of the staging form**

Section	Purpose of fields
A	These fields provide information about processing of the staging form. They include fields for ID, data load status, error flag, error code, and error message. These fields are not promoted to the target form.
B	These fields contain the data being imported. These fields correspond to the columns of data entered on the staging form. These fields are promoted to the target form.
C	These fields are calculated from data in section B. These fields are read-only; the values are entered only through filter calculations. These fields are promoted to the target form.
D	These are system fields.

---

**NOTE**

Hidden fields, which are not in the view, are used for temporary calculation by workflow.

---

## Adding custom fields

The following scenario demonstrates the steps to take when a new field is added to a target form and how to incorporate the field into the ITSM Data Management tool.

---

**TIP**

To determine the staging form equivalent of the target form you are loading data into, see Appendix A, “How tabs map from spreadsheet to target form.”

---

In this scenario, a new required character field called “Employee ID,” with field ID 536871147, has been created in the CTM:People form. The requirement is to incorporate this new field into the ITSM Data Management tool so that the contents of this field can be loaded at the same time as the other out-of-the-box fields.

---

**NOTE**

This scenario is relatively straightforward, because filters for this staging form use the “Matching IDs” feature. Some forms require an additional step, as described in “Modifying workflow to promote custom fields” on page 50.

---

## ► To make the customization from the scenario work

- 1 Add a new column called "Employee ID" in the 02 CTM-People tab of the `People.xls` spreadsheet.

This spreadsheet is installed with the ITSM Data Management tool. You can use this column to populate and load the contents of the custom field at the same time as the other People records.

- 2 Update the `CTM-People.arm` file.

This file is located in the `<ITSM Data Management>\Mappings` directory. Update the file by adding the following line:

```
Mapping:    $536871147$="Employee ID"
```

This mapping is required for importing the modified spreadsheet into the staging form.

- 3 Recreate an exact copy of this field in the CTM:LoadPeople staging form.

The field must exist on the staging form, so that it can accept the new customized field.

After this step, you can load new People records that contain the customized Employee ID column. For some forms, however, you must first modify the filter on the staging form before you can promote the data. For more information, see "Modifying workflow to promote custom fields."

## Modifying workflow to promote custom fields

For most forms, you do not need to modify the workflow for the promotion of data from the staging form to the target form. In the Employee ID example, the filters use the Matching IDs feature, so no modification is needed. For some forms, however, the workflow must be modified.

If you add fields to a form that does not use this feature, such as the `FIN:LoadCostCenterUDAAssoc` form, you must:

**Step 1** Copy the new fields from the target form to the staging form.

**Step 2** In the Push Field action, select the new fields in the Field and Value fields.

The staging versions of these target forms do *not* use the Matching IDs feature, and require the workflow modification for custom fields:

- `FIN:CostCenterUDAAssoc`
- Business Time Holidays
- Business Time Workdays
- `COM:Company Alias`
- All people attributes forms:
  - `CTM:People IT Skills`
  - `CTM:Login ID`

- CTM:People Benefit Info
- CTM:People Education
- CTM:People HR Attendance Mgmt
- CTM:People HR Time Management
- CTM:People Travel Profile
- CTM:People Wallet
- CTM:People Worklog
- NTE:CFG-Notification Events

► **To modify workflow to promote custom fields**

- 1 Copy the new field from the target form to the staging form.
- 2 View the filters on the staging form.
- 3 Open the filter that pushes to the target form.

This filter is in the 700 range. For example, on the FIN:LoadCostCenterUDAAssoc form, the filter is called:

FIN:DCU:CreatCostCenterUDA\_750\_FIN'

- 4 On the If Action tab, in the fields area, choose the Name and choose Value > Field.  
The Name indicates the field name on the target form. Choose Value > Field to select the field name on the staging form. These two fields might be the same field name.
- 5 Save your changes.



## Appendix

# A How tabs map from spreadsheet to target form

This section describes how tabs in the Excel (XLS) spreadsheets map to staging forms, and how the staging forms map to the primary target forms in ITSM 7.0.

The following topic is provided:

- Foundation data mapping (page 54)

# Foundation data mapping

Table A-1 lists the mapping from spreadsheet to the target form of foundation data.

**Table A-1: Foundation data mapping**

Spreadsheet	Tab	Staging form	Target form or forms
Company.xls	01 COM-Company	COM:LoadCompany	COM:Company
Company.xls	02 COM-Company Alias	COM:LoadCompanyAlias	COM:Company Alias
Financials.xls	01 FIN-ConfigCost CentersRepository	FIN:LoadConfigCostCenters Rep	FIN:ConfigCostCenters Repository
Financials.xls	02 FIN-CostCenterUD Associations	FIN:LoadCostCenterUDA Assoc	FIN:CostCenterUDA Associations
GenericCatalog.xls	01 CFG-GenericCatalog	CFG:LoadGenericCatalog	CFG:Generic Catalog
GenericCatalog.xls	02 CFG-GenericProd ServiceAssoc	CFG:LoadGenericProdSer Assoc	CFG:GenericProdService Assoc
GenericCatalog.xls	02 CFG-Generic CompanyModuleAsso	CFG:LoadGenericCpyModule Assoc	CFG:GenericCompany ModuleAssoc
Geography.xls	CTM-Postal Codes	CTM:LoadPostalCodes	CTM:PostalCodes
Location.xls	01 SIT-Site	SIT:LoadSite	SIT:Site
Location.xls	02 SIT-SiteAlias	SIT:LoadSiteAlias	SIT:Site Alias
Location.xls	03 CTM-Region	CTM:LoadRegion	CTM:Region
Location.xls	04 SIT-SiteGroup	SIT:LoadSiteGroup	SIT:Site Group
Location.xls	05 SIT-SiteCompany Association	SIT:LoadSite CompanyAssoc	SIT:Site Company Association
OperationalCatalog.xls	01 CFG-Operational Catalog	CFG:LoadServiceCatalog	CFG:Service Catalog
OperationalCatalog.xls	02 CFG-Operational CatalogAssoc	CFG:LoadServiceCatalog Assoc	CFG:Service Catalog Assoc
People.xls	01 CTM-People Template	CTM:LoadPeopleTemplate	CTM:People Template
People.xls	02 CTM-People	CTM:LoadPeople	<ul style="list-style-type: none"> <li>■ CTM:People</li> <li>■ User (if a Remedy Login ID is specified)</li> </ul>
People.xls	03 CTM-People PermissionGroups	CTM:LoadPeopleTemplatePG	<ul style="list-style-type: none"> <li>■ CTM:People Template PG</li> <li>■ CTM:People Permission Groups</li> </ul>
People.xls	04 CTM-SupportGroup Association	CTM:LoadPeopleTemplateSG	<ul style="list-style-type: none"> <li>■ CTM:People Template SG</li> <li>■ CTM:Support Group Association</li> </ul>

**Table A-1: Foundation data mapping (Continued)**

Spreadsheet	Tab	Staging form	Target form or forms
People.xls	05 CTM-SupportGroup FunctionalRole	CTM:LoadPeopleTemplateSFR	<ul style="list-style-type: none"> <li>■ CTM:SupportGroup FunctionalRole</li> <li>■ AP:Role</li> </ul>
People.xls	06 CTM-Login	CTM:LoadPeopleAttributes	CTM:Login ID
People.xls	07 CTM-PeopleWallet	CTM:LoadPeopleAttributes	CTM:People Wallet
People.xls	08 CTM-PeopleHR AttendanceMgmt	CTM:LoadPeopleAttributes	CTM:People HR Attendance Mgmt
People.xls	09 CTM-PeopleHR TimeManagement	CTM:LoadPeopleAttributes	CTM:People HR Time Management
People.xls	10 CTM-People Education	CTM:LoadPeopleAttributes	CTM:People Education
People.xls	11 CTM-PeopleTravel Profile	CTM:LoadPeopleAttributes	CTM:People Travel Profile
People.xls	12 CTM-PeopleBenefit Info	CTM:LoadPeopleAttributes	CTM:People Benefit Info
People.xls	13 CTM-PeopleITSkills	CTM:LoadPeopleAttributes	CTM:People IT Skills
People.xls	14 FIN-CostCenterUD Associations	FIN:LoadCostCenterUDA Assoc	FIN:CostCenterUDA Associations
People.xls	15 CTM-PeopleWork Log	CTM:LoadPeopleWorkLog	CTM:People WorkLog
People.xls	16 NTE-CFG-Notification Events	NTE:LoadCFGNotification Events	NTE:CFG-Notification Events
PeopleOrg.xls	CTM-People Organization	CTM:LoadPeople Organization	CTM:People Organization
ProductCatalog.xls	01 PCT-ProductCatalog	PCT:LoadProductCatalog	PCT:Product Catalog
ProductCatalog.xls	02 PCT-ProductAlias	PCT:LoadProductAlias	PCT:Product Alias
ProductCatalog.xls	03 PCT-Product CompanyAssoc	PCT:LoadProdComAssoc	PCT:ProductCompany Association
ProductCatalog.xls	04 PCT-ProductModel Version	PCT:LoadProdModelVersion	PCT:Product Model/ Version
ProductCatalog.xls	05 PCT-ModelVersion Patch	PCT:LoadModelVersionPatch	PCT:ModelVersion Patch
ProductCatalog.xls	06 PCT-ProdCatalog AliasMapping	PCT:LoadProdCatAlias Mapping	PCT:ProductCatalogAlias MappingForm
SupportGroup.xls	01 CTM-SupportGroup	CTM:LoadSupportGroup	CTM:Support Group
SupportGroup.xls	02 CTM-SupportGroup Assignments	CTM:LoadSGPAssignments	CTM:Support Group Assignments
SupportGroup.xls	03 CTM-SupportGroup Alias	CTM:LoadSupportGroupAlias	CTM:Support Group Alias
SupportGroup.xls	04 CTM-SupportGroup OnCall	CTM:LoadSGPOnCall	CTM:Support Group On-Call

**Table A-1: Foundation data mapping (Continued)**

Spreadsheet	Tab	Staging form	Target form or forms
SupportGroup.xls	05 BusinessTime Workdays	CFG:LoadBusinessTimeWork days	Business Time Workdays
SupportGroup.xls	06 BusinessTime Holidays	CFG:LoadBusinessTime Holidays	<ul style="list-style-type: none"> <li>■ CFG:Business Holidays Storage</li> <li>■ Business Time Holidays</li> </ul>
SystemSetup.xls	NTE-CFG-PagerService Config	NTE:LoadCFGPagerService Config	NTE:CFG-Pager Service Config



# B

## Exclusions from bulk load

The following areas are excluded from bulk load data management:

- **Attachments**—File attachments cannot be loaded into AR System attachment fields because AR System supports importing attachments only as ARX files.
- **Geography**—The following foundation forms are excluded from bulk load:
  - CFG:Geography City
  - CFG:Geography Country
  - CFG:Geography Stat/Province

These foundation geography forms are excluded because ITSM provides extensive data for all these forms with installation of the applications. To import additional data, import the records directly into these forms using BMC Remedy Import. For information about using BMC Remedy Import, see the BMC Remedy Import Help.



# C

## Error messages

This section lists error codes from the bulk load process.

The following topics are provided:

- Invalid data errors (page 60)
- Required field errors (page 63)
- Duplicate data errors (page 65)

## Invalid data errors

This section lists error codes from invalid data that is identified during the validation operation on records in staging forms.

**Table C-1: Error codes from invalid data**

Code	Message	Explanation
100	Invalid Bargaining Unit	
101	Invalid Benefit Group	
102	Invalid Compensation Method	
103	Invalid Dental Plan	
104	Invalid Employment Status	
105	Invalid Marital Status	
106	Invalid Medical Plan	
107	Invalid Pension Plan	
108	Invalid Person	
109	Invalid Operational Category Fields For IT Skills	
110	Invalid Product Category Fields For IT Skills	
111	Invalid Category/Type	The Category and Type values are invalid. Correct values can be obtained from CFG:Generic Catalog.
112	Invalid Contact Type	
113	Invalid Home Country	
114	Invalid Manager	
115	Invalid Pager Service Provider	
116	Invalid Template	
117	Invalid Title	
118	Invalid Company	
119	Invalid Department	
120	Invalid Organization	
121	Invalid Site	
122	Invalid Site for selected Company	
123	Invalid Support Group	
124	Invalid Permission Group	
125	Invalid Country	
126	Invalid Region	
127	Invalid Site Group	
128	Invalid City	
129	Assignment Group Cannot Be The Same As The Support Group	

**Table C-1: Error codes from invalid data (Continued)**

Code	Message	Explanation
130	Invalid Assignment Group	
131	Invalid Functional Role	
132	Invalid Product Catalog	The functional role that is selected is not valid or is not applicable to your currently installed applications.
133	Invalid Product Model/Version	
134	Invalid Operational Catalog	
135	Invalid Manufacturer. Manufacturer must match entries found in the Company form or Company staging form with a company type of Manufacturer	
136	Both Start And End Times Must Be Entered Or Left Blank	
137	Start Time Must Be Earlier Than End Time	
138	Start Time Of The Next Schedule Must Be Later Than The End Time Of The Previous Schedule	
139	Invalid Timezone	
140	Invalid Primary Cost Center Code	
141	Invalid Cost Center	
142	Invalid Source Cost Center	
143	Person Does Not Have A Primary Cost Center Defined	
144	Total Distribution Percentage Is Greater Than 100	
145	Cost Center And Source Cost Center Must Not Be The Same	
146	The Allocation Method For The Source Cost Center In The Finance Cost Center Configuration Form Is Not Set To 'Equal Distribution' Or 'User-Defined Percentage'	
147	Relationship Type Must Be Set To Secondary Cost Center	
148	Invalid Notification Event For The Module Name	
149	Invalid Login ID	
150	Invalid CI Type	
151	Invalid Company or Company is not enabled	

**Table C-1: Error codes from invalid data (Continued)**

Code	Message	Explanation
152	Support Group must exist as a valid Support Group on CTM:LoadPeopleTemplatesSG for the specified Template	
153	HR Attendance Management record does not exist for the HR Time Management record	
154	Invalid work time. Open Time has to be earlier than Close Time for any workday	
155	Invalid Person ID	
156	The Allocation Method For The Source Cost Center In the FIN:LoadConfigCostCentersRep Form Is Not Set To 'Equal Distribution' Or 'User-Defined Percentage'	
157	Invalid Manager Name	
158	Invalid Generic Catalog	
159	A valid Generic Product Operational relationship record cannot be found	A valid record that matches the record's Generic, Product, and Operational catalog cannot be found in CFG:LoadGenericProdSerAssoc or CFG:GenericProdServiceAssoc forms. You must create a relationship first between those catalog entries before creating a Company Module relationship to it.
160	General Access is automatically given and is not a valid permission group for this form	
161	Asset Viewer is automatically given	If the following permission groups are specified for the Template Name, "Asset Viewer" is not valid since it is automatically given: <ul style="list-style-type: none"> <li>■ Task Manager</li> <li>■ Task User</li> <li>■ Incident User</li> <li>■ Incident Master</li> <li>■ Problem User</li> <li>■ Problem Master</li> <li>■ Infrastructure Change User</li> <li>■ Infrastructure Change Master</li> <li>■ Infrastructure Change Config</li> <li>■ Purchasing User</li> </ul>

**Table C-1: Error codes from invalid data (Continued)**

Code	Message	Explanation
162	Invalid Client Type	The following client types are valid. You can use either the number or words to specify the client type: <ul style="list-style-type: none"> <li>■ 2000 or Office-Based Employee</li> <li>■ 3000 or Field-Based Employee</li> <li>■ 4000 or Home-Based Employee</li> <li>■ 5000 or Contractor</li> <li>■ 7000 or Customer</li> <li>■ 8000 or Prospect</li> <li>■ 10000 or Vendor</li> </ul>
163	Invalid Assignment Event	
164	Invalid Company, Region, Site Group and Site combination	
165	Invalid Process Name	
166	Invalid Contact Company	
167	Invalid Currency	

## Required field errors

This section lists error codes from missing required fields.

**Table C-2: Error codes from missing required fields**

Code	Message	Explanation
200	Missing Required Fields For Access IF	
201	Missing Required Fields For It Skills	When IT Skills is selected, Operational Category Tier 1 and Product Category Tier 1 are required.
202	Missing Home Fields	Home fields are required when client type is set to Home-based.
203	Paging Times Is Required	
204	Time Zone Is Required	
205	Corresponding Values For Open Times And Close Times Must Be Entered Or Both Must Be Empty	
206	Pager Service Provider Is Required When On-Call Paging Type Is Generic	
207	Pager Parameters Email Is Required For The Selected Pager Service Provider	
208	Pager Parameters Pin Is Required For The Selected Pager Service Provider	
209	Pager Parameters Phone Is Required For The Selected Pager Service Provider	

**Table C-2: Error codes from missing required fields (Continued)**

Code	Message	Explanation
210	Pager Parameters Pin And Phone Is Required For The Selected Pager Service Provider	
211	Operational Category Tier 1 and 2 is a required field when Operational Category Tier 3 is entered	
212	Incident Management selected, at least one sub category is required	
213	Change Management selected, at least one sub category is required	
214	Source Cost Center And Distribution Percentage Are Required	
215	Person ID Is Required	
216	Source Cost Center Is Required	
217	Both the Product Name and Manufacturer are required when defining a Product within Product Catalog	
218	Login ID is required when On-Call paging type is set to Individual	
219	Site Required when the Client Type is Office-Based Employee, Field-Based Employee or Contractor	
220	Missing Required Fields for Wallet attribute	When Wallet Attribute is selected, Category and Type are required.
221	Generic Category Tier 1 and 2 is a required field when Generic Category Tier 3 is entered	
222	Manufacturer is required when specifying Product Name	
223	Product Name required with specifying Manufacturer	
224	Product Tier 1 through 3, Manufacturer and Product Name is required with specifying a Model Version	
225	Product Tier 1 through 3 is required when specifying a Product Name or Manufacturer	
226	Product Tier 1 is required when Product Tier 2 or 3 is entered	
227	Product Tier 1 and 2 is a required field when Product Category Tier 3 is entered	
228	Operational Category Tier 1 is required when Operational Category 2 or 3 is entered	



**Table C-2: Error codes from missing required fields (Continued)**

Code	Message	Explanation
229	Company Menu Structure Tier 1 is required when Menu Structure Tier 2 is entered	
230	Company Menu Structure Tier 1 and Tier 2 are required when Menu Structure Tier 3 is entered	
231	Organization is required when specifying Department	
232	User Service Restoration, User Service Request, Infrastructure Restoration or Infrastructure Event is required when Incident Management flag is selected	
233	Organization and Department must be blank when specifying Global Contact Company	
234	Region, Site Group and Site must be blank when specifying Global Company	
235	The License Type, Full Text License Type and Default Notification Mechanism is required when specifying Login ID	
236	The Login ID is required when the Support Staff flag is set to Yes	
237	The Currency is required when specifying the Hourly Rate Value	
247	'Time Management Type', Year and 'Status Reason' fields are required when the 'Attribute Type' is set to 'HR Time Management'	

## Duplicate data errors

This section lists error codes from duplicate data.

**Table C-3: Error codes from duplicate data**

Code	Message	Explanation
300	Duplicate Record On Staging Form	
301	Duplicate Record On Target Form	
304	Navigation Tiers for Company are not unique	
305	Login ID Exist On Staging Form	
306	Login ID Exist On User Form	

**Table C-3: Error codes from duplicate data (Continued)**

Code	Message	Explanation
307	An entry with this Product Categorization and blank Product Name already exists on target form	
308	An entry with the Product Name and Manufacturer already exists on target form	
309	An entry with this Product Categorization and blank Product Name already exists on staging form	
310	An entry with the Product Name and Manufacturer already exists on staging form	
311	Invalid Product Alias, duplicate alias will be created from Product Catalog staging form	
312	Duplicate Site Alias from Site staging form	
313	Duplicate Support Group Alias from Support Group staging form	
314	Cannot create Company relationship. Global relationship is already being created from the PCT:LoadProductCatalog staging form	
315	Cannot create Company relationship. Global relationship is already being created from the CFG:LoadGenericProdSerAssoc staging form	
316	Cannot create association to the specified company. Global association already exists on target form	
317	Cannot create association to the specified company. Global association already exists on staging form	
318	Cannot create Global Company relationship. Relationship already exists with other company on target form	
319	Cannot create Global Company relationship. Relationship already exists with other company on staging form	
320	Invalid Company Alias, duplicate alias will be created from Company staging form	

**Table C-3: Error codes from duplicate data (Continued)**

Code	Message	Explanation
321	Cannot create Company relationship. Global relationship is already being created from the CFG:LoadServiceCatalog staging form	
322	Duplicate Company Multi-tiered menu structure already exists	The duplicate Company multi-tiered menu structure exists either in the COM:Company form or in the COM:LoadCompany staging form.



# D Data values

The spreadsheets for data migration include instructions on how to complete the spreadsheet columns. This section provides tables of data values where the list of values was too lengthy to display in the spreadsheet.

The following topics are provided:

- Configuration Item types (page 70)
- Notification events (page 72)
- Permission groups and license types (page 75)
- Time zones (page 76)

# Configuration Item types

On the `ProductCatalog.xls` spreadsheet, the 01 PCT-ProductCatalog tab includes a column for configuration item (CI) type, which must be completed with one of the following values:

- Account
- Activity
- Admin Domain
- Application
- Application Infrastructure
- Application Service
- Application System
- BIOS Element
- Bulk Inventory
- Business Process
- Business Service
- Card
- CDROM Drive
- Chassis
- Cluster
- Communication Endpoint
- Computer System
- Connectivity Collection
- Connectivity Segment
- Database
- Database Storage
- Disk Drive
- Disk Partition
- Document
- Equipment
- File System
- Floppy Drive
- Hardware Package
- Hardware System Component
- Inventory Location

- IP Connectivity Subnet
- IP Endpoint
- IPX Connectivity Network
- Keyboard
- Local Area Network (LAN)
- LNs Collection
- Local File System
- Logical System Component
- LPAR
- Mainframe
- Media
- Memory
- Monitor
- Network Port
- NT Domain
- Operating System
- Package
- Patch
- Physical Location
- Pointing Device
- Printer
- Processor
- Product
- Protocol Endpoint
- Rack
- Remote File System
- Role
- Share
- Software Server
- System Resource
- System Software
- Tape Drive
- UPS
- Virtual System

- Virtual System Enabler
- VM Ware
- Wide Area Network (WAN)

## Notification events

On the `People.xls` spreadsheet, the 16 NTE-CFG-NotificationEvents tab includes columns for Module Name and Notification Event, both of which are required fields. The following table lists the module names in ITSM 7.0 along with the applicable notification events.

**Table D-1: ITSM 7.0 module names and applicable notification events**

ITSM 7.0 modules	Applicable notification events
Asset Management	<ul style="list-style-type: none"> <li>■ Asset Scheduled Maintenance</li> <li>■ Bulk Inventory Reorder</li> <li>■ CI Status Change</li> <li>■ Configuration Item Approval</li> <li>■ Configuration Scheduled Maintenance</li> <li>■ Contract Expiration</li> <li>■ Contract Expiration Warning</li> <li>■ Escalated Notifications</li> <li>■ License Management Exception</li> <li>■ Resolution Escalation</li> <li>■ Response Escalation</li> <li>■ Unavailability Assignment</li> </ul>
Broadcast	<ul style="list-style-type: none"> <li>■ Broadcast Notification</li> </ul>
Incident (Continued on next page)	<ul style="list-style-type: none"> <li>■ Assignment</li> <li>■ Cancellation</li> <li>■ Change Associations</li> <li>■ Incident Escalation</li> <li>■ Known Error Solution</li> <li>■ Known Error Workaround</li> <li>■ OLA Resolution Escalated Notification</li> <li>■ OLA Resolution Escalation</li> <li>■ OLA Response Escalated Notification</li> <li>■ OLA Response Escalation</li> <li>■ Ownership Assignment</li> <li>■ Problem Investigation Associations</li> <li>■ Problem Investigation Completion</li> <li>■ Requester Incident Re-Opened</li> <li>■ Requester Incident Receipt Confirmation</li> <li>■ Requester Incident Resolution</li> <li>■ Resolution</li> </ul>



Table D-1: ITSM 7.0 module names and applicable notification events (Continued)

ITSM 7.0 modules	Applicable notification events
Incident (Continued from previous page)	<ul style="list-style-type: none"> <li>■ SLA Resolution Escalated Notification</li> <li>■ SLA Resolution Escalation</li> <li>■ SLA Response Escalated Notification</li> <li>■ SLA Response Escalation</li> <li>■ UC Resolution Escalated Notification</li> <li>■ UC Response Escalation</li> <li>■ Unavailability Restored</li> </ul>
Infrastructure Change (Continued on next page)	<ul style="list-style-type: none"> <li>■ Approval</li> <li>■ Approval Information</li> <li>■ Approval Resolution Escalated Notification</li> <li>■ Approval Resolution Escalation</li> <li>■ Cancellation</li> <li>■ Change Assignee Assignment</li> <li>■ Change Assignee Approval Rejection</li> <li>■ Change Assignee Completion</li> <li>■ Change Assignee Latent Completion</li> <li>■ Change Assignee Planning</li> <li>■ Change Assignee Pre-planning</li> <li>■ Change Assignee Re-scheduled</li> <li>■ Change Assignee Scheduled</li> <li>■ Change Assignee Scheduled For Review</li> <li>■ Change Management Assignment</li> <li>■ Change Management Approval Rejection</li> <li>■ Change Manager Completion</li> <li>■ Change Manager Group Escalation</li> <li>■ Change Manager Latent Completion</li> <li>■ Change Manager Next Dependent Change</li> <li>■ Change Manager Planning</li> <li>■ Change Manager Pre-planning</li> <li>■ Change Manager Predecessor Completion</li> <li>■ Change Manager Re-scheduled</li> <li>■ Change Manager Scheduled</li> <li>■ Change Manager Scheduled for Review</li> <li>■ Change Worklog Assignment</li> <li>■ Completion</li> <li>■ Implementer Assignment</li> <li>■ Implementer Planning</li> <li>■ Implementer Pre-planner</li> <li>■ Implementer Scheduled</li> <li>■ Manual Notification</li> <li>■ Non-Approval Information</li> <li>■ OLA Resolution Escalated Notification</li> <li>■ OLA Resolution Escalation</li> </ul>

**Table D-1: ITSM 7.0 module names and applicable notification events (Continued)**

ITSM 7.0 modules	Applicable notification events
Infrastructure Change (Continued from previous page)	<ul style="list-style-type: none"> <li>■ OLA Response Escalated Notification</li> <li>■ OLA Response Escalation</li> <li>■ Receipt Confirmation</li> <li>■ Requester Change Cancellation</li> <li>■ Requester Change Receipt Confirmation</li> <li>■ Requester Completion</li> <li>■ Requester Change Re-scheduled</li> <li>■ Requester Change Scheduled</li> <li>■ Requester Rejection</li> <li>■ Scheduled</li> <li>■ SLA Response Escalated Notification</li> <li>■ Task Cancellation</li> <li>■ Task Pending</li> <li>■ Unavailability Restored</li> </ul>
Problem Management	<ul style="list-style-type: none"> <li>■ Change Completed</li> <li>■ Known Error Assignment</li> <li>■ Known Error Manager Assignment</li> <li>■ Problem Assignment</li> <li>■ Problem Cancelled</li> <li>■ Problem Completed</li> <li>■ Problem Manager Assignment</li> <li>■ Solution Assignment</li> <li>■ Unavailability Restored</li> </ul>
Reminders	<ul style="list-style-type: none"> <li>■ Reminders Notification</li> </ul>
Request Management	<ul style="list-style-type: none"> <li>■ Request Status Changed</li> <li>■ Request Submitted</li> </ul>
Task Management	<ul style="list-style-type: none"> <li>■ Task Assigned</li> <li>■ Task Status Changed</li> </ul>

# Permission groups and license types

On the `People.xls` spreadsheet, the 03 CTM-PeoplePermissionGroups tab includes columns for Permissions Group and License Type, both of which are required fields. The following table lists the permission groups in ITSM 7.0 along with the applicable license types.

For a description of each permission group, see the *BMC Remedy IT Service Management 7.0 Configuration Guide*.

**Table D-2: ITSM 7.0 permission groups and applicable license types**

Permission group	Applicable license types			
	Read	Fixed	Floating	None
Administrator				Yes
ApprovalAdmin				Yes
ASE-Administrator				Yes
Asset Admin		Yes	Yes	Yes
Asset Config		Yes	Yes	Yes
Asset User		Yes	Yes	Yes
Asset Viewer				Yes
Browser				Yes
CM Dashboard User				Yes
Command Event Master				Yes
Config Categorization Admin				Yes
Config Categorization User				Yes
Config Group Mapping Admin				Yes
Contact Location Admin				Yes
Contact Organization Admin				Yes
Contact People Admin				Yes
Contact People HR Admin				Yes
Contact People User				Yes
Contact Support Admin				Yes
Cost Manager		Yes	Yes	Yes
Customize				Yes
DSL Master				Yes
DSL Viewer				Yes
Incident Config		Yes	Yes	
Incident Master		Yes	Yes	
Incident Submitter	Yes			
Incident User		Yes	Yes	
Incident Viewer				Yes
Infrastructure Change Config		Yes	Yes	

**Table D-2: ITSM 7.0 permission groups and applicable license types (Continued)**

Permission group	Applicable license types			
	Read	Fixed	Floating	None
Infrastructure Change Master		Yes	Yes	
Infrastructure Change Submit	Yes			
Infrastructure Change User		Yes	Yes	
Infrastructure Change Viewer				Yes
Licensing				Yes
Notification Admin				Yes
Problem Config		Yes	Yes	
Problem Master		Yes	Yes	
Problem Submitter	Yes			
Problem User		Yes	Yes	
Problem Viewer				Yes
Purchasing User		Yes	Yes	
Receiving User				Yes
Requester Console Config				Yes
Requester Console Master				Yes
Security				Yes
SLM Config		Yes	Yes	
SLM Customer		Yes	Yes	
SLM Manager		Yes	Yes	
Sub Administrator				Yes
Summary Definition Config				Yes
Task Administrator				Yes
Task Application Config				Yes
Task Manager				Yes
Task Process Config				Yes
Task User				Yes

## Time zones

On the `SupportGroup.xls` spreadsheet, the `06 BusinessTimeHolidays` tab includes a column for time zone, which must be completed with one of the following values:

- (GMT -12:00) Eriwetok, Kwajalein
- (GMT -11:00) Midway Island, Samoa
- (GMT -10:00) Hawaii
- (GMT -09:00) Alaska

- (GMT -08:00) Pacific Time (US & Canada); Tijuana
- (GMT -07:00) Arizona
- (GMT -07:00) Mountain Time (US & Canada)
- (GMT -06:00) Central Time (US & Canada)
- (GMT -06:00) Mexico City (Tegucigalpa)
- (GMT -06:00) Saskatchewan
- (GMT -05:00) Bogota, Lima, Quito
- (GMT -05:00) Eastern Time (US & Canada)
- (GMT -05:00) Indiana (East)
- (GMT -04:00) Atlantic Time (Canada)
- (GMT -04:00) Caracas, La Paz
- (GMT -03:30) Newfoundland
- (GMT -03:00) Brasilia
- (GMT -03:00) Buenos Aires, Georgetown
- (GMT -02:00) Mid-Atlantic
- (GMT -01:00) Azores, Cape Verde Is.
- (GMT) Casablanca, Monrovia
- (GMT) Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London
- (GMT +1:00) Amsterdam, Copenhagen, Madrid, Paris, Vilnius
- (GMT +1:00) Belgrade, Sarajevo, Skopje, Sofija, Zagreb
- (GMT+1:00) Bratislava, Budapest, Ljubljana, Prague, Warsaw
- (GMT +1:00) Brussels, Berlin, Bern, Rome, Stockholm, Vienna
- (GMT +2:00) Athens, Istanbul, Minsk
- (GMT +2:00) Bucharest
- (GMT +2:00) Cairo
- (GMT +2:00) Harare, Pretoria
- (GMT +2:00) Helsinki, Riga, Tallinn
- (GMT +2:00) Israel
- (GMT +3:00) Baghdad, Kuwait, Riyadh
- (GMT+3:00) Moscow, St. Petersburg, Volgograd
- (GMT +3:00) Nairobi
- (GMT +3:30) Tehran
- (GMT +4:00) Abu Dhabi, Muscat
- (GMT +4:00) Baku, Tbilisi

- (GMT +4:30) Kabul
- (GMT +5:00) Ekaterinburg
- (GMT +5:30) Bombay, Calcutta, Madras, New Delhi
- (GMT +6:00) Colombo
- (GMT +7:00) Bangkok, Hanoi, Jakarta
- (GMT+8:00) Beijing, Chongqing, Hong Kong, Urumqi
- (GMT +8:00) Perth
- (GMT +8:00) Singapore
- (GMT +8:00) Taipei
- (GMT +9:00) Osaka, Sapporo, Tokyo
- (GMT +9:00) Seoul
- (GMT +9:00) Yakutsk
- (GMT +9:30) Adelaide
- (GMT +10:00) Canberra, Melbourne, Sydney
- (GMT +10:00) Guam, Port Moresby
- (GMT +10:00) Hobart
- (GMT+10:00) Vladivostok
- (GMT +11:00) Magadan, Solomon Is., New Caledonia
- (GMT +12:00) Auckland, Wellington
- (GMT +12:00) Fiji, Kamchatka, Marshall Is.

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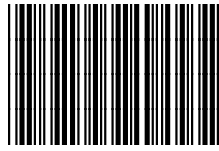
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