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Introduction

This document summarizes new features and changes to the Sun B2B eXchange Integrator (eXchange) application.

eXchange is the prerequisite base product for all products in Sun B2B Suite 2.0.

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1.1 About eXchange Integrator

eXchange Integrator is a B2B integration framework that provides core functions and features for the other products in the Sun B2B Suite. eXchange is tightly integrated with the Java Composite Application Platform Suite (Java CAPS), and runs as a component within the Java CAPS environment. Figure 1 illustrates how eXchange and Java CAPS components work together.

Figure 1 eXchange and the Java CAPS Framework
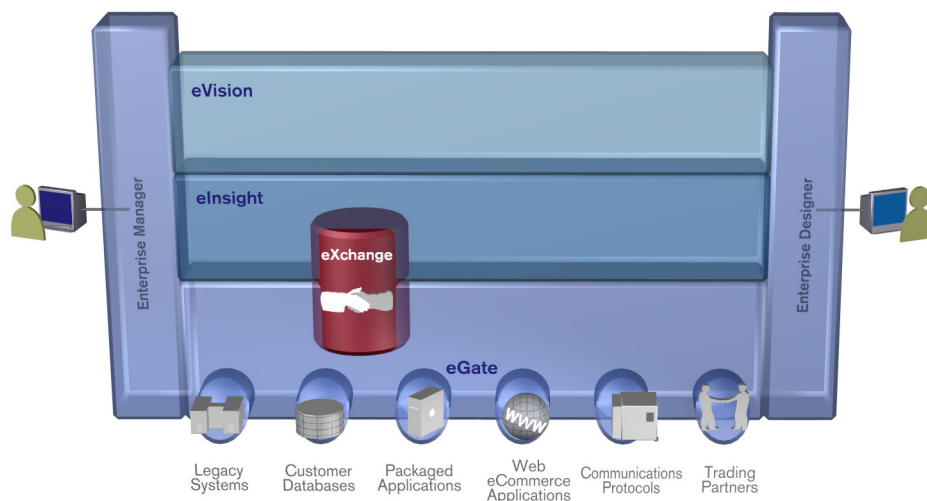
eXchange has dependencies on the following Java CAPS products as prerequisites:

- eGate Integrator
- eInsight Business Process Manager
- eWays for Batch, File, HTTP, LDAP, and Oracle

In addition, eXchange requires external servers for Oracle and for an LDAP-compliant directory server ("LDAP server").

For complete information on prerequisites and installation, refer to the *eXchange Integrator User's Guide*.

1.2 Related Documents

For late-breaking information on the B2B Suite, refer to the **B2B_Readme** file on the product media.

For information on using eXchange Integrator or other products in the B2B Suite, refer to the appropriate user's guides:

- *eXchange Integrator User's Guide*
- *ASC X12 OTD Library User's Guide*
- *ASC X12 Protocol Manager User's Guide*
- *HIPAA OTD Library User's Guide*
- *HIPAA Manager Protocol Manager User's Guide*

For more information about Java CAPS products, refer to the following:

Title	Filename
Java CAPS Installation Guide	CAPS_Install_Guide.pdf
Java CAPS Deployment Guide	CAPS_Deployment_Guide.pdf
eGate Integrator User's Guide	eGate_UG.pdf
eGate Integrator System Administration Guide	eGate_Sys_Admin_Guide.pdf
eGate Integrator JMS Reference Guide	eGate_JMS_Ref.pdf
eInsight Business Process Manager User's Guide	eInsight_UG.pdf
eWay Batch Adapter User's Guide	Batch_eWay_UG.pdf
eWay HTTPS Adapter User's Guide	HTTP_eWay_UG.pdf
eWay File Adapter User's Guide	File_eWay_UG.pdf
eWay LDAP Adapter User's Guide	LDAP_eWay_UG.pdf
eWay Adapter for Oracle User's Guide	Oracle_eWay_UG.pdf
Readme for Java CAPS / eGate Integrator	Readme.txt

1.3 Sun Microsystems, Inc. Web Site

The Sun Microsystems web site is your best source for up-to-the-minute product news and technical support information. The site's URL is:

http://www.sun.com

1.4 Documentation Feedback

We appreciate your feedback. Please send any comments or suggestions regarding this document to:

CAPS_docsfeedback@sun.com

New Features in This Release

This chapter discusses eXchange Integrator features that are new in Release 5.1.0.

What's in This Chapter

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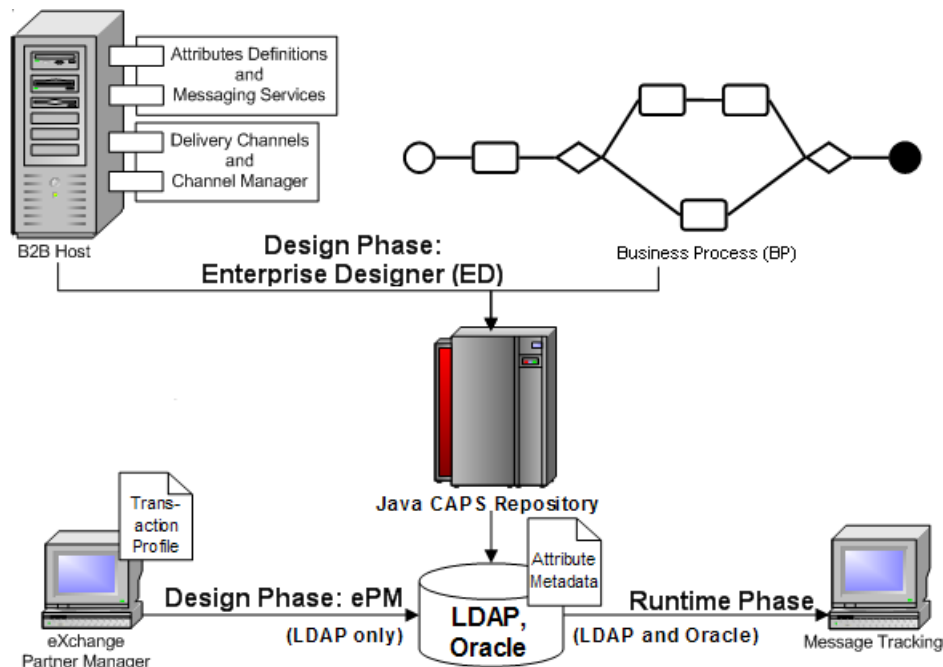- **Performance, Reliability, and Scalability** on page 10

2.1   Architecture and Compatibility

The overall architecture of eXchange components in 5.1.0 is illustrated in Figure 2.

Figure 2   eXchange Architectural Overview

2.1.1 External Systems

At 5.1.0, eXchange core processing (as opposed to eWay-mediated data flow) relies on two external systems: LDAP and Oracle.

LDAP

In releases before 5.1.0, Trading Partner information was stored in the eXchange Oracle database. With this release, eXchange now stores this information in an LDAP-compliant Directory Server. Although both Sun Java™ System Directory Server 5.2 (formerly Sun ONE Directory Server 5.2) and openLDAP 2.3.*x* are supported, the Sun Directory Service is recommended on the basis of performance.

The eXchange product is shipped with *.ldif and *.schema files for the LDAP server.

Oracle

The eXchange Oracle database continues to be used in 5.1.0 for message tracking and correlation, and the product is shipped with SQL scripts for setting up the database, as before. Because of architectural changes, an eXchange database prior to 5.1.0 cannot be migrated to 5.1.0.

2.1.2 Java CAPS Products

eInsight

In releases before 5.1.0, eXchange supplied a separate code set that provided needed eInsight functionality even if eInsight was not installed. With this release, eXchange explicitly requires eInsight 5.1.2 as an installation prerequisite.

When you are installing eXchange, the Installer detects the prerequisite of eInsight and prompts you to install it before you can install any B2B products.

eWays

At 5.1.0, eXchange now requires the LDAP eWay. In addition, the mix of required and eWays in prior releases has been replaced by a blanket requirement: The installation process now detects the prerequisite five eWays (Batch, File, HTTP, LDAP, and Oracle, all at version 5.1.2) and prompts you to install them all before you can install any B2B products.

2.2 Enterprise Designer

B2B Host Setup

At release 5.0.x, eXchange included a B2B Host Designer GUI with several panes for defining attributes, setting up internal and external delivery channels, and setting several layers of properties. With this release, B2B Host setup is greatly simplified and streamlined: all you need to do to set up a B2B Host in Enterprise Designer is to drag attribute definitions into it.

On the Environment side, a new external service is required, the B2B Configurator. When you provide valid Oracle connection parameters and build the B2B Host, it allows eXchange to use the Oracle database for message correlation and other services.

As before, creating an eXchange Service requires you to build a B2B Host using a Connectivity Map; at 5.1.0, however, the Connectivity Map requires you to connect the Host to both Oracle and LDAP.

Presupplied Projects

At 5.1.0, the eXchange product presupplies several projects that do not require separate installation. The two projects in the eXchange > GUI folder allow you to easily build the ePM and Message Tracker GUIs. Two other projects, in the eXchange > Error folder, allow you to easily build projects that write unprocessed messages to files where they can be examined for troubleshooting.

In addition, the protocol managers each presupply sample projects for demonstrating a simple implementation. For more information on these, consult the protocol manager user's guide for the corresponding protocol.

2.3 eXchange Partner Manager (ePM)

At 5.1.0, ePM (the facility for configuring and managing parameter settings for B2B Hosts and Trading Partners) has been completely revamped in both its appearance and its approach. The Host side has a simple linear chain of inheritance whereby each parameter setting can either keep the default of its parent or be overridden at any point in the chain. The Trading Partner side has a dual chain of inheritance: each parameter setting can either keep the setting of the corresponding Host level, or it can inherit along the Trading Partner chain, which has its own set of override opportunities.

This provides a powerful way of leveraging default settings and widespread overrides, and it also allows a global change to trickle down immediately if not overridden.

The ePM GUI provides a new layered appearance with consistent interface controls, replacing the previous sub[sub[...]]tabs. For each parameter setting, the GUI displays not just the current value but also the level from which the default value would be inherited if not overridden, thus making it easy to trace through the inheritance chain.

2.4 Performance, Reliability, and Scalability

One of the most important goals set for the B2B Suite was to significantly improve the performance, reliability, and scalability of message throughput. This has been achieved. Details are provided in white papers that are reproduced in modified form in the *eXchange Integrator User's Guide*.

Performance

On typical hardware (Sun Fire™ V440 with four SPARC® CPUs running Solaris 10 with 8 GB of memory), throughput of three transactions per second was consistently and repeatedly achieved or exceeded for both outbound and inbound scenarios.

Reliability

On typical hardware (Sun Fire V440 with four SPARC CPUs running Solaris 10 with 8 GB of memory), as part of final verification testing, a week-long period of continuous throughput was observed without any message loss or down time, maintaining a throughput of more than 3.3 transactions per second for more than a million messages.

Scalability

On typical hardware (Sun Fire V440 with four SPARC CPUs running Solaris 10 with 8 GB of memory), throughput was increased by as much as 24% by adding a second domain to distribute the load.