

Workforce Integration Manager User's Guide

*A user's guide to setting up, running, and managing
Workforce Integration Manager interfaces on the
Workforce Central application server, and performing
related data integration operations.*

*Kronos® Workforce Central® Suite
Version 6.3*



The information in this document is subject to change without notice and should not be construed as a commitment by Kronos Incorporated. Kronos Incorporated assumes no responsibility for any errors that may appear in this manual. This document or any part thereof may not be reproduced in any form without the written permission of Kronos Incorporated. All rights reserved. Copyright 2011.

Altitude, Altitude Dream, Cambridge Clock, CardSaver, Datakeeper, Datakeeper Central, eForce, Gatekeeper, Gatekeeper Central, Imagekeeper, Jobkeeper Central, Keep.Trac, Kronos, Kronos Touch ID, the Kronos logo, My Genies, PeoplePlanner, PeoplePlanner & Design, Schedule Manager & Design, ShiftLogic, ShopTrac, ShopTrac Pro, StarComm, StarPort, StarSaver, StarTimer, TeleTime, Timekeeper, Timekeeper Central, TimeMaker, Unicru, Visionware, Workforce Accruals, Workforce Central, Workforce Decisions, Workforce Express, Workforce Genie, and Workforce TeleTime are registered trademarks of Kronos Incorporated or a related company. Altitude MPP, Altitude MPPXpress, Altitude Pairing, Altitude PBS, Comm.Mgr, CommLink, DKC/Datalink, eDiagnostics, Experts at Improving the Performance of People and Business, FasTrack, Hireport, HR and Payroll Answerforce, HyperFind, Kronos 4500 Touch ID, Kronos 4500, Kronos 4510, Kronos Acquisition, Kronos e-Central, Kronos InTouch, Kronos KnowledgePass, Kronos TechKnowledge, KronosWorks, KVC OnDemand, Labor Plus, Momentum Essentials, Momentum Online, Momentum, MPPXpress, Overall Labor Effectiveness, Schedule Assistant, Smart Scheduler, Smart View, Start Quality, Start WIP, Starter Series, StartLabor, TeleStaff, Timekeeper Decisions, Timekeeper Web, VisionPlus, Winstar Elite, WIP Plus, Workforce Absence Manager, Workforce Acquisition, Workforce Activities, Workforce Analytics, Workforce Attendance, Workforce Central Portal, Workforce Connect, Workforce Employee, Workforce ESP, Workforce Forecast Manager, Workforce HR, Workforce Leave, Workforce Manager, Workforce MobileTime, Workforce Operations Planner, Workforce Payroll, Workforce Record Manager, Workforce Recruiter, Workforce Scheduler, Workforce Smart Scheduler, Workforce Tax Filing, Workforce Timekeeper, Workforce View, and Workforce Worksheet are trademarks of Kronos Incorporated or a related company.

The source code for Equinox is available for free download at www.eclipse.org.

All other trademarks or registered trademarks used herein are the property of their respective owners and are used for identification purposes only.

When using and applying the information generated by Kronos products, customers should ensure that they comply with the applicable requirements of federal and state law, such as the Fair Labor Standards Act. Nothing in this Guide shall be construed as an assurance or guaranty that Kronos products comply with any such laws.

Published by Kronos Incorporated
297 Billerica Road, Chelmsford, Massachusetts 01824-4119 USA
Phone: 978-250-9800, Fax: 978-367-5900
Kronos Incorporated Global Support: 1-800-394-HELP (1-800-394-4357)

For links to information about international subsidiaries of Kronos Incorporated, go to <http://www.kronos.com>

Document Revision History

Document Revision	Product Version	Release Date
A	6.3	December 2011

Contents

Chapter 1: Overview

Introduction	6
Overview of the data integration implementation process	7
Getting started with data integration	10

Chapter 2: System Setup and Administration

Configuring system settings	12
System settings for locale policy	12
System settings for time and date output	13
System settings for date/time strings	13
Additional notes about system settings	15
Configuring function access profiles	16
Configuring the generic data access profile	18
Viewing the list of generic data access profiles for data integration	19
Assigning multiple generic data access profiles to one user	19
Using generic data access profiles to support the Delegate Authority feature	19
Allowing access to files	21
Allowing access to the data integration accrual Genie	22
Installing custom database drivers	24
Copying a Workforce Central database	26

Chapter 3: Working with Interfaces

Running an interface	28
Canceling an interface	30
Deleting an interface	31
Scheduling an interface with Event Manager	32
Overriding the interface options at runtime	35

Chapter 4: Working with Connections

Creating a new connection	41
Editing a connection	43
Duplicating a connection	45
Deleting a connection	47
Using custom connections	48

Chapter 5: Working with Mapped Folders

Creating a new mapped folder	51
Duplicating a mapped folder	52
Editing a mapped folder	53
Deleting a mapped folder	54

Chapter 6: Working with Lookup Tables

Editing lookup tables	56
Using wildcards in lookup tables	57
Examples of using wildcards in a lookup table	58
Extended wildcard option	58
Pattern matching with wildcards	59
Sort order of wildcards in a lookup table	60

Chapter 7: Working with Reports and Logs

Viewing reports	62
Interface Results Summary	63
Interface Error Report	65
Link Error Report	66
Disqualified Records Report	67
Link XML Log Report	68
System log report of data integration results	69
Saving reports	70

Index

Chapter 1

Overview

This chapter contains the following sections:

- [“Introduction”](#) on page 6
- [“Overview of the data integration implementation process”](#) on page 7
- [“Getting started with data integration”](#) on page 10

Introduction

Integration Manager is a data integration tool that enables you to transfer data from one data *source* (such as the timekeeping application, text file, or SQL query) to an *output* destination. That output destination can be a text file, database, XML document, or another suite application.

The key component of Integration Manager is the *interface*, which is a file (.KNI) that contains a set of instructions, or *steps*, for the data transfer. Those steps are executed when you *run* the interface. A step can be a *command* or it can be a *link*, which is a file (.KNX) that specifies the source of the data, how to manipulate and transfer the data, and the output of the data.

Depending on your access rights, you can perform the following data integration operations on the server where Integration Manager is installed:

- Select, run, modify, cancel, and delete the interfaces that have been deployed on the server.
- Schedule an interface to run at a specific time, using Event Manager.
- Create or change the connection that an interface uses to transfer data between the source and the output destination. The connection can be a database connection or an XML API connection.
- Edit lookup tables that are used by the interface. A *lookup table* is a comma-delimited text file that is typically used to translate one piece of text into another or to validate user input.
- Create or change the mapped folder that is used for the source and output text files that are associated with the interface.
- View reports that show the results of the interface and its associated links. The reports include information about any errors that occurred and they list any records that were disqualified. The reports also display the locale policy with which the user ran the interface.

Overview of the data integration implementation process

Before users can run interfaces and perform related data integration tasks, *Integration Manager* must be installed and configured on the server where the timekeeping suite of products is installed. Users must have access to that system and to the data integration components.

Interface programmers must have the *Interface Designer* component installed on their client systems. They use Interface Designer to configure and deploy the interfaces that users run on the server where Integration Manager is installed.

The following workflow shows how Integration Manager is typically set up and implemented at a site:

1. The individual who is responsible for installing the suite of time and labor management products on the servers at your site does the following as part of the overall suite installation process:
 - Selects and installs the Integration Manager component.
 - Ensures that the JBoss user (the default user that executes Workforce Integration Manager interfaces) has appropriate rights on the Windows domain to access all source and output file locations that will be used for Workforce Integration Manager interfaces and links.
 - Copies all the product licenses, including the Integration Manager license, to the licensing directory of each instance of the suite installation on the application server.
 - Installs the separate Interface Designer component on the client systems where interfaces will be developed and on application servers where interfaces can be run as batch jobs.

Tip: See the Workforce Central installation documentation for more information about installing Integration Manager and Interface Designer, and for information about installing the corresponding license.

2. The system administrator configures the system settings that control how the Integration Manager engine functions on the server during data integration operations and how certain elements will be displayed on the data integration screens (for example, the format of the date and time).

3. The system administrator configures and assigns function access profiles (FAPs) to allow users basic access to Integration Manager components. The administrator also allows individuals who have more extensive administrative and programming responsibilities access to additional data integration functions.
4. The interface programmer uses Interface Designer to develop and test interfaces, and then deploys them to the server where the interfaces will be run. The programmer can also download an interface from the server to the client machine, make any necessary changes to the interface, and then redeploy it to the server.

Tip: The Interface Designer online Help on the client machine and the *Integration Manager Programmer's Guide* have complete information about developing, upgrading, testing, deploying, and downloading interfaces.

5. After interfaces have been deployed on the server, the system administrator configures and assigns generic data access profiles (GDAPs) to control user access to the interfaces, and to the connections and mapped folders that are used by those interfaces. The following kinds of access can be granted to specific users or groups of users:
 - Interfaces — Controls which interfaces, along with their associated lookup tables, the user has access to on the server.
 - Connections — Controls which database and XML API connections the user has access to; for example, the connection to the timekeeping database.
 - Mapped folders — Controls which mapped folders the user has access to on the server. These folders contain the files that are used by interfaces.
6. After Integration Manager is set up on the server and the interfaces have been deployed, users log on to that server, click the Data Integration tab on the suite home page, and then run an interface or perform related data integration tasks.

Tip: The Integration Manager online help and the *Integration Manager User's Guide* have complete information about setting up and using the data integration features on the server.

Getting started with data integration

To get started implementing and using the data integration features on the timekeeping server, go to the following topics:

- To perform administrative functions on the server, see [“System Setup and Administration”](#) on page 11.
- If the server is already set up for access to data integration functions, see [“Working with Interfaces”](#) on page 27.

Chapter 2

System Setup and Administration

Before users can access the data integration components that are installed on the server, the system administrator must configure and then maintain Integration Manager on that system.

This section contains the following topics:

- [“Configuring system settings”](#) on page 12
- [“Configuring function access profiles”](#) on page 16
- [“Configuring the generic data access profile”](#) on page 18
- [“Allowing access to the data integration accrual Genie”](#) on page 22
- [“Allowing access to files”](#) on page 21
- [“Installing custom database drivers”](#) on page 24
- [“Copying a Workforce Central database”](#) on page 26

Configuring system settings

You can configure system settings to control how the Integration Manager engine performs certain operations or displays data, such as the following:

- The number of threads the engine can generate for interfaces (requires that you restart the timekeeping application)
- How long to block competing job requests and how often to scan the database for stalled job requests
- How to perform sort operations
- The date and time formats to use for data integration operations
- Whether to allow commands that are specified in an interface to execute on the server
- Which delimiter to use to identify mapped folders that are specified in a command
- How error messages are logged

To configure the system settings:

1. From the suite home page, click **Setup**.
2. Under System Configuration, click **System Settings**.
3. Click the **Data Integration** tab and configure the settings.

Note: You can also specify time and date settings in Locale Policy.

4. To configure the error logging settings, click the Logging Context tab and edit the following settings:
 - `site.loggingContext.WFC.BUSINESS.WIM`
 - `site.loggingContext.WFC.BUSINESS.WIM.SVC`
5. Click **Save**.

System settings for locale policy

To support multiple languages on one instance of Workforce Central, you can specify time and date formats by locale for users who run data integration interfaces:

1. From the suite home page, click **Setup**.
2. Under System Configuration, click **Locale Policy**.
3. Select a language and then click **Edit**.
4. In the **Data Integration** section of the Locale Policy Editor, specify the time and date settings for the locale.
5. Click **Save**.
6. Ensure that users who run the data integration interfaces are assigned the locale policy. Use the Locale Policy field in the People Editor (Job Assignment > Access Profiles).

Note: The date and time settings specified in the locale policy override the corresponding date and time system settings specified on the Data Integration system settings tab. The Data Integration system settings are used by default if the user is not assigned a locale policy.

System settings for time and date output

Workforce Integration Manager uses the following system settings under Data Integration to format *output* only. These system settings from the Data Integration tab are used as “fallback” values if they are not specified in a local policy.

- Time AM — The A.M. time format. The default is am.
- Time PM — The P.M. time format. The default is pm.
- Date Separator — The symbol that the system uses to separate the elements of a date format. The default is a slash (/). For example: 04/30/09.
- Time Separator — The symbol that the system uses to separate the elements of a time format. The default is a colon (:). For example: 10:15.

System settings for date/time strings

Integration Manager uses the following system settings to parse date and time strings from the source (if Source Date Formatting is not being used) and for output:

- Short Date Format — The short date format that will be used by the system for all data integration operations. Default: "MM/dd/yy" (month, day, and last two numbers of the year)
- Long Date Format — The long date format that will be used by the system for all data integration operations. Default: "MM/dd/yyyy" (month, day, and all four numbers of the year)
- Short Time Format — The short time format that will be used by the system for all data integration operations. Default: "hh:mm" (hours and minutes)
- Long Time Format — The long time format that will be used by the system for all data integration operations. Default: "hh:mm:ss a" (hours, minutes, and seconds with AM/PM indicator)

The following date/time specifiers are used in configuring these system settings:

Specifier	Date or Time Component	Examples
y	Year	1996, 96
M	Month in year: <ul style="list-style-type: none"> • M – month number (1–12) • MM – month number (01–12) • MMM – Abbreviated name* • MMMM – Full name 	Options: <ul style="list-style-type: none"> • 7 • 07 • Jul • July
D	Day in year	189
d	Day in month	10
E	Name of the day: <ul style="list-style-type: none"> • EEE – Abbreviated name • EEEE – Full name 	Options: <ul style="list-style-type: none"> • Tue • Tuesday
a	Am/pm marker**	PM
H	Hour in day (0-23)**	2
h	Hour in am/pm (1-12)**	12
m	Minute in hour	30
s	Second in minute	55
S	Millisecond	978
z	Time zone	EDT, PST, GMT

* If the number of pattern letters is three or more, the month is interpreted as text; otherwise, it is interpreted as a number.

** Use a in conjunction with h to indicate A.M. or P.M. Do not use a when you use H.

Additional notes about system settings

In addition to the online information the system displays for the Data Integration system settings, note the following:

- Restart the timekeeping application for changes to `knx.engine.ThreadPoolSize` to take effect.
- Steps in the commands of an interface can specify a mapped folder. That portion of the command must use a delimiter, such as the @ symbol, to identify the mapped folder. Specify that symbol in `knx.engine.RunCommandVarDelimiter`.
- When an interface is scheduled with Event Manager, the batch processing framework overrides the following Global setting:
`global.knx.engine.UseBatchProcessingFramework`
- If you expect the output from some interfaces to be large files written to a mapped folder on the network, change the following system setting to a larger value (for example, 600 minutes) to ensure that the system has enough time to create the output file:

`knx.engine.JobMaxInactiveTime`

Configuring function access profiles

To configure function access profiles (FAPs) that control how users access and use the data integration components:

1. From the suite home page, click **Setup**.
2. Under Access Profiles, click **Function Access Profiles**.
3. To control basic access to the Data Integration tab and access to associated administrative functions, select **Workforce Manager - Common Setup > Data Integration**. Use the drop-down list boxes to allow or disallow access to the following functions:
 - Data Integration Access — Controls the ability of the user to view and use the Data Integration tab on the suite home page. This is basic access that a user needs to run interfaces, edit associated lookup tables, and view the results.
Note: The format of the totals that are displayed in the Interface Results Summary is based on the user's Display Profile.
 - View data integration results for all users, in addition to your own results — Controls the ability of a user with administrative responsibilities to view the results of interfaces (that this user has access to) that are run by other users.
 - Delete Interfaces — Controls the ability of a user with administrative responsibilities to view and use the Delete button to remove interfaces (that this user has access to) from the server.
 - View output files displayed in Interface Run Summary — Controls the ability of a user to access the output file from the Interface Results Summary page.
4. To control user access to data integration components that appear in the Workforce Central Setup area, select **Workforce Manager - System Configuration > Setup > Data Integration Setup** and then use the drop-down list boxes to allow or disallow access to the following functions:
 - Connections — Controls the ability of a user to create, edit, duplicate, and delete connections used by the interfaces that the user has access to.

- Mapped Folders — Controls the ability of a user to create, edit, duplicate, and delete mapped folders that contain files for the interfaces that the user has access to.
5. Click **Save & Return** when you are done.
 6. Use the People Editor to assign the function access profile to the individuals who require access to the data integration components and functions that you selected for this profile.

Tip: You can use the Reports feature to view which employees or groups of employees have function access profiles set up for data integration. From the General tab of the suite home page, select Reports and then click the Select Report tab. Under Categories, select **Configuration > Function Access Profiles** and then use the Set Options tab to select the appropriate function access profiles for the report.

Configuring the generic data access profile

When a user has a function access profile that allows access to the Data Integration tab and Setup area, that user can now run interfaces and manage the associated lookup tables, connections, and mapped folders.

To control *which* interfaces (and associated lookup tables), connections, and mapped folders the user has access to, you must configure a generic data access profile (GDAP) and assign it to that user.

To configure a generic data access profile for data integration users:

1. From the suite home page, click **Setup**.
 2. Under Access Profiles, click **Generic Data Access Profiles**.
 3. Click **New** or **Edit**.
 4. Add or edit the name and description as necessary.
 5. In the Setup Category field, select **Data Integration** from the drop-down list box.
 6. In the Setup Item box, select each component that you are providing access to:
 - Interfaces — The interfaces that you want users to have access to. (Access to the associated lookup table files is included automatically with this setting.) Users can also view the results for these interfaces in the corresponding Interface Run Summary reports and log files.
 - Connections — The configuration parameters that provide access to data sources and output data destinations that the interfaces use.
 - Mapped Folders — The named directories that contain the source or output files associated with an interface.
- Note:** The JBoss user (the default user that executes interfaces) must also have access rights to all mapped folders. See the installation documentation for more information about JBoss setup.
7. For each selected Setup Item, use the arrow buttons to move specific interfaces, connections, or mapped folders from the Available box to the Selected box.
 8. Click **Save & Return**.

9. Use the People Editor to assign the generic data access profile to the individuals who require access to the specific data integration connections, mapped folders, and interfaces that you specified.

Viewing the list of generic data access profiles for data integration

Use the Reports feature to view which generic data access profiles are set up for data integration:

1. From the General tab of the suite home page, select **Reports** and then click the **Select Report** tab.
2. Under Categories, select **Configuration > Generic Data Access Profiles**
3. Click **Run Report**.
4. Click **View Report**. Any data access profiles that were set up for data integration will be listed in the report.

Assigning multiple generic data access profiles to one user

To enable a user to switch among several profiles and view different sets of interfaces, connections, and mapped folders, assign multiple generic data access profiles to that user.

The user can then use the **Change** button in the Connections, Mapped Folders, and Interfaces areas to switch to a different generic data access profile.

Using generic data access profiles to support the Delegate Authority feature

The Delegate Authority feature allows any individual (delegate) who is listed in the manager's delegates profile to perform tasks in the role of that manager. However, to view and run the manager's data integration interfaces, the delegate must *also* have access to the manager's generic data access profile that contains those interfaces.

Therefore, to allow the delegate authority feature to include access to the manager's data integration interfaces, the manager (or administrator) must use the following procedure:

1. The manager must identify a delegate and specify the time period when the delegate is authorized to act in the manager's role.
2. The manager or administrator must use the People Editor to assign the appropriate generic data access profile (that contains the list of interfaces) to the delegate.
3. The manager or administrator must use the People Editor to remove access to that generic data access profile when the authorization period ends.

For more information about the Delegate Authority feature, see the suite online Help, the manager or employee *Getting Started* guides for timekeeping, and the *Workforce Central System Administrator's Guide*.

Allowing access to files

To ensure access to files that are used by interfaces and links, be sure the application server where Workforce Integration Manager is installed is set up as follows:

- The server must be running under a logon account that has access permissions for the files in the mapped folders. It cannot be running as a “local system” account (the default installation).
- The server must have WRITE permissions for any remote source files. (Workforce Integration Manager locks those files during certain operations.)
- The server must have WRITE permissions for any remote target (output) files.

Allowing access to the data integration accrual Genie

When individuals run an interface with links that export accruals data from the timekeeping database to an output file, the user names that can be specified in the XML API connections that are used in the links must have access to the data integration accrual Genie that the system uses to perform that operation.

By default, the Workforce Genie Profile includes the data integration accrual Genie. Because that profile is associated with the SuperAccess display profile, all individuals with that display profile have access to the data integration accrual Genie.

However, if you want individuals to have access to the data integration accrual Genie through a different display profile, complete these steps:

1. Use the People Editor to determine what the display profile is for the individual. For example:
 - a. Select a user name with QuickFind and then click **People** on the menu bar.
 - b. Select the **Job Assignment** tab and then click **Access Profiles**.
 - c. In the Display Profile field, note which display profile is assigned to the user (for example, *Default*).
2. From the suite home page, click the **Setup** link.
3. Under **Display Preferences**, click **Display Profiles**.
4. Select the display profile that you identified in step 1c (*Default* in this example) and then click **Edit**.
5. In the Edit Display Profile area, click the **Manager Selections** tab and then select a Workforce Genie Profile from the drop-down list box.
6. Click **Save & Return**.
7. Click the **Setup** link again.
8. Under Display Preferences > Display Profile Building Blocks, select Workforce Genie **Profiles**.
9. Select the profile that you selected in step 5 and then click **Edit**.

10. In the left pane of Available Genies, select the check box for **(Timekeeping) Data Integration - Accrual Review (Accrual Detail)** and then click the right-arrow button to move the selected Genie to the right pane, Selected Genies.
11. Click **Save & Return**.

Any individual who uses the Display Profile *Default* can now perform a data integration operation that exports accruals data.

Installing custom database drivers

To allow interface programmers to create a custom connection to data contained in a database, you must install a custom database driver.

Note: Workforce Central and Workforce Integration Manager provide default JDBC drivers for Microsoft SQL Server and Oracle databases. If you plan to use Workforce Integration Manager with databases other than SQL Server or Oracle, you must obtain an appropriate ANSI SQL-92-compliant JDBC driver.

1. The `driver_name.jar` file contains all the Java class files for the custom database driver that you want to make available. Store that file on the timekeeping application server at the following location. For example:

```
drive:\Kronos\wfc\applications\wpk\lib
```
2. To incorporate the contents of the `driver_name.jar` file into the timekeeping application, you must rebuild the `wfc.ear` file. On the timekeeping application server, double-click the Stop icon on the desktop to stop the timekeeping application.
3. When the timekeeping application has stopped, double-click the Workforce Central Configuration Manager icon on the desktop to start the Configuration Manager InstallShield.
4. At the welcome screen, click **Next**.
5. At the configuration action screen, select **Modify an instance** and then click **Next**.
6. At the next screen, select the instance (for example, `wfc`) and then click **Next**.
7. At the actions screen, do *not* select **Add or remove products**. Instead, leave this check box clear and then click **Next**.
8. At the modification confirmation screen, click **Next** to start rebuilding the `wfc.ear` file.
9. Once the rebuilding of the `wfc.ear` file is complete, exit from Configuration Manager.

10. Double-click the **Go** icon on the desktop to start the timekeeping application. Wait for the application to start in online mode before proceeding to the next task.
11. To confirm that a connection is valid for the newly installed driver, in the Setup area of the application server, click **Connections** under Data Integration. You can then create and test the connection. (See “[Creating a new connection](#)” on page 41.)

Copying a Workforce Central database

If you copy a Workforce Central database with interfaces pointing to production systems, you must take certain precautions to make sure you do not accidentally run these interfaces against the production system. There are several options, depending on the configuration of the interfaces and links, and the system configuration at your site:

- For links with interface overrides, change the connection or mapped folder to one that is not a production system.
- Any interface that is scheduled in Event Manager should be turned off so that it does not run at its regularly scheduled time.
- If you do not want users running interfaces from this copy database, you can move the interfaces out of the end-user GDAPs (and make them available in Super Access only).
- Delete the interfaces and redeploy them with the new connections and mapped folder information.

Keep the test and production environments separate. For example, place the test and production environments on separate subnetworks that do not have access to one another—the entire stack, including the application and web servers.

Chapter 3

Working with Interfaces

When you have access to the data integration components that are installed on the server, you can access and run the interfaces that have been deployed on your system.

Note: If you previously used a batch file to run an interface without opening the configuration tool or to schedule an interface from Event Manager, use the Integration Manager features described in these topics instead. For more information about using batch files to run interfaces, see the *Workforce Integration Manager Programmer's Guide*.

This section contains the following topics:

- [“Running an interface”](#) on page 28
- [“Canceling an interface”](#) on page 30
- [“Deleting an interface”](#) on page 31
- [“Scheduling an interface with Event Manager”](#) on page 32
- [“Overriding the interface options at runtime”](#) on page 35

Running an interface

This topic describes how to run a single interface from the application server. For other methods of running interfaces, see the *Workforce Integration Manager Programmer's Guide*.

1. From the suite home page, select the **Data Integration** tab and then click **Interfaces**.
2. In the Interfaces display, select the button that is next the interface name.
3. To enable or disable certain steps or override certain options before you run or schedule the interface, click **Set Runtime Options**. Then make the necessary changes to the selected steps in the interface. (See [“Overriding the interface options at runtime”](#) on page 35 for more information.)
4. To schedule the interface to run at a specific time, click **Schedule** and run the interface from Event Manager. (See [“Scheduling an interface with Event Manager”](#) on page 32 for more information.)
5. Click **Run**.
6. (Optional) Depending on the design of the interface, you may be prompted to provide specific information before the interface runs. You may also have the option to perform some other task, such as renaming the output file. For either scenario, the system provides the Enter Data display, where you can complete those preliminary tasks.
7. Click **OK** in the confirmation message window.
8. In the Interface Monitor display:
 - Click **Cancel** —To stop an interface that is currently running.
 - Click **Refresh** until the interface completes its run.
9. After the interface completes its run (successfully or with errors), click the hyperlink in the **Status** field to view the Interface Results Summary report.
10. If there are errors, view the error report for the interface in one of the following ways:
 - Click the **Total Errors** hyperlink at the bottom of the Interface Monitor display.
 - Click the **Errors** hyperlink that is next to the Totals area in the Interface Results Summary window.

You can analyze the information in the Interface Error Report window.

11. If there are errors for specific links, click the numbered hyperlink in the Step Details area of the report in the Interface Error Report window. You can analyze the information for that specific step in the Link Error Report window.
12. To run the same interface again after you resolve any errors, or to run another interface, click **Return** in the Interface Monitor display; then repeat steps 2 through 6.

Canceling an interface

1. In the Interface Monitor display, click **Cancel**.
2. Click **OK** in the confirmation message window. After the interface is canceled, Interface Monitor displays an informational message.
3. To run another interface, click **Return** in the Interface Monitor display and then select another interface.

Deleting an interface

To delete any of the interfaces that are available to you (as specified in your generic data access profile):

1. From the suite home page, select the **Data Integration** tab and then click **Interfaces**.
2. In the Interfaces display, select the button that is next to the interface name.
3. Click **Delete**.

Scheduling an interface with Event Manager

Integration Manager provides access to the Event Manager, where you can schedule an interface to run at any time or to run repeatedly at specified intervals. To schedule multiple interfaces, see the *Workforce Integration Manager Programmer's Guide*.

To schedule an interface:

1. From the suite home page, select the **Data Integration** tab and then click **Interfaces**.
2. In the Interfaces display, select the button that is next to the interface name.
3. To enable or disable certain steps or override certain options before you schedule the interface to run, click **Set Runtime Options**. Then make the necessary changes to the selected steps in the interface. (See [“Overriding the interface options at runtime”](#) on page 35 for more information.)
4. Click **Schedule**.
5. In the Event Manager display, specify the following information:
 - User name — A user that has access rights to run the interface.
 - Description — A brief description of the interface.
 - Instance name — The name of the server and instance where Workforce Central will run the interface. The default is “Any Instance” of Workforce Central that is available. Online and offline instances appear in the list. (Note: If you select an instance that is offline, the interface will run on the server and instance that you are logged in to.)
 - Schedule Type — How often the interface will run.
 - Start Date and End Date
6. Click **Run**.

Note: If the interface contains prompts, there is a 2000-character limit on the text that a user can enter for each prompt. The system truncates text that is over that limit.

7. Use the browser to return to the Interfaces display.

Note about locale policy:

- If a user overrides the assigned locale policy at login and then schedules an interface to run under his account, the locale policy chosen at login will be used to run the interface instead of the assigned locale policy.
- If the user schedules a different user to run the interface, the locale policy assigned to that other user will be used when the interface runs.

Overriding the interface options at runtime

When you select an interface to run (as described in [“Running an interface”](#) on page 28), you can enable or disable specific steps (links or commands) within the interface. You can also override certain options for both the source and output for each link in the interface before you run that interface.

After you click Set Runtime Options in the Interfaces display, you can do the following in the Set Runtime Options area:

- To edit the description for the interface, change the text in the Description field that is below the name of the interface.
- To modify a step, click the button that is next to the step. You can then do the following:
 - In the Enabled column of the row of the step that you selected, select the check box to enable the step or clear the check box to disable the step.
 - Change the text in the Description field that is below the name of the step.
 - Change the options that are displayed on the Source and Output tabs (for links only).

Note: If you cannot edit the options that are displayed after you select a step, it is because the step was configured to disallow overrides to those values. See your administrator if you want to change those options.

Source tab

The following override options for links may appear on the page, depending on the configuration of the interface:

- Mapped Folder — The folder that contains source text files for the interface. For example: `MyInterface`
- Path/File Name — The source file for the interface. This option may contain path information that is relative to the location of the specified mapped folder.
- Lookup Table File Name — If a lookup table is the source, the name of that lookup table.
- One of the following connection types:

-
- Database Connection
 - XML API Connection
 - Web Service
 - Timekeeping database options:
 - Pay Period — Previous, Current, or Prompt for Range of Dates.
 - Use Variables for Range — If the Pay Period is **Prompt for Range of Dates**, select a variable from the drop-down lists for start and end dates.
 - Options — Active employees only, ignore signoff, and daily records.

Output tab

The following override options for links may appear on the page, depending on the configuration of the interface:

- Mapped Folder — The target folder for the output file from the interface. For example: MyInterfaceResults
- Path/File Name — The name of the output file from the interface.
- Append records to any previous output file — Select this check box to enable this feature. Clear this check box if you want to create a separate file that will overwrite the original file (if there is one).
- Rename existing file — Select this check box if you want to retain the output file that was created the last time the interface was run. Renaming the existing output file prevents the new output file from overwriting it.
- One of the following connection types:
 - Database Connection
 - XML API Connection
- Submit import errors to the Transaction Assistant — Select this box to send errors to the Transaction Assistant so that those failed import transactions can be easily resubmitted after they are corrected.
- Batch Name — The name that you enter is referenced along with each import error submitted to the Transaction Assistant. The batch name enables you to distinguish which links caused specific errors.
- ADP options:
 - Batch Number — The default is 50.

- Company Code — A three-character alphanumeric code.

Variables tab

If the interface uses variables, you can use the Variables tab to do the following:

- Override the value of a variable, by entering a new value as text in the New Text Value column
- Add a descriptive note in the Comment column
- Select or clear the check box in the Enabled column to activate or disable the variable for this run of the interface

Actions

The following buttons are available:

- **Save** — Saves the new or changed data. To view that data, click Refresh.
- **Save & Return** — Saves the new or changed information and returns you to Interfaces.
- **Return** — Returns you to Interfaces without saving changes.
- **Refresh** — Displays the data that was last saved and discards any other changes.
- **Reset Options** — Reverts to the options that were originally configured for the individual links before any override options were specified.



Working with Connections

You use the Connections feature and the Connection Editor to manage the connections that Integration Manager uses to transfer data between databases (or other sources and targets for data). The display includes the name and description for each connection that you can select. You use the Connections Editor to create new connections, edit existing connections, or delete connections that you no longer need. The connections that you create or edit in the Connection Editor also appear in the list of available connections in Interface Designer, which is installed separately on the client system.

Note: If more than one generic data access profile (GDAP) has been assigned to you, there will be a **Change** button at the top of the Connections display. You can use that button to select a generic data access profile that provides access to a different set of connections.

Multiple language support for connection parameters

The language that the system uses to display the connection parameters depends on the following:

- If you were assigned a locale policy in the People Editor, the connection parameters appear in the assigned language.
- If you were *not* assigned a locale policy, the connection parameters appear in the default language of the installed instance of Workforce Central.
- If you *override* the assigned locale policy when you logged on to the system, the connection parameters appear in the language that you selected on the logon screen.

This chapter contains the following sections:

- [“Creating a new connection”](#) on page 41

- [“Editing a connection”](#) on page 43
- [“Duplicating a connection”](#) on page 45
- [“Deleting a connection”](#) on page 47
- [“Using custom connections”](#) on page 48

Creating a new connection

1. In the Setup area, click **Connections** under Data Integration.
2. In the Connections area, click **New**.
3. In the Connection Editor, specify the following information.
 - The name of the new connection.
 - A description of the connection
 - The type: Oracle, SQL Server, WFC XML API, Web Service, or Custom (see [“Using custom connections”](#) on page 48).

The remaining fields that the system displays vary, depending on what you specify for Type.

- JDBC driver and JDBC database URL (for custom connections only; refer to your JDBC documentation)

SQL Server Note: In a *multi-instance* environment with a SQL Server database, specify *only* the server name; do *not* include the name of the instance. Instead, specify the *port number* of the instance name.

- The name of the server where the database (or other source or target area) resides.
- The name of the instance of Workforce Central on the server (XML API).
- The URL prefix for the path, depending on whether a secure SSL connection is required(XML API).
- The SID (security identifier required for Oracle databases only) or Database Name (SQL Server database).
- Port number — The port number of the server. Oracle default is 1521 and SQL Server default is 1433.
- Parameters — Refer to the Oracle or SQL Server driver documentation.
- Timeout — The number of seconds to establish the connection before that connection times out.
- User name and password.

Note: The user name and password are not required for all connections. However, they *are* required for a connection to a database.

4. Click **Test** to ensure that the connection is working correctly. If necessary, make changes in the Connection Editor to correct any errors, and then test the connection again.
5. Click **Save** or **Save & Return**.

Editing a connection

1. In the Setup area, click **Connections** under Data Integration.
2. In the Connections area, select the check box next to the connection name; then click **Edit**.
3. In the Connection Editor, add or modify the following information:
 - The name of the connection.

Caution: If you *rename* an existing connection that is used by one or more interfaces or links on that server, those interfaces or links may not work correctly.

- A description of the connection.
- The type: Oracle, SQL Server, WFC XML API, Web Service, or Custom (see [“Using custom connections”](#) on page 48).

The remaining fields that appear vary, depending on what you specify for Type.

- JDBC driver and JDBC database URL (for custom connections only; refer to your JDBC documentation).

SQL Server Note: In a *multi-instance* environment with a SQL Server database, specify *only* the server name; do *not* include the name of the instance. Instead, specify the *port number* of the instance name.

- The name of the server where the database (or other source or target area) resides.
- The name of the instance of Workforce Central on the server (XML API).
- The URL prefix for the path, depending on whether a secure SSL connection is required (XML API).
- The SID (security identifier required for Oracle databases only) or Database Name (SQL Server database).
- Port number — The port number of the server.
- Parameters — Refer to your Oracle or SQL Server driver documentation.

- Timeout — The number of seconds to establish the connection before the connection times out.
- User name and password.

Note: The user name and password are not required for all connections. However, they *are* required for a connection to a database.

4. Click **Test** to ensure that the connection is working correctly. If necessary, make changes in the Connection Editor to correct any errors and then test the connection again.
5. Click **Save** or **Save & Return**.

Duplicating a connection

1. In the Setup area, click **Connections** under Data Integration.
2. In the Connections area, select the check box next to the connection name; then click **Duplicate**.
3. In the Connection Editor, add or modify the following information:
 - The name of the connection.

Caution: If you *rename* an existing connection that is used by one or more interfaces or links on that server, those interfaces or links may not work correctly.

- A description of the connection.
- The type: Oracle, SQL Server, WFC XML API, Web Service, or Custom (see [“Using custom connections”](#) on page 48).

The remaining fields that appear vary, depending on what you specify for Type.

- JDBC driver and JDBC database URL (for custom connections only; refer to your JDBC documentation).

SQL Server Note: In a *multi-instance* environment with a SQL Server database, specify *only* the server name; do *not* include the name of the instance. Instead, specify the *port number* of the instance name.

- The name of the server where the database (or other source or target area) resides.
- The name of the instance of Workforce Central on the server (XML API).
- The URL prefix for the path, depending on whether a secure SSL connection is required (XML API).
- The SID (security identifier required for Oracle databases only) or Database Name (SQL Server database).
- Port number — The port number of the server.
- Parameters — Refer to your Oracle or SQL Server driver documentation.

- Timeout — The number of seconds to establish the connection before the connection times out.
- User name and password.

Note: The user name and password are not required for all connections. However, they *are* required for a connection to a database.

4. Click **Test** to ensure that the connection is working correctly. If necessary, make changes in the Connection Editor to correct any errors and then test the connection again.
5. Click **Save** or **Save & Return**.

Deleting a connection

1. In the Setup area, click **Connections** under Data Integration.
2. In the Connections area, select the check box next to the connection name.
3. Click **Delete**.

Note:

- A connection cannot be deleted if it is used by one or more interfaces or links on that server.
- The custom connection, `CONNECTION_TO_SORT_TABLE`, cannot be deleted. This connection is created automatically at system startup and points to the location where sort tables are placed temporarily during sort operations.

Using custom connections

Included in the list of connections that are displayed is a custom connection: `CONNECTION_TO_SORT_TABLE`. This connection is created automatically at system startup and points to the location where sort tables are placed temporarily during sort operations. The default target for this connection is the Workforce Central database. You can use the Connection Editor to change that target, but you cannot change the name of this connection or delete it.

To create a custom connection, be sure the database driver required for that connection is installed on the application server. See [“Installing custom database drivers”](#) on page 24.

Chapter 5

Working with Mapped Folders

In the Setup area of the application server, you use the Mapped Folders option in the Data Integration area to create, edit, duplicate, or delete mapped folders that are used by an interface. These folders can contain one or more source *input* files or they can serve as the target folder for *output* files generated by the interface.

Note: All text files used by an interface as the *source* must be in the same mapped folder.

This is an example of a name and path for a mapped folder:

- Name: MyPayrollData
- Path to the folder (UNC format):
\\server\kronos\wim\

Note: In an environment that has multiple application servers running Integration Manager, use a UNC (Universal Naming Convention) for the mapped folder path whenever possible.

The folders that you create on the server appear in the list of available mapped folders (with their paths) that appears in the Interface Designer component that is installed on the client system. You can select a folder from that list when you configure the source or output for a link, or you can create and deploy a mapped folder from the client. See the Interface Designer online Help and the *Workforce Integration Manager Programmer's Guide* for more information about configuring links with mapped folders.

This chapter contains the following sections:

- [“Creating a new mapped folder”](#) on page 51
- [“Duplicating a mapped folder”](#) on page 52

- [“Editing a mapped folder”](#) on page 53
- [“Deleting a mapped folder”](#) on page 54

Creating a new mapped folder

1. In the Setup area, click **Mapped Folders** under Data Integration.
2. In the Mapped Folders area, click **New**.
3. In the Mapped Folder Editor, specify the following information:
 - The name of the new folder. For example: MyInterface
 - The path to that folder. For example (UNC format):
`\\server\kronos\wim\`

Note: If you click the Refresh button in the Mapped Folder Editor without first saving your edits, you will lose the data that you have entered or changed in the two fields.

4. To ensure that the path to the folder is valid and that the folder has write access, click the **Test** button. If the folder does not have write access, contact the system administrator.
5. Do one of the following:
 - If you are done creating new mapped folders, click **Save & Return**.
 - If you want to create a duplicate of the folder name and path or create a folder name and path that is similar to the one that you created, click **Save**. Click the **Duplicate** button in the Mapped Folder Editor. Modify the duplicate mapped folder name or path as needed, and then click **Save & Return**.
 - If you want to create another new mapped folder, click **Save** and then click **New**. Enter new information in the Name and Path fields; then click **Save & Return** when you are done.

Duplicating a mapped folder

1. In the Setup area, click **Mapped Folders** under Data Integration.
2. In the Mapped Folders area, use the check box to select the mapped folder name, and then click **Duplicate**.
3. In the Mapped Folder Editor, modify the following information as necessary:
 - The name of the new folder. For example: MyInterface
 - The path to that folder. For example (UNC format):
`\\server\kronos\wim\`

Note: If you click the Refresh button in the Mapped Folder Editor without first saving your edits, you will lose the data that you have entered or changed in the two fields.

4. To ensure that the path to the folder is valid and that the folder has write access, click the **Test** button. If the folder does not have write access, contact the system administrator.
5. Do one of the following:
 - If you are done creating mapped folders, click **Save & Return**.
 - To create another duplicate of the folder name and path or to create a folder name and path that is similar to the one that you created, click **Save**. Click the **Duplicate** button in the Mapped Folder Editor. Modify the duplicate mapped folder name or path as needed, and then click **Save & Return**.
 - To create a mapped folder, click **Save** and then click **New**. Enter new information in the Name and Path fields; then click **Save & Return**.

Editing a mapped folder

1. In the Setup area, click **Mapped Folders** under Data Integration.
2. In the Mapped Folders area, use the check box to select the mapped folder name, and then click **Edit**.
3. In the Mapped Folder Editor, modify the following information as necessary:
 - The name of the new folder. For example: MyInterface
 - The path to that folder. For example (UNC format):
`\\server\kronos\wim\`

Note: If you click the Refresh button in the Mapped Folder Editor without first saving your edits, you will lose the data that you have entered or changed in the two fields.

4. To ensure that the path to the folder is valid and that the folder has write access, click the **Test** button. If the folder does not have write access, contact the system administrator.
5. Do one of the following:
 - If you are done editing the mapped folder, click **Save & Return**.
 - To edit another mapped folder, click **Save & Return** and then repeat steps 2 through 4.
 - To create a duplicate of the folder name and path or to create a folder name and path that is similar to the one that you edited, click **Save**. Click the **Duplicate** button in the Mapped Folder Editor. Modify the duplicate mapped folder name or path as needed and then click **Save & Return**.
 - To create a mapped folder, click **Save** and then click **New**. Enter new information in the Name and Path fields; then click **Save & Return**.

Deleting a mapped folder

1. In the Setup area, click **Mapped Folders** under Data Integration.
2. In the Mapped Folders area, use the check boxes to select one or more mapped folder names.
3. Click **Delete** and then click **OK** in the confirmation message box.

Note: You cannot delete a mapped folder if any of the files stored in it are used by an interface or link that is deployed on the server.

Chapter 6

Working with Lookup Tables

A lookup table is a comma-delimited text file that is typically used to translate one piece of text into another. A lookup table can have one or more columns (lookup tables with one column are used for validating user input). An interface can contain as many lookup tables as necessary.

The chapter contains the following sections:

- [“Editing lookup tables”](#) on page 56
- [“Using wildcards in lookup tables”](#) on page 57

Editing lookup tables

To edit a lookup table:

1. From the suite home page, click the **Data Integration** tab and then select **Lookup Tables**.
2. In the Lookup Tables area, select the button that is next to the lookup table name.
3. Click **Edit**.
4. In the Lookup Table Editor, click the button next to the row that you are editing. (You can also click directly in the box within the row or column.) Then edit the data within the box.

Note:

- If a lookup table is empty, it may be because the associated interface has not yet been run. When you run that interface, it will populate that lookup table with data.
 - If a lookup table does not contain any rows, there may be an error in how the lookup table was configured for the interface. Contact the interface programmer or administrator.
5. Use the Row Actions buttons to add, delete, or cut and paste entire rows.
 6. To view, save, or discard the changes, use the following buttons:
 - **Save** — Saves the new or changed information.
 - **Save & Return** — Saves the new or changed information and returns you to Lookup Tables.
 - **Return** — Returns you to Lookup Tables and discards any changes that you made since you last clicked **Save**.
 - **Refresh** — Discards any changes and displays the rows with the data and format that was last saved.

Using wildcards in lookup tables

Lookup tables can use “wildcard” characters to match and translate text. The ability to use wildcards frees you from having to enter every possibility in a lookup table. You can use wildcards in both the lookup and return columns of a lookup table. There are different wildcard options for each column and the wildcards themselves behave differently depending on the column in which they are used.

Tip: Integration Manager searches down a lookup column until it finds the first match, and returns the value from the return column without searching further. You can use this logic to your advantage by placing the most frequently found lookup values near the top of the table. Place wildcard values after any explicit lookup values contained in the table.

Lookup Column Wildcards

There are three standard wildcards for use in the lookup column:

- ? — Matches any single character.
- * — Matches any number of consecutive characters.
- ! — Allows you to use a wildcard character in the lookup column without performing the wildcard matching.

Return Column Wildcards

The following wildcards can be used in the return column:

- ? — Inserts the character from the same position in the lookup string here.
- ~ — Does not insert the character from the same position in the lookup string here.
- ! — Allows you to use a wildcard character in the return column without performing the wildcard translation.
- * — Allows you to extract all consecutive characters that follow the asterisk (*) in the string.

Other characters, such as A - Z and 0 - 9, are substituted based on their position in the string in the return column.

Examples of using wildcards in a lookup table

The following table provides some lookup wildcard examples:

Lookup Column	Return Column	Search Example	Text Returned	Description
1??	9??	123	923	In any text 3 characters long that starts with 1, replace the 1 with a 9.
???-????	~~~~????	ABC-1234	1234	Ignore the first four characters and extract the last four.
??/?/????	~~~?~~~~~	11/07/2006	07	Extract the fourth and fifth characters from the string.
????	!2!7????	1234	271234	Precede all text 4 characters long with 27.

Extended wildcard option

When the Extended wildcard options check box in the Lookup table dialog box is selected, you can use these additional wildcards:

- [] — The brackets symbols find one of the specified characters. For example, w[io]n finds *win* and *won*.
- [-] — The brackets symbols with a hyphen find any single character in this range. For example, [r-t]ight finds *right*, *sight*, and *tight*. Ranges must be in ascending order. The order will be based on the ASCII table position.
- [~] — The brackets symbols with a tilde find any single character except the characters inside the brackets. For example, m[~a]st finds *mist* and *most*, but not *mast*.

- `[~x-z]` — The brackets symbols with a tilde and range of characters find any single character except characters in the range inside the brackets. For example, `t[~a-m]ck` finds *tock* and *tuck*, but not *tack* or *tick*. Ranges must be in ascending order. The order will be based on the ASCII table position.
- `@` — The “At” symbol finds one or more occurrences of the previous character or expression. For example `lo@t` finds *lot* and *loot*.
- `{n,}` — Matches *n* or more occurrences of the previous character. For example, `10{2,}` finds 100, 1000, 10000 and so on.
- `{n}` — Matches exactly *n* occurrences of the previous character. For example, `10{2}` finds 100 only.
- `{n, m}` — Matches *n* to *m* occurrences of the previous character. For example, `10{1,3}` finds only 10, 100, and 1000.

Note:

- If you are using extended wildcard characters, and you need to look up one of the wildcard characters, precede it with the exclamation point escape character (`!`).
- Each column in a table is separated by a comma. Any space before or after the comma is not included with the text of the column.
- To include a comma or another character as part of the text, add quotation marks before and after the string that contains that character.

Pattern matching with wildcards

Another method for extracting parts of data is to use lookup tables to search for patterns. Construct a lookup table with all possible combinations, using wildcards to establish the patterns. The return columns are the respective pieces of the data.

In the following example, you search for a dash character: The first column is the lookup, the second column returns the part of the data before the dash, and the third column returns the part of the data after the dash.

???-???	???~~~~~	~~~~~???
????-???	????~~~~~	~~~~~???

????-???	???~~~~~	~~~~~???
?????-???	????~~~~~	~~~~~???

Sort order of wildcards in a lookup table

The following demonstrates the proper sort order for wildcard entries:

```
2?????  
??1???  
????4?  
??????  
12*  
*
```

The entries with the question marks come before entries with the asterisks—because question mark entries have a definite length (six characters in this example), whereas the asterisk entries do not have a definite length. Integration Manager searches down the lookup column until it finds a match. It sends back the value from the return column and does not continue to look for a better match.

The last entry is an asterisk, which will match any lookup text of any length. In other words, this entry will always match. If you include an asterisk, there is no need to define a default value in the Lookup Table dialog box.

Working with Reports and Logs

Integration Manager provides several reports and logs that you can use to analyze the results of an interface or link. These reports include information about any errors and disqualifications.

This section contains the following topics:

- [“Interface Results Summary”](#) on page 63
- [“Interface Error Report”](#) on page 65
- [“Link Error Report”](#) on page 66
- [“Disqualified Records Report”](#) on page 67
- [“Link XML Log Report”](#) on page 68
- [“System log report of data integration results”](#) on page 69
- [“Saving reports”](#) on page 70

Viewing reports

When you run an interface, you can view data about that interface, including information about any errors that may have occurred. You can also view system-level errors and information about the Integration Manager application. Save or print the reports just as you would any web page, or send them using e-mail.

- [“Interface Results Summary”](#) on page 63 — View this report in one of the following ways:
 - Whenever you run an interface interactively, the Interface Monitor opens. Click **Refresh** in that display and then click the hyperlink text in the **Status** field to view the summary report.
 - To view results for any interfaces that you have already run, click the **Data Integration** tab and then select **Results**. Click the hyperlink text in the Status column to view the summary report for a specific interface.
- [“Interface Error Report”](#) on page 65 — View this report in one of the following ways:
 - Click the **Total Errors** hyperlink at the bottom of the Interface Monitor display.
 - Click the **Errors** hyperlink in the Totals area under General Information in the Interface Results Summary window.
- [“Link Error Report”](#) on page 66 — View this report in one of the following ways:
 - In the Interface Error Report window, click a numbered hyperlink in the Step Details area of the report.
 - In the Interface Results Summary window, click the Errors hyperlink in the Totals column for a specific step.
- [“Disqualified Records Report”](#) on page 67 — View this report from the Interface Results Summary window. Click the Disqualified hyperlink in the Totals column within a specific step.
- [“Link XML Log Report”](#) on page 68 — View this report from the Interface Results Summary window. If a step generated an XML log report, click the View hyperlink on the right side of the summary.
- [“System log report of data integration results”](#) on page 69 — View this report by using the Log Report feature in the System Configuration area of Setup.

Interface Results Summary

View this report in one of the following ways:

- Whenever you run an interface interactively, the Interface Monitor opens. Click **Refresh** in that display and then click the hyperlink text in the **Status** field to view the summary report.
- To view results for any interfaces that you have already run, click the **Data Integration** tab and then select **Results**. Click the hyperlink text in the Status column to view the summary report for a specific interface.

The report displays the following types of information, depending on the configuration of the interface and its associated links:

- **General Information** — The name and description of the interface, the name of the user who ran the interface, the locale policy (language) that was used, the start and end date, the duration, the status of the interface, and totals for errors and disqualified records.

Tip: Click the Errors hyperlink in the Totals column to view the Interface Error Report.

- **Interface Details** — The name of the application server, name of the interface, the names of variables used for that interface, and setup information.
- **Step Details** — If there are multiple steps, each step number is a hyperlink that you can click to access the relevant data. The following kinds of data appear for each link or command in a step, depending on how the step was configured.

Note: If there is no Integration Manager license installed on the server and a step is configured to process more than 50 records (the maximum allowed without a license), the report displays an error message. The message indicates that the step stopped processing after reaching 50 records.

- Name of the link.
- Variables (if any) that are used in the interface.
- Start and end date, and the duration.

- Status of the link.
- Mapped folders and files used by the link for the source and output.
- Selected options that were specified for the source and output. Examples include: timekeeping data such as pay period, daily records, pay code totals, job totals, and custom labor account totals; batch information; Activities data; custom output totals; a delimiter (,); XML API import or export information; and Payroll Prep indicator.
- The name of the source and output connection.
- SQL Query name.
- Tables used by the link.
- Hypertext link to the XML log report that is generated when the XML APIs extract or import data.
- If an XML document is the source: the file, folder, and schema.
- If an XML document is the output: a hypertext link to that XML output file.
- Totals for the number of batches, records that were created, processed, and disqualified, and errors.

Tip: Click the Errors or Disqualified hyperlinks in the Totals column within any step to view detailed reports.

Interface Error Report

View this report in one of the following ways:

- Click the **Total Errors** hyperlink at the bottom of the Interface Monitor display.
- Click the **Errors** hyperlink in the Totals area under General Information in the Interface Results Summary window.

This report displays the following error information:

- The name and description of the interface.
- A Step column that contains a series of step numbers that each have a hyperlink to the corresponding error information.
- Each step in sequential order with the specific error information, such as the following:
 - Could not find one or more files.
 - Could not get exclusive access to the source or output file while the interface was running.

Note: Whenever Integration Manager detects an incorrect date value, it skips the record that is being processed at the time. That particular record will not be written to the output file.

Link Error Report

View this report in one of the following ways:

- In the Interface Error Report window, click a numbered hyperlink in the Step Details area of the report.
- In the Interface Results Summary window, click the Errors hyperlink in the Totals column for a specific step.

This report displays the following error information:

- The name and description of the interface that includes the link.
- The step number that contains the link, as well as associated error information, such as the following:
 - The names of any variables that failed for that link.
 - A message that directs you to the wfc.log file for more details about the errors.

Note: Whenever Integration Manager detects an incorrect date value, it skips the record that is being processed at the time. That particular record will not be written to the output file.

Disqualified Records Report

View this report from the Interface Results Summary window. Click the Disqualified hyperlink in the Totals column within a specific step.

This report displays the following information about records that were disqualified within a step when the link was executed by the interface:

- Interface name
- Description of the interface
- Step number that contains the link
- List of disqualified records for that link

Link XML Log Report

The XML log report displays the name and description of the link, along with the results (including errors) from XML API operations that extracted or imported data.

You can access the Link XML Log Report from the Interface Results Summary window. Under each step in the summary, locate the XML Log entry. If that step generated an XML log report, click the View hyperlink in the right column.

System log report of data integration results

If you want to analyze data integration operations at the programming level without having to review the entire system log (wfc.log), you can create a report that extracts only the Integration Manager information from that system log file.

1. From the suite home page, click the **Setup** link and then select **System Configuration > Log Report**.
2. Specify the server names and the start and end dates.
3. In the Log Context drop-down list box, select one of the following:
 - WFC.BUSINESS.WIM — For system-level errors and information about the Integration Manager application that is installed and running on the server.
 - WFC.BUSINESS.WIM.SVC — For errors and information about specific Integration Manager interfaces that ran on the server.
4. Specify information in the remaining fields as necessary. See the Log Report online Help or the *Workforce Central System Administrator's Guide* if you need more detailed information about the Log Report feature.
5. Click **Run Report**.

Saving reports

When you view any report, you may want to save it for further analysis or delivery to a technical support person. You can use the Save As feature on your browser to save the report as an HTML or text file.

Note: If the Interface Run Summary report contains hyperlinks to other reports, be sure to open and save those individual reports as well.

Index

A

accruals
 data integration Genie 22

B

batch files
 running interfaces 27
 scheduling interfaces 27

C

Change button
 data integration 19
connections
 changing 43
 creating 41
 custom connections 48
 deleting 47
 duplicating 45
 editing 43
Connections workspace 39
custom connections 48
custom database drivers
 installing 24

D

data integration
 accruals Genie 22
 assigning multiple profiles 19
 canceling an interface 30
 Change button 19

Connections workspace 39
copying the database 26
creating a mapped folder 51
creating new connections 41
custom connections 48
deleting a mapped folder 54
deleting an interface 31
deleting connections 47
Disqualified Records Report 67
duplicating a mapped folder 52
duplicating connections 45
editing a mapped folder 53
editing connections 43
function access profiles 16
generic data access profiles 18
Interface Error Report 65
Interface Results Summary 63
Link Error Report 66
Mapped Folders workspace 49
overview 5
removing an interface 31
running an interface 28
saving reports 70
scheduling an interface 32
setup 11
setup and implementation 7
stopping an interface 30
system administration 11
system settings 12
users with generic data access profiles 19
using Delegate Authority to run interfaces 19

- using interfaces 27
- using the Mapped Folder Editor 54
- viewing interface results 62
- viewing reports 61
- XML Log 68
- database drivers
 - installing custom drivers 24
- Delegate Authority
 - using with data integration features 20
- display profiles
 - format of Interface Results Summary 16
- Disqualified Records Report 67
- drivers
 - installing custom database drivers 24

E

- Enter Data workspace 37
- Event Manager
 - scheduling an interface 32

F

- folders
 - creating a mapped folder 51
 - deleting a mapped folder 54
 - duplicating a mapped folder 52
 - editing a mapped folder 53
 - using the Mapped Folder Editor 54

G

- generic data access profiles
 - assigning multiple profiles 19
 - running interfaces with Delegate Authority 19
 - users with access to data integration 19

I

- Integration Manager
 - canceling an interface 30
 - Connections workspace 39

- copying the database 26
- creating a mapped folder 51
- creating new connections 41
- custom connections 48
- custom database drivers 24
- data integration Genie 22
- deleting a mapped folder 54
- deleting an interface 31
- deleting connections 47
- Disqualified Records Report 67
- duplicating a mapped folder 52
- duplicating connections 45
- editing a mapped folder 53
- editing connections 43
- function access profiles 16
- generic data access profiles 18
- Interface Error Report 65
- Interface Results Summary 63
- Link Error Report 66
- Mapped Folders workspace 49
- overview 5
- removing an interface 31
- running an interface 28
- saving reports 70
- scheduling an interface 32
- setup 11
- setup and implementation 7
- stopping an interface 30
- system administration 11
- system settings 12
- using interfaces 27
- using the Mapped Folder Editor 54
- viewing interface results 62
- viewing reports 61
- XML Log 68
- Interface Error Report 65
- Interface Results Summary 63
 - format 16
- interfaces 27
 - canceling 30

- deleting 31
 - Disqualified Records Report 67
 - enabling and disabling steps 35
 - Interface Error Report 65
 - Interface Results Summary 63
 - Link Error Report 66
 - overriding options 35
 - removing 31
 - running 28
 - saving reports 70
 - scheduling 32
 - setting runtime options 35
 - stopping 30
 - viewing results 62
 - XML Log 68
- L**
- Link Error Report 66
 - lookup tables
 - editing 56
 - sort order 60
 - wildcard examples 58
- M**
- Mapped Folder Editor 54
 - Mapped Folders workspace 49
 - creating a mapped folder 51
 - deleting a mapped folder 54
 - duplicating a mapped folder 52
 - editing a mapped folder 53
 - using the Mapped Folder Editor 54
- P**
- pattern matching 59
- R**
- reports
 - saving 70
- S**
- scheduling interfaces 32
 - batch files 27
 - Set Runtime Options workspace 35
 - sort order
 - in lookup tables 60
 - system administration
 - copying the database 26
 - Integration Manager 11
- U**
- using batch files 27
- W**
- wildcards
 - in lookup tables, examples 58
 - lookup tables 57
- X**
- XML Log
 - running an interface 68

