Software AG Installation Guide

Version 8.0

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About This Guide

This guide is for users who want to install the latest releases of the products listed below using the Software AG Installer.

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- webMethods Deployer 8.0
- Software AG Designer 8.0
- webMethods Developer 8.0
- webMethods EntireX 8.1
- webMethods Integration Server 8.0
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Important! Information in this guide might have been updated since you last downloaded it. Go to the Software AG Documentation Web site for the latest version of the guide.

If you must perform certain configuration tasks before you can start a product, this guide also explains those configuration tasks. For instructions on starting products and configuring them after they are started, see the product documentation.

Important! If you want to upgrade the products listed above, you must use the instructions in the *webMethods Upgrade Guide* or the appropriate product guide. The instructions in this installation guide do not cover upgrades, so following the instructions in this guide for upgrades would have unpredictable results.

Document Conventions

Convention	Description
Bold	Identifies elements on a user interface.
Narrow font	Identifies storage locations for services on webMethods Integration Server, using the convention *folder.subfolder:service*.
UPPERCASE	Identifies keyboard keys. Keys you must press simultaneously are joined with a plus sign (+).
Italic	Identifies variables for which you must supply values specific to your own situation or environment. Identifies new terms the first time they occur in the text.
`Monospace font`	Identifies text you must type or messages displayed by the system.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
|	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the | symbol.
[ ]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

Documentation Installation

You can download the product documentation using the Software AG Installer. Depending on the release of the webMethods product suite, the location of the downloaded documentation will be as shown in the table below.

For webMethods...	The documentation is downloaded to...
6.x	The installation directory of each product.
7.x	A central directory named _documentation in the main installation directory (webMethods by default).

For webMethods...	The documentation is downloaded to...
8.x	A central directory named _documentation in the main installation directory (Software AG by default).

Online Information

You can find additional information about Software AG products at the locations listed below.

Note: The Empower Product Support Web site and the Software AG Documentation Web site replace Software AG ServLine24 and webMethods Advantage.

If you want to...	Go to...
Access the latest version of product documentation.	Software AG Documentation Web site http://documentation.softwareag.com
Find information about product releases and tools that you can use to resolve problems. See the Knowledge Center to: ■ Read technical articles and papers. ■ Download fixes and service packs. ■ Learn about critical alerts. See the Products area to: ■ Download products. ■ Download certified samples. ■ Get information about product availability. ■ Access documentation for all supported versions of products. ■ Submit feature/enhancement requests.	Empower Product Support Web site https://empower.softwareag.com

If you want to...	Go to...
■ Access additional articles, demos, and tutorials. ■ Obtain technical information, useful resources, and online discussion forums, moderated by Software AG professionals, to help you do more with Software AG technology. ■ Use the online discussion forums to exchange best practices and chat with other experts. ■ Expand your knowledge about product documentation, code samples, articles, online seminars, and tutorials. ■ Link to external Web sites that discuss open standards and many Web technology topics. ■ See how other customers are streamlining their operations with technology from Software AG.	Software AG Developer Community for webMethods http://communities.softwareag.com/webmethods

1 Typical Development Installations

Overview

This chapter discusses Software AG development installations. You can install individual Software AG products, or you can install combinations of Software AG products that enable you to perform a certain task (for example, business process design). The sections below lists the Software AG products and components that make up typical development installations. The products and components are listed as they appear on the Software AG Installer.

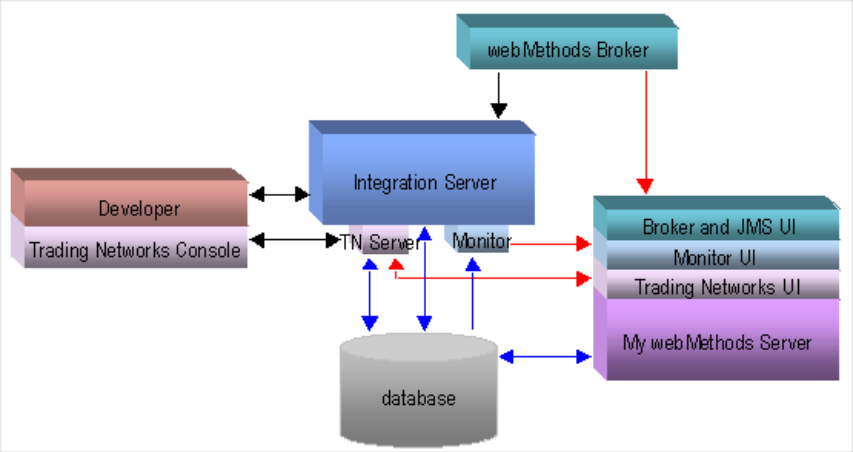
The chapter also lists the *database components* you must or can install for each development installation. A database component is a grouping of database objects that can be used by one or more Software AG products.

To create production environments, work with your administrators, Software AG Global Consulting Services, GEAR methodology, and best practices documentation.

For a summary of tasks to perform to create standalone installations of ApplinX, CentraSite, EntireX, NaturalONE, and Tamino XML Server, see the corresponding appendices.

Integration Development Typical Installation

- Developer and Trading Networks Console
- Integration Server with Trading Networks Server and Monitor
- webMethods Broker
- My webMethods Server, and My webMethods user interfaces for Trading Networks, Monitor, and Broker and JMS
- Database Component Configurator
- Documentation



Below are additional options.

If you want to...	Install this product...
Store Integration Server and Trading Networks keys and certificates securely	Integration Server PKI Support package
Maintain Developer elements in Microsoft Visual SourceSafe, IBM Rational ClearCase, or CollabNet Inc. Subversion	Integration Server VSS, ClearCase, or Subversion Support

The table below lists the database components you must or can include for an integration development installation.

Database Components	For more information, see...
ISCoreAudit ISInternal CrossReference DocumentHistory Distributed Locking	"Integration Server Data Storage" on page 24
MywebMethodsServer TradingNetworks	"Product Database Component Descriptions and Installation Requirements" on page 27

Composite Applications Development Typical Installation

- Designer Eclipse with Composite Applications Development and My webMethods Server Support plug-ins, and SOA Governance CentraSite plug-ins
- My webMethods Server
- Database Component Configurator
- Documentation

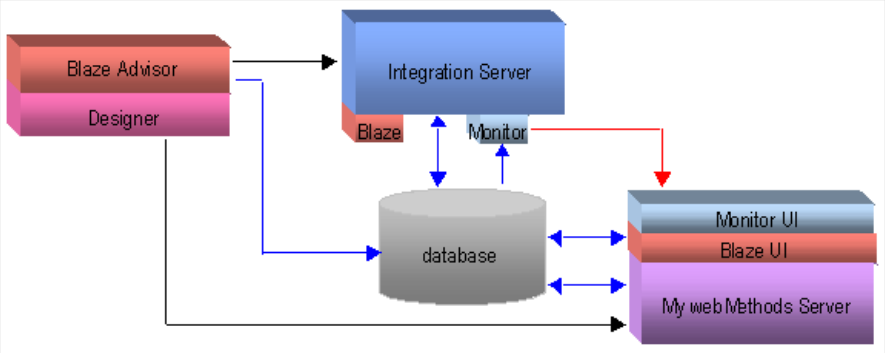
Note: In a collaborative development environment, CentraSite Registry Repository would be installed on a shared machine and accessed by development users.

The table below lists the database components you must or can include for a composite application development installation.

Database Components	For more information, see...
MywebMethodsServer	"Product Database Component Descriptions and Installation Requirements" on page 27

If you want your composite applications to call services available through other products, add the following:

- Designer ESB and Integration Server Development plug-in
- Blaze Advisor
- Integration Server with Blaze Rule Service Support and Monitor
- My webMethods user interface for Blaze and Monitor

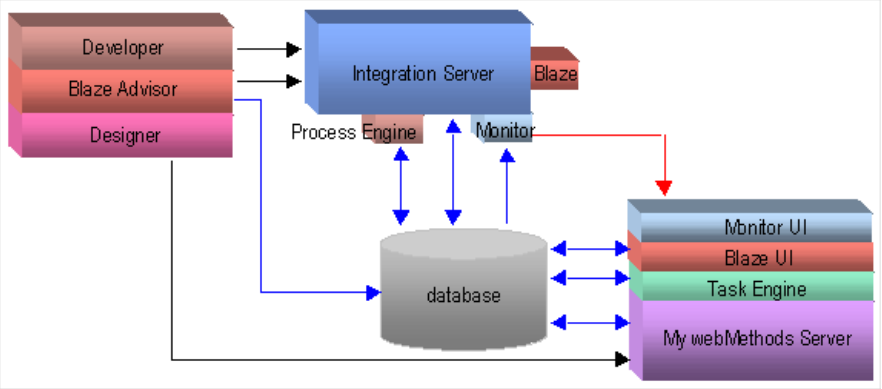


Database Components	For more information, see...
ISCoreAudit ISInternal Distributed Locking	"Integration Server Data Storage" on page 24
Blaze	"Product Database Component Descriptions and Installation Requirements" on page 27

Process Design Typical Installation

- Designer Eclipse with Business Processes Development and Simulation, Composite Applications Task Development, ESB and Integration Server Development, and SOA Governance CentraSite plug-ins
- Developer with Blaze Rule Service plug-in
- Blaze Advisor
- Integration Server with Blaze Rule Service Support, Monitor, Process Engine, and Optimize Support
- My webMethods Server with Task Engine, and My webMethods user interface for Blaze and Monitor
- Database Component Configurator
- Documentation

Note: In a collaborative development environment, CentraSite Registry Repository would be installed on a shared machine and accessed by development users.



Below are additional options.

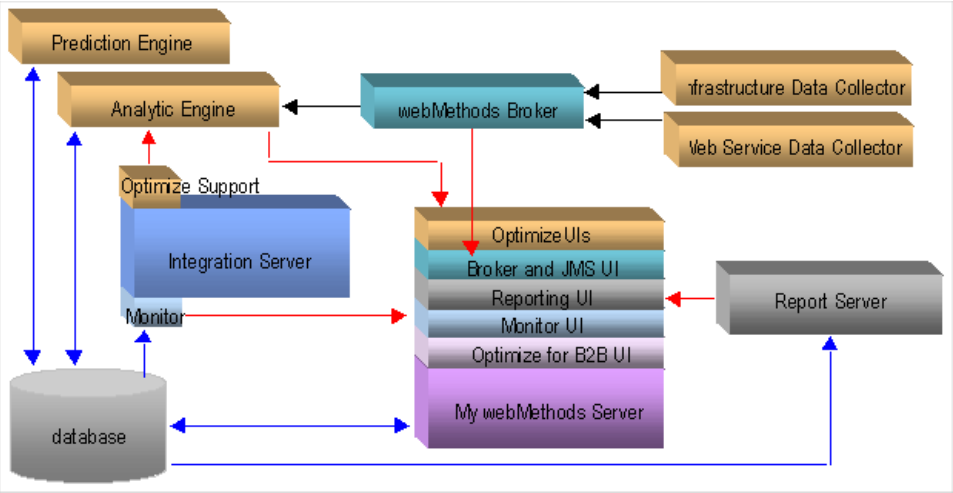
If you want to...	Install this product...
Store Integration Server keys and certificates securely	Integration Server PKI Support package
Maintain Developer elements in Microsoft Visual SourceSafe, IBM Rational ClearCase, or CollabNet Inc. Subversion	Integration Server VSS, ClearCase, or Subversion Support

The table below lists the database components you must or can include for a process design installation.

Database Components	For more information, see...
ISCoreAudit ISInternal Distributed Locking	"Integration Server Data Storage" on page 24
Blaze BPEL MywebMethodsServer ProcessEngine ProcessAudit	"Product Database Component Descriptions and Installation Requirements" on page 27

Monitoring and Reporting Typical Development Installation

- Optimize Analytic Engine and Prediction Engine
- webMethods Broker
- Integration Server with Monitor and Optimize Support
- To collect data about Software AG products, Optimize Infrastructure Data Collector
- To collect data about custom applications, Optimize Web Service Data Collector
- Report Server with Monitor, Optimize, and Optimize for B2B packages
- My webMethods Server, and My webMethods user interfaces for Optimize (all), Central Configuration, Broker and JMS, Monitor, and Reports
- Database Component Configurator
- Documentation

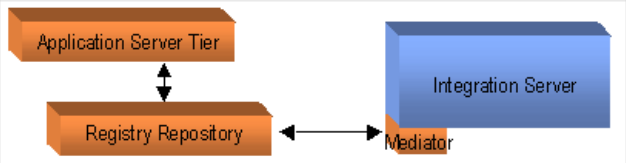


The table below lists the database components you must or can include for a monitoring and reporting installation.

Database Components	For more information, see...
Analysis CentralConfiguration MywebMethodsServer ProcessTracker ProcessAudit	"Product Database Component Descriptions and Installation Requirements" on page 27
Reporting Staging SuiteReporting SuiteReporting-Common	

SOA Governance Typical Development Installation

- CentraSite Registry Repository and Application Server Tier
- ESB and Integration Server with Mediator



The table below lists the database components you must or can include for an integration development installation.

Database Components	See
ISCoreAudit ISInternal CrossReference Distributed Locking	"Integration Server Data Storage" on page 24
MediatorEvents	"Product Database Component Descriptions and Installation Requirements" on page 27

ApplinX Typical Development Installation

- ApplinX Server, Administration, JSP and .NET Frameworks, and Visual Studio Add-in
- Designer Eclipse with ApplinX, SOA Governance CentraSite, and Web Services Stack plug-ins
- Documentation

Note: In a collaborative development environment, CentraSite Registry Repository would be installed on a shared machine and accessed by development users.

EntireX Typical Development Installation

- EntireX Core Files, Broker, Administration, Visual Studio Add-ins (Windows), and Web Services Runtime
- Designer Eclipse with EntireX and SOA Governance CentraSite plug-ins
- Documentation

Note: In a collaborative development environment, CentraSite Registry Repository would be installed on a shared machine and accessed by development users.

NaturalONE Typical Development Installations

For a typical Eclipse development installation for Natural applications:

- Designer Eclipse with NaturalONE Application Development plug-in
- If you want to develop Natural CRUD (Create, Read, Update, Delete)-type applications with database access for Adabas and other RDBMSs, Designer Application Modeling plug-in
- Documentation

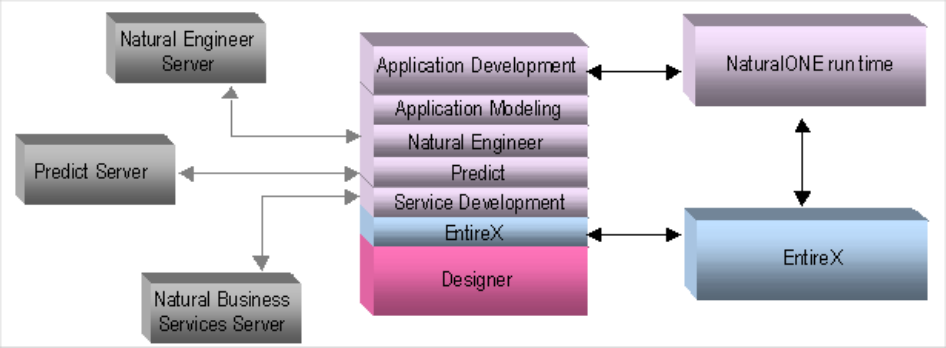
If you want a complete development installation for Natural applications, add the following:

- Designer NaturalONE Application Modeling, Natural Engineer, and Predict plug-ins
- NaturalONE run-time environment

If you want service enabling in the complete development installation, add the following:

- Designer NaturalONE Service Development and EntireX plug-ins
- EntireX

Note: In a collaborative development environment, CentraSite Registry Repository would be installed on a shared machine and accessed by development users.



Tamino XML Server Typical Development Installation

- Tamino XML Server and XTools
- Designer Eclipse with Tamino XML Server plug-ins
- Documentation

Deployer Typical Installation

Deployer is a tool you use to deploy items that reside on source Software AG servers to target Software AG servers. For example, you might want to deploy items you have developed on servers in a development environment to servers in a test or production environment. Deployer 8.0 works with 8.0 webMethods Broker, Designer, Integration Server, My webMethods Server, Optimize, and Trading Networks.

Deployer is a package you install on an Integration Server. If no firewall separates your source and target environments, install Deployer and its host Integration Server on a machine that can access all source and target servers. If a firewall separates the environments, install Deployer and its host Integration Server on a machine in the source environment that can access all source servers and in the target environment on a machine that can access all target servers.

2 Data Storage

Integration Server Data Storage

Integration Server can persist these types of data:

Type of Data	Content	Integration Server writes this data when...
IS Internal	Scheduled tasks, client certificate mappings, run-time data for pub.storage services, audit log of guaranteed delivery transactions, and trigger* joins.	You are using the features listed in the Contents column
IS Core Audit Log	■ Error, guaranteed delivery, service, security, and session audit data.	Logging is enabled (see the *webMethods Audit Logging Guide*)
	■ Documents that are in doubt, have failed, or have exhausted trigger* retries.	You are using triggers
Cross Reference	Cross-referencing data* for publish-and-subscribe solutions.	You are using publish-and-subscribe solutions
Document History*	Document history data for exactly-once processing* in publish-and-subscribe solutions. Integration Server uses the data to detect and reject duplicate documents.	You are using exactly-once processing

*For information on triggers, cross referencing, exactly-once processing, and publish-subscribe solutions, see the *Publish-Subscribe Developer's Guide*.

When you install Integration Server, the installer asks whether you want Integration Server to write data to an embedded database or an external RDBMS. The sections below explain when you would choose each option.

Embedded Database

The embedded database is SQL based. You can use the embedded database when you:

- Are going to use Integration Server as a standalone server (for example, as the run time for adapters).
- Do not have an external RDBMS.
- Are not installing in a production environment that has high transaction volumes or large datasets.

If you choose the embedded database, Integration Server will write IS Internal and Cross Reference data to that database, and will write IS Core Audit Log data to files. For information about the files, see the *webMethods Audit Logging Guide*.

Document History data can only be written to an external RDBMS. You are using exactly-once processing in publish-and-subscribe solutions, you must create the DocumentHistory database component and configure Integration Server appropriately. The database chapters and "Connect Products to Database Components" on page 158 in this guide provide instructions.

If you later choose to write IS Internal, Cross Reference, or IS Core Audit Log data to an external RDBMS instead of the embedded database, you will need to install the necessary database components, as described in the database chapters in this guide. You will then need to reconfigure where Integration Server writes IS Internal and Cross Reference data as described in *Administering webMethods Integration Server*, and IS Core Audit Log data as described in"Connect Products to Database Components" on page 158. You *must* write IS Core Audit Log data to an external RDBMS when the IS Core Audit Log includes the following types of data:

- If you are using triggers. When you use triggers, Integration Server needs to write problem documents to the IS Core Audit Log. Documents can only be written to an external RDBMS; they cannot be written to files.
- If you want services to log their input pipelines, or post user-defined progress messages (for example, to indicate whether certain pieces of code ran successfully). Input pipelines and user-defined messages can only be written to an external RDBMS; they cannot be written to files.
- You are using Mediator, and have configured the log invocation policy action in CentraSite to include the request or response SOAP envelopes with logged transaction events. The MediatorEvents database component to which Mediator writes is in the same schema or database as the ISCoreAudit database component.
- If you are using Monitor. Monitor can only read from an RDBMS.

External RDBMS

You must use an external RDBMS if you are going to:

- Cluster Integration Servers.
- Write Document History data (that is, use exactly-once processing in publish-and-subscribe solutions).
- Write Process Audit Log and Process Engine data (that is, run business processes).
- Use triggers; Integration Server can only write problem documents to an external RDBMS.
- Have services log their input pipelines, or post user-defined progress messages (for example, to indicate whether certain segments of code ran successfully).
- Use Monitor.

- You are using Mediator, and have configured the log invocation policy action in CentraSite to include the request or response SOAP envelopes with logged transaction events. The MediatorEvents database component to which Mediator writes is in the same schema or database as the ISCoreAudit database component.
- Install in a production environment with high transaction volumes or large datasets.

When you use an external RDBMS, you must create *database components*. A database component is a grouping of database objects. Each database component is named for the type of data that is written to it; for example, the database component for IS Core Audit Log data is called the ISCoreAudit database component.

Before or after installation, you must create the ISCoreAudit, ISInternal, and Distributed Locking database components in your external RDBMS. You will also create other database components as needed. For example, if you are using publish-and-subscribe solutions and exactly-once processing, you will need the CrossReference and DocumentHistory database components; if you are running business processes, you will need the ProcessAudit and ProcessEngine database components. For complete information about the database components you will need to create, see "Product Database Component Descriptions and Installation Requirements" on page 27.

When you choose the external RDBMS in the installer, the installer asks you to supply the database connection. From this information, the installer creates a JDBC connection pool and configures Integration Server to write IS Internal, IS Core Audit Log, Cross Reference, Document History, Process Audit Log, and Process Engine data to the external RDBMS using that pool.

Note: This auto-configuration of Integration Server is for ease of use only. You need not create all the corresponding database components; only create those you will actually use. Also, in a production environment, you might want to create additional JDBC connection pools and reconfigure Integration Server to write different types of data using different pools. "Connect Products to Database Components" on page 158 provides instructions.

If you are clustering Integration Servers, create one of each of the following database components for the cluster to share: ISCoreAudit, ISInternal, CrossReference, DocumentHistory, and Distributed Locking.

If you are not clustering Integration Servers, create a separate ISInternal and Distributed Locking database component for each Integration Server. You can create a separate ISCoreAudit database component, CrossReference database component, and DocumentHistory database component for each Integration Server, or you can create a single one of each of those database components for the Integration Servers to share.

Product Database Component Descriptions and Installation Requirements

This section briefly describes each database component and its installation requirements.

Note: For detailed information on product concepts mentioned in the sections below, see the relevant product documentation.

Analysis Database Component

If you install Optimize, you must create the Analysis database component.

Optimize Analytic Engines write computed analytics and process and monitoring data received from Infrastructure Data Collectors and Web Service Data Collectors to the Analysis database component. Optimize Prediction Engines evaluate the data and generate prediction events. The Optimize user interface in My webMethods displays the data.

The Report Server generates Optimize reports about key performance indicators (KPIs) from the data in the Analysis database component. The Reporting user interface in My webMethods displays the data.

Create a single Analysis database component for all Optimize Analytic Engines to share. If you are going to use root cause analysis for business processes, install the Analysis and ProcessTracker database components in the same schema (Oracle) or database (DB2 or SQL Server).

Archive Database Component

If you want to archive data from the ISCoreAudit and ProcessAudit database components (called the “source” database components in this section), create the Archive database component.

The Archive database component includes a copy of the ISCoreAudit and ProcessAudit database components. The requirements for the Archive database component are as follows:

- You must create the Archive database component in the same type of RDBMS as the source database components.
- For DB2, you must create the Archive database component on the same database server as, but in a different database from, the source database components.
- For Oracle or SQL Server, you can do either of the following:
  - Create the Archive database component on the same database server as the source database components. In this case, you must create the Archive database component in a different schema (Oracle) or database (SQL Server) than the source database components.

- Create the Archive database component on a different database server than the source database components, and then create a DBlink name for the Archive database component to use to link to each source database component. If the two source database components are on the same database server, the Archive database component can use the same DBLink to connect to both source database components. For instructions on specifying the DBlink name, see *Monitoring BPM, Services, and Documents with BAM: webMethods Monitor User's Guide*.

Blaze Database Component

If you want to use the Blaze user interface in My webMethods to edit rules created in Blaze Advisor, create the Blaze database component.

Blaze Advisor writes metadata, project information, and rulesets for Blaze rules to this database component. The Blaze user interface connects to this database component to retrieve Blaze rules and to store Blaze rules after users modify them.

BPEL Database Component

If you install BPEL Engines on Integration Servers to orchestrate BPEL processes, you must create the BPEL database component.

BPEL Engines write process execution data for processes they orchestrate to this database component.

If you are clustering BPEL Engines, create a single BPEL database component for the clustered BPEL Engines to share. If you are not clustering, create a separate BPEL database component for each BPEL Engine.

CentralConfiguration Database Component

The CentralConfiguration database component is automatically created when you create the MywebMethodsServer database component. The CentralConfiguration database component stores the Optimize configuration information you enter in the Central Configuration interface in My webMethods.

Note: The CentralConfiguration database component is not automatically *dropped* when you drop the MywebMethodsServer database component. If you want to drop the CentralConfiguration database component, you must do so manually.

ISCoreAudit, ISInternal, Cross Reference, DocumentHistory, and Distributed Locking Database Components

See "Integration Server Data Storage" on page 24.

MediatorEvents Database Component

If you install Mediator on Integration Server to enforce SOA policies, you must create the MediatorEvents database component. You must create the MediatorEvents database component in the same schema (Oracle) or database (SQL Server and DB2) as the ISCoreAudit database component.

Mediator writes transaction events about certain SOA policies to the MediatorEvents database component.

MywebMethodsServer Database Component

If you install My webMethods Server, you must create the MywebMethodsServer database component.

The following write to this database component:

- My webMethods Server writes data about deployment, configuration, security, portal pages, and run-time operations. It uses this data to manage the My webMethods user interfaces (that is, the user interfaces in My webMethods for Broker and JMS, Monitor, Optimize, Optimize for B2B, Reporting, and Trading Networks) and to support central user management in Integration Server and Optimize.
- The Task Engine writes task status, task distribution, and business data. The Task Engine user interface in My webMethods displays the data.

If you are clustering My webMethods Servers, create a single MywebMethodsServer database component for the cluster to share. If you are not clustering, create a separate MywebMethodsServer database component for each My webMethods Server.

ProcessAudit Database Component

If you install Process Engines, you must create the ProcessAudit database component.

The following write to this database component:

- Process Engines write process audit data for business processes that they orchestrate.
- Task Engines write task audit data.
- Third-party products can write process execution data.

Optimize Analytic Engines read process data from this database component so they can analyze capabilities such as transition duration and write data about analysis-enabled processes. The Optimize user interface in My webMethods displays the data.

If you are distributing business process steps, you cluster the Process Engines that orchestrate the steps. Create a single ProcessAudit database component for the clustered Process Engines to share. Integration Servers that host these Process Engines and also the Blaze Rule Service Support package register themselves in the shared ProcessAudit

database component. When users modify rules in the Blaze user interface in My webMethods, the interface redeploys the modified rules to the registered Integration Servers.

If you are not distributing business process steps, and therefore not clustering Process Engines, you can create either a separate ProcessAudit database component for each Process Engine or a single shared ProcessAudit database component.

Create a single ProcessAudit database components for all Task Engines to share.

If you are using Process Engines, Task Engines, Optimize Analytic Engines, or some combination of these, create a single ProcessAudit database component for all to share.

ProcessEngine Database Component

If you install Process Engines on Integration Servers, you must create the ProcessEngine database component.

Process Engines write process execution data for processes they orchestrate to this database component.

If you are distributing business process steps, you cluster the Process Engines that orchestrate the steps. Create a single ProcessEngine database component for the clustered Process Engines to share. If you are not clustering, create a separate ProcessEngine database component for each Process Engine.

ProcessTracker Database Component

If you install Optimize, you must create the ProcessTracker database component.

Optimize Analytic Engines write business and process status data received from processes that are not orchestrated by the Process Engine to the ProcessTracker database component. The Optimize user interface in My webMethods displays the data.

Create a single ProcessTracker database component for all Optimize Analytic Engines to share. If you are going to use root cause analysis for business processes, install the ProcessTracker and Analysis database components in the same schema (Oracle) or database (DB2 or SQL Server).

Staging and Reporting Database Components

If you want to simulate business processes in Designer using historical data, create the Reporting database component. Tables for simulation data are automatically created as part of the Reporting database component.

If you want to generate Monitor reports, create the Staging and Reporting database components. Monitor extracts business process audit and execution data from the ProcessAudit database component and aggregates it using the Staging and Reporting

database components. The Report Server generates the Monitor reports about business process execution metrics from the aggregated data in the Reporting database component. The Reporting user interface in My webMethods displays the reports.

You can create the Reporting and Staging database components in the same database. However, the Monitor services that aggregate and load data consume large amounts of the CPU. For best performance, install the Reporting and Staging database components on a database server that will not adversely affect the ProcessAudit or ProcessTracker database components.

The ProcessAudit, Staging, and Reporting database components have a 1-to-1-to-1 relationship. This means that you cannot gather data from multiple ProcessAudit database components into a single Reporting database component. The Report Server can generate Monitor reports from only one Reporting database component at a time.

SuiteReporting Database Component

If you install Report Server, the SuiteReporting database component is automatically created when you create the MywebMethodsServer database component. The SuiteReporting component stores the configuration information you enter in the Reporting interface in My webMethods.

Note: The SuiteReporting database component is not automatically *dropped* when you drop the MywebMethodsServer database component. If you want to drop the SuiteReporting database component, you must do so manually.

SuiteReporting-Common Database Component

If you install Report Server, and are using Trading Networks and Optimize reports, you must create this database component in the TradingNetworks and Analysis database components, respectively. This database component stores the database objects for the reports.

Note: Monitor reports do not require this database component.

TradingNetworks and TradingNetworksArchive Database Components

If you install Trading Networks, you must create the TradingNetworks database component. If you want to archive your Trading Networks data, also create the TradingNetworksArchive database component.

Trading Networks Server writes metadata (partner profiles, trading partner agreements, document types, processing rules, and partner profile groups) and run-time data (documents, document content parts, attributes, and delivery information) to the TradingNetworks database component. Trading Networks Server also logs entries about

document processing steps. Trading Networks Console and the Trading Networks user interface in My webMethods display the data. Trading Networks archiving functionality can archive data from the TradingNetworks database component to the TradingNetworksArchive database component.

The Report Server generates Trading Networks reports about B2B transactions and trading partners from the data in the TradingNetworks and TradingNetworksArchive database components. The Report Server generates Optimize for B2B reports about Trading Networks document types and attributes that are monitored by Optimize for B2B from the data in the TradingNetworks database component. The reports display in the reporting user interface in My webMethods.

If you are clustering Trading Networks Servers, create a single TradingNetworks database component for the cluster to share. If you are not clustering, create a separate TradingNetworks database component for each Trading Networks Server.

Create the TradingNetworksArchive database component in the same database as the source TradingNetworks database component.

Infrastructure Database Components

The Storage database component creates default storage structures, such as tablespaces and user credentials, for all database components.

The table below lists infrastructure database components that are automatically created when you create product-related database components.

Database Component	Description
ComponentTracker	Tracks the database components that are created or dropped.
DataPurge	Provides a common method for purging data from the Analysis and Process Tracker database components.
DatabaseManagement	Provides core routines for data purge functionality.
DistributedLocking	Coordinates access to resources across a distributed collection of servers and processes. Resources can be locked for exclusive use, to prevent another server from accessing the resource as it is being updated, or for shared use, to prevent another server from updating the resource as it is being accessed.
OperationManagement	Provides a common method for configuration, logging, and error handling for any database component.

3 Software and Hardware Support and Requirements

Operating System Support

For information on operating systems that are supported by NaturalONE, see the *Software AG NaturalONE Release Notes*. For information on operating systems that are supported by all other products, see the *webMethods System Requirements*.

Special Considerations for Integration Server

- Integration Server supports Web applications and JavaServer Pages (JSPs) on Windows and Solaris systems.
- Integration Server supports C/C++ and Visual Basic code generation on OS/JVM bit mode 32/32 and 64/32 platforms only.
- Integration Servers on IBM i5 or Mac systems cannot connect to Brokers using SSL.
- Integration Servers on IBM i5 systems do not support C/C++ code generation.

Special Considerations for webMethods Broker

- On Windows and Linux systems, Software AG offers dedicated 64-bit and 32-bit versions of Broker Server. The 64-bit Broker Server is supported on 64-bit systems. The 32-bit Broker Server is supported on 32-bit systems.
- On Solaris, HP-UX, and AIX systems, Broker Server is a 64-bit binary application. Before you install Broker Server on one of these systems, you must configure the operating system kernel to run in 64-bit mode.
- On AIX or HP-UX systems, if you install the webMethods Broker C API, Software AG installs 64-bit and 32-bit versions. The 64-bit C API is installed in the *webMethods Broker_directory*/lib directory. The 32-bit API (LP32 Object Code) is installed in the *webMethods Broker_directory*/lib32 directory.

RDBMS Support

For information on RDBMSs that are supported by your products, see the *webMethods System Requirements*. For information on supported database drivers, see "Products and Databases" on page 104.

Browser Support

For information on browsers that are supported by NaturalONE, see the *Software AG NaturalONE Release Notes*. For information on browsers that are supported by all other products, see the *webMethods System Requirements*.

JDK Support

The installer automatically installs appropriate JDKs on most operating systems. For information on the JDK that each product uses by default on each type of system, see "Installed JDKs and Product JDK Usage" on page 163.

Third-party Software Requirements

ApplinX

If you are installing ApplinX and want to develop .NET ApplinX Web applications in Visual Basic or C#, you must install one of the following:

- Microsoft Visual Studio 2005
- Microsoft Visual Studio 2008 and the Microsoft Visual J# .NET 2.0 Redistributable Package

Hardware Requirements

The table below lists the minimum and recommended hardware requirements for each product. Recommended amounts are shown in parentheses.

Important! The hardware requirements below are for products only. They do not include 200MB of hard drive space for Software AG infrastructure shared libraries required by most products and installed once per installation directory. They do not include requirements for supporting software such as RDBMSs. You must determine the overall hardware requirements for each of your machines based on the overall requirements of your operating system and software.

Product	Hard Drive Space	RAM	CPUs
ApplinX			
Server	100MB	80MB+300KB per user	2 (4)
Administration	75MB	40MB	
JSP Framework	50MB	2GB	
C#.NET Framework	55MB	2GB	

*Includes 500MB hard drive space, 1GB RAM, and 1 CPU for System Management Hub and Web Services Stack.
†Includes all Software AG plug-ins.
‡4GB on 64-bit systems. 1GB in development environments.
**Minimum Intel Pentium 4 2.0 GHz or equivalent.

Product	Hard Drive Space	RAM	CPUs
VB.NET Framework	30MB	2GB	
Visual Studio Add-In	1MB	2GB	
Blaze Advisor	200MB	1GB (2GB)	1
webMethods Broker	750MB (1.2GB)	512MB (2GB)	1
CentraSite*			
Registry Repository	1GB (2GB)	1GB (2GB)	1 (2)
Application Server Tier	1GB (2GB)	1GB	1 (2)
Database Component Configurator	60MB		
Deployer	20MB	Nothing beyond the host Integration Server	
Designer	1.6GB†	1.5GB (2GB)	1 (2)
Developer	100MB (200MB)	128MB (256MB)	1
EntireX*	800MB	1GB (2GB)	1
Integration Server	200MB (350MB)	256MB (512MB)	1
Monitor	Nothing beyond host Integration Server.		
My webMethods Server	300MB	1GB (2GB)	1
NaturalONE			
Eclipse development installation without runtimes	970MB	1.5GB (2GB)	1 (2)
Eclipse development installation with NaturalONE runtime	1GB	1.5GB (2GB)	1 (2)
Eclipse development installation with service enabling and NaturalONE and EntireX runtimes	1.8GB	1.5GB (2GB)	1 (2)
Optimize			
Analytic Engine	100MB	2GB‡	1**
Prediction Engine	100MB	2GB‡	1**
Infrastructure Data Collector	300MB	2GB‡	1
Web Service Data Collector	100MB	256MB	1

*Includes 500MB hard drive space, 1GB RAM, and 1 CPU for System Management Hub and Web Services Stack.

†Includes all Software AG plug-ins.

‡4GB on 64-bit systems. 1GB in development environments.

**Minimum Intel Pentium 4 2.0 GHz or equivalent.

Product	Hard Drive Space	RAM	CPUs
Process Engine	Nothing beyond host Integration Server.		
Report Server	2.5GB	2GB	
Tamino XML Server*	5GB	1GB	1
Task Engine	Nothing beyond host My webMethods Server.		
Trading Networks			
Console	25MB	128MB (256MB)	
Server	50MB		1

*Includes 500MB hard drive space, 1GB RAM, and 1 CPU for System Management Hub and Web Services Stack.
†Includes all Software AG plug-ins.
‡4GB on 64-bit systems. 1GB in development environments.
**Minimum Intel Pentium 4 2.0 GHz or equivalent.

Documentation

Product	Hard Drive Space
Main Product Documentation	680MB
Third-party Documentation	140MB

Additional Hardware Requirements

This section describes additional requirements you must consider when determining actual hardware requirements for the indicated products.

Product	Additional Requirements
webMethods Broker	webMethods Broker might require additional hard drive space if your documents are large, or if your clients use many guaranteed documents.
Deployer	Deployer requires additional hard drive space for the deployment projects you create. When allocating space, allow for the number of projects to increase over time.
Optimize engines	Each engine requires 1GB virtual swap space and a disk subsystem with 10GB available free space. In a production environment, the disk subsystem must have a redundant array of independent disks (RAID 5), an UltraWide SCSI, and 10K to 15K RPM drives. Also in a production environment, each engine requires additional hard drive space for log files. The recommended amount is 100MB; each engine requires 7MB of hard drive space for each log file.

Product	Additional Requirements
Optimize Web Service Data Collector	Each Web Service Data Collector requires 128MB of virtual swap space. In a production environment, each Web Service Data Collector requires additional hard drive space for log files. The recommended amount is 75MB; each Web Service Data Collector requires 5MB of hard drive space for each log file. More hard drive space might be required if you use debug level or higher logging.
Trading Networks	To use large document handling, you need additional hard disk drive space on which Trading Networks Server can temporarily save documents (rather than store them in memory). The amount of space you need varies based on the number of documents you process concurrently and the size of the documents you process. For example, if your typical concurrent document load is 10, you would need hard disk drive space that is 10 to 15 times the combined size of the documents being processed concurrently. For more information, see *Managing B2B Integrations: webMethods Trading Networks User's Guide*.

4 Preparing for Product Installation

About the Software AG Installer

The Software AG Installer offers two modes:

Mode	Description
Wizard	Available on all operating systems supported by Software AG products. UNIX systems must have an X Windows environment. You can use the wizard to install locally or remotely. Note: When you run the installer on an IBM i5 system, the installer experiences display problems. While these display problems will not adversely affect the installation process, Software AG strongly recommends that you minimize the problems by running the installer from an IBM i5 client for Windows rather than from a telnet client.
Console	You can use console mode to install locally or remotely on a UNIX, IBM i5, or Mac operating system.

The installer writes errors or warnings that occur during installation to a file named installLog.txt in the *Software AG_directory*/install/logs directory. If necessary, you can change logging behavior. For instructions, see "Change Logging Level and File, and Add Targets" on page 60 or page 91.

The installer writes product, version, and build information to an audit history log file named history.txt in the *Software AG_directory*/install/history directory.

Important! Software AG strongly recommends that you create an installation image and store it on your internal network before installing your software. You should create an image for each operating system that is covered by your license agreement on which you plan to install (for example, 32-bit, 64-bit, or both). This will help you reduce WAN traffic and speed installation, and ensure consistency across installations over time, since the installer provides only the latest release of each product.

Prepare for Installation on All Systems

1 Software AG recommends upgrading your operating system to the most recent maintenance level (Windows Service Pack, AIX Technical Level, HP-UX Quality Patch Bundle, SuSE/RedHat Service Pack/Update) before installing your products. Except where noted elsewhere in this chapter, webMethods products will work on any patch level.

2 Make sure the machine on which you are going to run the installer has at least 1GB of available virtual memory.

3 Make sure the machine has the following amounts of available disk space in its system temp (Windows) or temporary (UNIX) directory:

Installation	Available Disk Space
The products you are installing do not include Designer Eclipse, EntireX, or the Report Server, and you are not installing from an installation image.	100MB
You are installing Designer Eclipse.	Additional 200MB
You are installing EntireX.	Additional 800MB
You are installing the Report Server.	Additional 4GB
You are installing from an installation image.	Enough additional disk space to accommodate the image; for example, if the image is 200MB, the directory must have at least 300MB of available disk space

Note: If necessary, you can specify a different directory to use as the system temp or temporary directory when you start the installer (see"Start the Software AG Installer" on page 53 and page 86).

4 Software AG provides license files for several products; the installer requires them during installation. Copy the license files to the machine.

5 When you install ApplinX, CentraSite, EntireX, or Tamino XML Server, the installer automatically also installs some or all of these components: System Management Hub, Tomcat Kit, and Java Development Kit 1.6. If you have never installed these components before, or if your machine already has installations of earlier releases of these components, Software AG strongly recommends that you back up or image your machine before you install.

Note: In earlier releases, Tomcat Kit was known as Common Tomcat Package, and Java Development Kit 1.6 was known as Common Java Package.

Prepare for Installation on a Windows System

1 Download the Software AG Installer for Windows as instructed by your installation email from Software AG.

2 Shut down the Software AG products listed below.

Important! Software AG products that are not listed do not need to be shut down.

Products to Shut Down	Method
Running as applications: ApplinX EntireX (all Brokers and RPC Servers) My webMethods Server and Task Engine Optimize Analytic Engine, Prediction Engine, and Web Service Data Collector Report Server	Use Windows Start menu (**Start > Programs > Software AG > Stop Servers** > *product*)
Running as application: Tomcat Kit	Open a command window and run the command `net stop SAGCTP80`
Running as services: ApplinX Broker Monitor (stops Broker Servers) CentraSite Application Server Tier My webMethods Server and Task Engine Optimize Analytic Engine, Prediction Engine, and Web Service Data Collector Report Server System Management Hub* Tomcat Kit	Use Windows Services window (Software AG webMethods *product release*)
Running as service: Report Server	Run script (see product documentation)
CentraSite Registry Repository Developer Designer Integration Server (and products it hosts) Optimize Infrastructure Data Collector Tamino XML Server	Use product interface (see product documentation)

*System Management Hub services are named Software AG CSLayer Service and EventLayer Service.

Prepare to Install ApplinX, CentraSite, EntireX, NaturalONE, or Tamino XML Server

If you are going to install one or more of these products, complete the appropriate tasks below.

- If you are going to install ApplinX and want to develop .NET ApplinX Web applications in Visual Basic or C#, install Microsoft Visual Studio 2005, or install Microsoft Visual Studio 2008 and the Microsoft Visual J# .NET 2.0 Redistributable Package. Microsoft Visual Studio does not have to be running when you install ApplinX.

  Important! If you do not install Microsoft Visual Studio, you will not be able to install the ApplinX Visual Studio Add-in component, and the ApplinX .NET Framework component will have limited functionality; you will not be able to develop composite Web applications.

- If you are going to install ApplinX, CentraSite, Designer, EntireX, NaturalONE, or Tamino XML Server on a Windows Vista or Windows Server 2008 system, disable User Account Control (UAC).

  Important! If you do not disable UAC, installation will fail.

- If you are going to install CentraSite, EntireX, NaturalONE, or Tamino XML Server, apply all operating system patches recommended by Microsoft for your operating system.
- If you are going to install CentraSite, run the CentraSite Prerequisite Check Utility. The utility makes sure your machine meets the requirements for a CentraSite installation.

  a Log on to the Empower Product Support Web site, then go to https://empower.softwareag.com/sl24sec/SecuredServices/Products.nav5/Component_Downloads.lnk2/Default.htm#CentraSite.

  b From the CentraSite area, download the chkprg-win.zip file to your machine.

  c Unzip the file into any directory.

  d Log on to your machine as the user name under which you will run the installer.

  Important! If you log on as any other user you will experience unpredictable results.

  e Open a command window, go to the directory in which you are going to install CentraSite, and run the command `chkprg.cmd`.

  The command output displays in the command window. If the display includes PREREQUISITES VIOLATIONs or PREREQUISITES WARNINGs, address them and then run the utility again until there are no violations or warnings. When the

utility runs successfully, it writes the log file CSprereqChecked80SP4.txt to your home directory. If the utility does not run successfully, it does not write the log file, and the installer will not be able to install CentraSite.

Prepare to Install Report Server

If you are going to install Report Server, apply all operating system patches listed here for your operating system:
http://www-01.ibm.com/support/docview.wss?rs=3442&uid=swg27014428.

Prepare for Installation on a UNIX, IBM i5, or Mac System

1 Download the Software AG Installer for UNIX as instructed by your installation email from Software AG.

2 Install a 32- or 64-bit JRE or JDK 1.5 or 1.6 to run the installer. For an AIX system, if you want to install a JDK 1.6, you must install JDK 1.6 SR4.

Important! On IBM i5 and Mac systems, the installer configures products to use the JRE or JDK you install in this step. To determine whether you need a JRE or JDK, check your products' requirements in "Redirect Products to Use a Non-Default JRE or JDK" on page 166.

3 If you are going to install your products on a remote machine and you want to install using the installer wizard, an installation image, or an installation script that uses the wizard, follow these steps:

a Enable the display of the local machine using the command shown below, where *remote_host* is the remote machine on which you are going to install:

```
xhost +remote_host
```

b Log on to the remote machine and set the DISPLAY variable on the remote machine to point to the local machine. For example, if you are using a Bash shell, are installing from a local machine named installmachine, and want to set the display to the default device, enter:

```
export DISPLAY=installmachine:0.0
```

4 The user file-creation mode mask (umask) determines the file permissions for newly created files. Make sure the umask you are using for installation will not prevent users from accessing and executing the installed files. For example, on many UNIX systems, the common umask 022 allows all users the necessary access.

5 Use the instructions provided in the product documentation to shut down the Software AG products listed below if they are running on the machine on which you are going to install.

Important! Software AG products that are not listed do not need to be shut down.

- ApplinX
- Broker Monitor (stops Broker Servers)
- CentraSite
- EntireX (all Brokers and RPC Servers, but not Broker Admin Service)
- Integration Server (and products it hosts)
- My webMethods Server and Task Engine
- Optimize Analytic Engine, Prediction Engine, and Infrastructure Data Collector
- Report Server
- System Management Hub
- Tamino XML Server
- Tomcat Kit

Prepare to Install webMethods Broker

If you are going to install webMethods Broker, do the following:

- Information about webMethods Broker installations is stored in the BrokerInstallations.txt file in the /var/opt/webMethods directory. Make sure you have write permission to that directory.
- Broker Monitor and Broker Server require certain minimum system and user limits on UNIX systems. Ask your system administrator to set the following values for each process:

Limit	Value
Maximum threads	`512`
Maximum open files	`8192`
Core dump size	`unlimited`

- The Broker Server for Solaris, HP-UX, and AIX systems is a 64-bit binary application. If you are going to install webMethods Broker on one of these systems, configure the operating system kernel to run in 64-bit mode. You cannot run the 64-bit Broker Server on an operating system kernel that is configured to run in 32-bit mode.
- If you are going to install on an AIX system, Software AG strongly recommends that you upgrade to the most recent AIX Technical Level (TL). At minimum, you must have TL 8 for AIX 5.3 and TL 4 for AIX 6.1.
- If you are going to install on a Solaris system, Software AG strongly recommends that you install the latest Recommended Patch Cluster for Solaris provided by Sun (http://sunsolve.sun.com).

- If you are going to install on a SuSE Linux Enterprise Server (x86_64) or Red Hat Enterprise Linux Server (x86_64) system, install the compat-libstdc++ package from your operating system distributions using the vendor instructions.
- If you are going to configure Broker Server to create data files on an NFS-mounted partition, mount the partition using the command below. The options on the command help protect data integrity.

```
mount -o hard,nointr,proto=tcp host:/path /mount_point
```

Option	Description
`hard`	By default, if the NFS server does not respond to requests from the Broker Server, the Broker Server tries a few times and then fails. The `hard` option forces the Broker Server to keep retrying until the NFS server responds. The Broker Server hangs during this period.
`nointr`	Prevents users from shutting down the Broker Server while it waits for the NFS server to respond.
`proto=tcp`	By default, the NFS-mounted partition uses the user datagram protocol (UDP) protocol to communicate with the Broker Server. The proto=tcp option forces the partition to use transmission control protocol (TCP) instead. TCP is more reliable than UDP.

Suppose the partition you want to mount is on a machine named netappca, the data directory on the partition is wmbroker_data, and you want to mount the partition on the local file system at /var/opt/wmbroker_data. The command would be as follows:

```
mount -o hard,nointr,proto=tcp netappca:/wmbroker_data /var/opt/wmbroker_data
```

For information on other ways to protect data integrity, see your NFS server documentation.

Prepare to Install ApplinX, CentraSite, EntireX, NaturalONE, or Tamino XML Server

If you are going to install one or more of these products, complete the appropriate tasks below.

- If you are going to install on a SuSE Linux Enterprise Server system that is configured to run in parallel boot mode, disable parallel boot mode. Open the file /etc/sysconfig/boot and set `RUN_PARALLEL=no`.

Important! You must disable parallel boot mode or the rc.scripts that are installed by the installer will not work and installation will fail. Do not re-enable parallel boot mode after installation.

- If you are going to install on a SuSE Linux Enterprise Server 10 or Red Hat Enterprise Linux Server 5 system, install compat-libstdc++, glibc, libgcc, pam, and ncurses RPM from your operating system distribution using the vendor instructions.
- The installer will ask whether you want to install using sudo authentication. If you want to install using sudo, you must make sure sudo preserves your environment settings. For examples, if you are installing on a SuSE Linux Enterprise Server or Red Hat Enterprise Linux Server system, you cannot use the option `Defaults env_reset`; you would open the sudo configuration file /etc/sudoers and do the following:

On this system...	Do this...
SuSE Linux Enterprise Server 10	Comment out the option `Defaults env_reset`.
SuSE Linux Enterprise Server 11 or Red Hat Enterprise Linux Server 5	Explicitly set the `Defaults env_reset` option with ! (that is, `Defaults !env_reset`).

- If you are going to install CentraSite or Tamino XML Server, complete the appropriate tasks below.
  - Make sure your system is using the DES, MD5 or Blowfish algorithm to encrypt the password of the user name under which you are going to run the installer.
  - If you are going to install on an HP-UX 11.31 (11i v3) system, apply the operating system patches PHCO_36900 (11.31 libc cumulative patch) and Sep '07 (11.31 Standard Patch Bundles).
  - CentraSite and Tamino XML Server do not support SELinux. If you are going to install on a Linux system, disable SELinux by setting SELINUX=disabled in the /etc/selinux/config file or by executing system-config-securitylevel.
  - If you are going to install on an AIX 5.3 system, apply the latest patch cluster recommended by the vendor. Also enable the AIX asynchronous I/O facility, as follows:
    1. Log on as super user.
    2. Run the AIX system administration command smit.
    3. Go to Devices > Asynchronous I/O and click Change/Show Characteristics of Asynchronous I/O. Accept the default values.
    4. Go to Devices > Asynchronous I/O and click Configure Defined Asynchronous I/O. If the command is successful, the system returns the message `aio0 available`.
  - If you are going to install on an AIX 6.1 system, apply the latest patch cluster recommended by the vendor. Also, make sure the I/O facility, which is enabled by default, is available by running the command `ioo -a | grep active`. If the command runs successfully, the system returns the message `aio_active = 1 posix_aio_active = 1`.

- If you are going to install on a Solaris 9 system, CentraSite and Tamino XML Server require certain kernel parameters settings. Check the /etc/system file to make sure the current parameter settings match or exceed the minimum values listed below. Software AG recommends setting the `shmmax` parameter to the size of the physical memory on your machine in bytes. You can use the prtconf command to find your machine's physical memory.

  Important! If you change any of the parameter settings in your /etc/system file, you must reboot your machine to make the changes take effect

```
set pt_cnt=512

* set inode cache
set ufs_ninode=32000

* set DNLC (Directory Name Lookup Cache)
set ncsize=32000
set msgsys:msginfo_msgmap=512
set msgsys:msginfo_msgmax=8192
set msgsys:msginfo_msgmnb=64000
set msgsys:msginfo_msgmni=512
set msgsys:msginfo_msgseg=8192
set msgsys:msginfo_msgssz=8
set msgsys:msginfo_msgtql=512
set semsys:seminfo_semaem=16384
set semsys:seminfo_semmap=512
set semsys:seminfo_semmni=512
set semsys:seminfo_semmsl=512
set semsys:seminfo_semmns=1024
set semsys:seminfo_semmnu=1024
set semsys:seminfo_semume=36
set semsys:seminfo_semvmx=32767
set shmsys:shminfo_shmmax=1024000000
set shmsys:shminfo_shmmni=100
set npty=512
```

- If you are going to install CentraSite, run the CentraSite Prerequisite Check Utility. The utility makes sure your machine meets the requirements for a CentraSite installation. For example, the utility makes sure the inittab configuration is readable and that a loopback device is configured in an IPv4 network.

  a Log on to the Empower Product Support Web site, then go to https://empower.softwareag.com/sl24sec/SecuredServices/Products.nav5/Component_Downloads.lnk2/Default.htm#CentraSite.

  b From the CentraSite area, download the chkprg-ux.zip file to your machine.

  c Unzip the file into any directory.

  d Log on to your machine as the user name under which you will run the installer.

  Important! If you log on as any other user you will experience unpredictable results.

e Open a command window, go to the directory in which you are going to install CentraSite, and run the command `chkprq.sh`.

The command output displays in the command window. If the display includes PREREQUISITES VIOLATIONs or PREREQUISITES WARNINGs, address them and then run the utility again until there are no violations or warnings. When the utility runs successfully, it writes the log file CSprereqChecked80SP4.txt to your home directory. If the utility does not run successfully, it does not write the log file, and the installer will not be able to install CentraSite.

Prepare to Install Optimize

If you are going to install Optimize on an AIX 6.1 system, apply the operating system patch listed here: http://www-01.ibm.com/support/docview.wss?uid=isg1IZ35205.

Prepare to Install Report Server

If you are going to install the Report Server, do the following:

- Add the current working directory (that is, .) to your PATH environment variable (for example, PATH=.:/usr/bin)
- On a 64-bit system, add the *Software AG_directory*/cognos/c8/bin64 directory to the library path environment variable, as follows:

System	Library Path Environment Variable
Solaris or Linux	LD_LIBRARY_PATH
AIX	LIBPATH
HP-UX	SHLIB_PATH

- Apply all operating system patches listed here for your operating system: http://www-01.ibm.com/support/docview.wss?rs=3442&uid=swg27014428.

Installation Scripts and Images

The installer offers advanced options for creating and installing from *installation scripts* and *installation images*.

Installation Scripts

If you want to create identical installations on multiple machines, you can create a script of the installation on one of the machines, then run the script to create the same installation on each of the other machines.

To create a script, you run the installer, select the products to install, and specify all the installation options (for example, release number, user name and password, and target installation directory). When you run the script, the installer automatically downloads the products you selected from the installer server and installs them using the installation options you specified.

When you create the script, the installer scans the target installation directory you specify on the *local* machine, and uses that as the model for the other target machines. If a product already exists in this local directory, you will not be able to select it for the script. Make sure, therefore, that any Software AG products already installed in this local directory are also already installed in the target directory on the other machines.

You can edit a script by rerunning the installer and making different choices. You can save the script under the same name, or create a new script by saving it under a new name.

Note: If you do not want the script to go outside your corporate firewall to the installer server, you can create an installation image, then create a script of running the image. When you run the script, it downloads and installs the products from the image instead of the installer server.

Caution! If your product uses sudo, the sudo password is unencrypted in scripts and is visible to all that have access to scripts.

Installation Images

If you need to create installations on machines that cannot go outside your corporate firewall to the installer server, you can download your products from the installer server into an installation *image*, and then use that image to install the desired subsets of products onto each machine.

You create each image for a particular operating system, but you can do so by running the installer on any operating system. For example, you can run the installer on a Windows system and create an image for a Solaris system. You can create images more quickly by retrieving products from existing images rather than downloading them from the installer server.

Images do not include information on installation options such as target installation directory, because those options can vary by machine. You specify installation options for each machine when you install from the image.

When you select products for an image, the installer lists additional required products and asks whether you want to include them. Use your knowledge of the target installation directories to determine which required products to include. When you install from the image, the target directories must contain all required products you did not include in the image.

The installer saves images as zip files. Each zip file includes an HTML file named Image Contents that you can open to see the contents of the image.

5 Using the Wizard to Install

Overview

This chapter explains how to do the following on any system using the Software AG Installer wizard:

- Install products
- Create an installation script or image from which to install products
- Install products from an installation script or image

The installer writes any errors or warnings that occur during installation to a file named installLog.txt in the *Software AG_directory*/install/logs directory. If necessary, you can change logging behavior. For instructions, see "Change Logging Level and File, and Add Targets" on page 60 or page 91.

The installer writes product, version, and build information to an audit history log file named history.txt in the *Software AG_directory*\install\history directory.

On Windows systems, you can only install Software AG products on a local hard drive. You cannot install the products on a network-mounted drive.

Important! Software AG strongly recommends that you create an installation image and store it on your internal network before installing your software. You should create an image for each operating system that is covered by your license agreement on which you plan to install (for example, 32-bit, 64-bit, or both). This will help you reduce WAN traffic and speed installation, and ensure consistency across installations over time, since the installer provides only the latest release of each product.

Note: The installer uses HTTP port 80 to download files over the Internet. If your network interferes with the downloading of files (for example, if you are using a network appliance such as a virus scanner, or the security settings for your proxy or firewall are incompatible with the installer), you might have problems connecting to the installer server or see error messages about corrupted Zip files. In such cases, you can ask your IT department for temporary access to a port outside the firewall to download the files, or you can ask Software AG Customer Operations at keymaster@webmethods.com to provide your products on a DVD or through a private FTP site.

Start the Software AG Installer

Start the Software AG Installer on a Windows System

To run the installer on a Windows system, you must have Windows system administrator privileges. The user under which you log on to your machine will own all files you install.

Important! If you are going to install CentraSite in an environment where users will be authenticated against a central service such as Active Directory Server, and you plan to disconnect your machine from the network, run the installer as a local user. If you run the installer as a user of the central service, when you disconnect your machine, CentraSite will not be able to authenticate you.

The way you start the installer depends on the task you want to perform, as indicated below. If you want to perform the tasks that use the java -jar command, you must first download the installer for UNIX as instructed by your installation email from Software AG and then install a 32-bit JRE or JDK 1.5 or 1.6 to run the installer.

Important! If you want to run the installer wizard on a Hebrew Windows system, use the instructions in "Start the Software AG Installer on a UNIX, IBM i5, or Mac System" on page 54.

- To start the installer for most uses, open Windows Explorer, go to the directory that contains the installer, and double-click the SoftwareAGInstaller80SP2.exe file.
- You can run an installation script from the wizard or the command line. To use the installer's .exe file to run a script from the command line, follow these steps:

  a Open a command window.

  b Set the environment variable ZFUSION_INSTALL_ARGS to -readScript *full_path_to_script* (for example, enter `set ZFUSION_INSTALL_ARGS= -readScript c:\myScript.txt`).

  c Go to the directory that contains the installer and enter `SoftwareAGInstaller80SP2.exe`.

  To use the installer's .jar file to run a script from the command line, run this command:

  ```
  java -jar SoftwareAGInstaller80SP2.{jar|zip} -readScript scriptfile
  ```

- To have the installer use a different system temp directory than the default, run this command:

  ```
  java -Xmxamountm -Djava.io.tmpdir=different_directory
  -jar SoftwareAGInstaller80SP2.{jar|zip}
  ```

Start the Software AG Installer on a UNIX, IBM i5, or Mac System

Log on as a non-root user. The user under which you log on will own all files you install.

Important! On UNIX systems, if you are going to install ApplinX, CentraSite, EntireX, NaturalONE, or Tamino XML Server, the user must have write access to the directory from which you start the installer. Do not run the installer as a background process.

The way you start the installer depends on the task you want to perform, as indicated below.

Note: On UNIX systems, you might receive Java messages when you start the installer. For example, you might receive warning messages about system preferences, or about unlocking connections. You can ignore these messages.

- For most uses, run this command:

```
java -Xmx512m -jar SoftwareAGInstaller80SP2.{jar|zip}
```

- On a Solaris x86-64 EM64T system, or on a Solaris x86-64 AMD Opteron system when you are using JDK 1.6 to run the installer, run this command:

```
java -Xmx512m -Dsun.cpu.isalist=amd64
-jar SoftwareAGInstaller80SP2.{jar|zip}
```

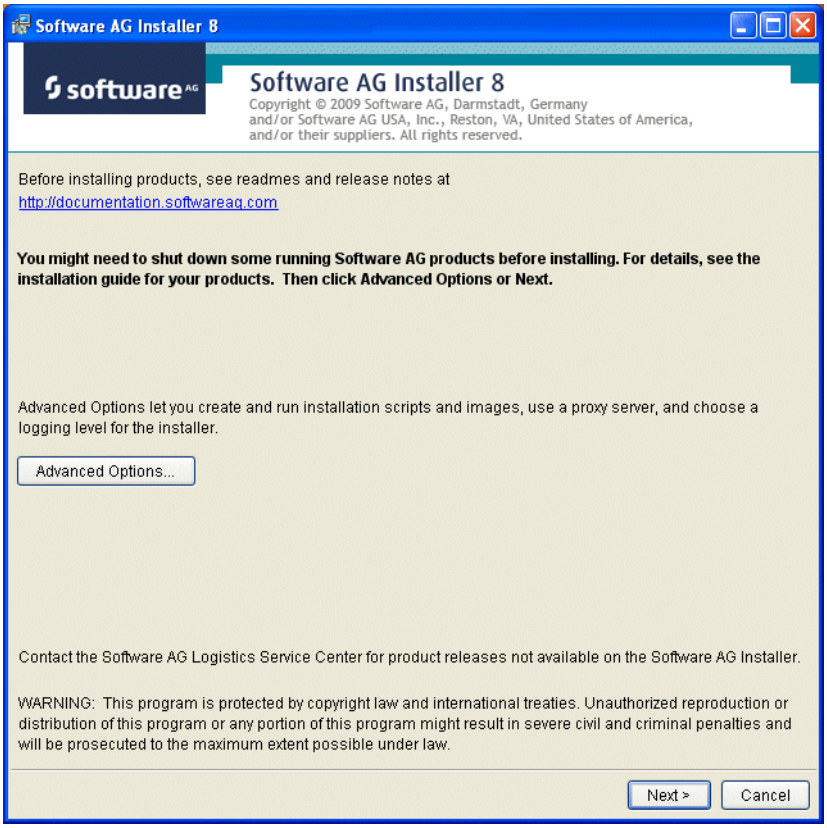
- To have the installer use a different temporary directory than the default, run this command:

```
java -Xmx512m -Djava.io.tmpdir=different_temp_directory
-jar SoftwareAGInstaller80SP2.{jar|zip}
```

View the Welcome Panel

The installer takes several seconds to unzip and launch its JVM, then displays the welcome panel.

Note: On Windows systems, if the progress bar on the installer launcher (called Zipfusion) stops showing progress, your anti-virus software might be interfering. Start the installer using the jar file instead (see "Start the Software AG Installer" on page 53).



You can resize the wizard.

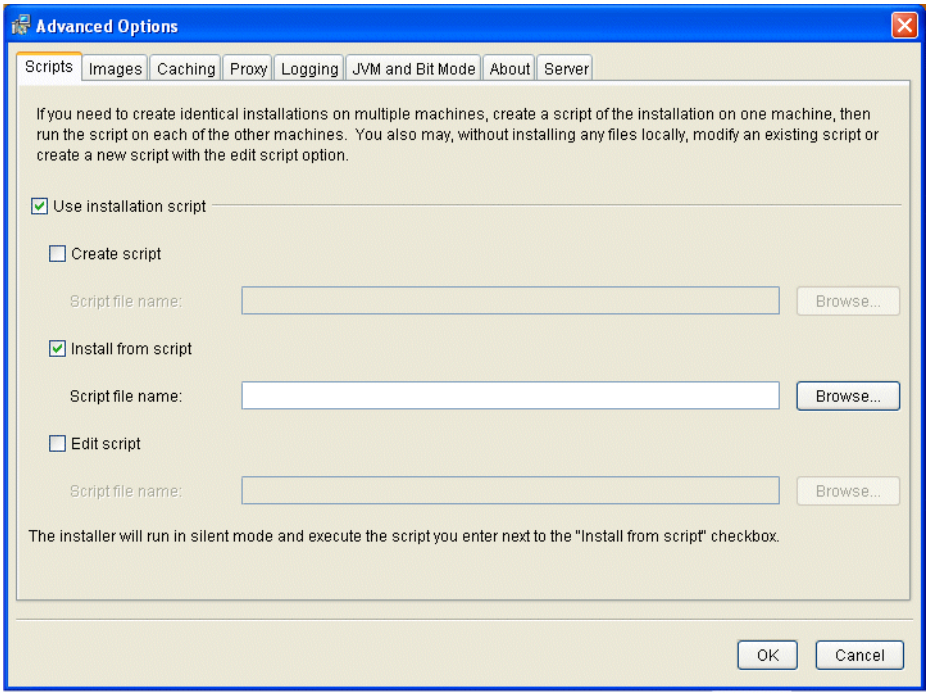
If you want to create or run an installation script or image, install using a proxy server, or change logging options, click **Advanced Options** and go to "Use Advanced Options", below. If you want to install your products without using any advanced options, click **Next** and go to "Specify Release, User Name, and Password" on page 62.

Use Advanced Options

When are you done setting advanced options, click OK. The installer closes the dialog box and returns to the welcome panel, where you can click Next to continue.

Create, Install from, or Edit an Installation Script

For information on installation scripts, see "Installation Scripts and Images" on page 49.



You can do the following from this panel:

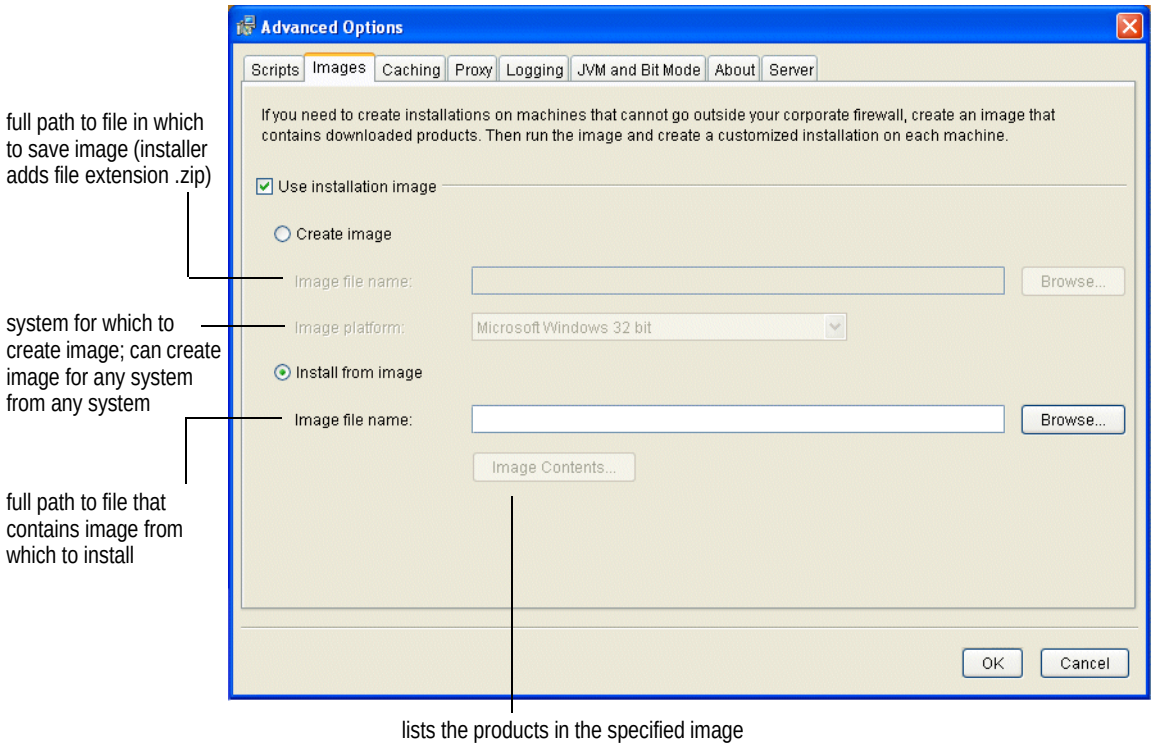
To do this...	Follow these steps...
Create script and install	Click Create script. In the Script file name field, enter the full path to the file in which to save the new script. You can specify any name, and you do not have to specify an extension.
Create script without installing	Click Edit script. In the Script file name field, enter the full path to the file in which to save the new script. You can specify any name, and you do not have to specify an extension.
Create script from existing script without installing	Click Install from script. In the adjacent Script file name field, type the full path to the file that contains the existing script to use as a template for the new script. Click Create script. In the adjacent Script file name field, type the the full path to the file to which to write the new script.

To do this...	Follow these steps...
Install from script	Click **Install from script**. In the **Script file name** field, type the full path to the file from which to install. If errors occur while the script is running, installation fails.
Edit script	Click **Edit script**. In the **Script file name** field, type the full path to the file that contains the script to edit.

Create or Install from an Installation Image

For information on installation images, see "Installation Scripts and Images" on page 49. When creating an image, you can also use the caching option to improve performance (see "Improve Installation or Image Creation Performance Using Caching" on page 58).

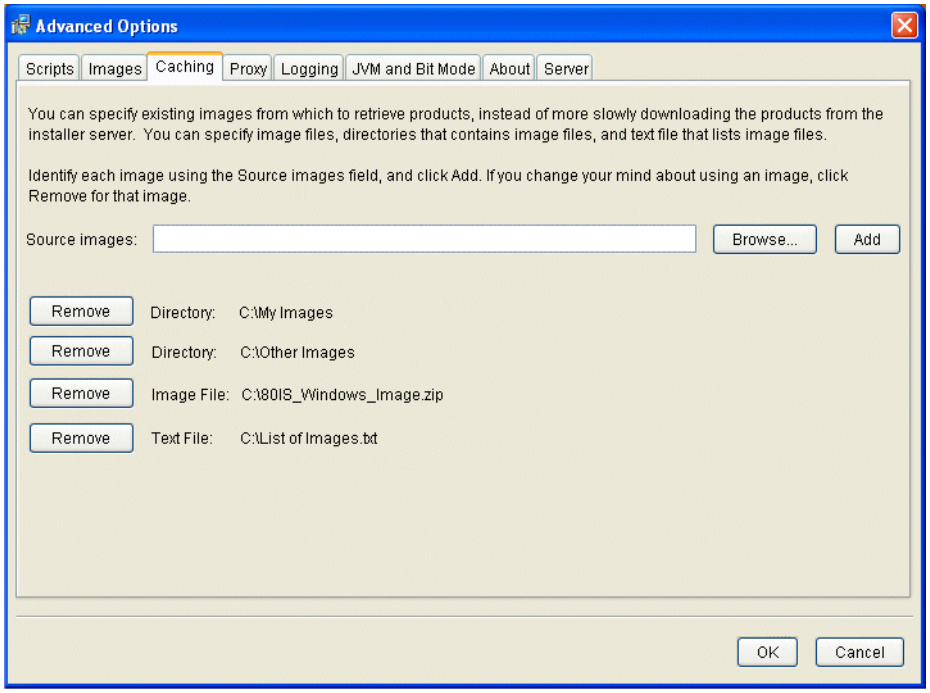
Important! Do not extract or modify image files using any tool other than the installer.



Improve Installation or Image Creation Performance Using Caching

You can retrieve products from existing installation images, instead of downloading the products from the installer server. You can use this option when installing or when creating an image. You can specify any image containing products from the same release, regardless of the operating system for which the image was created.

Important! Do not extract or modify image files using any tool other than the installer.



Specify the source images as follows:

- Specify the full path to a source image file and click **Add**.
- Specify directories that contain source image files and click **Add**.
- Create a text file that lists source image files, then specify the text file on the panel, and click **Add**. For example, the text file could look like this:

```
C:\IS_HPUX.zip
C:\Designer_Solaris.zip
C:\MwS_Windows.zip
```

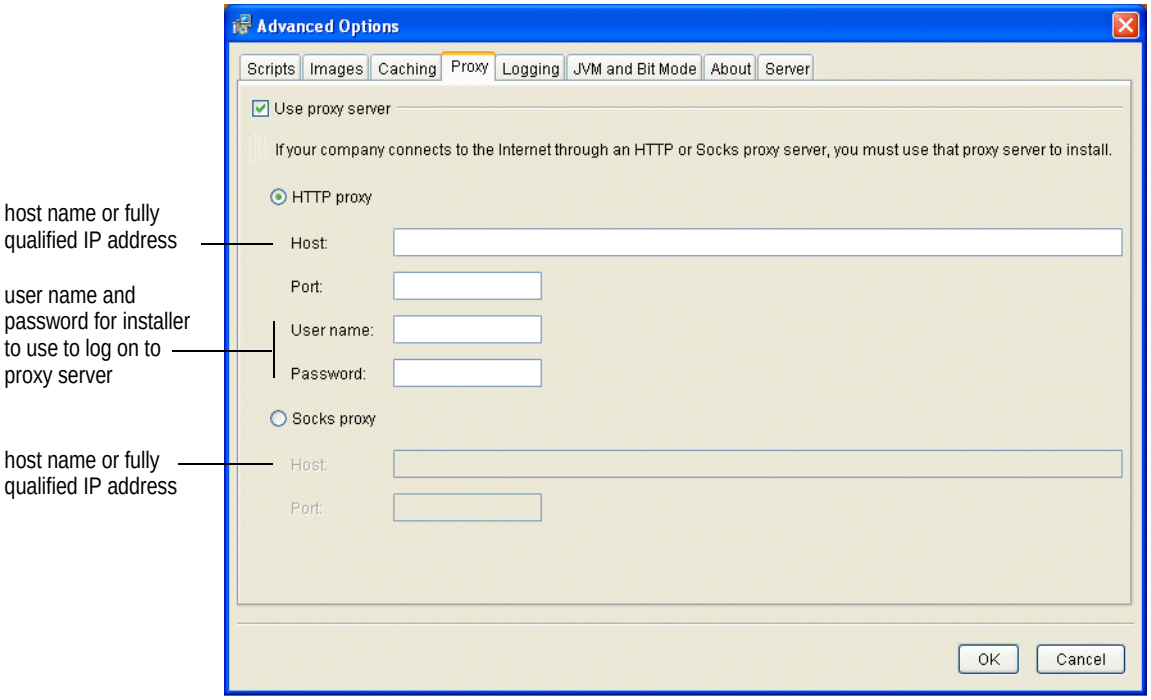
Each time you add a specification, the installer lists the specification below the **Source images** field. If you change your mind about using a specification, click **Remove**.

As you continue through the installer, select the release from which to install and select the products to install as usual. The installer will install products from the specified images unless later builds of those product exist on the installer server.

Note: The installer ignores non-image files.

Use a Proxy Server to Install

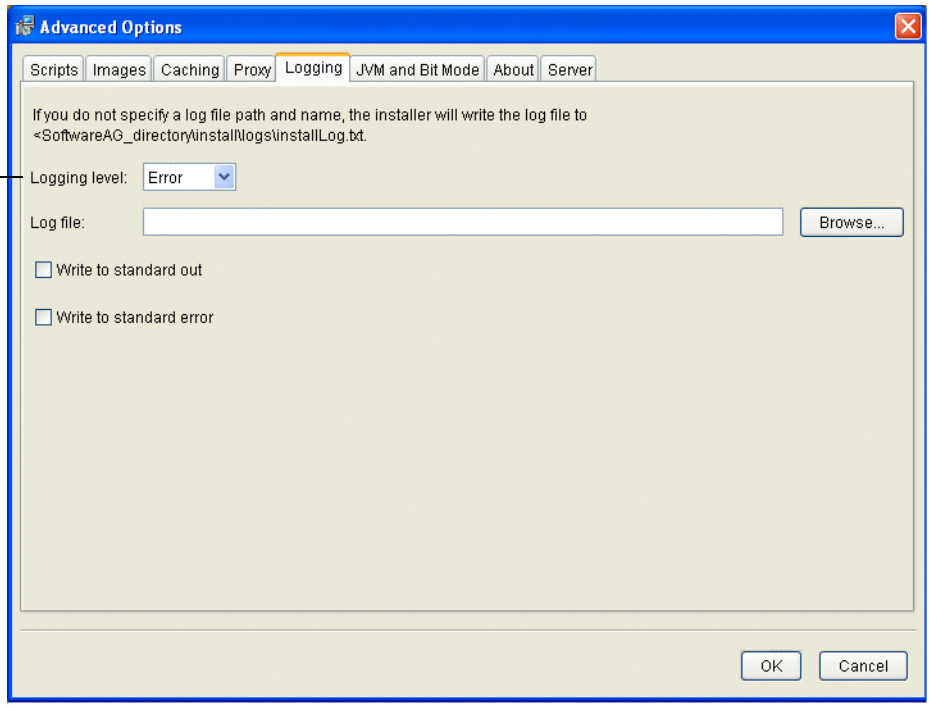
If your company connects to the Internet through an HTTP or Socks proxy server, you must use that proxy server to install. Your network administrator can provide information on your company's proxy servers.



Change Logging Level and File, and Add Targets

By default, the installer writes errors and warnings that occur during installation to a file named installLog.txt in the *Software AG_directory*/install/logs directory. You can increase or decrease the amount of information that is written, specify a different file name and directory, and choose to write to standard out and standard error in addition to the log file.

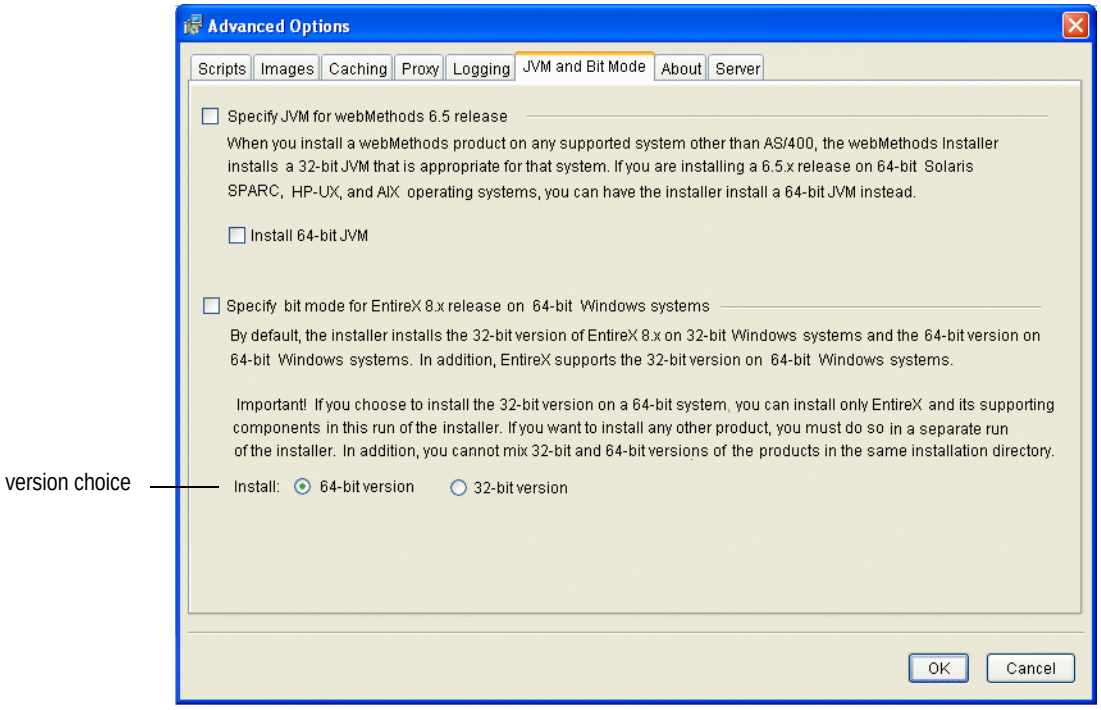
Verbose produces a 10 to 200MB file



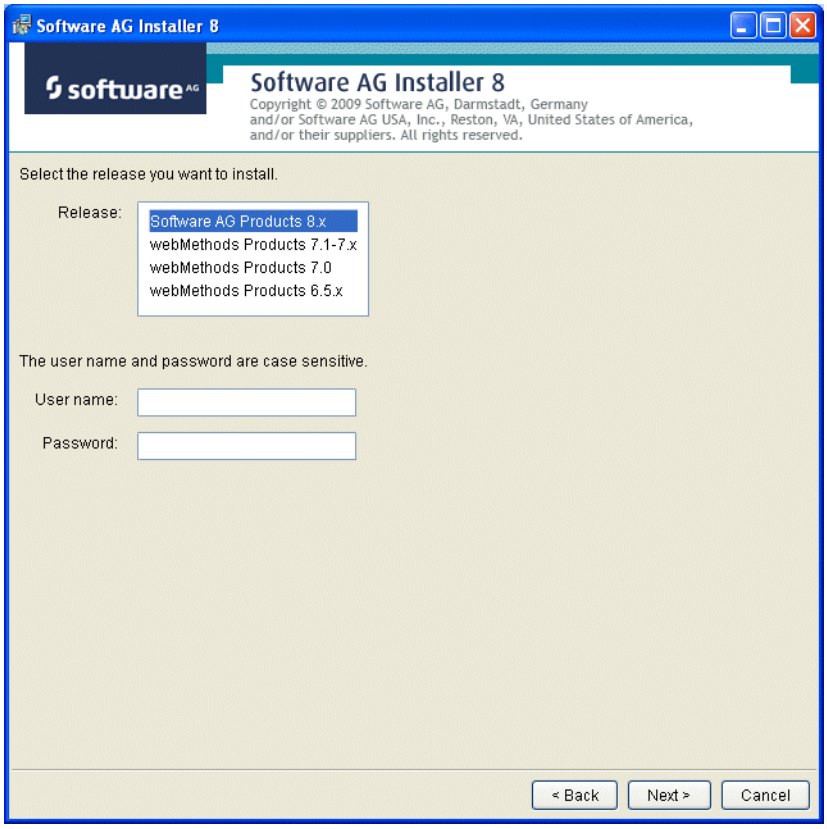
Specify Bit Version of EntireX to Install

By default, on Windows systems, the installer installs the 32-bit version of EntireX on 32-bit systems and the 64-bit version on 64-bit systems. You can choose to have the installer install the 32-bit version on a 64-bit system instead.

Important! If you do so, you can install only EntireX and its supporting component in this run of the installer. If you want to install any other product, you must do so in a separate run of the installer. Also, you cannot mix 32-bit and 64-bit versions of products in the same installation directory.


Advanced Options
Scripts
Images
Caching
Proxy
Logging
JVM and Bit Mode
About
Server
Specify JVM for webMethods 6.5 release
When you install a webMethods product on any supported system other than AS/400, the webMethods Installer installs a 32-bit JVM that is appropriate for that system. If you are installing a 6.5.x release on 64-bit Solaris SPARC, HP-UX, and AIX operating systems, you can have the installer install a 64-bit JVM instead.
Install 64-bit JVM
Specify bit mode for EntireX 8.x release on 64-bit Windows systems
By default, the installer installs the 32-bit version of EntireX 8.x on 32-bit Windows systems and the 64-bit version on 64-bit Windows systems. In addition, EntireX supports the 32-bit version on 64-bit Windows systems.
Important! If you choose to install the 32-bit version on a 64-bit system, you can install only EntireX and its supporting components in this run of the installer. If you want to install any other product, you must do so in a separate run of the installer. In addition, you cannot mix 32-bit and 64-bit versions of the products in the same installation directory.
Install:
64-bit version
32-bit version
OK
Cancel
version choice

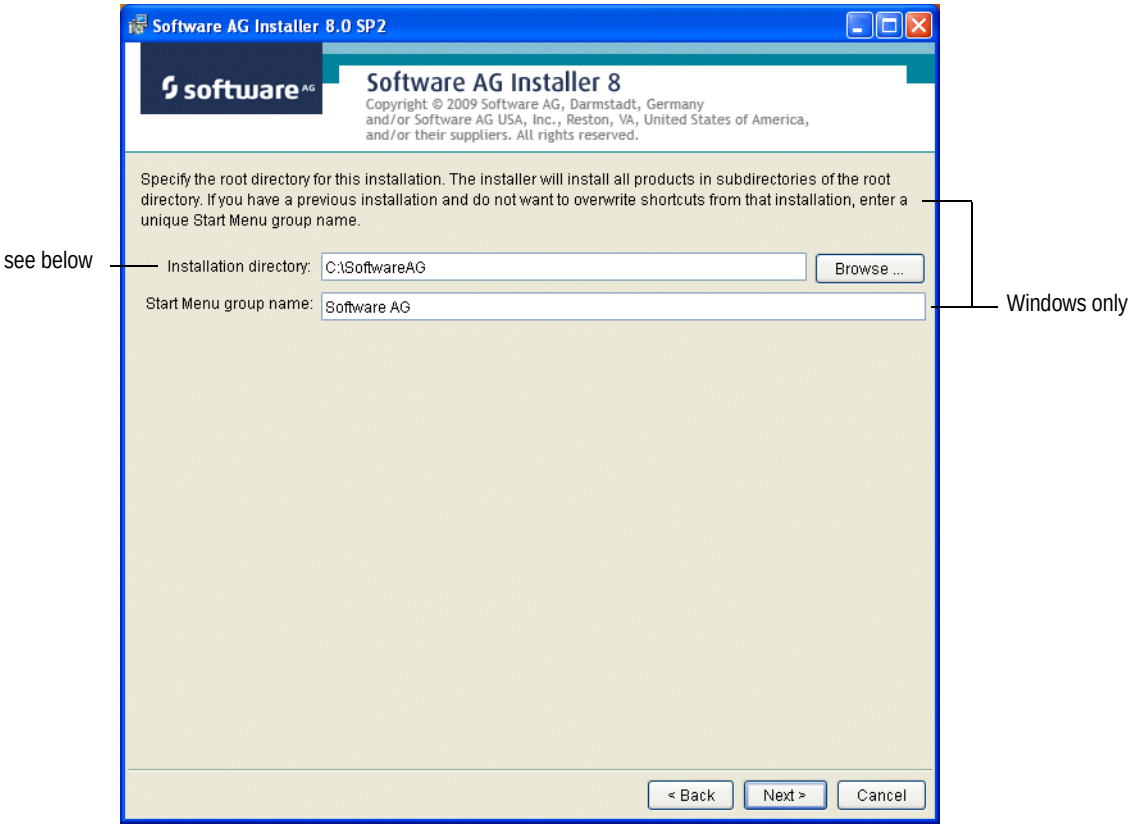
Specify Release, User Name, and Password



In the Release list, click Software AG Products 8.x. Provide the user name and password indicated by your installation email from Software AG. Click Next. The installer uses the user name and password to connect to the installer server and download the products for which you have purchased licenses.

Important! Only install products from the Software AG Products 8.x release. Do not mix and match products from different releases on the list or you will experience problems.

Specify the Installation Directory



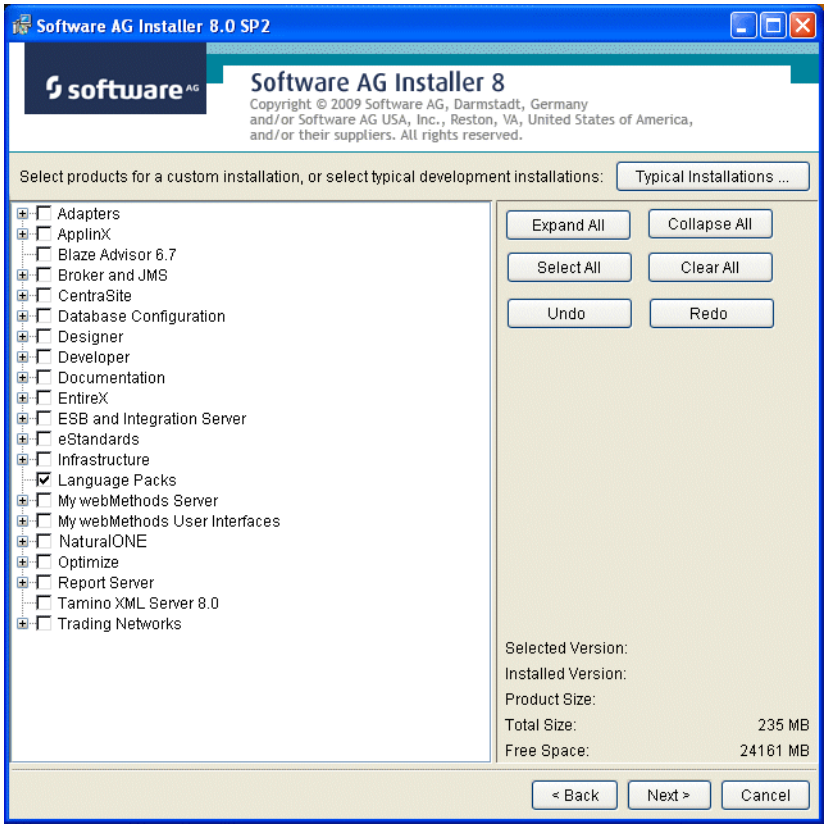
Specify the installation directory in which to install all Software AG products. The user name under which you are running the installer must have full read and write permissions to the installation directory you specify.

If you are installing from an installation image, specify the installation directory for which the image was designed. The installation directory must contain required products that you did not include in the image. For example, if the image contains Designer plug-ins, the installation directory must contain Eclipse. For more information, see "Installation Images" on page 50.

Important! Do not install products from the Software AG Products 8.x release into a directory that contains products from any other release.

Click Next.

Select Products to Install



The installer lists the products for which you have purchased licenses and that are supported on the target operating system.

Important! The installer does not distinguish among versions (Windows) or flavors (UNIX) of an operating system. Make sure you install products only on supported operating systems, as specified in the *webMethods System Requirements*.

Important! You cannot install multiple instances of the CentraSite 8.x components, Tamino XML Server 8.x, or System Management Hub 8.x on the same machine.

The highest level in the product selection tree shows product names and releases, while the lower levels show the items that make up or can be used with the product. If you have already installed a product or item in the specified installation directory, the item name is followed by the text (Installed) and the item name and its check box are grayed out.

You can select products using these methods:

- Select typical development installations from the Typical Installations list. The installer automatically selects the products and items that make up those installations.

  Note: If you choose the NaturalONE Application Development typical installation, the installer automatically selects the NaturalONE run time. If you want to use an already installed NaturalONE run time on the local machine or a remote machine, deselect the NaturalONE run time. The same is true for the NaturalONE Application Development with Service Enabling typical installation and EntireX. "Complete the NaturalONE Installation" on page 138 provides instructions on using an already-installed NaturalONE run time or EntireX.

- Select every product and item in the tree by clicking Select All.
- Select individual products in the tree. If a chosen product requires other products and items on the same machine, the installer automatically selects them. For example, Trading Networks Server requires Integration Server on the same machine. If you select Trading Networks Server, the installer selects Integration Server.

  Note: If you are creating an installation image, the installer asks whether you want it to automatically select additional required products. For information on how to respond, see "Installation Images" on page 50.

  If a product you select requires other products and items, but not on the same machine, the installer does not automatically select them. For example, Optimize requires its user interface, but you can install the user interface on a different machine, so the installer does not select it.

- Select individual items on the tree (for example, PKI Support under Integration Server). If an item you select requires other products and items on the same machine, the installer automatically selects them.

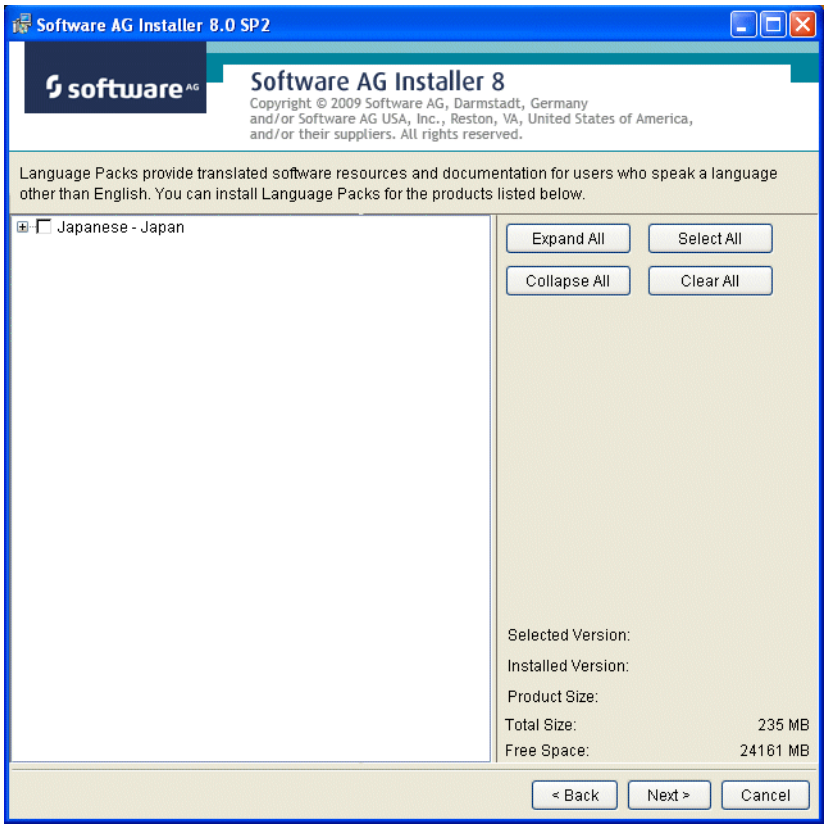
  Note: If you select a NaturalONE plug-in to Designer, the installer automatically selects the Software AG-supplied Eclipse. You can switch to a different Eclipse after installation. "Complete the NaturalONE Installation" on page 138 provides instructions.

  Note: If you select EntireX, the installer automatically selects the Administration component, which in turn selects the System Management Hub, Tomcat Kit, and Java Development Kit 1.6. The Administration component enables you to administer the EntireX Broker, Broker Agent, Location Transparency, and Authorization Rule, and to use the System Management Hub to administer the EntireX RPC server. If you need only a lightweight EntireX installation (for example, for use with NaturalONE), you might not need the Administration component. Without this component, you will only be able to start and stop the default EntireX Broker. For complete information on functionality provided by the Administration component, see "System Management Hub" in the EntireX product documentation.

When you are done, click Next.

Select Language Packs

If language packs are available for products you are installing or have already installed, the installer displays the language packs panel.



Many products support multiple languages. You can install as many language packs as you want, and all of the languages installed (including the default, U.S. English) will be available to users.

Select the language packs to install, and then click Next.

Read the license agreement. If you accept the terms, select the check box and click Next. To read the third-party license agreements, you need Internet access. If you do not have Internet access, you can go to a machine that has Internet access and enter http://documentation.softwareag.com/legal in a browser. If you are installing from an image and do not have Internet access, you can open the image and go to the TPL directory to view the licenses.

Configure Products

If you are installing any of the products listed below, the installer displays configuration panels.

- Configure Trading Networks Server
- Configure Optimize
- Configure Integration Server
- Configure Infrastructure Data Collector
- Configure webMethods Broker
- Configure My webMethods Server
- Configure the Report Server
- Configure ApplinX, CentraSite, EntireX, NaturalONE, and Tamino XML Server

Database Connection Information

Some products require you to supply database connection information during installation. Sample URL formats for that driver are shown in the product panels. Keep in the mind the following:

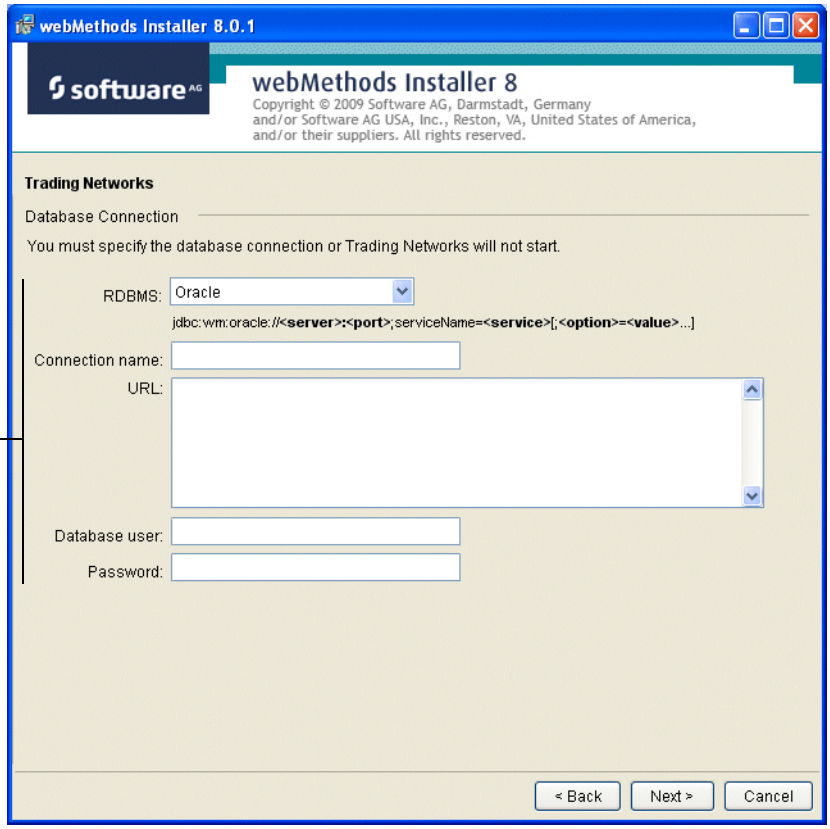
- Many products use the DataDirect Connect JDBC 4.0 driver. For information about options supported by this driver, see *DataDirect Connect for JDBC User's Guide and Reference 4.0* in the *Software AG_directory*/_documentation directory or on the Software AG Documentation Web site.
- For ease of use, the database connection values you enter on one panel are reflected on the next as you go forward through the installer the first time.
- Use the DataDirect Connect connection option MaxPooledStatements=35 on all database URLs except those for Trading Networks. This connection option improves performance by caching prepared statements. (Trading Networks caches its prepared statements using its own pooling mechanism).
- If the database user and password do not yet exist, specify the database user and password you will create after installation. You can use one database user for multiple database components, or you can use a different database user for each database component.
- For DB2, if the product will connect to a schema other than the default schema for the specified database user, you must specify these connection options in the database URL:

  ```
  ;AlternateId=schema;InitializationString="SET CURRENT PATH=current_path,schema;
  MaxPooledStatements=35"
  ```

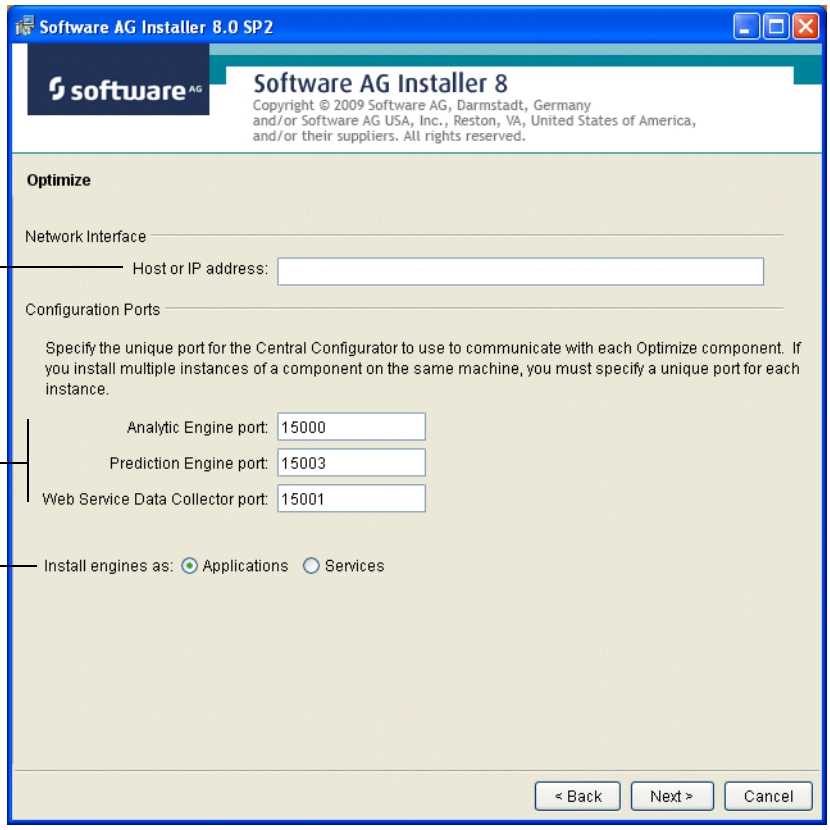
  `AlternateID` is the name of the default schema that is used to qualify unqualified database objects in dynamically prepared SQL statements.

Configure Trading Networks Server

connection from Trading Networks Server to Trading Networks database component

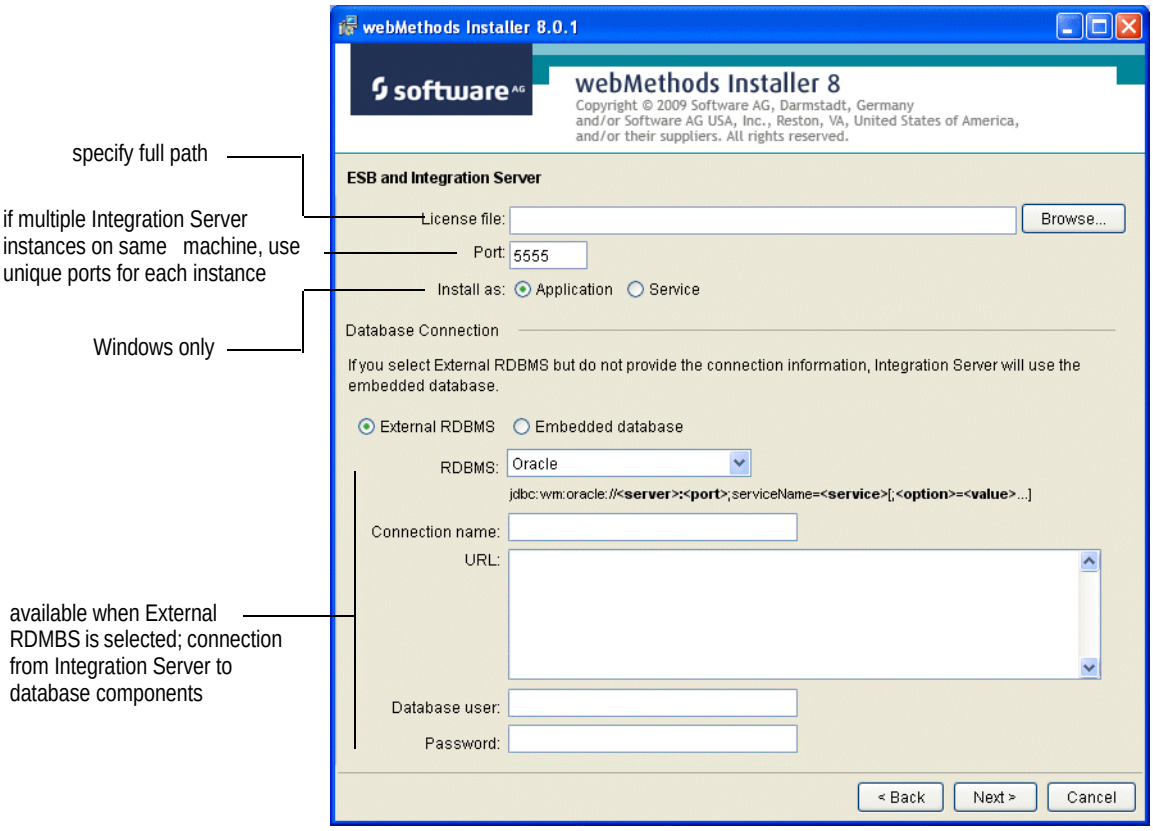


Configure Optimize



Optimize provides a Central Configuration user interface that allows you to configure Optimize components from a central machine. Specify the port you want the interface to use to communicate with each Optimize component you are installing. Each port must be unique. If you install multiple instances of a component on the same machine, the port for each instance must be unique.

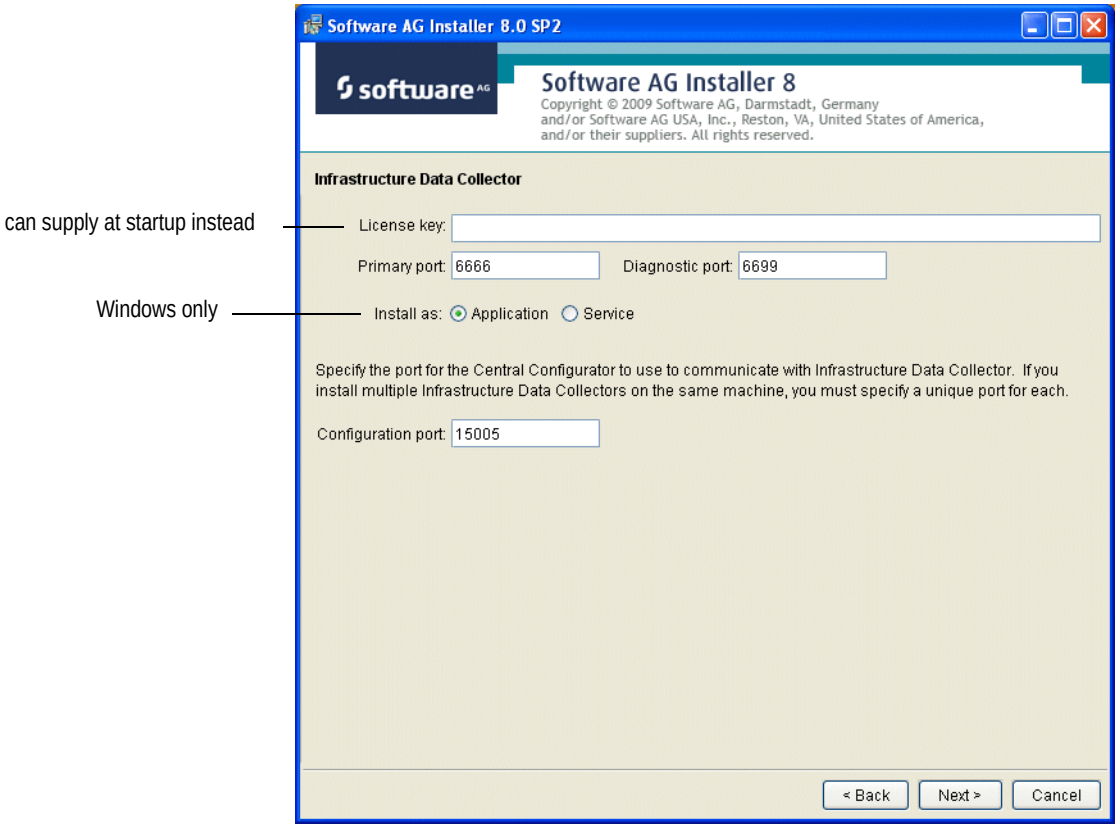
Configure Integration Server



You must decide where to store data written by Integration Server. For complete information, see "Integration Server Data Storage" on page 24.

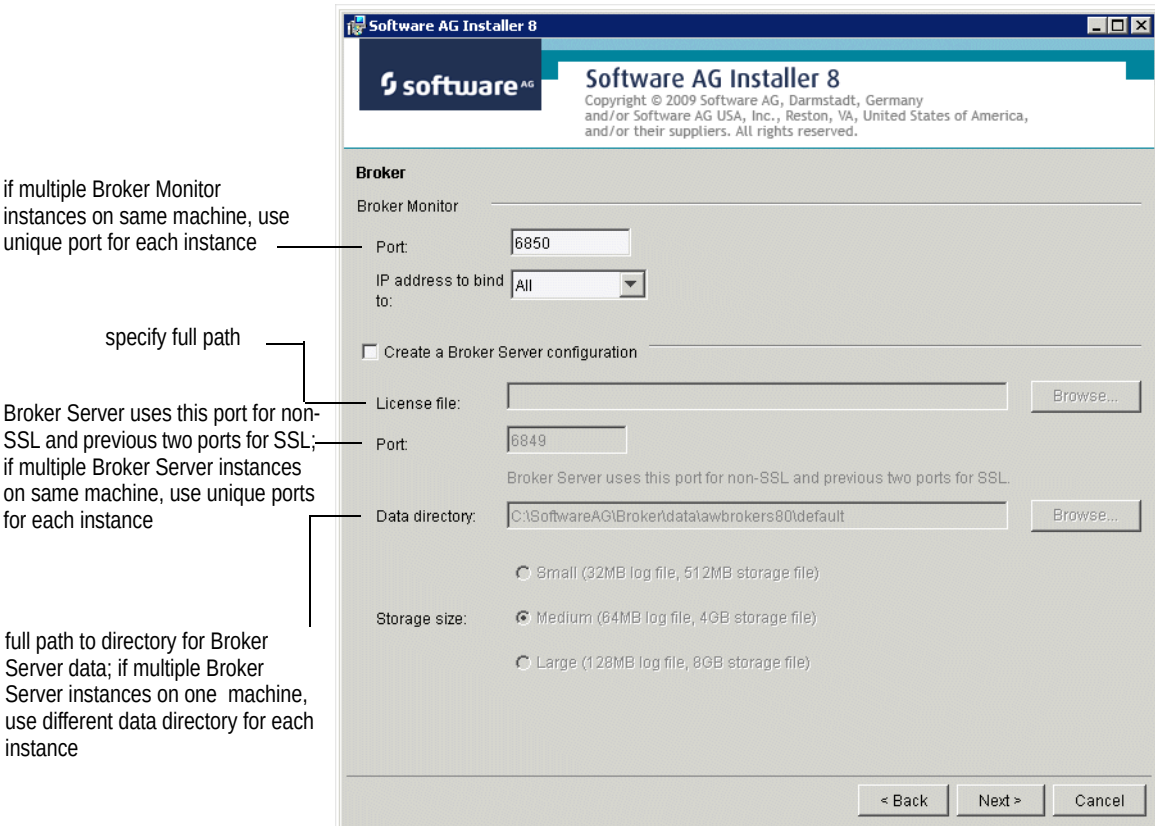
Important! If you are installing on a Windows system and will be using a version control system with Developer, you must install Integration Server as an application rather than a service.

Configure Infrastructure Data Collector



Optimize provides a Central Configuration user interface that allows you to configure Optimize components from a central machine. Specify the port you want the interface to use to communicate with the Optimize Infrastructure Data Collector. The port must be unique. If you install multiple instances of the Infrastructure Data Collector on the same machine, the port for each instance must be unique.

Configure webMethods Broker



Create a Broker Server Configuration

You would *not* create the Broker Server configuration at this time (that is, using the installer) if you want to use a different storage size than is offered on the panel or if you want to create a combined storage session for configuration and run-time data. If you do not need to back up configuration data without shutting down your Broker Server, using a combined session might save you a small amount of disk space. If you choose to not create the Broker Server configuration at this time, you must create it after installation is complete, using instructions in *Administering webMethods Broker*.

You would create the Broker Server at this time (that is, using the installer) if you want to use a storage size that is offered on the panel and you want to create separate storage sessions for configuration (metadata) and run-time data. Using separate storage sessions minimizes the risk of corruption that goes with a combined storage location and enables you to back up configuration data without having to shut down your Broker Server. (For information about the webMethods Broker online configuration data backup tool, see *Administering webMethods Broker*.)

Important! Software AG recommends creating separate sessions. You cannot later change from a combined session to separate sessions or vice versa.

Select a pre-configured storage session for the Broker Server that can handle your expected usage needs, as follows:

Files Created	When to Use	Broker Server Startup Time
Small Configuration		
32MB log file 512MB storage file	Ideal for running development Broker Servers or relatively few production integrations, low document volumes, and no document logging	Fastest of all configurations
Medium Configuration		
64MB log file 4GB storage file	Standard deployment size, fits more cases than **Small**; larger maximum transaction size and twice the storage capacity of **Small**	Up to twice as long as for **Small**
Large Configuration		
128MB log file 8GB storage file	Suitable for production deployments with many integrations running at relatively high document volumes, possibly using document logging as well	Two times longer than for **Medium**; four times longer than for **Small**

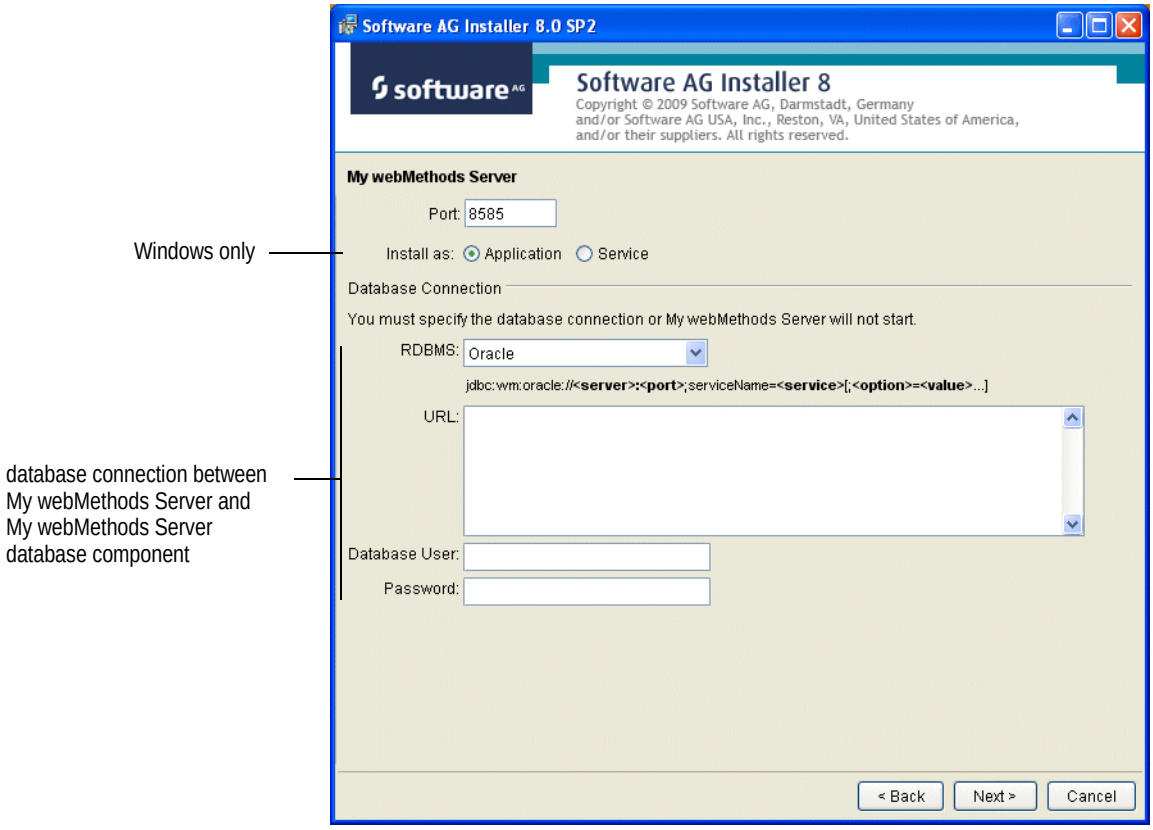
*For complete information on Broker Server storage sessions, see *Administering webMethods Broker*.)

When determining the appropriate size for the log file, the factors to balance are Broker Server startup time and the desired maximum transaction size. The smaller the log file, the faster the startup; however, with a larger log file, you can send larger messages (that is, one larger-sized single document or a batch of documents). If necessary, you can remove or replace log files after installation, and you can increase or decrease their size.

Startup time does *not* depend on the size of the storage file; additional storage capacity merely prevents the Broker Server from running out of room. After installation, if the amount of storage allocated turns out to be insufficient, you can add storage files and increase their size. You cannot remove storage files or decrease their size.

The *Administering webMethods Broker* book provides instructions on working with log files and storage files.

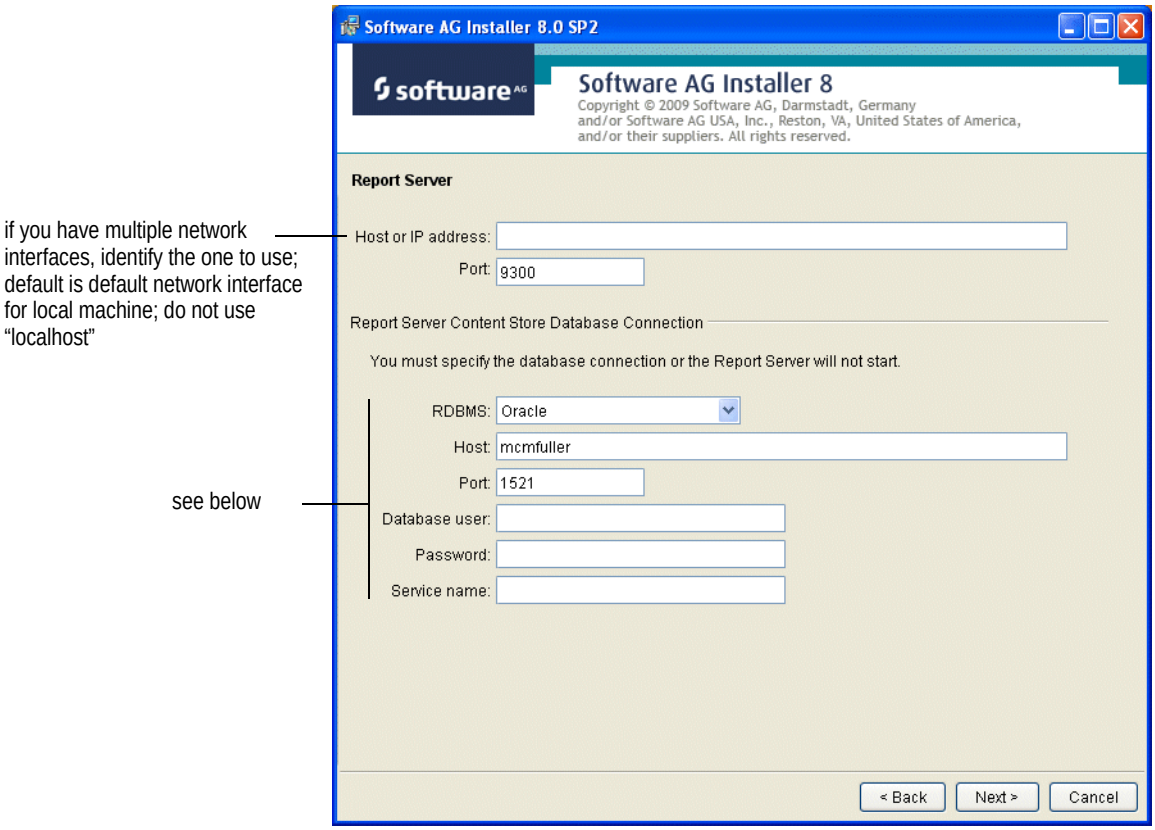
Configure My webMethods Server



Note: If you are installing My webMethods Server for the sole purpose of running the Messaging user interface in My webMethods, you can configure My webMethods Server to use an embedded database instead of an external RDBMS. To do so, leave the database connection fields on the panel blank. After installation is complete, see *Administering webMethods Broker* for instructions on configuring the embedded database.

If you are installing My webMethods Server for any other purpose, you must use an external RDBMS.

Configure the Report Server



The Report Server uses a Content Store. The Content Store is an external RDBMS containing data that the Report Server needs to operate, such as global configuration data and report definitions. You must specify the database connection between the Report Server and its Content Store or the Report Server will not start after installation.

The database connection fields vary slightly by RDBMS. If the service (Oracle) or database (SQL Server or DB2) does not yet exist, specify the service or database you will create after installation. For more information on the Content Store, see *Generating webMethods Reports*.

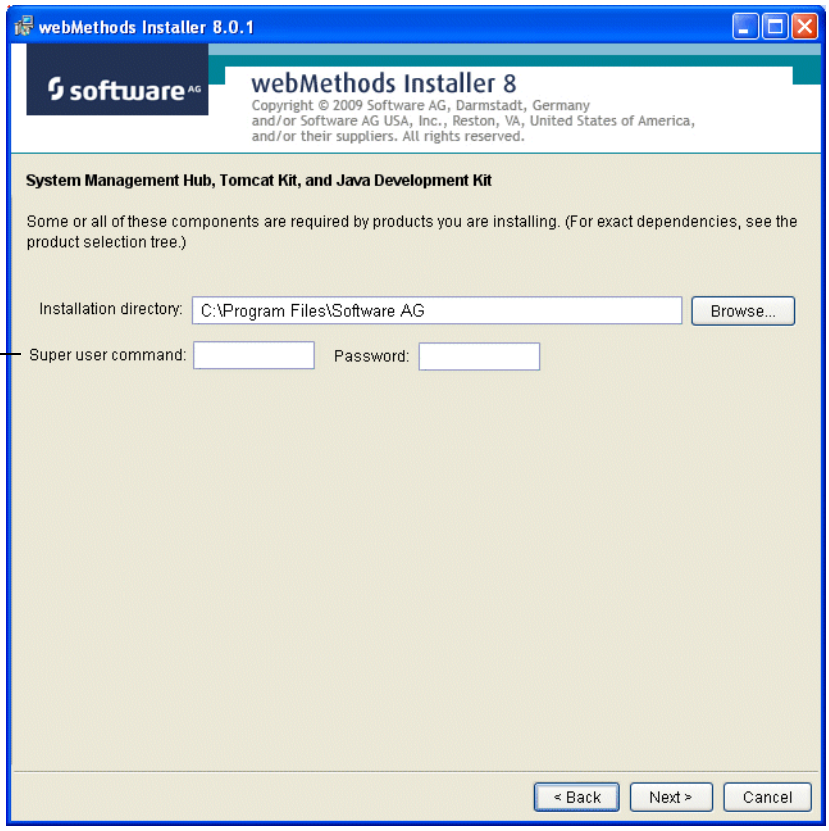
Configure ApplinX, CentraSite, EntireX, NaturalONE, and Tamino XML Server

Shared Components

ApplinX, CentraSite, EntireX, and Tamino XML Server require and share some or all of these components: System Management Hub, Tomcat Kit, and Java Development Kit 1.6. If you install one of these products, the installer might display the panel below, depending on conditions described below the panel.

Note: Because the components are shared by Software AG products that are not part of the webMethods product suite, their default directory is different from the default product installation directory. However, you can change the default to any directory.

UNIX only; type sudo and the sudo password of the user under which you are running the installer



If no shared components exist on the machine, the fields on the panel are enabled. The user name under which you are running the installer must have full read and write permissions to the Installation directory you specify.

If shared components from this release or a previous release exist on the machine:

- On Windows, the installer automatically installs any not-yet-installed shared components into the existing directory.

- On UNIX, you must specify the directory that contains the existing shared components in the Installation directory field. The user name under which you are running the installer must have full read and write permissions to the directory.

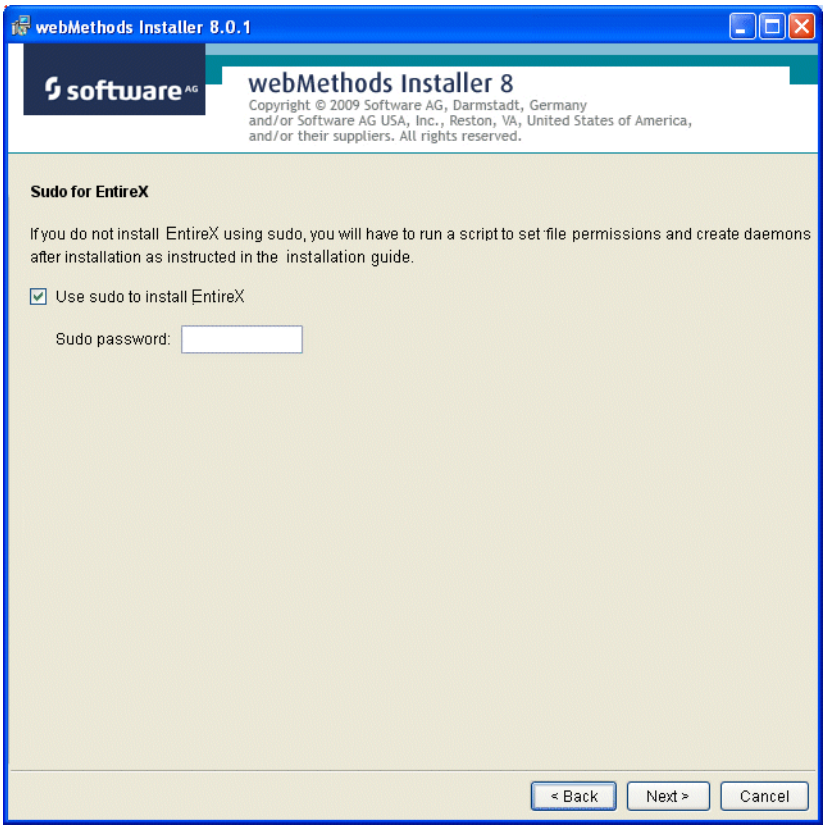
If the shared components are from a previous release, the installer upgrades them.

Note: On UNIX systems, you can choose to not upgrade the existing shared components and instead create a new shared components installation. For instructions, see the System Management Hub documentation.

The super user command and password are required on UNIX systems to install all products discussed in this section except ApplinX and CentraSite. The super user command is used to register daemons and to set file permissions for the ssxauthd2 file. However, the product files will be owned by the user under which you are running the installer.

Sudo for EntireX

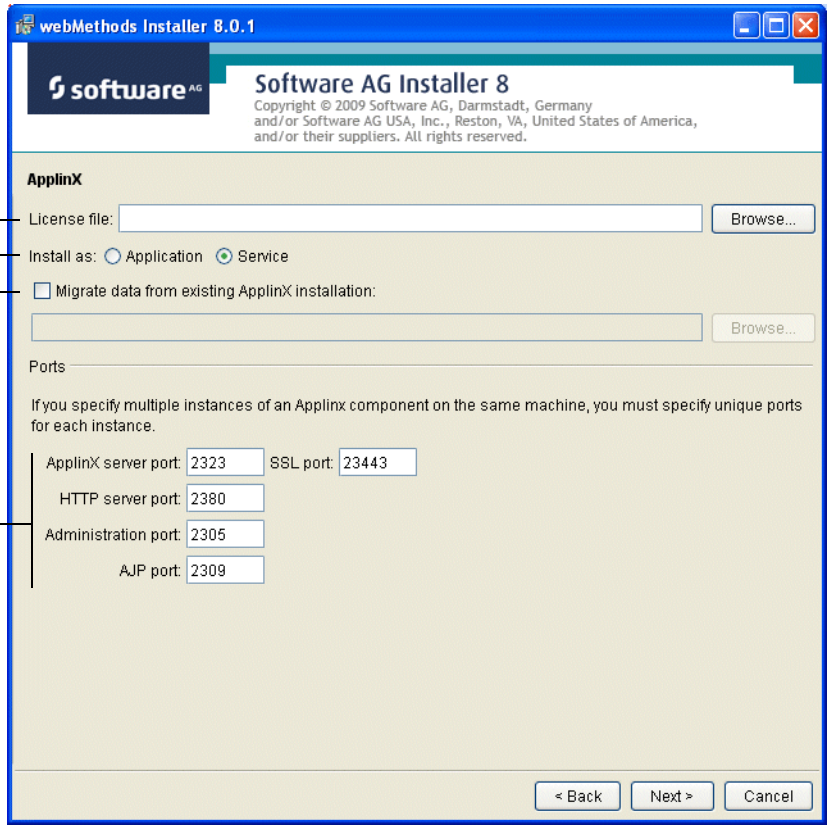
When you install EntireX on a UNIX system, the panel below appears if the shared components panel did not appear.



You can choose to install EntireX using sudo by selecting the check box and providing the sudo password of the user under which you are running the installer. Otherwise, you will have to run commands with sudo privileges after installation to register daemons and set file permissions.

ApplinX

If you are installing the ApplinX Server, the installer displays the panel below.



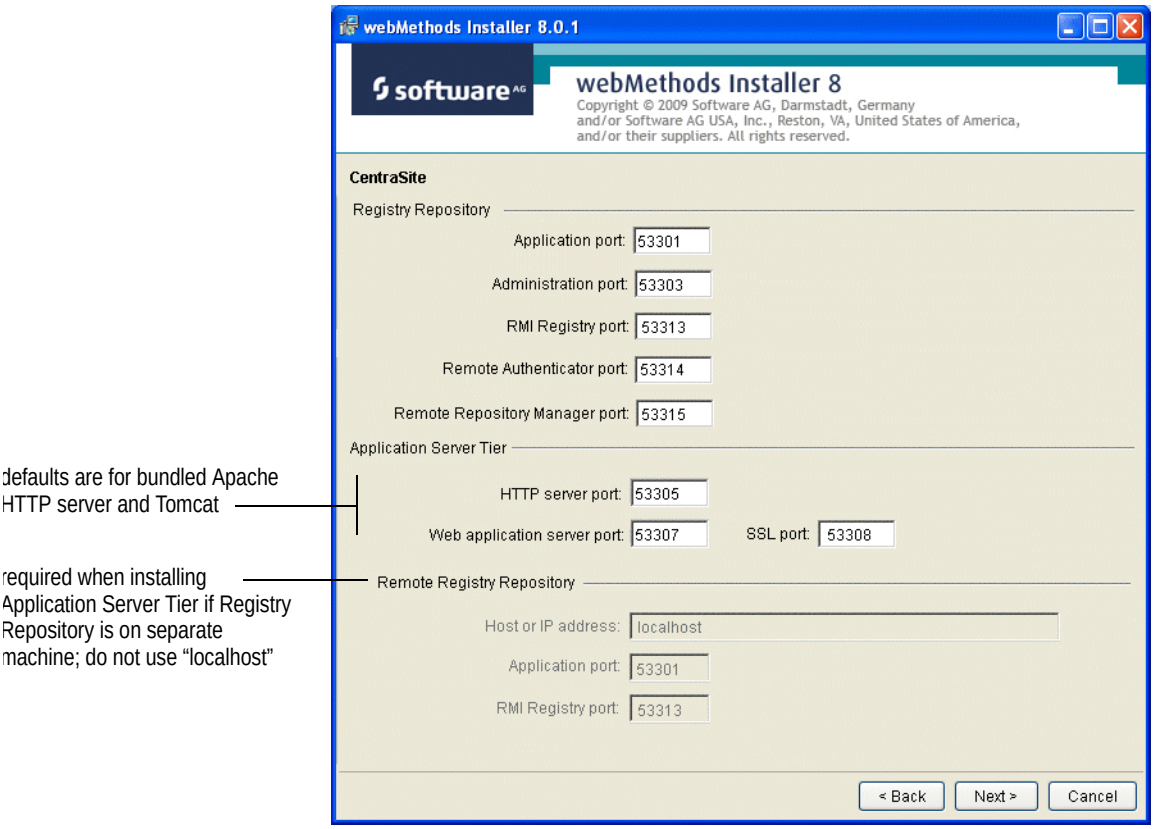
specify full path

Windows only

Use for upgrade only; see upgrade documentation

if multiple ApplinX Server instances on same machine, use unique ports for each instance; see Appendix A, "Default Ports" for port information

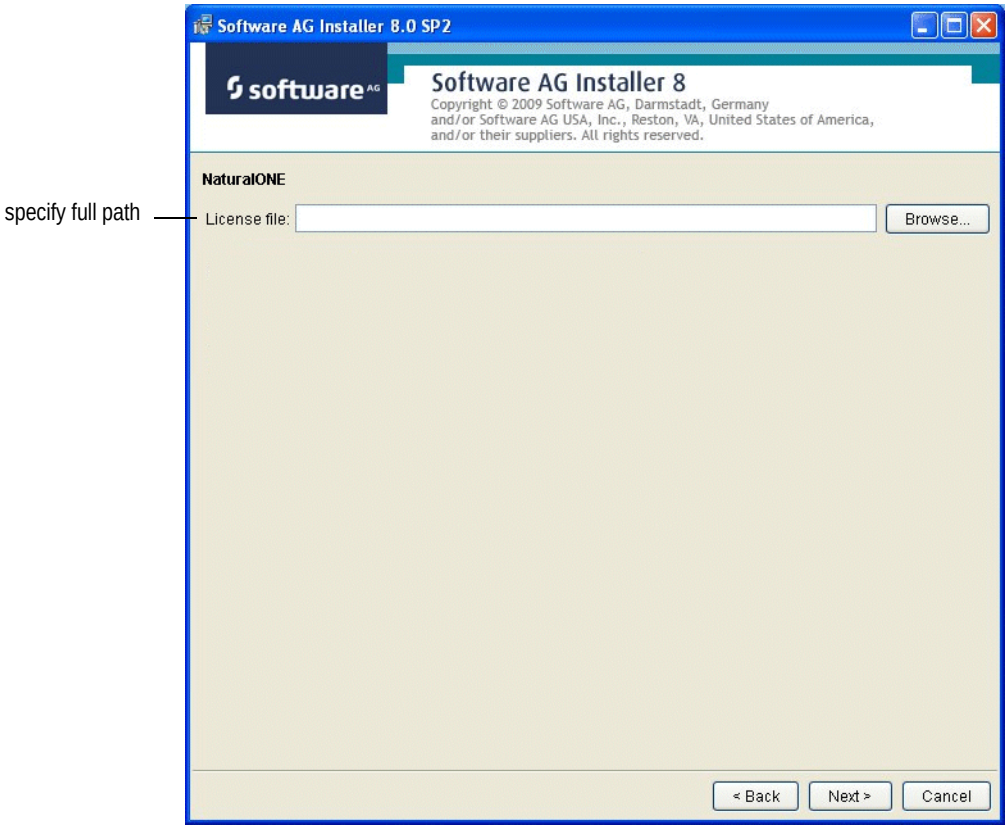
CentraSite



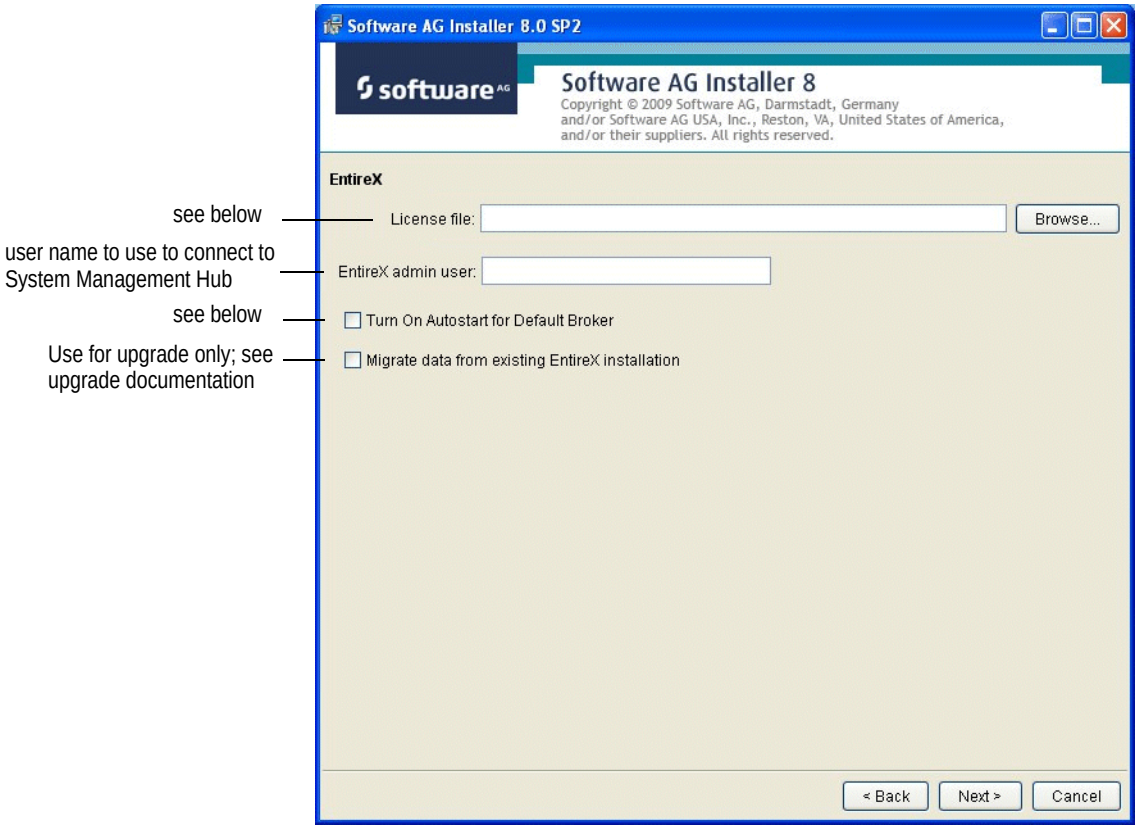
You can install the CentraSite Registry Repository and Application Server Tier in the same directory on the same machine or on separate machines. If you install the components on separate machines, or in the same directory on the same machine but at different times, you must install the Registry Repository first, and it must be running when you install the Application Server Tier.

See Appendix A, "Default Ports" for information about ports.

NaturalONE


Software AG Installer 8.0 SP2
Software AG Installer 8
Copyright © 2009 Software AG, Darmstadt, Germany
and/or Software AG USA, Inc., Reston, VA, United States of America,
and/or their suppliers. All rights reserved.
NaturalONE
specify full path
License file:
Browse...
< Back
Next >
Cancel

EntireX

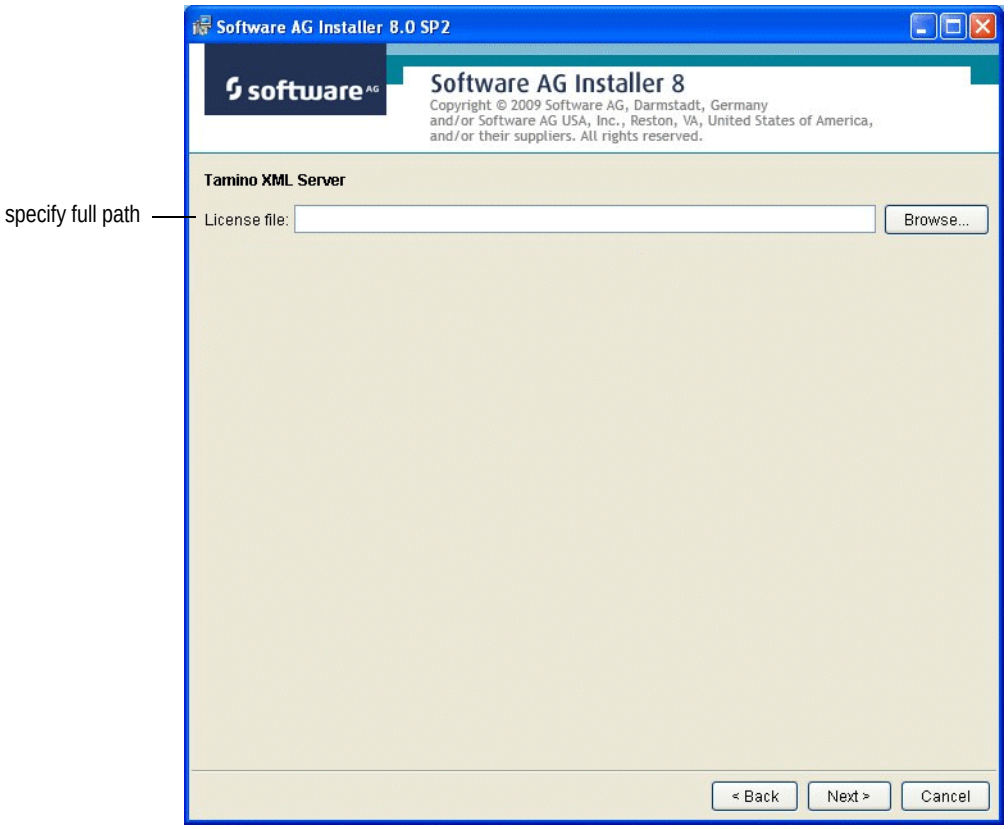


If you are also installing NaturalONE, EntireX uses the NaturalONE license file. If you are not also installing NaturalONE, specify the full path to your EntireX license file in the License file field.

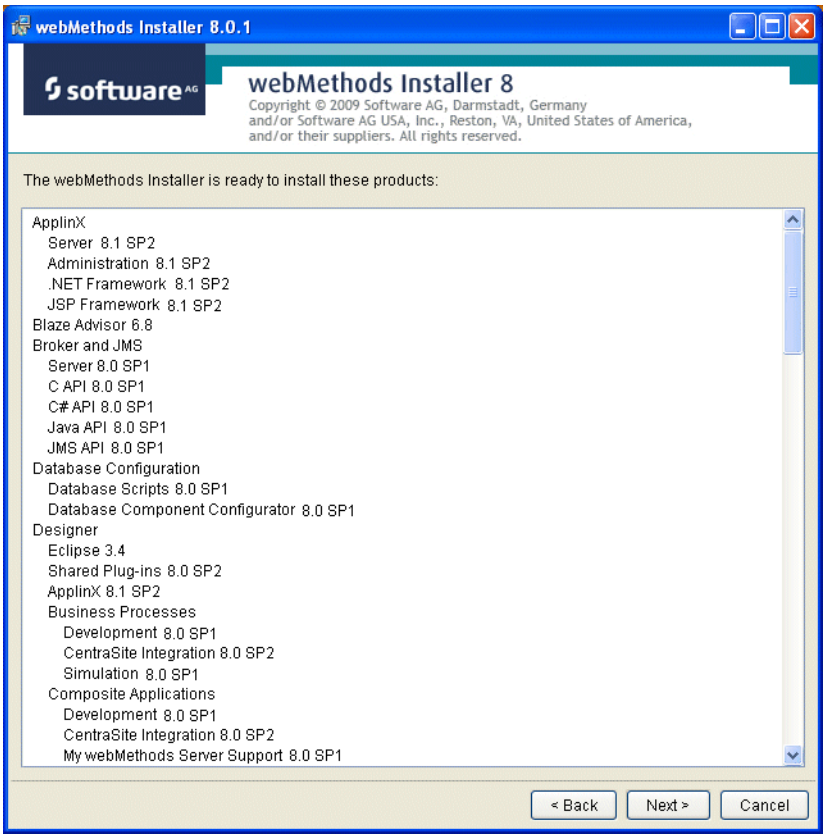
If you are installing on a Windows system and you want the EntireX admin user to be a user from the Active Directory, you must also specify the domain in the EntireX admin user field. For instructions on specifying the domain, see the EntireX documentation.

You can have the installer start the default EntireX Broker after installation and turn on the Autostart option so the Broker will start automatically whenever you start your system. To do so, select the Turn on Autostart for default Broker check box.

Tamino XML Server



Review and Install



Review the list of products and items you have selected for install. If the list is not correct, click **Back** until you reach the panel on which you chose the products to install and correct the choices. If the list is correct, click **Next**. The installer installs the products and related items, then displays the installation complete panel. Click **Close**.

6 Using Console Mode to Install

Overview

This chapter explains how to do the following on a UNIX, IBM i5, or Mac system using Software AG Installer console mode:

- Install products from the installer
- Create an installation script or image from which to install products
- Install products from an installation script or image.

The installer writes errors or warnings that occur during installation to a file named installLog.txt in the *Software AG_directory*/install/logs directory. If necessary, you can change logging behavior. For instructions, see "Change Logging Level and File, and Add Targets" on page 60 or page 91.

The installer writes product, version, and build information to an audit history log file named history.txt in the *Software AG_directory*\install\history directory.

Important! Software AG strongly recommends that you create an installation image and store it on your internal network before installing your software. You should create an image for each operating system that is covered by your license agreement on which you plan to install (for example, 32-bit, 64-bit, or both). This will help you reduce WAN traffic and speed installation, and ensure consistency across installations over time, since the installer provides only the latest release of each product.

Note: The installer uses HTTP port 80 to download files over the Internet. If your network interferes with the downloading of files (for example, if you are using a network appliance such as a virus scanner, or the security settings for your proxy or firewall are incompatible with the installer), you might have problems connecting to the installer server or see error messages about corrupted Zip files. In such cases, you can ask your IT department for temporary access to a port outside the firewall to download the files, or you can ask Software AG Customer Operations at keymaster@webmethods.com to provide your products on a DVD or through a private FTP site.

Start the Software AG Installer

Log on as a non-root user. The user under which you log on will own all files you install.

Important! If you are going to install ApplinX, CentraSite, EntireX, NaturalONE, or Tamino XML Server, you must have write access to the directory from which you start the installer. Do not run the installer as a background process.

The way you start the installer depends on the task you want to perform, as indicated below.

Note: You might receive Java messages when you start the installer. For example, you might receive warning messages about system preferences, or about unlocking connections. You can ignore these messages.

- For most uses, run this command:

```
java -Xmx512m -jar SoftwareAGInstaller80SP2.{jar|zip} -console
```

- On a Solaris x86-64 EM64T system, or on a Solaris x86-64 AMD Opteron system when you are using JDK 1.6 to run the installer, run this command:

```
java -Xmx512m -Dsun.cpu.isalist=amd64
-jar SoftwareAGInstaller80SP2.{jar|zip} -console
```

- To have the installer use a different temporary directory than the default, run this command:

```
java -Xmx512m -Djava.io.tmpdir=different_temp_directory
-jar SoftwareAGInstaller80SP2.{jar|zip} -console
```

  Important! If you are going to install CentraSite in an environment where users will be authenticated against a central service such as Active Directory Server, and you plan to disconnect your machine from the network, run the installer as a local user. If you run the installer as a user of the central service, when you disconnect your machine, CentraSite will not be able to authenticate you.

- You can run the command with the options described below in any order before the `-console` option:

For this option...	See...
Use an installation script	"Create, Install from, or Edit an Installation Script" on page 88
Use an installation image	"Create or Install from an Installation Image" on page 89
Install using a proxy server	"Use a Proxy Server to Install" on page 91
Change installer logging behavior	"Change Logging Level and File, and Add Targets" on page 91

- You can retrieve products from existing installation images, instead of downloading the products from the installer server. You can use this option when installing or when creating an image. For instructions, see the `-existingImage` option in "Create or Install from an Installation Image" on page 89.

- You can list all available command line options by running this command:

```
java -Xmx512m -jar SoftwareAGInstaller80SP2.{jar|zip} -help -console
```

Create, Install from, or Edit an Installation Script

Option	Variables
Create a script and install	
`-writeScript` *script_file*	Full path to the file in which to save the script.
Create a script without installing	
`-editScript` *script_file*	Full path to the file in which to save the script.
Create a script from an existing script without installing	
`-readScript` *script_file*	Full path to the file that contains the existing script to use as a template.
`-writeScript` *script_file*	Full path to the file in which to save the new script.
Edit a script	
`-editScript` *script_file*	Full path to the file that contains the script to edit.
Install from a script	
`-readScript` *script_file*	Full path to the file that contains the installation script from which to install. **Important!** If any errors occur while an installation script is running, the installation fails.
`-scriptErrorExit`	By default, if errors occur while an installation script is running, the installer shows those errors and does not exit. This option lets you override that behavior so the installer exits and does not show the errors.

Create or Install from an Installation Image

Important! Do not extract or modify image files using any tool other than the installer.

Option	Variables
Create an image	
`-writeImage` *image_file*	Full path to the file in which to save the installation image. The installer adds the file extension .zip.
`-imagePlatform` *system*	System for which you are creating the image. You can create an image for any system from any system. Valid values are as listed below. The default is the system on which you are running the installer.

System	Value
Windows x86	`WNT`
Windows x86-64 (EM64T, AMD64)	`W64`
Solaris SPARC	`SOL`
Solaris x86-64 (EM64T, AMD Opteron)	`SOLAMD64`
HP-UX PA-RISC	`HP11`
HP-UX Itanium 2	`HP11IT`
IBM AIX	`AIX`
IBM i5	`AS400`
Linux x86	`LNX`
Linux x86-64 (EM64T, AMD64)	`LNXAMD64`
Linux IBM zSeries	`LNXS390X`
Mac OS X	`OSX`

Option	Variables
Install from an image	
`-readImage` *image_file*	Full path to the file that contains the installation image from which to install.

`-existingImages` *image_files*	Existing images from which to retrieve products, instead of downloading the products from the installer server. You can specify any image containing products from the same release, regardless of the operating system for which the image was created.
	
	You can use this option when installing or when creating an image. When creating an image, also specify the `-writeImage` and `-imagePlatform` options.
	
	You can identify the source images as follows:
	
	■ Specify full paths to source image files. For example:
	`-existingImages C:\IS_HPUX.zip,C:\Designer_Solaris.zip`
	
	■ Specify directories that contain source image files. For example:
	`-existingImages C:\MyImages`
	
	■ List source image files in a text file. For example:
	`C:\IS_HPUX.zip`
	`C:\Designer_Solaris.zip`
	`C:\MwS_Windows.zip`
	
	Then specify the file. For example:
	`-existingImages C:\listofimages.txt`
	
	As you continue through the installer, select the release from which to install and select the products to install as usual. The installer will install products from the specified images unless later builds of those product exist on the installer server.
	
	Note: The installer ignores non-image files.

Use a Proxy Server to Install

If your company connects to the Internet through an HTTP or Socks proxy server, you must use that proxy server to install. Your network administrator can provide information on your company's proxy servers.

Option	Variables
Use an HTTP proxy server to install	
`-proxyHost` *`host`*	Host name or fully qualified IP address for the proxy server.
`-proxyPort` *`port`*	Port used by the proxy server.
`-proxyUser` *`user`*	User name for the installer to use to log on to the proxy server.
`-proxyPass` *`password`*	Password for *user*.
Use a Socks proxy server to install	
`-socksProxyHost` *`host`*	Host name or fully qualified IP address for the proxy server.
`-socksProxyPort` *`port`*	Port used by the proxy server. The default is the system on which you are running the installer.

Change Logging Level and File, and Add Targets

By default, the installer writes errors and warnings that occur during installation to a file named installLog.txt in the *Software AG_directory*/install/logs directory. You can increase or decrease the amount of information that is written, specify a different file name and directory, and choose to write to standard out and standard error in addition to the log file.

Option	Variables
`-debugLvl` *`number`*	Amount of information to log. Valid values are as follows: **Amount of information to log** / **Value** None / `0` or `none` Errors only / `5` or `error` All (verbose); produces a 10 to 200MB file / `10` or `verbose`
`-debugFile` *`debug_file`*	Full path to the file to contain the logging information.
`-debugOut`	Writes logging information to standard out as well as to file.
`-debugErr`	Writes logging information to standard error as well as to file.
`-debug` *`number`*	Shorthand way to specify `-debugErr -debugLvl` *`number`*.

Specify Release, User Name, and Password

Choose to install from the Software AG Products 8.x release.

Provide the user name and password indicated by your installation email from Software AG. The installer uses the user name and password to connect to the installer server and download the products for which you have purchased licenses.

Important! Only install products from the Software AG Products 8.x release. Do not mix and match products from different releases on the list or you will experience problems.

Specify the Installation Directory

Specify the installation directory in which to install all Software AG products. The user name under which you are running the installer must have full read and write permissions to the installation directory you specify.

If you are installing from an installation image, specify the installation directory for which the image was designed. The installation directory must contain required products that you did not include in the image. For example, if the image contains Designer plug-ins, the installation directory must contain Eclipse. For more information, see "Installation Images" on page 50.

Important! Do not install products from the Software AG 8.x release into a directory that contains products from any other release.

Select Products to Install

The installer lists the products for which you have purchased licenses and that are supported on the target operating system.

Important! The installer does not distinguish among flavors of an operating system. Make sure you install products only on supported operating systems, as specified in the *webMethods System Requirements*

Important! You cannot install multiple instances of the CentraSite 8.x components, Tamino XML Server 8.x, or System Management Hub 8.x on the same machine.

The highest level of the product selection tree shows product names and releases, while the lower levels show the items that make up or are related to the product. If you have already installed an item in the specified installation directory, the item name is followed by a letter I.

The installer can display only a limited number of lines in the tree at a time. To page forward through the tree, enter a plus sign (+). To page backward through the tree, enter a minus sign (-). To search for a specific product or item, enter S, then enter the name of the product or item. Enter S again to find the next occurrence of the product or item.

You can select products using the methods below in any combination. The installer puts an X in the tree next to selected products and items.

- Select typical development installations from the Typical Installations list by entering the appropriate numbers. The installer automatically selects the products and items that make up those installations.

  Note: You might not see the selections until you page forward through the tree. The products and items that make up each typical installation are listed in Chapter 1, "Typical Development Installations".

  Note: If you select the NaturalONE Application Development typical installation, the installer automatically selects the NaturalONE run time. If you want to use an already installed NaturalONE run time on the local machine or a remote machine, deselect the NaturalONE run time. The same is true for the NaturalONE Application Development with Service Enabling typical installation and EntireX. "Complete the NaturalONE Installation" on page 138 provides instructions on using an already-installed NaturalONE run time or EntireX.

- Select individual products by entering the numbers next to the product headings (for example, enter the number for Integration Server). Enter each number on a separate line. If a chosen product requires other products and items on the same machine, the installer automatically selects them. For example, Trading Networks Server requires Integration Server on the same machine. If you select Trading Networks Server, the installer selects Integration Server.

  Note: If you are creating an installation image, the installer asks whether you want it to automatically select additional required products. For information on how to respond, see "Installation Images" on page 50.

  If a product you select requires other products and items, but not on the same machine, the installer does not automatically select them. For example, Optimize requires its user interfaces, but you can install the user interfaces on a different machine, so the installer does not select them.

- Select individual items by entering the numbers next to them (for example, enter the number for PKI Support under Integration Server). Enter each number on a separate line. If an item you select requires other products and items on the same machine, the installer automatically selects them.

Note: If you select a NaturalONE plug-in to Designer, the installer automatically selects the Software AG-supplied Eclipse. You can switch to a different Eclipse after installation. “Complete the NaturalONE Installation” on page 138 provides instructions.

Note: If you select EntireX, the installer automatically selects the Administration component, which in turn selects the System Management Hub, Tomcat Kit, and Java Development Kit 1.6. The Administration component enables you to administer the EntireX Broker, Broker Agent, Location Transparency, and Authorization Rule, and to use the System Management Hub to administer the EntireX RPC server. If you need only a lightweight EntireX installation (for example, for use with NaturalONE), you might not need the Administration component. Without this component, you will only be able to start and stop the default EntireX Broker. For complete information on functionality provided by the Administration component, see "System Management Hub" in the EntireX product documentation.

When you are done, press ENTER twice.

Select Language Packs

If language packs are available for products you are installing or have already installed, the installer prompts you to choose language packs to install.

Many products support multiple languages; you can install as many language packs as you want, and all of the languages installed (including the default, U.S. English) will be available to users.

Read the license agreement and indicate whether you accept the terms. To read the third-party license agreements, you need Internet access. If you do not have Internet access, you can go to a machine that has Internet access and enter http://documentation.softwareag.com/legal in a browser. If you are installing from an image and do not have Internet access, you can open the image and go to the TPL directory to view the licenses.

Configure Products

If you are installing any of the products listed below, the installer prompts for configuration information.

- Configure Trading Networks Server
- Configure Optimize
- Configure Integration Server
- Configure the Infrastructure Data Collector
- Configure webMethods Broker
- Configure My webMethods Server
- Configure the Report Server
- Configure ApplinX, CentraSite, EntireX, NaturalONE, and Tamino XML Server

Database Connection Information

Some products require you to supply database connection information during installation. Sample URL formats for that driver are shown in the prompts. Keep in the mind the following:

- Many products use the DataDirect Connect JDBC 4.0 driver. For information about options supported by this driver, see *DataDirect Connect for JDBC User's Guide and Reference 4.0* in the *Software AG_directory*/_documentation directory or on the Software AG Documentation Web site.
- Use the DataDirect Connect connection option MaxPooledStatements=35 on all database URLs except those for Trading Networks. This connection option improves performance by caching prepared statements. (Trading Networks caches its prepared statements using its own pooling mechanism).
- If the database user and password do not yet exist, specify the database user and password you will create after installation. You can use one database user for multiple database components, or you can use a different database user for each database component.
- For DB2, if the product will connect to a schema other than the default schema for the specified database user, you must specify these connection options in the database URL:

  ```
  ;AlternateId=schema;InitializationString="SET CURRENT PATH=current_path,schema;
  MaxPooledStatements=35"
  ```

  `AlternateID` is the name of the default schema that is used to qualify unqualified database objects in dynamically prepared SQL statements.

Configure Trading Networks Server

Define the database connection for Trading Networks Server to use to connect to the Trading Networks database component. If you do not do so, Trading Networks will not start after installation.

Configure Optimize

1 If you have multiple network interfaces, identify the one to use for the Optimize components you are installing. Do not use "localhost."

2 Optimize offers a Central Configuration user interface that allows you to configure Optimize components from a single machine. Specify the port you want the interface to use to communicate with each Optimize component you are installing. Each port must be unique. If you install multiple instances of a component on the same machine, the port for each instance must be unique.

Configure Integration Server

1 Specify the full path to your Integration Server license file.

2 You can specify the port to use for Integration Server. If you install multiple instances of Integration Server on the same machine, specify unique ports for each instance.

3 You must decide where to store data written by Integration Server (see "Integration Server Data Storage" on page 24).

Note: If you select the external RDBMS but do not provide the connection information, Integration Server will use the embedded database.

Configure the Infrastructure Data Collector

1 You can provide the Infrastructure Data Collector license key now, or you can provide it after you start Infrastructure Data Collector.

2 You can specify the primary and diagnostics ports to use for Infrastructure Data Collector.

3 Optimize provides a Central Configuration user interface that allows you to configure Optimize components from a central machine. Specify the port you want the interface to use to communicate with the Optimize Infrastructure Data Collector. The port must be unique. If you install multiple instances of the Infrastructure Data Collector on the same machine, the port for each instance must be unique.

Configure webMethods Broker

1 You can specify the port to use for Broker Monitor. If you install multiple Broker Monitors on this machine, specify a different port for each.

2 By default, Broker Monitor will bind to all IP addresses on the local machine. If necessary, bind Broker Monitor to a specific IP address instead.

3 Indicate whether you want to create the Broker Server.

- You would *not* create the Broker Server configuration at this time (that is, using the installer) if you want to use a different storage size than is offered on the panel or if you want to create a combined storage session for configuration and run-time data. If you do not need to back up configuration data without shutting down your Broker Server, using a combined session might save you a small amount of disk space. If you choose to not create the Broker Server configuration at this time, you must create it after installation is complete, using instructions in *Administering webMethods Broker*.
- You would create the Broker Server at this time (that is, using the installer) if you want to use a storage size that is offered on the panel and separate storage sessions for configuration (metadata) and run-time data. Using separate storage sessions minimizes the greater risk of corruption that goes with a combined storage location, and enables you to back up configuration data without having to shut down your Broker Server. (For information about the webMethods Broker online configuration data backup tool, see *Administering webMethods Broker*.) If you choose to create the Broker Server at this time, follow the steps below.

Important! Software AG recommends creating separate sessions. You cannot later change from a combined session to separate sessions or vice versa.

---

1 Enter the full path to your webMethods Broker license file.

2 Identify the port on which to run the Broker Server; Broker Server uses this port for non-SSL and the previous two ports for SSL. The default (non-SSL) port is 6849 (and, for SSL, 6848 and 6847). If you install multiple instances of Broker Server on the same machine, specify unique ports for each instance.

3 Provide the full path to the data directory in which to store Broker Server data. If you install multiple instances of Broker Server on the same machine, specify a unique data directory for each instance.

4 Select a pre-configured storage session for the Broker Server that is adequate for your expected usage needs.

Files Created	When to Use	Broker Server Startup Time
Small Configuration		
32MB log file 512MB storage file	Ideal for running development Broker Servers or relatively few production integrations, low document volumes, and no document logging	Fastest of all configurations
Medium Configuration		
64MB log file 4GB storage file	Standard deployment size, fits more cases than Small; larger maximum transaction size and twice the storage capacity of Small	Up to twice as long as for Small
Large Configuration		
128MB log file 8GB storage file	Suitable for production deployments with many integrations running at relatively high document volumes, possibly using document logging as well	Two times longer than for Medium; four times longer than for Small

*For complete information on Broker Server storage sessions, see *Administering webMethods Broker*.

When determining the appropriate size for the log file, the factors to balance are Broker Server startup time and the desired maximum transaction size. The smaller the log file, the faster the startup; however, with a larger log file, you can send larger messages (that is, one larger-sized single document or a batch of documents). If necessary, you can remove or replace log files after installation, and you can increase or decrease their size.

Startup time does *not* depend on the size of the storage file; additional storage capacity merely prevents the Broker Server from running out of room. After installation, if the amount of storage allocated turns out to be insufficient, you can add storage files and increase their size. You cannot remove storage files or decrease their size.

Administering webMethods Broker provides instructions on working with log files and storage files.

Configure My webMethods Server

1 You can specify the port to use for My webMethods Server.

2 Define the database connection for My webMethods Server to use to connect to the My webMethods Server database component. If you do not do so, My webMethods Server will not start after installation.

Note: If you are installing My webMethods Server for the sole purpose of running the Messaging user interface in My webMethods, you can configure My webMethods Server to use an embedded database instead of an external RDBMS. To do so, do not specify the database connection fields. After installation is complete, see *Administering webMethods Broker* for instructions on configuring the embedded database.

If you are installing My webMethods Server for any other purpose, you must use an external RDBMS.

Configure the Report Server

1 If you have multiple network interfaces, identify the one to use for the Report Server. Do not use "localhost."

2 You can specify the port to use for the Report Server.

3 The Report Server uses a Content Store. The Content Store is an external RDBMS containing data, such as global configuration data and report definitions, that the Report Server needs to operate. You must specify the database connection between the Report Server and the Content Store or the Report Server will not start after installation.

The database connection fields vary slightly by RDBMS. If the service (Oracle) or database (SQL Server or DB2) for which you are prompted does not yet exist, specify the service or database you will create after installation. For more information on the Content Store, see *Generating webMethods Reports*.

Configure ApplinX, CentraSite, EntireX, NaturalONE, and Tamino XML Server

The super user command and password are required to install all products discussed in this section except ApplinX, CentraSite, and Tamino XML Server. However, the product files will be owned by the user under which you are running the installer.

Shared Components

ApplinX, CentraSite, EntireX, and Tamino XML Server require and share some or all of these supporting components: System Management Hub, Tomcat Kit, and Java Development Kit 1.6. If you install one of these products, the installer might prompt for the information below.

1 If no shared components exist on the machine, the installer prompts for information about where to install the shared components. The user name under which you are running the installer must have full read and write permissions to the directory you specify.

Note: Because the components are shared by Software AG products that are not part of the webMethods product suite, their default directory is different from the default product installation directory. However, you can change the default to any directory.

If shared components from this release or a previous release exist on the machine, specify the directory that contains the existing shared components. If the shared components are from a previous release, the installer upgrades them.

Note: You can choose to not upgrade the existing shared components and instead create a new shared components installation. For instructions, see the System Management Hub documentation.

---

2 For the super user command and password, type sudo and the sudo password of the user under which you are running the installer. The super user command and password are required to install all products discussed in this section except ApplinX and CentraSite. The super user command is used to register daemons and to set file permissions for the ssxauthd2 file. However, the product files will be owned by the user under which you are running the installer.

Sudo for EntireX

When you install EntireX, the installer prompts for sudo information it if did not prompt for shared components information.

You can choose to install EntireX using sudo by selecting the check box and providing the sudo password of the user under which you are running the installer. Otherwise, you will have to run commands with sudo privileges after installation to register daemons and set file permissions.

ApplinX

If you are installing the ApplinX Server, do the following:

1 Specify the full path to your ApplinX license file.

2 You can specify the ports to use for ApplinX Server. If you install multiple instances of ApplinX Server on the same machine, specify unique ports for each instance. For information about ApplinX ports, see Appendix A, "Default Ports".

CentraSite

You can install the CentraSite Registry Repository and Application Server Tier in the same directory on the same machine or on separate machines. If you install the components on separate machines, or in the same directory on the same machine but at different times, you must install the Registry Repository first, and it must be running when you install the Application Server Tier.

1 If you are installing the Registry Repository, you can specify the application and administration ports to use. See Appendix A, "Default Ports" for information about ports.

2 If you are installing the Application Server Tier, provide the following:

- Ports to use for the HTTP and Web applications servers; defaults shown are for the bundled Apache HTTP and Tomcat servers.
- If the Registry Repository is installed on a different machine, identify the Registry Repository host and port. Do not use "localhost."

NaturalONE

If you are installing NaturalONE, specify the full path to your NaturalONE license file.

EntireX

1 If you are also installing NaturalONE, EntireX uses the NaturalONE license file. If you are not also installing NaturalONE, specify the full path to your EntireX license file.

2 Specify the user name to use to connect to the System Management Hub.

3 Indicate whether you want the installer to start the default EntireX Broker after installation and turn on the autostart option so the Broker will start automatically whenever you start your system.

Important! The prompt to migrate from an existing EntireX installation is used to upgrade from specific earlier releases, and is beyond the scope of this guide, which covers new installations only. For instructions on upgrading, see the upgrade documentation.

Tamino XML Server

Specify the full path to your Tamino XML Server license file.

Review and Install

Review the list of products you have chosen to install. If the list is correct, press ENTER. The installer installs the products and related items.

7 Creating and Dropping Database Components

Preparing for Database Component Configuration

Products and Databases

Chapter 1, "Typical Development Installations", explains which products in this guide use databases. These products use Java Database Connectivity (JDBC) to interact with their databases; specifically, to query and update data in *database components*. A database component is a grouping of database objects that can be used by one or more products. For example, Integration Servers write process status data to the Process Audit Log database component; My webMethods Server reads the data from the Process Audit Log database component and passes it to My webMethods to display.

Unless noted otherwise, the products use the DataDirect Connect JDBC 4.0 driver. The products come with the client component of this driver; it is a Type 4 JDBC native-protocol driver that does not have a server component. The products use the driver to convert JDBC requests from Java programs directly into the vendor-specific database protocol that each type of RDBMS can understand. The products execute DDL commands at install time and sometimes design time for each RDBMS with which they interact. For information about the driver, see *DataDirect Connect for JDBC User's Guide and Reference 4.0* in the *Software AG_directory*/_documentation directory or on the Software AG Documentation Web site.

To enable products to interact with a database component, you provide database connection parameters, usually during product installation, and the Software AG Installer uses the parameters to configure JDBC connection pools. After product installation and database component creation is complete, you set up the products to use the appropriate connection pools. For some products, such as Optimize, you configure the JDBC connection pools after product installation. Tasks you perform after product installation are covered in Chapter 8, "Completing the Installation".

For the list of RDBMSs supported by your products, see the *webMethods System Requirements*.

Note: If you want your products to exchange data with databases other than webMethods databases, you can use the webMethods JDBC Adapter. For more information, see the webMethods JDBC Adapter documentation.

Database Users and Storage

You can create one database user for multiple database components, or you can create a different database user for each database component. You can create all database component objects in the same storage or you can create the objects for each database component in its own storage. Later sections in this chapter explain how to create database users and storage.

The database user must have the permissions listed in the file below:

RDBMS	Path to File
Oracle	*Software AG_directory*\common\db\scripts\oracle\storage\25\create\ora_str_c_ddl_user.sql
SQL Server	*Software AG_directory*\common\db\scripts\mssql\storage\30\create\mss_str_c_ddl_user.sql
DB2	*Software AG_directory*\common\db\scripts\db2\storage\30\create\db2_str_c_ddl_user.sql

Database Administrator Account

You need DBA access only if you want to use the Database Component Configurator to create the necessary database users and storage objects.

Your products are designed to use the database users you create for the database components.

Character Set and Sort Order

Your products are globalized and support Unicode. Software AG strongly recommends choosing a Unicode encoding for your database and the most appropriate sort order for your environment. A database character set determines which languages a database can represent. Database sort order determines collation and comparison behavior.

The sections below list the most appropriate Unicode character encoding and sort order for each RDBMS that your products support. If you want to use a different character set or sort order than recommended below, consult your database administrator and your RDBMS vendor's documentation so you can carefully choose a database character set that supports the languages your data is in.

If you use the Database Component Configurator to create your database components, you can check whether the selected RDBMS is configured for the Unicode character set. If the RDBMS does not support Unicode, the configurator lists the character set the RDBMS does support.

Important! You must set character set and sort order before creating storage.

Oracle

Database schemas for Oracle use character data types. For character data types, Oracle supports the UTF8 and AL32UTF8 Unicode encodings. While UTF8 is CESU-8-compliant and supports the Unicode 3.0 UTF-8 Universal character set, AL32UTF8 conforms to the Unicode 3.1 or higher UTF-8 Universal character set. For nchar data types, Oracle supports the AL32UTF8 and AL16UTF16 Unicode encodings. The supported Unicode version for AL32UTF8 depends on the Oracle database version. Oracle database schemas for your products do not have linguistic indexes. Software AG recommends these character sets and sort order:

For...	Software AG recommends...
Character set	AL32UTF8
Nchar character set	AL16UTF16
Sort order	Binary

You can check database configuration and session settings by viewing the SYS.NLS_DATABASE_PARAMETERS or V$NLS_PARAMETERS parameter.

SQL Server

Database schemas for SQL Server use nchar data types. SQL Server provides support for UTF-16 through its nchar data types. Since nchar data types are always in UTF-16, you do not have to perform any special database configuration and can choose the most appropriate code page for your environment as a database character set. Software AG recommends these character sets and sort order:

For...	Software AG recommends...
Character set	The appropriate encoding for the languages your data is in.
Nchar character set	UTF-16
Sort order	Any case-insensitive collation type. **Important!** If you do not choose a case-insensitive sort order, you will not be able to create some database components in SQL Server.

You can check the database configuration using the sp_helpdb *database* stored procedure.

DB2

Database schemas for DB2 use character data types. DB2 supports UTF-8 for character data types and UTF-16 for graphic data types. Software AG recommends these character sets and sort order:

For...	Software AG recommends...
Character set	CCSID 1208 (UTF-8) Note: My webMethods Server requires this character set.
Graphic Character Set	UTF-16
Sort order	IDENTITY_16BIT Note: This sort order ensures the same sorting result for both character and graphic data types. This option is only available for DB2 for Linux, Unix, Windows (LUW). For DB2 for iSeries, sort order is always binary order when the database character set is UTF-8.

You can check the database configuration by using the following:

RDBMS	Use...
DB2 for LUW	GET DATABASE CONFIGURATION command
DB2 for iSeries	DSPFD command to check the database file description

Page and Block Size

Use the page and block sizes specified below for each type of RDBMS.

RDBMS	Required Page and Block Size	Default
Oracle	8k page/block size	8k
SQL Server	8k page/block size	8k
DB2	32k page size	4k

Set Database Options

Oracle

For your products to function properly, you must set the NLS_LENGTH_SEMANTICS initialization parameter to BYTE.

Important! Your products use BYTE rather than CHAR semantics because BYTE is the default configuration of Oracle database and is used by most Oracle users. If you try to use your products with CHAR semantics, unexpected results might occur. For example, since CHAR semantics allow storage of longer data than BYTE semantics (for Japanese, varchar(12 byte) takes four characters in UTF8 while varchar(12 char) takes 12), using CHAR semantics could cause the buffer in some products to overflow.

SQL Server

The following database settings are required for your products to function properly:

```
ALTER DATABASE database_name SET ALLOW_SNAPSHOT_ISOLATION ON;
ALTER DATABASE database_name SET READ_COMMITTED_SNAPSHOT ON;
```

In addition, enable Named Pipes and TCP/IP protocols using the SQL Server Configuration Manager.

By default, SQL Server uses case-insensitive collations. If you create the My webMethods Server database component, do not change this option from the default; My webMethods Server does not support case-sensitive collations.

Default Storage Convention

By default, all database components follow this storage convention:

RDBMS	Data Storage Unit	Index Storage Unit	BLOB Storage Unit
Oracle tablespaces	WEBMDATA	WEBMINDX	WEBMDATA
SQL Server filegroups	Primary	Primary	Primary
DB2 for LUW tablespaces	WEBMDATA	WEBMINDX	WEBMBLOB
DB2 for iSeries	Default	Default	Default

You can use a different storage convention when you create database components. For instructions, see Chapter 7, “Creating and Dropping Database Components”.

Download the Database Component Configurator or Database Scripts

The Database Component Configurator and database scripts are available through the Software AG Installer. For complete instructions on using the installer, see previous chapters in this guide.

1 Download the Software AG Installer as instructed by your installation email from Software AG to the appropriate machine, as follows:

If you are going to create database components...	Download the Software AG Installer to...
Automatically, using the Database Component Configurator	Any machine on the same network as your database server
Manually, using database scripts	A machine equipped with the database client for your type of RDBMS

2 Start the installer.

3 In the product selection list, select Database Configuration > Database Scripts or Database Component Configurator, as desired.

Change Environment Settings

The Database Component Configurator has the default environment settings shown below. If necessary, you can change them as described below.

1 Go to the *Software AG_directory*\common\db\bin directory.

2 Open the setEnv.{bat|sh} file in the text editor and edit the fields as necessary.

Setting	Determines whether the configurator...	Default
-DtermOutOn	Writes execution information to the console.	true
-DspoolOn	Logs execution information.	true
-DlogLevel	Sets the log level to INFO (high-level information) or DEBUG (more detailed information, including internal processing and SQL calls).	INFO
-Dlog.dir	This setting specifies the full path to the directory in which to store the log files. Make sure you have permission to write to this directory.	*Software AG_directory*\common\db\logs

3 Save and close the file.

Use the Database Component Configurator Graphical User Interface

This section explains how to use the Database Component Configurator graphical user interface to create or drop a database user and storage, and to create or drop database components. Each run of the configurator operates on a single schema.

The configurator writes execution information to the Results tab and to a log file named dcc_*yyyymmddHHMMss* in the *Software AG_directory*\common\db\logs directory.

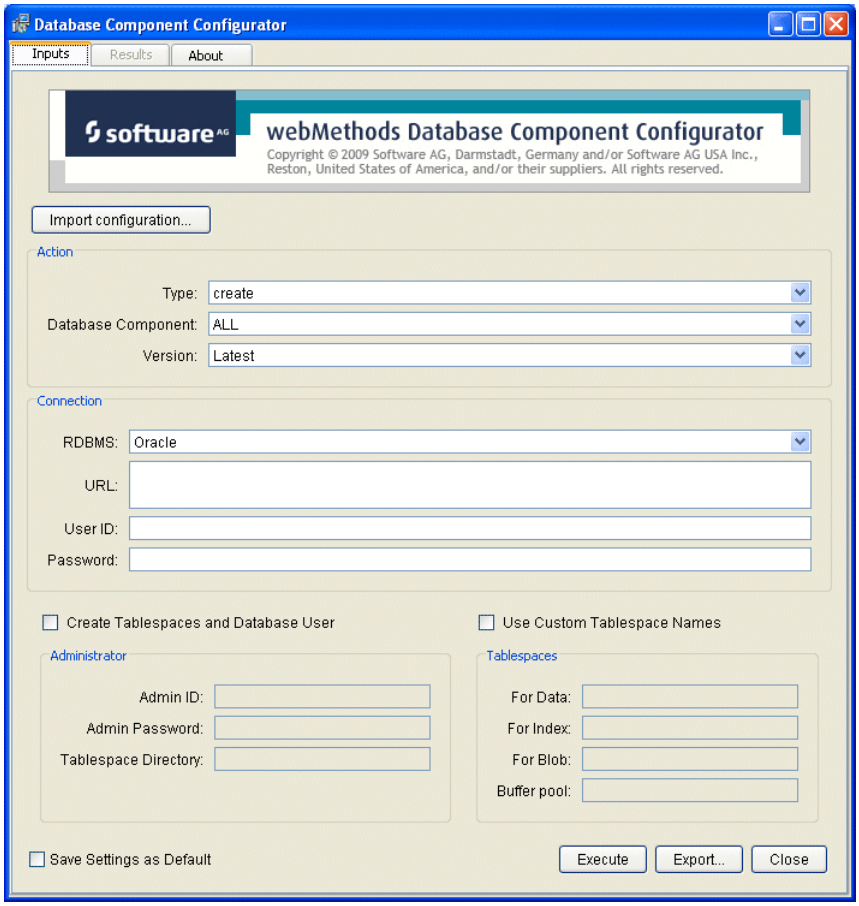
Create Database Components, Database User, and Storage

For Oracle, SQL Server, and DB2 for LUW, when you create database components using the configurator, you can also create the database user and storage. For DB2 for iSeries, you must create the database user and storage using scripts (see "Use the Database Scripts" on page 127).

Important! When you create database components in DB2 using the Database Component Configurator, the configurator creates the schema name in all uppercase letters. Since DB2 is case sensitive for schema names, you must use all uppercase letters for the schema names when you type them in URLs for JDBC connection pools, or you will experience problems.

Start the Database Component Configurator

On the Start menu, go to Programs > Software AG > Tools > Database Component Configurator.



Initially, some of the fields on the Inputs tab show values you entered for the same fields in the Software AG Installer during product installation. You can change these values and specify other field values.

Choose the Action to Perform

In the Action Type list, click the action to perform, as follows:

Option	Action
create	Creates the database components you select in the Database component list, and lets you create a database user and storage.
recreate	Drops and then re-creates the database components you select in the Database component list.

Option	Action
catalog	Displays existing database components on the Results tab.
checkEncoding	Checks whether your RDBMS is Unicode-enabled and displays the answer on the Results tab.

Specify the Connection to the RDBMS

Specify the connection for the configurator to use to connect to the RDBMS.

1 In the RDBMS list, click the RDBMS in which to create the database components.

2 In the URL field, provide the URL for the RDBMS. Sample URL formats for the DataDirect Connect JDBC 4.0 driver are displayed. Below is additional information for completing this field.

- For Oracle, if you are going to create storage and the Data Purge database component, you must specify the sysLoginRole connection option on the URL (for example, `;sysLoginRole=sysdba`).
- For DB2, if you are going to create database components in a schema other than the default schema for the specified database user, you must specify these connection options in the URL, where `AlternateID` is the name of the default schema used to qualify unqualified database objects in dynamically prepared SQL statements:

  ```
  ;AlternateId=schema;InitializationString="SET CURRENT
  PATH=current_path,schema"
  ```

  Important! If you are creating Optimize database components (that is, Analysis and ProcessTracker), you must specify *schema* using all capital letters. In addition, you must specify the options `CreateDefaultPackage=true`,`ReplacePackage=true`, and `DynamicSections=3000`. These settings will affect all database components in the same schema or database.

- For information about options supported by the DataDirect Connect JDBC 4.0 driver used by your products, see *DataDirect Connect for JDBC User's Guide and Reference 4.0* in the *Software AG_directory*/_documentation directory or at http://documentation.softwareag.com.

3 In the User ID and Password fields, your entries depend on the task you are going to perform, as follows:

If you are...	Specify...
Creating a database user and storage in Oracle or SQL Server	The database user and password to create. Important! For Oracle, do not use the SYSTEM user to create the database components in the SYSTEM schema.
Creating a database user and storage in DB2 for LUW	The OS user to which to grant permissions, and the password for that user.
Creating database components or performing the catalog action	An existing database user and password.
Performing the checkEncoding action	An existing database user that has create session and create table privileges, and that database user's password.

Create Database Components, Database User, and Storage

If you selected create in the Action Type list, do the following:

1 In the Database Component list, select the database components to create. You can use any of the options below.

- Click one database component to create.

  If you are going to create the SuiteReporting-Common database component, it requires the following:

  - 8GB of hard drive space for Oracle and DB2 and 18GB for SQL Server. It will take about 10 minutes (Oracle and DB2) and 1 hour (SQL Server) to create the database component.
  - For DB2, the configuration parameters below must be set as follows:

    LOGFILSZ=8192

    LOGPRIMARY=20

    LOGSECOND=10

    APPLHEAPSZ=60000

    In addition, the log must be at least 500MB.

- Click All to create all database components.

  The All option includes the SuiteReporting-Common database component; see the previous bullet for requirements.

- Click PRODUCT - *product* to create the database components for that product, or click PRODUCT - All to create the database components for all the PRODUCT options. The PRODUCT options map to the database components listed below.

  Note: You can see the list of database components for a PRODUCT option in the configurator interface by selecting the PRODUCT option, clicking print in the Action Type list, clicking Execute, and then clicking the Results tab.

This option...	Maps to these database components...
PRODUCT - Integration Server	ISCoreAudit, ISInternal, Distributed Locking, ProcessAudit, ProcessEngine, DocumentHistory, CrossReference, Blaze, BPEL, MediatorEvents, Staging, and Reporting
PRODUCT - My webMethods Server	MywebMethodsServer, CentralConfiguration, and SuiteReporting
PRODUCT - Optimize	Analysis, ProcessTracker, and ProcessAudit
PRODUCT - Trading Networks	TradingNetworks, TradingNetworksArchive
PRODUCT - All	All of the above.

2 Select from the Version list as follows:

If you selected...	Click...
A database component or All	Latest. The configurator will create the latest version of the database component or of all database components, respectively.
PRODUCT - *product* or PRODUCT - All	8.0.

3 If you want to also create the database user and storage, follow these steps:

a Select the Create Tablespaces check box.

  Note: This check box is labeled Create Database and Database User for SQL Server, and Create Tablespaces and Grant Permissions to OS User for DB2.

b In the Admin ID field, identify the database user or operating system user that has database administrator credentials to create the database user and storage. Supply the password for the user in the Admin Password field.

c The next field and your entry depend on your RDBMS.

RDBMS	Field and Entry
Oracle or DB2 for LUW	In the Tablespace Directory field, identify the directory in which to create the tablespaces. For Oracle, use this field only if the DB_CREATE_FILE_DEST parameter is not set for your Oracle instance.
SQL Server	In the Database field, specify the database to create.

4 For Oracle or DB2 for LUW, you can select the Use Custom Tablespace Names check box and specify custom tablespace names in the fields.

- For Oracle, the custom tablespace names will replace the defaults WEBMDATA and WEBMINDX.
- For DB2 for LUW, the custom tablespace names will replace the defaults WEBMDATA, WEBMINDX, and WEBMBLOB. You can also specify a custom name to use for the buffer pool for your products (WEBMBUFF by default).

Note: The products support all tablespace configurations deployed by customers.

Execute the Specified Action

1 If you intend to run the configurator more than once, you can set the current field values as the defaults for subsequent runs by clicking Save Settings as Default. You can also export field values to .xml files by clicking Export, then later import the values from a file by clicking Import Configuration. In each case, the values for the two Password fields are not saved.

2 Click Execute. The execution information is displayed on the Results tab and is written to the log file dcc_*yyyymmddHHMMss* in the *Software AG_directory*\common\db\logs directory.

Drop Database Components

1 Shut down all products that are connected to the database components you want to drop, and back up the database components.

2 On the Start menu, go to Programs > Software AG > Tools > Database Component Configurator 8.0.

3 In the Action list, click the action to perform, as follows:

Value	Action
drop	Drops the database components you select in the Database component list.
catalog	Lists existing database components on the Results tab.

4 In the Connection area, specify the connection for the configurator to use to connect to the RDBMS, as follows:

Field	Do this...
RDBMS	Click the RDBMS from which to drop the database components.
URL	Type the URL for the RDBMS. Sample URL formats for the DataDirect Connect JDBC 4.0 driver are displayed.
User ID and Password	Specify the database user and password to use to connect to the RDBMS.

5 In the Database Component list, select the database components to drop.

6 Select from the Version list as follows:

If you selected...	Click this in the Version list...
A database component or All	Latest.
A product	8.0.

7 Click Execute. The execution information is displayed on the Results tab and is written to the log file dcc_*yyyymmddHHMMss* in the *Software AG_directory*\common\db\logs directory.

Drop the Storage and Revoke Database User Permissions

If you have dropped all database components in a schema, you can drop the storage and revoke the database user permissions.

You can use the Database Component Configurator to drop the storage for Oracle, SQL Server, and DB2 for LUW. For DB2 for iSeries, you must drop the database user and storage using a script (see "Use the Database Scripts" on page 127).

1 On the Start menu, go to Programs > Software AG > Tools > Database Component Configurator 8.0.

2 In the Action list, click drop.

3 In the Database component list, click All.

4 In the Connection area, specify the connection for the configurator to use to connect to the RDBMS, as follows:

Field	Do this...
RDBMS	Click the RDBMS from which to drop the database components.
URL	Type the URL for the RDBMS. Sample URL formats for the DataDirect Connect JDBC 4.0 driver are displayed.
User ID and Password	Specify the database user and password to use to connect to the RDBMS.

5 Select the Drop tablespaces and database user check box.

a In the Admin ID field, identify the database user or operating system user that has database administrator credentials to drop the database user and storage. Supply the password for the database user in the Admin password field.

b The next field depends on your RDBMS.

RDBMS	Fields and Entries
DB2 for LUW and Oracle	In the Tablespace directory field, identify the directory that contains the tablespaces to drop. If you specified custom tablespace names, supply those names in the Tablespaces area.
SQL Server	In the Database field, specify the database that contains the storage.

6 Click Execute. The execution information is displayed on the Results tab and is written to the log file dcc_*yyyymmddHHMMss* in the *Software AG_directory*\common\db\logs directory.

Use the Database Component Configurator Command Line

This section explains how to use Database Component Configurator command line mode to create or drop a database user and storage, and to create or drop database components. Each run of the configurator operates on a single schema.

Command line mode lets you create a database user and storage in Oracle, SQL Server, and DB2 for LUW. For DB2 for iSeries, you must create the database user and storage using scripts (see "Use the Database Scripts" on page 127).

Important! When you create database components in DB2 using the Database Component Configurator, the configurator creates the schema name in all uppercase letters. Since DB2 is case sensitive for schema names, you must use all uppercase letters for the schema names when you type them in URLs for JDBC connection pools, or you will experience problems.

Before dropping any database component, shut down all products that are connected to the database component.

If you have dropped all the database components from a schema, you can drop the storage and revoke the database user permissions. You can use the command line to drop storage for Oracle, SQL Server, and DB2 for LUW. For DB2 for iSeries, you must drop storage using scripts (see "Use the Database Scripts" on page 127).

Database Component Configurator Command

You can perform an action on one database component or on all database components, or on the database components for one product, using the command below. You run the command from the *Software AG_directory*\common\db\bin directory.

```
dbConfigurator.{bat|sh} {-a|--action} action
{-d|--dbms} {oracle|sqlserver|db2luw|db2i}
{{-c|--component} db_component {-v|--version} version
{-l|--url} RDBMS_URL
{-u|--user} db_user {-p|--password} password
[{-au|--admin_user} db_admin_user {-ap|--admin_password} password]

Additional Parameters:
[-r|--runCatalog]
[{-tsdata|--tablespacefordata} data_tspace_name]
   [{-tsindex|--tablespaceforindex} index_tspace_name]
   [{-tsblob|--tablespaceforblob} BLOB_tspace_name]
   [{-b|--bufferpool} buffer_pool_name]
[-t|--tablespacedir directory]
[-n|--dbname database_name]
[-h|--help]
[-ab|--about]
[-pa|--printActions] [-pd|--printDatabase] [-pc|--printComponents]
[-pp|--printProducts] [-pe]
[{-e|--export|-i|--import} {-dir|--configdir} directory
   {-file|--configfile} file_name]
```

Parameter	Entry	
`{-a|--action} action`	Action to perform.	
	Value	**Action**
	`catalog`	Displays existing database components.
	`create`	Creates `db_component` or the database components for `product`.
	`drop`	Drops `db_component` or the database components for *product*.

<table>
<tr><th>Parameter</th><th colspan="2">Entry</th></tr>
<tr><td></td><td><code>recreate</code></td><td>Drops <code>db_component</code> or the database components for <code>product</code>, then creates <code>db_component</code> or the database components for <code>product</code>.</td></tr>
<tr><td></td><td><code>checkEncoding</code></td><td>Checks whether your RDBMS is Unicode-enabled and displays the answer.</td></tr>
<tr><td><code>{-d|--dbms} {oracle|sqlserver|db2luw|db2i}</code></td><td colspan="2">RDBMS on which to perform <code>action</code>.
Value — DBMS
<code>oracle</code> — Oracle
<code>sqlserver</code> — SQL Server
<code>db2luw</code> — DB2 for LUW
<code>db2i</code> — DB2 for iSeries</td></tr>
<tr><td><code>{-c|--component}</code> <code>db_component</code> <code>{-v|--version}</code> <code>version</code></td><td colspan="2">Database component version for which to perform <code>action</code>.
For <code>db_component</code>, you can specify the database component code or name.
Code — Name
<code>ALL</code> — All database components
<code>ANL</code> — Analysis
<code>ARC</code> — Archive
<code>BLZ</code> — Blaze
<code>BPL</code> — BPEL
<code>CCS</code> — CentralConfiguration
<code>CTR</code> — ComponentTracker
<code>XRF</code> — CrossReference
<code>DTP</code> — DataPurge
<code>DBM</code> — DatabaseManagement
<code>DSL</code> — DistributedLocking
<code>IDR</code> — DocumentHistory
<code>ISC</code> — ISCoreAudit
<code>ISI</code> — ISInternal
<code>MWS</code> — MywebMethodsServer
<code>OPM</code> — OperationManagement
<code>MED</code> — MediatorEvents
<code>PRA</code> — ProcessAudit
<code>PRE</code> — ProcessEngine
<code>PTR</code> — ProcessTracker
<code>PRP</code> — Reporting
<code>PST</code> — Staging
<code>STR</code> — Storage
<code>SRP</code> — SuiteReporting
<code>SRC</code> — SuiteReporting-Common
<code>TNS</code> — TradingNetworks
<code>TNA</code> — TradingNetworksArchive</td></tr>
</table>

<table>
<tr><th>Parameter</th><th>Entry</th></tr>
<tr><td></td><td>
Important! The <code>SuiteReporting-Common</code> database component, which is also included in the <code>ALL</code> option, requires the following:

8GB of hard drive space for Oracle and DB2 and 18GB for SQL Server. It will take about 10 minutes (Oracle and DB2) and 1 hour (SQL Server) to create the database component.
For DB2, the configuration parameters below must be set as follows:

LOGFILSZ=8192
LOGPRIMARY=20
LOGSECOND=10
APPLHEAPSZ=60000

For DB2, the log must be at least 500MB.

For <code>version</code>, you can specify this value:
<table>
<tr><th>Value</th><th>Description</th></tr>
<tr><td><code>latest</code></td><td>If you specified one database component for <code>db_component</code>, perform <code>action</code> for the latest version of <code>db_component</code>.

If you specified <code>ALL</code> for <code>db_component</code>, you must specify latest for <code>db_component_version</code>. The configurator will create the latest version of each database component.</td></tr>
</table>
</td></tr>
<tr><td><code>{-pr|--product}</code> <code>product</code>
<code>{-v|--version}</code> <code>release</code></td><td>
Product release for whose database components to perform <code>action</code>.

For <code>product</code>, you can specify the product code or name, or <code>ALL</code>. Each <code>product</code> maps to the database components listed below.

Note: You can see the list of database components for a <code>product</code> by using this parameter with the <code>print</code> action.
<table>
<tr><th>Code or Product</th><th>Maps to These Database Components</th></tr>
<tr><td><code>IS</code> or <code>Integration Server</code></td><td>ISCoreAudit, ISInternal, Distributed Locking, Process Audit, ProcessEngine, DocumentHistory, CrossReference, Blaze, BPEL, MediatorEvents, Staging, and Reporting</td></tr>
</table>
</td></tr>
</table>

Parameter	Entry	
	`MWS` or `My webMethods Server`	MywebMethodsServer, CentralConfiguration, and SuiteReporting
	`OPTI` or `Optimize`	Analysis, ProcessTracker, and ProcessAudit
	`TN` or `Trading Networks`	TradingNetworks, TradingNetworksArchive
	`ALL`	All database components for all the *product* options.

For *release*, you can specify the values below.

Value	Description
`latest`	Perform *`action`* on the database components for the latest release of *`product`*.
`release`	Release of the *`product`* for whose database components to perform *`action`*. The configurator will create the correct versions of the database components for the specified release.

`{-l|--url}` *`RDBMS_URL`*	URL for the RDBMS. For information about options supported by the DataDirect Connect JDBC 4.0 driver used by your products, see *DataDirect Connect for JDBC User's Guide and Reference 4.0* in the *Software AG_directory*/_documentation directory or on the Software AG Documentation Web site. **Important!** When working with database components on UNIX systems, you must enclose the URL in double quotes.

RDBMS	Sample Format for DataDirect Connect Driver
Oracle	`jdbc:wm:oracle://`*`server`*`:{1521|`*`port`*`}` `;serviceName=`*`service`*`[;`*`option=value`*`]...`

Important! For Oracle, If are going to create storage and the Data Purge database component, you must specify the sysLoginRole connection option on the URL (for example, `;sysLoginRole=sysdba`).

<table>
<tr><th>Parameter</th><th>Entry</th></tr>
<tr><td></td><td>
<table>
<tr><td>SQL Server</td><td><code>jdbc:wm:sqlserver://server:{1433|port}
;databaseName=database[;option=value]...</code></td></tr>
<tr><td>DB2 for Linux, UNIX, Windows</td><td><code>jdbc:wm:db2://server:{50000|port}
;databaseName=database[;option=value]...</code></td></tr>
<tr><td>DB2 for iSeries</td><td><code>jdbc:wm:db2://server:{446|port}
;locationName=location[;option=value]...</code></td></tr>
</table>
Important! For DB2, if you are going to create database components in a schema other than the default schema for the specified database user, you must specify these connection options in the URL:
<code>;AlternateId=schema;InitializationString="SET CURRENT PATH=current_path,schema"</code>
<code>AlternateID</code> is the name of the default schema used to qualify unqualified database objects in dynamically prepared SQL statements.
If you are creating Optimize database components (that is, Analysis and ProcessTracker), you must specify <code>schema</code> using all capital letters. In addition, you must specify the options <code>CreateDefaultPackage=true, ReplacePackage=true</code>, and <code>DynamicSections=3000</code>. These settings will affect all database components in the same schema or database.
</td></tr>
<tr><td><code>{-u|--user} db_user
{-p|--password} password</code></td><td>
Your entry here depends on the action you are performing.
<table>
<tr><th>If you are...</th><th>Specify...</th></tr>
<tr><td>Creating a database user and storage in Oracle or SQL Server</td><td>The database user and password to create.
Important! For Oracle, do not use the SYSTEM user to create the database components in the SYSTEM schema.</td></tr>
<tr><td>Creating a database user and storage in DB2 for LUW</td><td>The OS user to which to grant permissions.</td></tr>
<tr><td>Performing the checkEncoding action</td><td>An existing database user that has create session and create table privileges, and that database user’s password.</td></tr>
<tr><td>Performing any other action</td><td>An existing database user and password.</td></tr>
</table>
</td></tr>
</table>

Parameter	Entry
[{-au|--admin_user} *db_admin_user* {-ap|--admin_password} *password*]	If you are going to create a database user and storage, or drop storage and revoke the database user permissions, specify the database user or operating system user and password that has the necessary database administrator credentials.
Additional Parameters	
[-r|--runCatalog]	Runs the catalog action at the end of every execution.
[{-tsdata|--tablespacefordata} *data_tspace_name*] [{-tsindex|--tablespaceforindex} *index_tspace_name*] [{-tsblob|--tablespaceforblob} *BLOB_tspace_name*] [{-b|--bufferpool} *buffer_pool_name*]	If you are going to create database components in Oracle and DB2 for LUW, you can specify custom tablespace names. ■ For Oracle, the custom tablespace names will replace the defaults WEBMDATA and WEBMINDX. ■ For DB2 for LUW, the custom tablespace names will replace the defaults WEBMDATA, WEBMINDX, and WEBMBLOB. You can also specify a custom name to use for the webMethods buffer pool (WEBMBUFF by default). Note: Your products support all tablespace configurations deployed by customers. If you are going to drop storage and revoke the database user permissions for Oracle or DB2 for LUW, and you specified custom tablespace names, provide those names.
[-t|--tablespacedir *directory*]	If you are going to create a database user and storage, and want to create a tablespace directory for DB2 for LUW or Oracle, provide the full path to the directory. For Oracle, use this parameter only if the DB_CREATE_FILE_DEST parameter is not set for your Oracle instance. If you are going to drop storage and revoke the database user permissions or DB2 for LUW or Oracle, identify the directory that contains the tablespaces to drop.
[-n|--dbname *database_name*]	If you are going to create a database user and storage in SQL Server, name of the target database. If you are going to drop storage and revoke the database user permissions in SQL Server, identify the database that contains the storage.
[-h|--help]	Lists command line help.
[-ab|--about]	Lists information about the Database Component Configurator.
[-pa|--printActions]	Lists the actions you can perform, like create or drop.

Parameter	Entry
`[-pd|--printDatabase]`	Lists RDBMS the configurator supports.
`[-pc|--printComponents]`	Lists database components the configurator supports.
`[-pp|--printProducts]`	Lists products the configurator supports.
`[-pe]`	Lists command line examples.
`{-e|--export}` `{-dir|--configdir}` *`directory`* `{-file|--configfile}` *`file_name`*	Exports values for all required parameters except the password parameters to an .xml file.
`{-i|--import}` `{-dir|--configdir}` *`directory`* `{-file|--configfile}` *`file_name`*	Imports values for all parameters from an .xml file. Note: Password parameters are not saved, so you must specify them on the command.

Examples

Important! On UNIX systems, you must enclose the RDBMS URL in your commands in double quotes.

Create the Database User and Storage

This command creates the database user and the two tablespaces (default names) for Oracle:

```
dbConfigurator.bat -a create -d oracle -c storage -v latest
-l jdbc:wm:oracle://DBserver:1521;serviceName=myservicename
-au adminuser -ap adminpass -u webmuser -p w3bmpass -t tablespace_dir
```

This command creates the database user and the two tablespaces (custom names) for Oracle:

```
dbConfigurator.bat -a create -d oracle -c storage -v latest
-l jdbc:wm:oracle://DBserver:1521;serviceName=myservicename
-au adminuser -ap adminpass -u webmuser -p w3bmpass -t tablespace_dir
-tsdata MYDATA -tsindex MYINDEX
```

This command creates the database and database user for SQL Server:

```
dbConfigurator.bat -a create -d sqlserver -c storage -v latest
-l jdbc:wm:sqlserver://DBserver:1433;databaseName=master -u webmuser
-p w3bmpass -au sa -ap sa_password -n webmdb
```

This command creates the buffer pool and tablespaces (default names), and grants permissions for DB2:

```
dbConfigurator.bat -a create -d db2luw -c storage -v latest
-l jdbc:wm:db2://vmxpdb01:50000;databaseName=amol -u webmuser
-au adminuser -ap admin_password -t tablespace_dir
```

This command creates the buffer pool and tablespaces (custom names), and grants permissions for DB2:

```
dbConfigurator.bat -a create -d db2luw -c storage -v latest
-l jdbc:wm:db2://vmxpdb01:50000;databaseName=amol -u webmuser
-au adminuser -ap admin_password -t tablespace_dir
-tsdata MYDATA -tsindex MYINDEX -tsblob MYBLOB -b MYBUFF
```

Drop the Storage and Revoke Database User Permissions

If you drop all database components in a schema, you can drop the storage and revoke the database user permissions.

You can use the configurator to drop the storage for Oracle, SQL Server, and DB2 for LUW. For DB2 for iSeries, you must drop the database user and storage using a script (see "Use the Database Scripts" on page 127).

This command drops the two tablespaces (default names) for Oracle:

```
dbConfigurator.bat -a drop -d oracle -c storage -v latest
-l jdbc:wm:oracle://DBserver:1521;serviceName=myservicename
-au adminuser -ap adminpass -u webmuser -p w3bmpass -t tablespace_dir
```

This command drops the two tablespaces (custom names) for Oracle:

```
dbConfigurator.bat -a drop -d oracle -c storage -v latest
-l jdbc:wm:oracle://DBserver:1521;serviceName=myservicename
-au adminuser -ap adminpass -u webmuser -p w3bmpass -t tablespace_dir
-tsdata MYDATA -tsindex MYINDEX
```

This command drops the database for SQL Server:

```
dbConfigurator.bat -a drop -d sqlserver -c storage -v latest
-l jdbc:wm:sqlserver://DBserver:1433;databaseName=master -u webmuser
-p w3bmpass -au sa -ap sa_password -n webmdb
```

This command drops the buffer pool and tablespaces (default names), and revokes permissions for DB2:

```
dbConfigurator.bat -a drop -d db2luw -c storage -v latest
-l jdbc:wm:db2://vmxpdb01:50000;databaseName=amol -u webmuser
-au adminuser -ap admin_password -t tablespace_dir
```

This command drops the buffer pool and tablespaces (custom names), and revokes permissions for DB2:

```
dbConfigurator.bat -a drop -d db2luw -c storage -v latest
-l jdbc:wm:db2://vmxpdb01:50000;databaseName=amol -u webmuser
-au adminuser -ap admin_password -t tablespace_dir
-tsdata MYDATA -tsindex MYINDEX -tsblob MYBLOB -b MYBUFF
```

Create Database Components

This command creates the latest version of ProcessAudit in Oracle:

```
dbConfigurator.bat -a create -d oracle -c processaudit -v latest
-l jdbc:wm:oracle://DBserver:1521;serviceName=myservicename -u webmuser
-p w3bmpass
```

This command recreates (drops and then creates) the latest versions of all database components in SQL Server:

```
dbConfigurator.bat -a recreate -d sqlserver -c all -v latest
-l jdbc:wm:sqlserver://DBserver:1433;databaseName=webmdb -u webmuser -p w3bmpass
```

This command displays the database components that currently exist in DB2 for LUW:

```
dbConfigurator.bat -a catalog -d db2udb
-l jdbc:wm:db2://DBserver:50000;databaseName=webmdb -u webmuser -p w3bmpass
```

This command creates the latest database components in DB2 when creating in ALTSCHEMA rather than the default schema for the specified database user:

```
dbConfigurator.bat -a create -d db2luw -c all -v latest
-l “jdbc:wm:db2://DBserver:50000;databaseName=webmdb
;AlternateId=ALTSCHEMA;InitializationString=\”SET CURRENT
PATH=current_path,ALTSCHEMA\””
-u webmuser -p w3bmpass
```

Drop Database Components

Before dropping, shut down all products that are connected to the database component and back up the database component.

You cannot drop the Component Tracker database component using the configurator; you must use a script. For instructions, see “Use the Database Scripts” on page 127.

This command drops the latest ProcessAudit from Oracle:

```
dbConfigurator -a drop -d oracle -c processaudit -v latest
-l jdbc:wm:oracle://myserver:1521;serviceName=myservicename -u webmuser
-p w3bmpass
```

This command drops the latest versions of all database components from SQL Server:

```
dbConfigurator.bat -a drop -d sqlserver -c core -v latest
-l jdbc:wm:sqlserver://myserver:1433;databaseName=webmdb -u webmuser -p w3bmpass
```

The command drops the latest version of the Analysis database component from DB2 for LUW:

```
dbConfigurator.bat -a drop -d db2luw -c analysis -v latest
-l jdbc:wm:db2://DBserver:50000;databaseName=webmdb -u webmuser -p w3bmpass
```

This command drops the latest version of the Analysis database component from DB2 when dropping from ALTSCHEMA rather than the default schema for the specified database user:

```
dbConfigurator.bat -a drop -d db2luw -c analysis -v latest
-l jdbc:wm:db2://DBserver:50000;databaseName=webmdb;AlternateId=ALTSCHEMA
;InitializationString="SET CURRENT PATH=current_path,ALTSCHEMA"
-u webmuser -p w3bmpass
```

Use the Database Scripts

This section explains how to use database scripts provided by Software AG to create a database user and storage, drop storage and revoke the database user permissions, and to create or drop database components.

Modify Storage Convention

By default, all database components follow this storage convention:

RDBMS	Data Storage Unit	Index Storage Unit	BLOB Storage Unit
Oracle tablespaces	WEBMDATA	WEBMINDX	WEBMDATA
SQL Server filegroups	Primary	Primary	Primary
DB2 for LUW tablespaces	WEBMDATA	WEBMINDX	WEBMBLOB
DB2 for iSeries	Default	Default	Default

If you want to use a different storage convention when you create database components, do the following:

1 Go to the *Software AG_directory*\common\db\scripts directory.

2 Copy the creation scripts for your RDBMS to another directory.

3 Modify the values listed in the table above in the creation scripts.

Note: Commercial and public domain utilities provide search and replace functionality across subdirectories. Your products support all tablespace configurations deployed by customers.

Run the Database Scripts

You run the database scripts from your database client. By default, the scripts are stored in the *Software AG_directory*\common\db\scripts directory. If you modified the storage conventions, the creation scripts are stored in the directory to which you copied them.

To determine which scripts to run, go to the *Software AG_directory*\common\ db\bin directory and run the appropriate command below. The order in which the scripts are listed is the order in which you should run them. For explanations of the fields in the commands below, see "Database Component Configurator Command" on page 118.

Create a Database User and Storage

To list the scripts for creating a database user and storage, run this command:

```
dbConfigurator.{bat|sh} -a print -d {oracle|sqlserver|db2luw|db2i}
-c storage -v latest
```

Drop Storage and Revoke Database User Permissions

If you have dropped all database components from a schema, you can drop the database user and storage.

To list the scripts for dropping storage and revoking database user permissions, run this command:

```
dbConfigurator.{bat|sh} -a print -d {oracle|sqlserver|db2luw|db2i}
-c storage -v latest
```

Create Database Components

Create the proper versions of the database components for your product (see Chapter 1, "Typical Development Installations").

To list the scripts for creating individual database components, or all database components, run this command:

```
dbConfigurator.{bat|sh} -a print -d {oracle|sqlserver|db2luw|db2i}
-c db_component -v db_component_version
```

To list the scripts for creating the database components for a certain product, run this command:

```
dbConfigurator.{bat|sh} -a print -d {oracle|sqlserver|db2luw|db2i}
-pr product -v product_release
```

Drop Database Components

Before dropping, shut down all products that are connected to the database component and back up the database component.

To list the scripts for dropping individual database components, or all database components, run this command:

```
dbConfigurator.{bat|sh} -a print -d {oracle|sqlserver|db2luw|db2i}
-c db_component -v db_component_version
```

To list the scripts for dropping the database components for a certain product, run this command:

```
dbConfigurator.{bat|sh} -a print -d {oracle|sqlserver|db2luw|db2i}
-pr product -v product_release
```

8 Completing the Installation

Post-Installation Checklist

The checklist below identifies tasks you must perform to make your products operational.

Important! This chapter describes only tasks you must perform before starting some products. For instructions on starting products and configuring them, see the product documentation at http://documentation.softwareag.com.

Product	Task	Page
ApplinX	On UNIX, source the Software AG environment file apxenv to set the environment variable APPLINX_ROOT, or set the variable permanently by copying the setting from the apxenv file into your profile. The apxenv file is located in the ApplinX installation directory.	
	On Windows Vista and Windows Server 2008, re-enable User Account Control (UAC). On Windows Server 2008, grant write access for the installation directory to the Windows group Users.	
webMethods Broker	Make sure the Broker Server is running and the default Broker exists.	134
	On AIX, enable full core dumps.	134
	On UNIX, configure Broker Monitor to start automatically when you start the system.	134
	On UNIX, if you are going to run webMethods Broker in a locale other than U.S. English, set the Broker Server to run using that locale.	135
CentraSite	On UNIX, register daemons and set file permissions by going to the *CentraSite_directory*/bin directory and running the AsRootAfterInstall.sh script with super user privileges.	
	On Windows Vista and Windows Server 2008, re-enable User Account Control (UAC). On Windows Server 2008, grant write access for the installation directory to the Windows group Users.	
	Enable the edition of CentraSite that you licensed.	CentraSite documentation
EntireX	On UNIX, set environment variables.	135
	On UNIX, if you did not use sudo to install EntireX, register daemons and set file permissions.	135
	On Windows Vista and Windows Server 2008, re-enable User Account Control (UAC). On Windows Server 2008, grant write access for the installation directory to the Windows group Users.	

Product	Task	Page
Integration Server	On UNIX, IBM i5, and Mac, if you are using a Sun JDK, increase PermGen space.	136
	On UNIX, IBM i5, and Mac, increase file descriptors.	136
	(Optional) On UNIX, IBM i5, and Mac, change permissions.	137
	On IBM i5, prevent memory problems.	137
	If you installed the Integration Server and Optimize database components in two different schemas using the Database Component Configurator, drop redundant database components.	138
NaturalONE	Complete post-installation tasks, based on NaturalONE components installed.	138
Optimize	Configure Optimize. For instructions, see *Configuring BAM*.	
	If you installed the Optimize and Integration Server database components in two different schemas using the Database Component Configurator, drop redundant database components.	139
Tamino XML Server	Configure and customize Tamino XML Server.	Tamino XML Server documentation
	On Windows Vista and Windows Server 2008, re-enable User Account Control (UAC). On Windows Server 2008, grant write access for the installation directory to the Windows group Users.	
Most products	Connect products to each other. **Note:** If you installed all products at the same time, and did not change any port settings or default passwords after installation, many of these connections are configured automatically.	150
Most products	Connect products to database components.	158

Important! If you installed ApplinX, CentraSite, EntireX, or Tamino XML Server on a SuSE Linux Enterprise Server system that was configured to run in parallel boot mode, you disabled parallel boot mode before installation. Do not re-enable parallel boot mode after installation.

Configure Logging

You can log audit data for Integration Server errors, sessions, services, security, documents, and guaranteed delivery transactions. You can also log audit data for business processes, tasks, and integration processes. For detailed information and instructions on setting up audit logging, see the *webMethods Audit Logging Guide*.

Complete the webMethods Broker Installation

Make Sure Broker Server is Running and the Default Broker Exists

After installation, Broker Monitor starts automatically and then starts the Broker Server, which begins running with a default Broker. Make sure the Broker Server is running and the default Broker exists by running this command:

```
broker_status [Broker #1@]Broker Server_host[:Broker Server_port]
```

Enable Full Core Dumps on AIX Systems

On AIX systems, you must enable full core dumps. Using the AIX System Management Interface Tool (SMIT), run the command `smitty chgsys` and set `Enable full CORE dump` to `true`.

Configure Broker Monitors to Start Automatically on UNIX Systems

By default, Broker Monitors run as applications that you start and shut down manually. If you installed webMethods Broker on a UNIX system, and you want your Broker Monitors to start and shut down automatically when your system starts and shuts down, you must configure the Broker Monitors to run as daemons.

1 Go to the webMethods Broker installation directory.

2 Copy each Broker Monitor startup script aw_broker80 to the appropriate UNIX startup directory.

3 Replace the "aw" in aw_broker80 with "S*number*," where *number* is the run, or priority level (for example, S45broker80). If you configure multiple Broker Monitors to run as daemons, make the name for each Broker Monitor startup script unique among the startup scripts in the UNIX startup directory (for example, S45broker80_1, S45broker80_2, and so on).

Set Locale on UNIX Systems

If you are going to run webMethods Broker in a locale other than U.S. English, you set your shell to the proper locale before installation. However, this setting only affects the way the Software AG Installer starts your Broker Server during installation. When you restart the Broker Server, the Broker Server will use the default locale, U.S. English. On UNIX systems, if you want to set the Broker Server to run using a different locale, set the environment variables LC_ALL and LANG to that locale.

Complete the EntireX Installation

Set Environment Variables

On UNIX systems, you must set the EXXDIR environment variable to the EntireX installation directory, and set the PATH and LD_LIBRARY_PATH environment variables to include the EntireX installation directory.

To do so, source the EntireX environment script exxenv.csh or exxenv, depending on the shell you are using. The script is located in the *EntireX_directory*/INSTALL directory.

Source the Software AG environment script sagenv.new using the shell command `. $SAG/sagenv`. The script is located in the installation directory that contains the shared components. By default, that directory is /opt/softwareag.

Register Daemons and Set File Permissions

On UNIX systems, if you did not use sudo to install EntireX, you must register daemons and set file permissions manually using the instructions below.

1 Go to the *EntireX_directory*/INSTALL directory.

2 Run the install_etbsrv_deamon script with sudo privileges.

3 Run the exxssxsbit.bsh script with sudo privileges. Specify the EntireX installation directory as an argument; for example:

```
/opt/softwareag/EntireX/INSTALL/exxssxsbit.bsh  /opt/softwareag/EntireX
```

4 On a Linux system, run the exbinst.bsh script with sudo privileges.

5 Restart the EntireX Broker Admin Service. To do so, run the command below, where *n* matches the number in the sag*n*etbsrv script in your *EntireX_directory*/bin directory.

```
/etc/init.d/sagnetbsrv restart
```

6 During installation, you might have told the installer to enable autostart so the EntireX Broker would start automatically whenever you start your system. However, since you did not use sudo to install, the installer could not actually enable autostart. If you want to enable autostart, see the *Setting Local Broker Autostart* section in the System Management Hub documentation for instructions.

Complete the Integration Server Installation

Increase PermGen Space on UNIX, IBM i5, and Mac Systems

If you are using a Sun JDK with Integration Server, you must increase the permanent generation (PermGen) space from the default of 64MB to at least 128MB. By default, the Software AG Installer installs a Sun JDK for Integration Server 8.0 on Linux and Solaris systems. If you are using the default JDK on those systems, or if you are using your own Sun JDK on one of those systems, another UNIX system, or an IBM i5 or Mac system, complete the steps below.

Note: If you receive java.lang.OutOfMemoryError: PermGen space exceptions when running Integration Server, set the PermGen space higher than 128MB.

---

1 Go to the *Integration Server_directory*/bin directory and open the server.sh file in a text editor.

2 Uncomment these lines by removing the pound sign (#):

```
#JAVA_MAX_PERM_SIZE=128M
#JAVA_PERM_SIZESET=-XX:MaxPermSize=${JAVA_MAX_PERM_SIZE}
```

3 Save and close the file.

Increase File Descriptors on UNIX, IBM i5, and Mac Systems

On UNIX, IBM i5, and Mac systems, Integration Server's ability to handle traffic is constrained by the number of file descriptors available to the Integration Server process. On most systems, 64 file descriptors are available to each process by default. Software AG recommends that you ask your system administrator to increase the number of file descriptors available to the Integration Server process to at least 1024.

Important! You might have to increase this number depending on the number of files Integration Server needs to have open at one time. It is dangerous to set the rlim_fd_max value higher than 1024 because of limitations with the select function, so if Integration Server requires more file descriptors, ask the system administrator to set the setrlimit value directly.

Change Permissions on UNIX, IBM i5, and Mac Systems

If you installed Integration Server on a UNIX, IBM i5, or Mac system and non-root users will be running Integration Server, you might want to change the ownership of the installed files to allow a single non-root user to run Integration Server (chown), change the file group to the group of users who will run Integration Server (chgrp), or change file permissions to allow all users to run Integration Server (chmod).

Start Integration Server

The tasks below require you to start Integration Server.

System	Action
Windows application	On the Start menu, go to Programs > Software AG > Start Servers > Start ESB and Integration Server 8.0.
Windows service	Go to the Services window and start the service Software AG webMethods Integration Server 8.0.
All other systems	Go to the *Integration Server_directory*/bin directory and run the server.sh script.

Open Integration Server Administrator in either of these ways:

- On the Windows Start menu, go to Programs > Software AG > Administration > ESB and Integration Server Administrator 8.0.
- Enter the URL below in an Internet browser. The default port for Integration Server is 5555.

  `http://Integration Server_host:Integration Server_port`

  Log in under the default user name and password, `Administrator` and `manage`.

Prevent Memory Problems on IBM i5 Systems

If you installed Integration Server on an IBM i5 system, prevent memory problems by following the steps below.

1 Limit the size of the port queue available to the TCP/IP stack, as follows:

  a If you have not yet started Integration Server, start it now. Integration Server creates the server.cnf files when it starts for the first time.

  b Shut down Integration Server.

  c Go to the *Integration Server_directory*/config directory and open the server.cnf file in a text editor. Add this line, and then save and close the file:

  ```
  watt.server.portQueue=511
  ```

2 On IBM i5 systems, the JAVA_MIN_MEM setting acts as a garbage collection threshold. Prevent the JVM that Integration Server is using from running out of memory by doing the following:

   a Go to the *Integration Server_directory*/bin directory and open the server.sh file in a text editor.

   b Locate the JAVA_MIN_MEM parameter and set it as follows:

   ```
   JAVA_MIN_MEM=64M
   ```

   Note: This setting is based on an IBM i5 system that hosts an Integration Server and a DB2 for iSeries database. The optimal value for initial heap size might be higher or lower based on your system's configuration.

   c Locate the JAVA_MEMSET parameter and set it as follows:

   ```
   JAVA_MEMSET="-ms${JAVA_MIN_MEM}"
   ```

   d Save and close the file.

Drop Redundant Database Component

If you used the Database Component Configurator to install database components, and you installed the Integration Server database components and the Optimize database components in two different schemas, you will have two instances of the Process Audit Log database component. Configure Integration Server and Optimize to point to the same instance using instructions in "Connect Products to Database Components" on page 158 and *Configuring BAM*, respectively. You can then drop the other instance (see the database chapters in this guide).

Complete the NaturalONE Installation

See the Before You Start section of the NaturalONE documentation in these cases:

- You want to use an Eclipse other than the Software AG-installed Eclipse.
- You installed a complete development installation, with or without the NaturalONE run time, and you also want to use an existing Natural Development Server (NDV) and Natural run time on a remote machine.
- You installed a complete development installation with service enabling, but you did not install EntireX because you want to use an existing EntireX on the local or a remote machine.
- You installed the Natural Engineer plug-in, which requires a Natural Engineer server environment.
- You installed the Predict plug-in, which requires a Predict server environment.
- You installed the Service Development plug-in, which requires a Natural Business Server server environment.

Complete the Optimize Installation

Configure Optimize

You must configure Optimize using its Central Configuration user interface in My webMethods. For instructions, see *Configuring BAM*.

Drop Redundant Database Component

If you used the Database Component Configurator to install database components, and you installed the Integration Server database components and the Optimize database components in two different schemas, you will have two instances of the Process Audit Log database component. Configure Integration Server and Optimize to point to the same instance using instructions in "Connect Products to Database Components" on page 158 and *Configuring BAM*, respectively. You can then drop the other instance (see the database chapters in this guide).

Complete the Report Server Installation

This section explains how to set up a basic Report Server installation. For information on more complex Report Server installations, see *IBM Cognos 8 Business Intelligence Installation and Configuration Guide 8.4*.

A basic Report Server installation includes these components:

- Report Server and report packages that contain predefined report formats for data from products such as Monitor, Optimize for Infrastructure, Optimize for Process, Trading Networks, and Optimize for B2B, depending on your license.
- Database components that contain report data for products such as those listed above, depending on your license.
- Database clients to connect Report Server to database components.
- Content Store, an external RDBMS containing data that Report Server needs to operate, such as global configuration data and report definitions.
- Web server.

By default, Report Server bundles the Tomcat application server, but you can use other application servers instead. For a list of supported application servers and instructions on how to configure them, see *IBM Cognos 8 Business Intelligence Installation and Configuration Guide 8.4*.

The tasks you complete to set up a basic Report Server installation are as follows:

- Set Up a User Account and Configure the Web Server on Systems Other than Windows 2008 or Set Up the Network Service Account and Application Pool on Windows 2008
- Create the Content Store
- Connect Report Server to Database Components
- Configure Web Browsers
- Configure Report Server and Start Report Server Services

Set Up a User Account and Configure the Web Server on Systems Other than Windows 2008

On systems other than Windows 2008, Report Server must run under a user account and you must set up your Web server to work with the account.

Set Up the User Account

The user account Report Server runs under must have access to all required resources, such as printers and Web servers. For example, to print reports using a network printer, the account must have access to the network printer, or you must assign a logon account to the Report Server services.

On a Windows system, the user account must belong to the local administrator group. If you installed Report Server as a Windows service, the user account must have rights to log on as a service and act as part of the operating system. Go to the Windows Services window and assign a logon account to the Report Server service, and define any other user account properties.

On a UNIX system, create a new UNIX group named sagrpt8. This group must include the user that owns the Report Server files. Change the group ownership of the Report Server files to the sagrpt8 group and change the file permissions for all Report Server files to GROUP READABLE/WRITABLE/EXECUTABLE.

Configure the Web Server

This section explains how to configure the Apache Web server for use with Report Server. For instructions on how to configure and use other Web servers instead, see *IBM Cognos 8 Business Intelligence Installation and Configuration Guide 8.4*.

Configure the Apache Web server by creating virtual directories, or aliases, so users can connect to Report Server. You must also set the content expiry for the images directory in your Web server so your Web browser does not check image status after the first access.

1 On UNIX, the account under which the Web server runs must have read access to the cogstartup.xml file in the *Software AG_directory*/cognos/c8/configuration directory. By default, the cogstartup.xml file has read permission for others. If you run your Web server under a specific group, you can change the cogstartup.xml file permissions to make sure the file belongs to the same group as the Web server. You can then remove the read permission for others.

2 Create these virtual directories:

Alias	Location	Permission
reporting/cgi-bin	*Software AG_directory*/cognos/c8/cgi-bin	Execute
reporting	*Software AG_directory*/cognos/c8/webcontent	Read

3 Go to the *Apache_directory*/conf directory and open the httpd.conf file in a text editor. Define the reporting/cgi-bin alias as a ScriptAlias, and place it before the reporting alias in the file. For example:

```
#
# ScriptAlias: This controls which directories contain server scripts.
# ScriptAliases are essentially the same as Aliases, except that
# documents in the realname directory are treated as applications and
# run by the server when requested rather than as documents sent to the client.
# The same rules about trailing "/" apply to ScriptAlias directives as to
# Alias.
#
ScriptAlias /cgi-bin/ "C:/Program Files/Apache Group/Apache2/cgi-bin/"
#
# "C:/Program Files/Apache Group/Apache2/cgi-bin" should be changed to whatever
your ScriptAliased
# CGI directory exists, if you have that configured.
#
<Directory "C:/Program Files/Apache Group/Apache2/cgi-bin">
    AllowOverride None
    Options None
    Order allow,deny
    Allow from all
</Directory>

# ================================================================================
# Cognos 8 Settings  BEGIN                                                       =
# ================================================================================
ScriptAlias /reporting/cgi-bin/ "Software AG_directory/cognos/c8/cgi-bin/"
ScriptAlias /reporting/cgi-bin "Software AG_directory/cognos/c8/cgi-bin"

<Directory "Software AG_directory/cognos/c8/cgi-bin">
Options ExecCGI Indexes FollowSymlinks
AllowOverride None
Order allow,deny
Allow from all
</Directory>

Alias /reporting/help/
"Software AG_directory/cognos/c8/webcontent/documentation/"

<Directory "Software AG_directory/cognos/c8/webcontent/documentation/">
Options Indexes FollowSymlinks
Allow from all
AllowOverride None
Order allow,deny
</Directory>

Alias /reporting/ "Software AG_directory/cognos/c8/webcontent/"
Alias /reporting "Software AG_directory/cognos/c8/webcontent"

<Directory "Software AG_directory/cognos/c8/webcontent/">
Options Indexes FollowSymlinks
AllowOverride None
Order allow,deny
Allow from all
</Directory>
# ================================================================================
# Cognos 8 Settings  END                                                         =
# ================================================================================
```

Set Up the Network Service Account and Application Pool on Windows 2008

On Windows 2008 systems, Report Server must run under a network service account, and you must set up application pools.

Set Up the Network Service Account

Use the built-in account NT AUTHORITY\NetworkService in the operating system. Administrators do not need to manage a password or maintain the account. The account needs the appropriate write permissions to the Report Server directory.

Set Up Application Pools

1. On the Start menu, go to Control Panel > Performance and Maintenance > Administrative Tools > Internet Information Services (IIS) Manager. Web Management Tools and World Wide Web Services are enabled automatically.
2. From the root (your system name and user), select Features View.
   a. In the IIS section, launch ISAPI and CGI Restrictions. Click Edit Feature Settings, enable Allow unspecified CGI modules, and then click OK.
   b. Add your aliases (for example, *Software AG_directory*/cognos/c8, *Software AG_directory*/cognos/c8/cgi-bin).
3. Click your cgi-bin alias and select Features View.
   a. Right-click Application Pools and click Add. In the dialog box, enter a Web alias and the corresponding path to Report Server webcontent. Repeat this step to add the next Web alias.
   b. Click Default Web Site, open Handler Mappings, and click CGI-cgi mappings. In the right pane, click Revert to Inherited. Expand the application that points to your webcontent location.
   c. Expand your cgi-bin application node. Add a mapping that points to *.cgi and name it CGI-cgi. Select the CGI-cgi mapping. In the right pane, click Revert to Inherited.
4. Restart the IIS server.
5. Find the folder that contains cgi-bin (*Software AG_directory*/cognos/c8/cgi-bin) and right-click it. Click the Security tab. Add the Network Services user, granting all permissions except Full Control. Right-click Report Server service and click Properties.
6. Click the Log On tab. Click This account and type `Network Service` as the user. Delete the Password and Confirm the password values.
7. Click OK.

Create the Content Store

This section explains how to create the Content Store database in an Oracle, SQL Server, or DB2 RDBMS (see *webMethods System Requirements* for supported versions).

Report Server uses a single sort order that specifies the rules used by the Content Store database to interpret, collect, compare, and present character data. For example, a sort order defines whether the letter A is less than, equal to, or greater than the letter B; whether the collation is case sensitive; and whether the collation is accent sensitive. For more information about collation and collation sequences, see your RDBMS documentation.

Create the Content Store in Oracle

- Set the parameter for the database instance compatibility level of the Content Store database to 9.0.1 or higher. You can check the COMPATIBLE initialization parameter setting by issuing the SQL statement below. For instructions on changing an instance configuration parameter, see your Oracle documentation.

  ```
  select name, value, description FROM v$parameter WHERE name='compatible';
  ```

- Determine whether the database is Unicode by issuing this SQL statement:

  ```
  select * from NLS_DATABASE_PARAMETERS
  ```

  If the result set returns an NLS_CHARACTERSET that is not Unicode, create a new database and specify AL32UTF8 for the database character set parameters.

- Create the Content Store database user and storage using the Database Component Configurator. For instructions, see Chapter 7, “Creating and Dropping Database Components”.

- Connect Report Server to the Content Store using TCP/IP. Go to the ORACLE_HOME/jdbc/lib directory. For Java 1.5, copy the ojdbc5.jar driver file to the *Software AG_directory*/cognos/c8/webapps/p2pd/WEB-INF/lib directory. If the directory contains the classes12.jar file, delete it. You can download the driver file from the Oracle technology Web site.

Create the Content Store in SQL Server

You will connect Report Server to the Content Store when you configure the Report Server (see “Configure Report Server and Start Report Server Services” on page 149).

- Make sure the collation sequence is case-insensitive. In a Custom installation, you choose a collation, which includes character sets and sort order, during the SQL Server setup. In a Typical installation, the installation uses the locale identified by the installation program for the collation. You cannot change this setting later.

- Create the Content Store database user and storage using the Database Component Configurator. For instructions, see Chapter 7, “Creating and Dropping Database Components”.

Create the Content Store in DB2

- Report Server requires 32-bit library files when running in a 32-bit application server. If you are using DB2 9.5, the 64-bit library files might be set in your environment variables. List the 32-bit library files first in the environment variables so Report Server can find them.
- If you are using type 2 UDBC connectivity, set the environment variables for DB2 as follows:

Environment variable	Description	
DB2DIR	Top-level directory that contains the database client software. (If you have not yet installed the database client, see "Install the Database Client" on page 147.)	
LD_LIBRARY_PATH	Load library path. Add the driver location.	
	System	Example
	Solaris, Linux	LD_LIBRARY_PATH= $DB2DIR/lib: $LD_LIBRARY_PATH
	AIX	LIBPATH=$DB2DIR/lib:$LIBPATH
	HP-UX	SHLIB_PATH=$DB2DIR/lib:$SHLIB_PATH
DB2INSTANCE	Default database server connection.	
DB2CODE PAGE	Support for multilingual databases. For information about whether to use this environment variable, see your DB2 documentation.	

- When you create the database, use UTF-8 as the character set and 1208 as the code page value.
- Set these configuration properties:

Properties	Setting
Application heap size (applheapsz)	1024 KB
Lock timeout (locktimeout)	240 seconds

- Create two buffer pools, one with a page size of 32 KB, and one with a page size of 4 KB. Create a system temporary tablespace using the 32 KB buffer pool. Create a user temporary tablespace using the 4 KB buffer pool; DB2 will automatically create global temporary tables in the user temporary tablespace. Create a regular user tablespace using the 4 KB buffer pool.

- Grant these database privileges for the user account that Report Server will use to access the Content Store database:
  - Connect to database.
  - Create tables.
  - Create schemas implicitly.
  - Privileges for the user temporary tablespace and other appropriate tablespaces associated with the database.
- Create a schema for the user account and grant the user create, drop, and alter permissions for the schema.
- Create a profile that sources the sqllib/db2profile from the DB2 user's home directory. The content of your .profile will be similar to this:

```
    if
[ -f /home/db2user/sqllib/db2profile ]; then
        ./home/db2user/sqllib/db2profile
    fi
```

- Connect Report Server to the Content Store using TCP/IP, and as follows:

  a Report Server uses JDBC connectivity to access the Content Store database. Choose the driver to use.

Driver	Description	Action
Universal JDBC for DB2	Contains both type 2 and type 4 JDBC driver support. The db2jcc.jar driver file replaces the deprecated type 2 JDBC driver, db2java.zip.	Copy the db2jcc.jar db2jcc_license_*.jar files to the *Software AG_directory*/cognos/c8/webapps/p2pd/WEB-INF/lib directory.
Type 2 JDBC	Type 2 JDBC drivers comprise a native-API component and a Java component. The connection to the DB2 database occurs through the DB2 CLI libraries, which contain the native component that communicates with the database server.	Because type 2 JDBC drivers require common client code and rely on the native code of the product, you must install the DB2 client software on the Report Server host machine.
Type 4 JDBC	Type 4 JDBC drivers are pure Java drivers that provide direct access to DB2 database features through network communication. The type 4 driver is considered an independent product.	You can but do not have to install the DB2 client. If you choose to install it, install on the Report Server host machine.

  b If Report Server is on a Windows system, stop the DB2 services and the DB2 HTML Search Server.

c Go to the *DB2_installation*/sqllib/java directory. Copy the following files from that directory to the *Software AG_directory*/cognos/c8/webapps/p2pd/WEB-INF/lib directory:

- Universal driver file, db2jcc.jar
- DB2 license file.
- If you are using DB2 LUW, db2jcc_license_cu.jar.

d If Report Server is on a Windows system, restart the DB2 services and the HTML Search Server.

If the Report Server components are on a UNIX system, and you are using type 2 JDBC connectivity, make sure the 32-bit DB2 libraries are in the library search path, which is usually the $DB2DIR/lib or $DB2DIR/lib32 directory.

e You can improve the speed with which requests are processed. By default, DB2 assigns tables that contain large objects (LOBS) to a database-managed tablespace. As a result, the LOBS are not managed by the DB2 buffer pools. This results in direct I/O requests on the LOBS, which affects performance. You can reduce the number of direct I/O requests by reassigning the tables that contain LOBS to a system-managed tablespace. If you want to reconfigure the DB2 content store, allocate sufficient log space to restructure the database, and then do the following:

- Export the data from the tables that contain at least one LOB.
- Create the tables in a system-managed table space.
- Import the data into the tables.

Connect Report Server to Database Components

Install the Database Client

Install the appropriate database client for the database components that contain report data on the Report Server host machine. Use native database connectivity. For instructions, see your RDBMS documentation.

If the Report Server is on a UNIX system and a database component is on SQL Server, Report Server supports the Data Direct ODBC driver. This driver is available from Data Direct. Report Server requires TCP/IP connectivity with SQL Server.

Set Database Environment Variables for Oracle or DB2 (UNIX Systems)

If database components that contain report data are in Oracle or DB2 RDBMSs on UNIX systems, you must specify database environment variables. Report Server uses these database variables to connect to the database components. The proper syntax for creating database environment variables is shell dependent.

Set Oracle Database Environment Variables

One way to set database environment variables in Oracle is to include the commands that set them in the .profile or .login script of the user who starts the Report Server services. The table below describes environment variables for Oracle databases. Ask your database or network administrator for the correct values for your system.

Database Environment Variable	Description
ORACLE_ HOME	Top-level directory that contains the database client software or the entire database installation (for example, /usr/oracle). You might be able to use an Oracle script to create the environment variables (for example, /usr/local/bin/coraenv). For more information, see the Oracle documentation.
TNS_ADMIN	Directory that contains the tnsnames.ora file, which allows calls to the Oracle database to determine the required server connections (for example, $ORACLE_HOME/ network/admin).
PATH	Variable to locate executable files (for example, $PATH:$ORACLE_HOME/bin).
*library*PATH	Load library path. Make sure the 32-bit Oracle libraries are in the library search path, which is usually the $ORACLE_HOME/lib or the $ORACLE_HOME/lib32 directory if you installed a 64-bit Oracle client.

System	Examples
Solaris	LD_LIBRARY_PATH=$ORACLE_HOME/ lib:$LD_LIBRARY_PATH LD_LIBRARY_PATH=$ORACLE_HOME/ lib32:$LD_LIBRARY_PATH
AIX	LIBPATH=$ORACLE_HOME/ lib:$LIBPATH LIBPATH=$ORACLE_HOME/ lib32:$LIBPATH
HP-UX	SHLIB_PATH=$ORACLE_HOME/ lib:$SHLIB_PATH SHLIB_PATH=$ORACLE_HOME/ lib32:$SHLIB_PATH

NLS_LANG	Locale-dependent behavior of Report Server. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.

Set DB2 Database Environment Variables

For DB2, set the database environment variables by running the environment setup scripts included with the DB2 installation. For Bourne or Korn shells, run the following command or add it to the .profile script:

```
DB2_installation_path/db2profile
```

Ask your database or network administrator for the correct values for your system.

Configure Web Browsers

Enable the settings in the table below.

Browser	Setting to Enable
Internet Explorer	Allow Cookies, Active Scripting, Allow META REFRESH
Netscape	Allow Cookies, JavaScript
Firefox	Allow Cookies, Enable Java, Enable JavaScript

Configure Report Server and Start Report Server Services

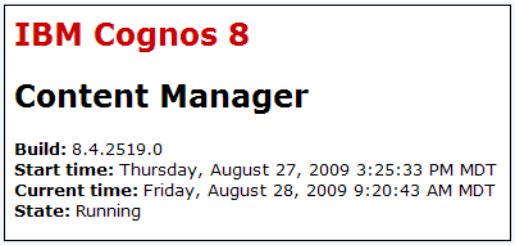
The Cognos Configuration tool configures Report Server components and creates the Content Store database tables. The configurator also starts and stops the Report Server services.

1. Open a command window, go to the *Software AG_directory*/cognos/c8/bin or bin64 directory, as appropriate for your system, and start the configurator by typing ./cogconfig.{bat|sh}. For Windows, you can also start the configurator from the Start menu (for example, Start > Programs > Software AG > Tools > IBM Cognos Configuration).
2. During Report Server installation, you were asked to specify the connection from the Report Server to the Report Server Content Store. If you did not specify the connection, or need to change it for some reason, see "Set Database Connection Properties for the Content Store" in *IBM Cognos 8 Business Intelligence Installation and Configuration Guide 8.4*. The Report Server cannot start without a valid connection to the Content Store.
3. Click Save to save the configuration you specified during Report Server installation.
4. Go to the Actions menu and click Test. The configurator checks common symmetric keys (CSK) availability, tests the namespace configuration, and tests the connections between Report Server and the Content Store. If the test fails, reconfigure the affected properties and test again.
5. Go to the Actions menu and click Start to start the Report Server services. The configurator creates the necessary database tables in the Content Store RDBMS. If you are on a Windows system, the configurator also creates the Report Server Windows service.

6 Test the Report Server installation and configuration as follows:

a Open a Web browser.

b Make sure the Content Store was successfully created and the Report Server service called the Content Manager started by typing the URL http://*Report Server_host*:*Report Server_port*/p2pd/servlet (for example, http://myhost:9300/p2pd/servlet, where 9300 is the default port). If the response includes the string `State: Running`, the Content Manager is available.



c Make sure your installation is working by connecting to the IBM Cognos 8 portal. In a browser, type the URL http://*Web_server_host*:*Web_server_port*/reporting (for example, http://myhost/reporting; reporting is the virtual directory you created when you configured the Web server). It might take a few minutes for the Web page to open. If you see the Welcome page in the IBM Cognos 8 portal, your installation is working.

Connect Products to Each Other

This section explains how to do the following:

- Connect Process Engines to Task Engine
- Connect Process Engine to Optimize Analytic Engine
- Connect Integration Server to the Default Broker
- Connect Products to My webMethods Server
- Connect Products to CentraSite

Note: If you installed all products at the same time, and did not change any port settings or default passwords after installation, many of these connections are configured automatically.

For instructions on connecting Designer to other products, see the Designer online help.

Start Integration Server and My webMethods Server

To create the connections, you need Integration Server and My webMethods Server.

Start Integration Server and open Integration Server Administrator (see "Increase File Descriptors on UNIX, IBM i5, and Mac Systems" on page 136).

Start My webMethods Server as follows:

System	Action
Windows application	On the Start menu, go to Programs > Software AG > Start Servers > Start My webMethods Server 8.0.
Windows service	Go to the Services window and start the service Software AG webMethods My webMethods Server 8.0.
All other systems	Go to the *Software AG_directory*/*My webMethods Server_instance*/bin directory and run this command: `mws -s default start`

My webMethods Server takes about five minutes to initialize the first time, then shuts down. Restart My webMethods Server and open My webMethods using one of these methods:

- On the Windows Start menu, go to Programs > Software AG >Administration > My webMethods 8.0.
- Enter the URL below in an Internet browser. The default port for My webMethods Server is 8585.

  `http://My webMethods Server_host:My webMethods Server_port`

  Log in under the default user name and password `Administrator` and `manage`.

  Important! After you finish connecting My webMethods Server to the other products, you will have to restart it before you can start using it.

Connect Process Engines to Task Engine

The Process Engine must connect to the Task Engine so the Task Engine can provide results of process steps that required human intervention to running processes.

Note: If you install multiple Process Engines in a Process Engine cluster, all Process Engines in the cluster share a Broker, the same database component, or both, so the Task Engine need only connect to one Process Engine to connect to all.

If you are going to cluster Task Engines, see *Administering My webMethods Server* for connection instructions.

1 Identify the Process Engines to the Task Engine as follows:

   a On the My webMethods Server that hosts the Task Engine, go to the Navigate > Applications > Administration > My webMethods > System Settings > Task Engine page.

   b In the Integration Server (Process Engine) Host row, identify the host machine for an Integration Server that hosts a Process Engine in your Process Engine cluster. The default port for Integration Server is 5555, but the port might have been changed during or after installation.

   c If My webMethods Server should use SSL to communicate with the Integration Server, select the Use SSL check box.

   d If you want to check whether the Integration Server is currently running, click Check Server Status.

   e Click Save.

2 Identify the Task Engine to the Process Engines as follows:

   a In the Integration Server Administrator for an Integration Server that hosts a Process Engine in your Process Engine cluster, go to the Packages > Management page and click  for the WmTaskClient package.

   b In the Task Server URL field, type the URL of the My webMethods Server that hosts the Task Engine (for example, http://myserver:8585).

   c In the Task Server Username and Task Server Password fields, accept the default values `Administrator` and `manage`.

   d Click Save.

   e Reload the WmTaskClient package by returning to the Packages > Management page and clicking in the WmTaskClient row.

Connect Process Engine to Optimize Analytic Engine

If processes are enabled for analysis, the Process Engine must connect to the Optimize Analytic Engine so My webMethods can display process metrics.

By default, the URL provided to the Process Engines for this Broker is broker://localhost:6849/Broker#1/analysis. If the Broker is not on the same machine as a Process Engine, or the port the Broker is using is not 6849, or the Broker's name is not Broker #1, you must modify this URL.

Note: If you install multiple Process Engines in a Process Engine cluster, all Process Engines in the cluster share the Broker.

---

1 In Integration Server Administrator for an Integration Server that hosts a Process Engine, go to the Packages > Management page and click for the WmPRT package.

2 In the Broker URL field, change `localhost` to the correct host, the port to the correct port, and `Broker #1` to the correct Broker name.

Important! Do not change the `broker://` or `/analysis` parts of the URL

3 If you need to edit any of the other fields, see *Administering webMethods Process Engine*.

4 Click Submit.

5 Repeat these steps for the WmOptimize package. If you need to edit any of the other fields, see *Administering webMethods Optimize*.

Connect Integration Server to the Default Broker

1 In Integration Server Administrator, go to the Settings > Messaging > Broker Settings page and click Edit Broker Settings.

2 Click Configured on the left side of the page and complete the fields as shown below.

Field	Entry
Broker Host	Name (*DNSname*:*port* or *IPaddress*:*port*) of the machine that hosts the Broker Server.
Broker Name	Name of the Broker to which Integration Server should connect, as defined on Broker Server. The default Broker is Broker #1.
Client Group	Broker Server client group to which Integration Server should connect. If the specified client group does not exist, Integration Server creates it when it connects to the Broker.
Client Prefix	String that identifies Integration Server to the Broker. By default, Integration Server uses its license key for the prefix. You can define your own, shorter, prefix. If the Integration Server is part of a cluster, all Integration Servers in the cluster must use the same client prefix. My webMethods displays this prefix for each client it creates for Integration Server. (The Broker creates multiple clients for each Integration Server that connects to it.) Note: If this Integration Server belongs to a cluster, make sure it uses the same client prefix as the rest of the cluster.
Use SSL	Indicates whether to use SSL to communicate with the Broker.
Keystore	Full path to Integration Server's keystore file.

Field	Entry
Keystore Type	File type of the keystore file (PKCS12 or JKS).
Truststore	Full path to Integration Server's trust store file.
Truststore Type	File type of the trust store file (JKS).
Password	Password to use to access the SSL certificate in Integration Server's keystore file.
Encryption	Whether to encrypt the connection between Integration Server and the Broker.

3 Click Save Changes, then restart Integration Server.

Connect Products to My webMethods Server

Monitor, the Report Server, the Optimize Analytic Engine, Trading Networks Server, and Integration Server must connect to the My webMethods Server that hosts their user interfaces so My webMethods can display each product's data. This section explains how to connect these products to My webMethods Server.

Note: If you are going to cluster My webMethods Servers, see *Administering My webMethods Server* for connection instructions.

Connect Monitor to My webMethods Server

1 Identify Monitor to My webMethods Server as follows:

a On the My webMethods Server that hosts the Monitor user interface, go to the Navigate > Applications > Administration > My webMethods > System Settings page.

b In the Integration Server (Monitor) Host row, identify the host machine for an Integration Server that hosts Monitor. The default port for Integration Server is 5555, but the port might have been changed during or after installation.

c If My webMethods Server should use SSL to communicate with the Integration Server, select the Use SSL check box.

d If you want to check whether the Integration Server is currently running, click Check Server Status.

e Click Save.

2 Identify My webMethods Server to Monitor as follows:

a In Integration Server Administrator for the Integration Server that hosts Monitor, go to the Packages > Management page and click  for the WmMonitor package.

b If the My webMethods Server is not on the same machine as the Integration Server, edit the MWS Host and MWS Port fields to identify the My webMethods Server host machine and port.

c In the MWS Username and Password fields, type the user name and password for Monitor to use to connect to the My webMethods Server that hosts the Monitor user interface. The password default is `manage`.

d If you need to edit any other fields, see *Monitoring BPM, Services, and Documents with BAM: webMethods Monitor User's Guide*.

e Click Submit.

f Reload the WmMonitor package by returning to the Packages > Management page and clicking  in the WmMonitor row.

Connect Report Server to My webMethods Server

1 On the My webMethods Server that hosts the Reporting user interface, go to the Navigate > Applications > Administration > System-Wide > Report Configuration page.

2 In the Report Server Host and Port fields, identify the host machine for the Report Server. The default port for Report Server is 9300, but the port might have been changed during or after installation.

3 In the Web Server Host and Port fields, identify the Web server you installed for use with the Report Server.

4 Click Save.

Connect Optimize Analytic Engines to My webMethods Server

Note: If you install multiple Analytic Engines, all will share the same database components, so My webMethods Server need only connect to one to connect to all.

1 Identify an Analytic Engine to My webMethods Server as follows:

a On the My webMethods Server that hosts the Optimize user interfaces, go to the Navigate > Applications > Administration > My webMethods > System Settings page.

b In the Analytic Engine Host row, identify the host machine for an Analytic Engine. The default port for Analytic Engines is 12503.

c If My webMethods Server should use SSL to communicate with the Analytic Engine, select the Use SSL check box.

d Click Save.

2 If you configured Optimize using the Central Configuration user interface in My webMethods, you already identified the My webMethods Server that hosts the Optimize user interfaces to your Analytic Engines. If not, do so using the instructions in *Configuring BAM*.

Connect Trading Networks Server to My webMethods Server

1 On the My webMethods Server that hosts the Trading Networks user interface, go to the Applications > Administration > Integration > B2B Settings > Administrative Preferences page.

2 In the Trading Networks Server area, identify the Integration Server that hosts Trading Networks Server. Then click Save.

Connect Integration Servers to My webMethods Server

You can identify Integration Servers to My webMethods Server so you can administer them from the ESB user interface in My webMethods. The ESB user interface is a portal to the Integration Server Administrator user interface.

1 Go to Navigate > Applications > Administration > ESB.

2 Click Add Server and complete the fields as follows:

Field	Entry
Description	Brief description for the Integration Server.
Server Host	Host machine for an Integration Server to administer from My webMethods.
Server Port	Integration Server port to which My webMethods Server will send requests. The default primary port for Integration Server is 5555. Note: The primary port for Integration Server might have been changed from the default during or after installation.
Single Sign On	If you use the My webMethods Server single sign-on feature, users who log on to My webMethods Server will be able to administer the Integration Server without having to log on to it as well. Note: To use this feature, the Integration Server must be configured to use central user management. For instructions on configuring Integration Server, see *Administering webMethods Integration Server*.
Use Secure Connection	Whether My webMethods Server should use SSL to connect to the Integration Server. Note: You can only select this option if the Integration Server is configured to use SSL and certificates. For instructions on configuring Integration Server, see *Administering webMethods Integration Server*.
Color	Choose the color to use for the border around the Integration Server Administrator interface. If you have multiple Integration Servers, you can use this feature to distinguish one from another; for example, you could use orange for Integration Servers in your production environment, and blue for Integration Servers in your test environment.

3 Click OK.

Connect Products to CentraSite

Connect Integration Server to CentraSite

1 In Integration Server Administrator, go to the Settings > Metadata page and click Edit Configuration.

2 In the Metadata Library Configuration area, complete the fields as shown below.

Field	Entry
IS Identifier	Name or IP address of the local machine. Integration Server includes this name with the published metadata. By default, Integration Server populates this field with the IP address, but you can enter an alias instead. The alias can include only alpha-numeric characters.
Library	URL for the CentraSite Registry Repository.
User Name and Password	User name and password for Integration Server to use to publish assets to CentraSite.

3 Click Save Changes.

4 Return to the Settings > Metadata page and click Test Connection.

Connect Mediator to CentraSite

1 Identify Mediator to CentraSite as a target. For instructions, see the Policy-Enforcement Targets and Run-Time Events section of the CentraSite documentation.

2 Identify CentraSite to Mediator as follows:

a In Integration Server Administrator, go to Solutions > Mediator.

b In Mediator, go to the Administration > CentraSite Communication page and click Edit.

c In the CentraSite Configuration area, select the Synchronize with CentraSite check box and complete the fields as shown below.

For this parameter...	Specify...
Host Name	Name or IP address of the CentraSite host machine.
Registry Port	CentraSite Registry Repository port.
UDDI Port	CentraSite UDDI access port.
Target Name	Target name defined in CentraSite for Mediator.

For this parameter...	Specify...
User Name and Password	User name and password for Mediator to use to access CentraSite. For user name, use the format *CentraSite_host\user_name*.
Report Performance Data	Whether Mediator should collect performance data and report it to CentraSite. If you select this check box, you must also complete the Publish Interval field.
Publish Interval (minutes)	How often, in minutes, Mediator should report performance data. Valid values are 1 through 60.

d Click Test Connection. If the connection is successful, click Save.

Connect Products to Database Components

This section explains how to define the following database connections:

- From Integration Server to the IS Internal, IS Core Audit Log, Archive, BPEL Engine, Cross Reference, Document History, Mediator, Process Audit Log, Process Engine, and Reporting and Staging database components, and to the Simulation tables in the Reporting database component.
- From Integration Server to the central users feature in My webMethods Server. This feature allows My webMethods Server users to access Integration Server, enables Integration Server to delegate user management to My webMethods Server, and enables My webMethods Server's user interfaces to call Integration Server services.
- From Trading Networks Server to the Trading Networks database component.

For instructions on defining the database connection for other products, see the following:

Product	See
Designer	Designer online help
My webMethods Server	*Administering My webMethods Server* Note: You were prompted to define this database connection during My webMethods Server installation.
Optimize	*Configuring BAM*
Report Server	*Generating webMethods Reports*
Task Engine	*Working with BPM Tasks: webMethods Task Engine User's Guide*

Database Connections for Integration Server and Hosted Products

You use Integration Server Administrator to connect Integration Server to database components, as follows:

- You define *JDBC database connection pools* in Integration Server Administrator for Integration Server to use to connect to database components. Each pool specifies the connection to a database server that hosts database components.
- Integration Server Administrator provides a *function* that corresponds to each database component (for example, IS Core Audit Log function, a Cross Reference function, and so on). You direct each function to write to the corresponding database component by pointing the function at the appropriate connection pool.

During Integration Server installation, if you chose an external RDBMS for the Integration Server database components and supplied the database connection parameters, the installer created a default connection pool from those parameters. The installer automatically pointed the IS Internal, IS Core Audit Log, Cross Reference, Document History, Process Audit Log, and Process Engine functions at that pool. You can edit the default pool using the instructions in this section, or you can create separate pools and redirect individual functions to use them. At run time, Integration Server creates a separate instance of the appropriate connection pool for each database component.

Note: When you supply the database connection parameters for an external RDBMS during Integration Server installation, the installer automatically configures Integration Server to write to the external RDBMS. You do not have to set any Integration Server properties.

You also use Integration Server Administrator to connect other products to database components, as follows:

- During Trading Networks Server installation, you supplied the database connection parameters for the Trading Networks database component. The installer created a connection pool from those parameters and pointed the Trading Networks function at that pool. You can edit the connection using Integration Server Administrator and the instructions below.
- Integration Server can authenticate clients using internally-defined user and group information, or it can use the My webMethods Server central user management feature. To use the latter, and to use the single sign on feature for My webMethods Server, Integration Server must have a connection pool that points to the My webMethods Server database component, and the CentralUsers function in Integration Server must point at that connection pool.

  If you installed My webMethods Server in the same directory as Integration Server, the installer created a connection pool from the My webMethods Server database parameters you supplied and pointed the CentralUsers function at that pool. If you installed My webMethods Server in a different directory from Integration Server, you must create the connection pool and point the CentralUsers function at that pool using Integration Server Administrator and the instructions below.

- If you created the Archive, BPEL, and Reporting and Staging database components, you must point those functions at connection pools. If you want to simulate business processes in Designer using historical data, you must point the Simulation function at the connection pool for the Reporting database component.
- If you created the Mediator database component, you created it in the same schema or database as the IS Core Audit Log. Integration Server therefore writes to the Mediator database component using the IS Core Audit Log function. There is no separate function for the Mediator database component.

Define a Connection Pool

1 Start Integration Server and open Integration Server Administrator (see "Start Integration Server" on page 137).

2 Go to the Settings > JDBC Pools page.

3 Many products use the DataDirect Connect JDBC 4.0 driver. The BPEL database component, however, requires other drivers. Do the following:

a Download the jar files indicated below from a trusted Internet site to the *Integration Server_directory*\lib\jars directory.

RDBMS	Driver	jar Files
Oracle	Oracle Database 10g Release 2 JDBC Drivers 10.2.0.2.0	ojdbc14.jar
SQL Server	JTDS JDBC Driver 1.2	JTDS-1.2.jar
DB2	IBM DB2 JDBC Universal Driver Architecture 1.3.70	db2jcc.jar db2jcc_license_cu.jar

b On the Settings > JDBC Pools page, click Create a new Driver Alias Definition and complete the fields as follows:

Field	
Alias Name	Name to use for the driver. The name can include any characters that are valid for a file name in your operating system.
Alias Description	Description for the driver.
Driver Class Name	Class name indicated below.

RDBMS	Entry
Oracle	oracle.jdbc.driver.OracleDriver
SQL Server	net.sourceforge.jtds.jdbc.Driver

4 On the Settings > JDBC Pools page, click Create a new Pool Alias Definition and complete the fields as follows:

Field	Entry
Alias Name	Name for the connection pool. The name can include any characters that are valid for a file name in your operating system.
Alias Description	Description for the pool.
Associated Driver Alias	Database driver to use. For the BPEL database component, choose the driver alias name you created in the previous step.
Database URL	URL for the database server. Sample URL formats for the DataDirect Connect JDBC 4.0 driver are displayed. Important! Use the DataDirect Connect connection option MaxPooledStatements=35 on all database URLs except those for Trading Networks. This connection option improves performance by caching prepared statements. (Trading Networks caches its prepared statements using its own pooling mechanism). Important! For DB2, if Integration Server will connect to a schema other than the default schema for the specified database user, you must specify these connection options in the URL: `;AlternateId=schema;InitializationString="SET CURRENT PATH=current_path,schema;MaxPooledStatements=35"` AlternateID is the name of the default schema that is used to qualify unqualified database objects in dynamically prepared SQL statements.
User Id	Database user for Integration Server to use to communicate with the database.
Password	Password for the database user.
Minimum connections	Minimum number of connections the pool must keep open at all times. If you use this pool alias for more than one function, each pool instance keeps the specified number of connections open. For example, if you specify keeping at least 3 connections open, and the IS Core Audit Log and the Document History database components both use this pool, the pool keeps a total of 6 connections open - 3 for the IS Core Audit Log pool instance and 3 for the Document History pool instance. If your logging volume has sudden spikes, you can improve performance by making sure the connections needed to handle the increased volume open quickly. You can minimize connection startup time during spikes by setting this value higher, so that more connections remain open at all times.

Field	Entry
Maximum connections	Maximum number of connections the pools can have open at one time. Calculate this value as part of the total possible number of connections that could be opened simultaneously by all functions and applications that write to the database. Make sure the total number does not exceed the database's connection limit. If one of the applications opens more connections than the database allows, the database will reject subsequent requests for connections from *any* application. However, if Trading Networks also writes to the database and has a pool that could open up to 5 connections, you could specify only 17 as the maximum number of connections for the current pool. The IS Core Audit Log pool instance could use up to 17 connections, and the Document History pool instance could use the remaining 5 connections. You must coordinate the value for the temporary store property watt.server.auditMaxPool with this value. For instructions, see the *webMethods Audit Logging Guide*.
Idle Timeout	Period of time, in milliseconds, the pool can keep an unused connection open. After the specified period of time, the pool closes unused connections that are not needed to satisfy the Minimum connections value.

5 Make sure Integration Server can connect to the database by clicking Test Connection.

6 Click Save Settings.

Point a Function at a Connection Pool

1 In Integration Server Administrator, go to the Settings > JDBC Pools page.

2 In the Functional Alias Definitions area, click Edit in the Edit Association column for a function.

3 In the Associated Pool Alias list, click the pool you want the function to point to.

4 Click Save Settings. Integration Server Administrator returns to the Settings > JDBC Pools page.

5 Initialize the connection pool. To do so, in the Functional Alias Definitions area, click Restart in the Restart Function column for the function.

6 Make sure Integration Server can connect to the database. To do so, in the Test column for the function, test the connection by clicking ▶.

7 If you created a connection pool for the My webMethods Server database component and pointed the CentralUsers function at it, go to the Settings > Resources page and make sure the MWS SAML Resolver URL field is pointing to your My webMethods Server host and port.

8 Restart Integration Server.

Installed JDKs and Product JDK Usage

ApplinX, CentraSite, EntireX, and Tamino XML Server JDKs

The Software AG Installer installs Java Development Kit 1.6 for ApplinX, CentraSite, EntireX, and Tamino XML Server XTools. Tamino XML Server uses its own bundled JDK 1.5.

Important! Do not switch to any other JDK, and only apply JDK maintenance updates that are provided by Software AG

JDKs for All Other Products

The tables below list JDKs that are installed by the installer on each operating system for the indicated products. The JDKs are installed in the *Software AG_directory*\jvm directory.

Important! Apply maintenance updates from the appropriate vendor to the installed JDK on a regular basis, as you would for JDKs you install yourself.

By default, the products use the installed JDK 1.6. You can redirect any product to use the installed JDK 1.5, or another JRE or JDK. For instructions, see "Redirect Products to Use a Non-Default JRE or JDK" on page 166.

Run-time Products

<table>
<tr><th rowspan="2">Servers</th><th colspan="5">64 Bit</th><th>32 Bit</th></tr>
<tr><th>Windows</th><th>Linux</th><th>Solaris</th><th>HP-UX</th><th>AIX</th><th>Windows, Linux</th></tr>
<tr><td>Integration Server (and hosted products),*
My webMethods Server</td><td colspan="2">64-bit Sun 1.6_19 and 1.5_20</td><td rowspan="2">32-bit Sun 1.6_19 and 1.5_20 with 64-bit extension†</td><td rowspan="2">64-bit HP 1.6_6 and 1.5_16</td><td rowspan="2">64-bit IBM 1.6 SR5 and 1.5 SR10</td><td rowspan="2">32-bit Sun 1.6_19 and 1.5_20</td></tr>
<tr><td>webMethods Broker Java and JMS APIs</td><td>32-bit Sun 1.6_19 and 1.5_20</td><td></td></tr>
<tr><td>CentraSite</td><td>32-bit Sun 1.6_19</td><td>64-bit Sun 1.6_19</td><td rowspan="2">32-bit Sun 1.6_19 with 64-bit extension†</td><td rowspan="2">64-bit HP 1.6_6</td><td rowspan="2">64-bit IBM 1.6 SR5</td><td rowspan="2">32-bit Sun 1.6_19</td></tr>
<tr><td>Optimize engines and Web Service Data Collector</td><td colspan="2">64-bit Sun 1.6_19</td></tr>
<tr><td>Infrastructure Data Collector, Report Server</td><td colspan="3">64-bit Sun 1.5_20</td><td>64-bit HP 1.5_16</td><td>64-bit IBM 1.5 SR10</td><td>32-bit Sun 1.5_20</td></tr>
</table>

*Integration Server also supports 64-bit IBM i5 and Mac systems. The installer does not install a JDK on these systems. However, you installed an appropriate JDK to run the installer, and the installer automatically configured the products to use that JDK.

†By default, this JDK runs in 32-bit mode. For some products, you can switch to 64-bit mode. For instructions, see "Configure Run-time Products to Use 64-Bit Mode on Solaris and HP-UX Systems" on page 165.

Development Products

Tools	Windows 64 Bit	Windows 32 Bit
Blaze Advisor, Designer		32-bit Sun 1.6_19 and 1.5_20
Developer, Trading Networks Console	64-bit Sun 1.6_19 and 1.5_20	

Java Cryptography Extension (JCD) Files

The installed JDKs contain Java Cryptography Extension (JCE) Limited Strength Jurisdiction Policy Files 6.0. If you want your products to be able to run in FIPS mode, or use algorithms such as 256-bit AES, your JVM must use JCE Unlimited Strength

Jurisdiction Policy Files 6.0. Download those files from the appropriate Web site below to the *Software AG_directory*/jvm/win160/jre/lib directory and install the files using the instructions in the vendor documentation.

JDK	Web Site
Sun and HP	http://java.sun.com/javase/downloads/index.jsp
IBM	http://www.ibm.com/developerworks/java/jdk/security/index.html

Configure Run-time Products to Use 64-Bit Mode on Solaris and HP-UX Systems

On 64-bit Solaris for some products, the installer installs a 32-bit JDK with a 64-bit extension. By default, this JDK runs in 32-bit mode. For the products listed below, you can switch to 64-bit mode.

Run-time Product	Steps
Integration Server (and hosted products)	1 Go to the *Integration Server_directory*/bin directory and open the server.sh file in a text editor. 2 Locate the line #JAVA_D64=”-d64” and uncomment it, as follows: `JAVA_D64=”-d64”` 3 Save and close the file.
Optimize engines and Web Service Data Collector	1 Go to the *Optimize_directory*/{analysis|prediction|dataCollector}/bin directory and open the startup{Analytic|Prediction|DataCollector}Engine.sh file in a text editor. 2 Locate the line GLUE_OPTS="$GLUE_OPTS -Xss256k" and add -d64, as follows: `GLUE_OPTS="$GLUE_OPTS -d64 -Xss256k"` 3 Save and close the file.
My webMethods Server	1 Go to the *My webMethods Server_directory*/bin directory and open the setenv.sh file in a text editor. 2 Locate the line {rem|#} JAVA_D64=-d64 and uncomment, as follows: `JAVA_D64=-d64` 3 Save and close the file.

Redirect Products to Use a Non-Default JRE or JDK

By default, each product uses the JDK indicated in "Installed JDKs and Product JDK Usage" on page 163. You can redirect the products indicated below to use a non-default JRE or JDK. If you want to switch to the JDK 1.5 installed by the installer, it is located in the *Software AG_directory*\jvm directory.

Important! If you redirect to a non-default JRE or JDK, apply maintenance updates from the appropriate vendor on a regular basis, as you would for JREs and JDKs you install yourself.

Software AG tests products only with the JDKs installed by the Software AG Installer. If you redirect products to use a different JDK or JRE and encounter issues, Software AG might require you to reproduce the issues with the JDK that is installed by the Software AG Installer.

Run-time Products

Product	Steps to Redirect to a Non-Default JRE or JDK

webMethods Broker Java and JMS APIs	Require JDK 1.6 or 1.5.
	In the steps below, *command* is any command other than awbroker, awbrokermon, server_config, or server_qsck.
	`webMethods Broker_directory\bin\command -DJAVA_HOME =JDK_path host:port`
	On a Windows system, the command might look like this:
	`C:\Program Files\webMethods8\Broker\bin\broker_status -DJAVA_HOME=C:\jdk1.5 localhost`
	On a UNIX system, the command might look like this:
	`/opt/webMethods8/Broker/bin/broker_status -DJAVA_HOME=/opt/java1.5 localhost`

Integration Server (and hosted products)	Requires JRE 1.6 or 1.5. If you are using Integration Server with Developer, Integration Server requires JDK 1.5. Go to the *Integration Server_directory*\bin directory and open the server.bat or server.sh file in a text editor. Edit the JAVA_DIR parameter to point to the JRE or JDK installation directory, then save and close the file.
Infrastructure Data Collector	Requires JRE 1.5. Go to the *Infrastructure Data Collector_directory*\bin directory and open the server.bat or server.sh file in a text editor. Edit the JAVA_DIR parameter to point to the JRE installation directory, then save and close the file.

Product	Steps to Redirect to a Non-Default JRE or JDK
My webMethods Server	Requires JDK 1.6 or 1.5. Go to the *My webMethods Server_directory*\bin directory and open the setenv.bat or setenv.sh file in a text editor. Edit the JAVA_HOME parameter to point to the JDK installation directory, then save and close the file.
Optimize engines and Web Service Data Collector	Requires JDK 1.6 or 1.5. 1 Log on to the host machine for the component. 2 Go to the *Optimize directory**component*\bin directory and open the kenobiEnv.bat or kenobiEnv.sh file in a text editor. 3 Edit the JAVA_HOME parameter to point to the JDK installation directory, then save and close the file. 4 If the engines were installed as Windows Services, do the following for each: a Go to the *Optimize directory**component*\bin directory and open the wrapper.conf file in a text editor. b Edit the wrapper.java.command property to point to the *JDK_directory*/bin/java executable. c Edit the wrapper.java.classpath.1 property to point to the *JDK_directory*/lib/tool.jar library. d Save and close the file e Run the uninstallNTsvc.bat program. f Run the installNTsvc.bat program.
Report Server	Requires JRE 1.5. Go to the *Software AG_directory*\cognos\c8\bin or bin64 directory, as appropriate for your system, and open the startup.bat or startup.sh file in a text editor. Edit the JAVA_HOME parameter to point to the JRE installation directory, then save and close the file.

Development Products

Product	Steps to Redirect to a Non-Default JRE or JDK
Designer (Eclipse)	Requires JRE 1.6 or 1.5. Go to the *Software AG_directory*\eclipse\v34 directory and open the eclipse.ini file in a text editor. Locate the -vm parameter and modify the JRE path.
Developer (and plug-ins)	Requires JRE 1.6 or 1.5. Go to the *Developer_directory*\bin directory and open the developer.bat file in a text editor. Edit the JAVA_DIR parameter to point to the JRE installation directory, then save and close the file.
Trading Networks Console	Requires JRE 1.6 or 1.5. Go to the *Trading Networks Console_directory*\bin directory and open the console.bat file in a text editor. Edit the JAVA_ROOT parameter to point to the JRE installation directory, then save and close the file. Note: When you launch Developer from Trading Networks Console, Developer runs in the same JVM as Trading Networks Console. If you decide to use a different JRE for Trading Networks Console, the JRE must be suitable for Developer as well as Trading Networks Console.

9 Uninstalling

Overview

You uninstall the Software AG products discussed in this guide using the Software AG Uninstaller. The uninstaller was automatically downloaded with the Software AG Installer. You can run the uninstaller using different modes, as follows:

System	Mode
Windows	Wizard
UNIX or Mac	Wizard* or console mode
IBM i5	Console mode

*To uninstall using the wizard on a UNIX system, your system must have an X Windows environment.

If errors or warnings occur during the uninstallation, the uninstaller writes them to a file named uninstallLog.txt and stores the file in the *Software AG_directory*/install/logs directory. If you are using console mode, you can change logging behavior; see "Change Logging Level and File, and Add Targets" on page 60 or page 91 for instructions. Uninstallation of Report Server from a UNIX system writes a file named cognos_uninst_log.txt to your root directory.

Uninstall on a Windows System

To uninstall products on a Windows system, you must have Windows system administrator privileges.

Important! If you are going to uninstall CentraSite, and the CentraSite Registry Repository is on a different machine than the Application Server Tiers, uninstall the Application Server Tiers first, and then uninstall the Registry Repository.

1 If the Software AG products are running on the local machine, shut them down.

Important! Software AG products that are not listed do not need to be shut down.

Products to Shut Down	Method
Running as applications: ApplinX EntireX (all Brokers and RPC Servers) My webMethods Server and Task Engine Optimize Analytic Engine, Prediction Engine, and Web Service Data Collector Report Server	Use Windows Start menu (**Start > Programs > Software AG > Stop Servers** > *product*)
Running as services: ApplinX Broker Monitor (stops Broker Servers) CentraSite Application Server Tier My webMethods Server and Task Engine Optimize Analytic Engine, Prediction Engine, and Web Service Data Collector Report Server System Management Hub*	Use Windows Services window (Software AG webMethods *product release*)
Running as service: Report Server	Run script (see product documentation)
Tomcat Kit	Open a command window and run the command `sc stop SAGCTP80`
CentraSite Registry Repository Developer Designer Integration Server (and products it hosts) Optimize Infrastructure Data Collector Tamino XML Server	Use product interface (see product documentation)

*System Management Hub services are named Software AG CSLayer Service and EventLayer Service.

Also shut down all non-Software AG applications that are running on the local machine.

Important! If you do not shut down the Software AG products listed above and your non-Software AG applications, the uninstaller will not be able to remove key files that are locked by the operating system.

2 The uninstaller will delete all files except the installer-maintained history.txt file from the *Software AG_directory*/install subdirectories. If you have stored your own files in either of those subdirectories and want to keep them, move those files to a non-webMethods directory.

3 If you are going to uninstall Integration Server, retract all assets you have published to CentraSite. For instructions, see the *webMethods Designer BPM and CAF CentraSite Metadata Help*.

4 Start the Software AG Uninstaller. To do so, open the Windows Add or Remove Programs utility and select Software AG Products 8.x *installation directory*. The uninstaller starts; it looks almost identical to the Software AG Installer.

   On the product selection tree, choose the products to uninstall.

   If you choose a product that is required by other products, the uninstaller warns that it will also uninstall those products. For example, if you choose Integration Server, the uninstaller will warn that it will uninstall all packages that require Integration Server. If you do not want to uninstall dependent products, deselect the required product.

   If you choose to uninstall ApplinX, CentraSite, EntireX, and Tamino XML Server, also choose to uninstall their shared components (System Management Hub, Tomcat Kit, and Java Development Kit 1.6).

   Continue through the uninstaller until uninstallation is complete.

5 If you uninstalled the System Management Hub, Tomcat Kit, and Java Development Kit 1.6, remove their files from the machine as instructed below.

   Important! You must follow the instructions exactly, and perform them in the indicated order, or you will experience unpredictable results.

   a Open the Windows Add or Remove Programs utility.

   b Uninstall System Management Hub.

   c Uninstall Tomcat Kit.

   d Uninstall Java Development Kit (appears as Common Java Package).

6 If you uninstalled Deployer, you can uninstall the Deployer communications component from the Deployer's source and target Integration Servers and ProcessModel servers. If the Integration Server is not running, go to the *Integration Server_directory*/packages directory and delete the WmDeployerResource directory. If the Integration Server is running, open Integration Server Administrator, go to the Packages > Management page, and delete the WmDeployerResource package.

7 The uninstaller does not delete files that were created after you installed your products (for example, user-created or configuration files), nor does it delete the directory structure that contains the files. If you are going to reinstall into the same directory, delete the product directories or, if you want to save the files, move them.

Uninstall on a UNIX, IBM i5, or Mac System

Important! If you are going to uninstall CentraSite, and the CentraSite Registry Repository is on a different machine than the Application Server Tiers, uninstall the Application Server Tiers first, and then uninstall the Registry Repository.

Important! When you run the Software AG Uninstaller on IBM i5 systems, the uninstaller experiences display problems. While these display problems will not adversely affect the uninstallation process, Software AG strongly recommends that you minimize the problems by running the uninstaller from an IBM i5 client for Windows rather than from a telnet client.

1 Shut down the Software AG products listed below using the commands provided in the product documentation.

Important! Software AG products that are not listed do not need to be shut down.

- ApplinX
- Broker Monitor (stops Broker Servers)
- CentraSite
- EntireX (all Brokers and RPC Servers, but not Broker Admin Service)
- Integration Server (and products it hosts)
- My webMethods Server and Task Engine
- Optimize Analytic Engine, Prediction Engine, and Infrastructure Data Collector
- Report Server
- System Management Hub
- Tamino XML Server
- Tomcat Kit

Also shut down all non-Software AG applications that are running on the machine.

Important! If you do not shut down the Software AG products listed above and your non-Software AG applications, the uninstaller will not be able to remove key files that are locked by the operating system.

2 Log on as the same user that installed the products.

3 If the products you are uninstalling are located on a remote machine and you want to use the uninstaller wizard, follow these steps:

a Enable the display of the local machine using the command shown below, where *remote_host* is the remote machine from which to uninstall:

```
xhost +remote_host
```

b Log on to the remote machine and set the DISPLAY variable on the remote machine to point to the local machine. For example, if you are using a Bash shell, are uninstalling from a local machine named uninstaller, and want to set the display to the default device, enter:

```
export DISPLAY=uninstaller:0.0
```

4 If you are going to uninstall all your products from the local or remote machine, the uninstaller will delete all files except the installer-maintained history.txt file from the *Software AG_directory*\install subdirectories. If you have stored your own files in either of those subdirectories and want to keep them, move those files to a non-webMethods directory.

5 If you are going to uninstall Integration Server, retract all assets you have published to CentraSite. For instructions, see the *webMethods Designer BPM and CAF CentraSite Metadata Help*.

6 If you are going to uninstall CentraSite, unregister the CentraSite HTTP server daemon and revert file permissions. To do so, run the AsRootBeforeUninstall.sh script with super user privileges. The script is located in the *CentraSite_directory*/bin directory.

7 If you are going to uninstall EntireX, and you are not going to run the uninstaller with sudo privileges, you must unregister the EntireX daemon manually. To do so, go to the *EntireX_directory*/INSTALL directory and run the script uninstall_etbsrv_daemon with sudo privileges. On Linux, also delete the /etc/ssxsrv.pamd file.

8 Start the uninstaller. To do so, go to the *Software AG_directory*/bin directory and enter the appropriate command, as follows:

Uninstall Mode	Command
Wizard	`uninstall`
Console mode	`uninstall -console`

The uninstaller starts; it looks almost identical to the Software AG Installer.

Choose the products to uninstall.

If you choose a product that is required by other products, the uninstaller warns that it will also uninstall those products. For example, if you choose Integration Server, the uninstaller will warn that it will uninstall all packages that require Integration Server. If you do not want to uninstall dependent products, deselect the required product.

If you choose to uninstall ApplinX, CentraSite, EntireX, and Tamino XML Server, also choose to uninstall their shared components (System Management Hub, Tomcat Kit, and Java Development Kit 1.6).

Continue through the uninstaller until uninstallation is complete.

9 If you uninstalled the System Management Hub, Tomcat Kit, and Java Development Kit 1.6, remove their files from the machine as instructed below.

Important! You must follow the instructions exactly, and perform them in the indicated order, or you will experience unpredictable results.

a Open a Bourne shell and set the $SAG environment variable to point to the installation directory that contains the shared components. By default, this directory is /opt/softwareag.

b Source the Software AG environment script sagenv.new using the shell command `. $SAG/sagenv.new`. The script is located in the installation directory that contains the shared components. By default, that directory is /opt/softwareag.

c Run the Software AG uninstallation utility, sagrm, to uninstall System Management Hub.

d Run sagrm to uninstall Tomcat Kit (Common Tomcat Package).

e Run sagrm to uninstall Java Development Kit 1.6 (Common Java Package v16).

10 If you uninstalled webMethods Broker, and your Broker Monitor was configured to run as a daemon, you can delete the Broker Monitor startup script from your UNIX startup directories. If you had configured a single Broker Monitor to run as a daemon, the startup script is named S*number*broker80 (for example, S45broker80). If you had configured multiple Broker Monitors to run as daemons, the names of the startup scripts have an additional character at the end to make them unique (for example, S45broker80_1, S45broker80_2, and so on).

11 If you uninstalled Deployer, you can uninstall the Deployer communications component from the Deployer's source and target Integration Servers and ProcessModel servers. If the Integration Server is not running, go to the *Integration Server_directory*\packages directory and delete the WmDeployerResource directory. If the Integration Server is running, open Integration Server Administrator, go to the **Packages > Management** page, and delete the WmDeployerResource package.

12 The uninstaller does not delete files that were created after you installed your products (for example, user-created or configuration files), nor does it delete the directory structure that contains the files. If you are going to reinstall into the same directory, delete the product directories or, if you want to save the files, move them.

A Default Ports

Product	Default Port	Protocol
ApplinX Server		
Server ports for communications with Designer, ApplinX Java and .NET frameworks-based objects, and ApplinX Java and .NET procedure clients for SOA.	2323 23443*	TCP Secured TCP
HTTP server port for communication with clients	2380	HTTP
Internal Administration port	2305	TCP
Internal AJP port	2309	AJP/1.3
webMethods Broker		
Broker Server ports	6849 6848† 6847‡	TCP
Default Broker port	6849	TCP
Broker Monitor port	6850	TCP
CentraSite		
Registry Repository		
Applications port	53301	Proprietary
Administration port	53303	Proprietary
RMI Registry port	53313	Standard RMI
Remote Authenticator port for authenticating remote users via SSX.	53314	RMI over SSL
Remote Repository Manager port for accessing repository data via SSX.	53315	RMI over SSL
Application Server Tier		
HTTP server port (Apache)	53305	HTTP
Web applications port (Tomcat)	53307 53308	HTTP HTTPS

*SSL authentication.

†One-way, server-only, SSL authentication.

‡Two-way, client and server, SSL authentication.

**SSL enabled.

Product	Default Port	Protocol
EntireX		
EntireX Default Broker port	1971	TCP
EntireX Default Broker SSL port	1958	TCP
EntireX Broker agent administration port	3000	TCP
EntireX Broker administration service port	57707 57708**	TCP TCP
Integration Server and all packages		
Primary port	5555	HTTP
Diagnostics port	9999	HTTP
Data port for communication among clustered Integration Servers	24547	Proprietary binary over TCP
My webMethods Server		
Java debugger port (available when My webMethods Server is started with -d option)	5000	TCP
Jetty HTTP Web server port (for communication between products and their user interfaces on My webMethods Server, and for users and clients to call Web services)	8585	HTTP
Communication with Central Configuration	15002	HTTP
NaturalONE		
Application development Natural I/O	3500	Proprietary
Run-time HTTP connector	8080 to 8099	HTTP
Run-time Tomcat shutdown port	8005 to 8024	Tomcat
Natural run-time	2800	Proprietary
Optimize		
Central Configuration	16000-16025	HTTP
Analytic Engine		
Central Configuration port	15000	HTTP/HTTPS
Internal Web service registry port	12503	HTTP
Data port for communication among clustered Analytic Engines	30999	Proprietary binary over TCP

*SSL authentication.
†One-way, server-only, SSL authentication.
‡Two-way, client and server, SSL authentication.
**SSL enabled.

Product	Default Port	Protocol
Prediction Engine		
Central Configuration port	15003	HTTP/HTTPS
Internal Web service registry port	12513	HTTP
Web Service Data Collector		
Central Configuration port	15001	HTTP/HTTPS
Internal Web service registry port	12603	HTTP
Infrastructure Data Collector	6666	HTTP
Central Configuration port	15005	HTTP/HTTPS
Diagnostics port	6699	HTTP
Report Server	9300	HTTP
System Management Hub		
Tomcat shut down port	49983	Tomcat
Communication with CentraSite Control and all other user interface plug-ins to System Management Hub	49982 49981	HTTPS HTTP
CSLayer ports	49900 49901 49903	Proprietary HTTP SNMP
EventLayer ports	49902 49904	Proprietary SNMP
MiLayer port	49992	SNMP
Tamino XML Server		
Ports for new databases	49600 - 49800	TCP
Web Services Stack		
WS-stack Web application (Axis2 servlet). Uses the HTTP and HTTPS connectors configured for the container by default. Default container is Software AG Tomcat.	49981 49982	HTTP HTTPS

*SSL authentication.

†One-way, server-only, SSL authentication.

‡Two-way, client and server, SSL authentication.

**SSL enabled.

Product	Default Port	Protocol
SimpleHTTPServer. Can be used as standalone host for Web Services Stack services; typically used when a Web service is invoked asynchronously and the response requires a separate transport listener. Disabled by default.	8080	HTTP
JMS transport listener; Java naming provider used by JMS. Disabled by default.	61616	TCP
TCP transport listener. Disabled by default.	6060	TCP
Non-blocking HTTP transport based on HttpCore+NIO extensions. Disabled by default.	9000	HTTP
Non-blocking HTTPS transport based on HttpCore+SSL-NIO extensions. Disabled by default.	9002	HTTPS

*SSL authentication.
†One-way, server-only, SSL authentication.
‡Two-way, client and server, SSL authentication.
**SSL enabled.

B International Operating Environments

Overview

Software AG products are designed for use anywhere in the world, and enable you to exchange data with systems and users who speak languages other than your own.

The products use the Universal Character Set (ISO/IEC 10646-2, or Unicode) as the character set for all internal operations. At minimum, the products support the requirements of Unicode 3.0. HTML content, including administration tools, uses Unicode UTF-8 encoding.

For specific information on the testing, configuration, capabilities, and limitations of any product, see the product's readme.

Language Packs

Language packs are available for webMethods Broker on all supported operating systems. Language packs are available for other Software AG products on all supported operating systems except IBM i5 and Mac OS X.

The Software AG Installer always installs the U.S. English files necessary to run your products. However, for many products, you can also install language packs that provide translated user interfaces, messages, help, and documentation.

Most products support multiple languages at a time; you can install as many language packs as you need. For products that support multiple languages, your client setup (that is, browser language preference, default locale in which the product is started, and locale selected in your user profile) will determine which language you see. If you operate a product in a locale for which language packs are not available or installed, you will see U.S. English.

Eclipse Language Packs

Designer is based on the Eclipse platform and its projects. Software AG's language packs do not include language packs for plug-ins provided by Eclipse projects. If you need language packs for those plug-ins, follow these steps:

1 Start Designer.

2 Go to Help > Software Updates, click the Available Software tab, and then click Add Site.

3 In the Location field, type `http://download.eclipse.org/technology/babel/update-site/ganymede/` and click OK.

4 Click Refresh, select the language pack for the language you need, and click Install. Confirm the language pack to install and click Next.

5 Read the license agreement. If you accept the terms, select the check box and click Finish.

6 Restart Eclipse.

Extended Character Set

The Software AG Installer offers an extended character set that extends Java's java.nio.Charset class to support additional installable character encodings and adds more than 870 custom character encodings. The extended character set allows you to use custom character encodings such as EBCDIC and OEM character encodings with Integration Server, adapters, and services.

Configure Browsers and JDK Font

Some HTML interfaces for Software AG products detect the language setting for your browser. If you have installed language packs on your products, those interfaces try to supply the user interface, messages, and data in that language. You can indicate which of the installed languages to display in your browser as follows:

Browser	Action
Firefox 3.x	Go to Tools > Options > Content. Click Choose and add the language you want to use to the top of the list.
Internet Explorer 6.x and 7.x	Go to Tools > Internet Options. Click Languages and add the language you want to use to the top of the list.

Your Java run-time environment might require modification to display non-ASCII data. If you see hollow boxes or black squares where you would expect to see non-ASCII characters, you might need to modify your JDK's font configuration file to provide an appropriate font for displaying these characters. For example, you might install a full Unicode font, such as Arial Unicode MS, or you can install a font for a particular language. For information on modifying font configuration file, see J2SE 5.0 at http://java.sun.com/j2se/1.5.0/docs/guide/intl/fontconfig.html

Configure the Proper Locale

If you are going to install or run your products in a locale other than U.S. English, do the following:

<table>
<tr><th>System</th><th>Steps</th></tr>
<tr><td>Windows</td><td>Set the Windows system locale to the proper locale, as follows:
1 On the Start menu, go to Control Panel > Regional and Language Options.
2 Click the Advanced tab. In the Language for non-Unicode programs area, click the language to use and click OK.
3 Restart Windows.
Note: The instructions above are for Windows XP. Instructions for other Windows systems vary slightly.</td></tr>
<tr><td>UNIX</td><td>Set your shell to the proper locale by setting the LANG environment variable. Run the appropriate command below:
<table><tr><th>Shell</th><th>Command</th></tr><tr><td>sh</td><td>LANG=locale; export LANG</td></tr><tr><td>csh</td><td>setenv LANG locale</td></tr></table></td></tr>
</table>