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Callidus Application Installation Order

To ensure that the applications are integrated, the applications should be installed in the following order:

- TrueComp
- TrueComp Datamart
- Callidus Portal
- TrueInformation (If Upgrading, for Fresh Install this is not supported)
- TrueProducer
- Callidus TrueAnalytics

If you are not planning to deploy all the applications, do not include those applications but maintain the order for the remaining applications.

Platform Support Stacks

This section lists the supported platform for the Callidus Software application suite, Callidus 6.0.

All Callidus Software components must be installed in the same time zone and behind the same firewall.

When installing onto UNIX platforms, an X Windows client is required.
# Oracle / WebLogic Stack for Solaris 10 (SPARC)

<table>
<thead>
<tr>
<th>Component</th>
<th>Vendor / Version</th>
<th>Operating Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>Oracle 11.1.0.7 Enterprise Edition</td>
<td>All vendors supported</td>
</tr>
<tr>
<td>Application Server</td>
<td>WebLogic 9.2.1 (Clustering Supported)</td>
<td>Solaris 10 (SPARC)</td>
</tr>
<tr>
<td>TrueInformation Report Server</td>
<td>Actuate 9 SP2</td>
<td>Solaris 10 (SPARC)</td>
</tr>
<tr>
<td>TrueComp ETL</td>
<td>Informatica PowerCenter 8.6</td>
<td>Solaris 10 (SPARC)</td>
</tr>
<tr>
<td>Callidus TrueAnalytics</td>
<td>BusinessObjects XI 3.1, SP2</td>
<td>Solaris 10 (SPARC)</td>
</tr>
</tbody>
</table>

# Oracle WebSphere Stack for AIX

<table>
<thead>
<tr>
<th>Component</th>
<th>Vendor / Version</th>
<th>Operating Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>Oracle 11.1.0.7 Enterprise Edition</td>
<td>All vendors supported</td>
</tr>
<tr>
<td>Application Server</td>
<td>WebSphere 6.1.0.23 (Clustering Supported)</td>
<td>AIX 5.3</td>
</tr>
<tr>
<td>TrueInformation Report Server</td>
<td>Actuate 9 SP2</td>
<td>AIX 5.3</td>
</tr>
<tr>
<td>TrueComp ETL</td>
<td>Informatica PowerCenter 8.6</td>
<td>AIX 5.3</td>
</tr>
<tr>
<td>Callidus TrueAnalytics</td>
<td>BusinessObjects XI 3.1, SP2</td>
<td>AIX 5.3</td>
</tr>
</tbody>
</table>
DB2 WebSphere Stack for AIX

<table>
<thead>
<tr>
<th>Component</th>
<th>Vendor / Version</th>
<th>Operating Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>DB2 V9.1.0.4</td>
<td>AIX 5.3</td>
</tr>
<tr>
<td>Application Server</td>
<td>WebSphere 6.1.0.23</td>
<td>AIX 5.3</td>
</tr>
<tr>
<td></td>
<td>(Clustering Supported)</td>
<td></td>
</tr>
<tr>
<td>TrueInformation Report Server</td>
<td>Actuate 9 SP2</td>
<td>AIX 5.3</td>
</tr>
<tr>
<td>TrueComp ETL</td>
<td>Informatica PowerCenter 8.6</td>
<td>AIX 5.3</td>
</tr>
<tr>
<td>Callidus TrueAnalytics</td>
<td>BusinessObjects XI 3.1, SP2</td>
<td>AIX 5.3</td>
</tr>
</tbody>
</table>

SQL Server WebSphere Stack for Windows

<table>
<thead>
<tr>
<th>Component</th>
<th>Vendor / Version</th>
<th>Operating Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>Microsoft SQL Server 2005</td>
<td>Windows 2003 Server SP2</td>
</tr>
<tr>
<td></td>
<td>(data segmentation not supported)</td>
<td></td>
</tr>
<tr>
<td>Application Server</td>
<td>WebSphere 6.1.0.23</td>
<td>Windows 2003 Server SP2</td>
</tr>
<tr>
<td></td>
<td>(Clustering Supported)</td>
<td></td>
</tr>
<tr>
<td>TrueInformation Report Server</td>
<td>Actuate 9 SP2</td>
<td>Windows 2003 Server SP2</td>
</tr>
<tr>
<td>TrueComp ETL</td>
<td>Informatica PowerCenter 8.6</td>
<td>Windows 2003 Server SP2</td>
</tr>
<tr>
<td>Callidus TrueAnalytics</td>
<td>BusinessObjects XI 3.1, SP2</td>
<td>Windows 2003 Server SP2</td>
</tr>
</tbody>
</table>

Architecture

Callidus Software applications are certified on the following operating system architectures:

- AIX: 64 bit
- Solaris: 64 bit
- Windows: 32 bit

Refer to the third-party documentation for requirements on any third-party products.
Client Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client operating system</td>
<td>Windows XP Professional with Service Pack 3, Windows Vista Enterprise</td>
</tr>
<tr>
<td>Web browser</td>
<td>Internet Explorer 7, with Java enabled (for scripting and applets)</td>
</tr>
<tr>
<td></td>
<td><em>Note:</em> Do not enable pop-up blockers</td>
</tr>
<tr>
<td>Java Plug-in</td>
<td>Version 1.6.0_11 (only)</td>
</tr>
<tr>
<td>Java Runtime Environment</td>
<td>Version 1.6.0_11 (only)</td>
</tr>
<tr>
<td>Suggested screen resolution</td>
<td>1024 x 768 or higher</td>
</tr>
<tr>
<td>Minimum system requirements</td>
<td>Pentium III, 500 MHz or faster with 1024 MB of RAM.</td>
</tr>
<tr>
<td>Minimum available disk space</td>
<td>15 MB</td>
</tr>
</tbody>
</table>

The client-side memory usage for the TrueComp Manager client is set in the Launch.jnlp file which resides on the machine hosting the application server. Following deployment, this file is located in:

\n
\n
\n
where \$TRUECOMP_HOME\$ is the TrueComp subdirectory in the directory to which you install TrueComp and \$application_id\$ is the application ID of the TrueComp deployment. By default, \$TRUECOMP_HOME\$ is C:\Callidus\TrueComp on Windows.

To set the minimum and maximum values for the client machine, modify the initial-heap-size and max-heap-size values in the following lines in the launch.jnlp file:

\n
\n
\n
To view large territory definitions, set the environment variable JAVA OPTIONS on the client machine to -Xss4096k.

Additional Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client OS</td>
<td>Windows XP Professional SP2+</td>
</tr>
<tr>
<td></td>
<td>Windows Vista Enterprise</td>
</tr>
<tr>
<td>Web Browser</td>
<td>Internet Explorer 7</td>
</tr>
<tr>
<td></td>
<td><em>Note:</em> Do not enable pop-up blockers</td>
</tr>
<tr>
<td>Category</td>
<td>OS/Platforms</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>Grid Servers</td>
<td>Windows 2003 Server SP2</td>
</tr>
<tr>
<td></td>
<td>Solaris 10 (X86* or SPARC)</td>
</tr>
<tr>
<td></td>
<td>AIX 5.3</td>
</tr>
<tr>
<td></td>
<td>RedHat Linux 4</td>
</tr>
<tr>
<td>Grid Workers</td>
<td>Windows 2003 Server SP2</td>
</tr>
<tr>
<td></td>
<td>Solaris 10 (X86* or SPARC)</td>
</tr>
<tr>
<td></td>
<td>AIX 5.3</td>
</tr>
<tr>
<td></td>
<td>RedHat Linux 4</td>
</tr>
<tr>
<td>Security - Authentication Servers</td>
<td>Sun Java System Directory Server</td>
</tr>
<tr>
<td>Web Server</td>
<td>Apache 2.0.49</td>
</tr>
<tr>
<td></td>
<td>Sun Java Web server 6.1</td>
</tr>
</tbody>
</table>
JDBC Driver Requirements

This section lists the JDBC (Java Database Connectivity) driver requirements for the supported database platform.

Note: If the incorrect JDBC driver is listed in your CLASSPATH environment variable, the installation will fail. Include the correct driver.

Oracle

The required jdbc driver files are ojdbc5.jar and ojdbc14.jar. The Oracle JDBC drivers are shipped with Oracle Server. The file is located at the following location within the directory in which you installed Oracle Server: `<ORACLE_HOME>\jdbc\lib`. The required drivers may also be downloaded.

SQL Server

The JDBC driver for SQL Server is `sqljdbc.jar`.

The JDBC driver for SQL Server 2005 can be downloaded from the following location:


If this URL does not work, navigate to the following URL and search for the JDBC driver:

http://www.microsoft.com/sql/downloads

The location of the `sqljdbc.jar` file within the downloaded zip file is `sqljdbc_1.2\enu`.

DB2

The JDBC driver for DB2 is provided in two `.jar` files. These files are:

- `db2jcc.jar`
- `db2jcc_license_cu.jar`

These files are provided in the `java` subdirectory within your DB2 server or client installation.

Installing the JDBC Driver

Before you install TrueComp or other Callidus Software products, you must obtain the JDBC driver and place it in a specific location.

If you install multiple products to the same root directory (for example, `/apps/Callidus`) on the same machine, you only need to perform this procedure once on that machine. If you install to other machines, you must perform this procedure on each machine.
If you are installing multiple Callidus Software products on multiple machines, you might want to place the JDBC driver file(s) in a shared folder that is available across the network, so the JDBC driver can be copied to each machine from one location.

To install the JDBC driver:

1. Create a directory `/common/lib/jdbc` within the location you want to install. For example, if you are installing to `/apps/Callidus`, create the following directory: `/apps/Callidus/common/lib/jdbc`.

2. Obtain the driver, either by copying it from the database server or downloading it, and place the driver in the folder you created in Step 1.

3. Recommended: Copy the driver to a shared network folder so that it is easily available when you follow this procedure for additional machines.
DB2 Upgrade Settings

DB2 upgrade scripts and procedures contain complex SQL statements and require DB2 client V9.x. Before installing on DB2 or running the DB2 upgrade, perform the following steps.

To prepare to upgrade DB2:

1. Set the STMTHEAP configuration parameter using following commands:
   
   ```
   db2 connect to dbname user dbuser using password
   db2 update db cfg using stmtheap 8192
   ```
   
2. Adjust the storage space using the following commands:
   
   ```
   db2 connect to dbname user username using password
   db2 alter tablespace tallydata autoresize yes
   db2 alter tablespace tallyindex autoresize yes
   ```
   
3. Run the listed scripts from within the `<installDir>\TrueComp\database\db2` directory.
   
<table>
<thead>
<tr>
<th>Script</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>setIntegrity.sql</td>
<td>Set integrity—Removes the table from set integrity pending state.</td>
</tr>
<tr>
<td>reorg.sql</td>
<td>Reorganize tables—Reorganizes the table data. Before running this script, ensure that you have enough space in the syscatspace tablespace.</td>
</tr>
<tr>
<td>runStats.sql</td>
<td>Gather statistics—Provides better performance. Before running this script, replace <code>&lt;Schema Name&gt;</code> with the actual schema name.</td>
</tr>
</tbody>
</table>

   **Note:** This step can be executed standalone from the client.

4. Check parameter settings using the listed commands.
   
   ```
   db2 connect to dbname user username using password
   get db cfg |grep -i stmheap
   ```

   Tablespace auto-resize can be checked from the Control Center by navigating as follows:
   All Databases > database name > Table Spaces > Auto-Resize column (in the right-hand panel)

5. Resize the Syscatspace tablespace. The tablespace should be auto resized or should have sufficient space.
Upgrading DB2 For Data Segmentation

Upgrading your DB2 database to use data segmentation can perform slowly. By default all partitions are created in the `tallydata` tablespace. The performance depends on the server configuration and requires additional space for the `tallydata` tablespace and the container in which its data resides.

Connect to the specific database and execute the following query to see the segment creation activity:

```sql
SELECT tabname, count(*) "Num of partitions"
FROM syscat.datapartitions
where tabname in (select upper(tablename)
                 from cs_segmentedtables
                 ) group by tabname;
```
SQL Server Install Settings

SQL Server installations require that a collation setting be changed from the default database installation.

Collation

By default, SQL Server 2005 is configured to run using a case insensitive collation. You must change this to be case sensitive.

You can set collation at the server level before installation or during installation. For information about this process, see the collation documentation in the Microsoft library at:


Java Development Kit Requirements

To ensure that the proper Java Development Kit (JDK) is used, create a JAVA_HOME environment variable and set the path to the JDK included with the application server. To find the location of your application server’s JDK, consult the documentation for your application server.
TrueComp Repository Requirements

This section documents the database configurations required to prepare for the installation of the TrueComp Repository. You should create the database and its tablespaces or file groups from a Database Administrator (DBA) account before creating the database user. For more detailed information about installing and configuring the TrueComp Repository, see the TrueComp Installation Guide.

Note: Set the character set and national character set of the database to UTF-8.

This section contains the following topics:

- Creating the Database Tablespaces and User for Oracle (see page 15)
- Creating the Database Tablespaces and User for SQL Server (see page 16)
- Creating the Database Tablespaces and User for DB2 (see page 17)

Creating the Database Tablespaces and User for Oracle

The following instructions assume that the Oracle Server has already been installed and configured. Refer to Oracle’s documentation for detailed installation information.

Creating Tablespaces for Oracle

TrueComp requires the following tablespaces in the Oracle database:

- tallydata
- tallyindex

If you want to use the Automatic Undo Management feature, create an undo tablespace named tallyundo. You also need to uncomment or add the following settings in the init.ora file:

undo_management=AUTO
undo_tablespace=tallyundo
undo_retention=10800
undo_suppress_errors=true

Spread your Oracle tablespaces across multiple drives if possible, regardless of the number of disk controllers. One option is to use high-end disk controllers and disk striping to implement this approach. Each tablespace should point to a different disk controller.

Creating a Callidus Database User for Oracle

Assign the following role to the user:

- SELECT_CATALOG_ROLE
Assign the following system privileges to the user:

- ALTER ANY TRIGGER
- ALTER SESSION
- CREATE ANY TRIGGER
- CREATE PROCEDURE
- CREATE PUBLIC SYNONYM
- CREATE SEQUENCE
- CREATE SESSION
- CREATE TABLE
- CREATE TYPE
- CREATE VIEW
- DROP ANY TRIGGER
- DROP PUBLIC SYNONYM
- QUERY REWRITE
- UNLIMITED TABLESPACE

The previous privileges must be granted explicitly rather than through roles. The user must also have execute privileges to the following packages:

- SYS.DBMS_ALERT
- SYS.DBMS_LOCK
- SYS.DBMS_STATS

If you want to create your own tables, Callidus Software recommends that you do not place these tables in the TALLYDATA tablespace.

The idle_time for this user should be set to unlimited. During pipeline runs, if a worker finishes its task prior to other workers, if the idle_time is not set to unlimited, the worker can time out and disrupt the pipeline.

Creating the Database Tablespaces and User for SQL Server

The following instructions assume that the SQL Server has already been installed and configured. Refer to Microsoft’s documentation for detailed installation information.

Creating Tablespaces for SQL Server

TrueComp requires the following tablespaces in the SQL Server database:

- tallydata
- tallyindex

The following is an example of how to create these tablespaces during database creation.

```sql
filegroup tallydata (name = truecompdata,
```
filename = 'E:\MSSQL7\data\truecompdata.ndf',
size = 750MB
),
filegroup tallyindex {
  name = truecompindex,
  filename = 'F:\MSSQL7\data\truecompindex.ndf',
  size = 750M
}
The type must be DATA.

To distribute input and output loads, indexes and tables should be stored on separate drives, on separate controllers. If they reside on the same drive, all the input and output associated with an index search is limited to the same disk.

Creating a Callidus Database User for SQL Server

For MS SQL Server, the user should own the database (be assigned the dbo role). If you want to import dump files, the user also needs to have the dbcreator role assigned to it.

Create a database (for example, truecomp). Create a login that is the database owner (dbo). You will create the schema and stored procedures as the dbo. If you run sp_helpusers, you should see something like the following:

<table>
<thead>
<tr>
<th>UserName</th>
<th>GroupName</th>
<th>LoginName</th>
<th>DefDBName</th>
<th>UserID</th>
</tr>
</thead>
<tbody>
<tr>
<td>dbo</td>
<td>db_owner</td>
<td>truecomp</td>
<td>truecomp</td>
<td>1</td>
</tr>
</tbody>
</table>

Creating the Database Tablespaces and User for DB2

The following instructions assume that the DB2 server has already been installed and configured. Refer to IBM’s documentation for detailed installation information.

Creating Tablespaces for DB2

The TrueComp Repository requires the following tablespaces for DB2:

- TALLYDATA
- TALLYINDEX
- TALLYUSER
- TALLYTEMP (system temporary tablespace)
- TALLYTEMP1 (secondary system temporary tablespace)
- TALLYLONG (long tablespace)
- TALLYTEMP_USER (user temporary tablespace)
The following example shows how you can create these tablespaces:

```sql
CONNECT TO <database_name>;
CREATE REGULAR TABLESPACE TALLYDATA PAGESIZE 32 K MANAGED BY DATABASE USING ( FILE '<path_name>	allydata.dat' <size>) EXTENTSIZED 32 PREFETCHSIZE 16 BUFFERPOOL TCM_BP32K;
CREATE REGULAR TABLESPACE TALLYINDEX PAGESIZE 32 K MANAGED BY DATABASE USING ( FILE '<path_name>	allyindex.dat' <size>) EXTENTSIZED 32 PREFETCHSIZE 16 BUFFERPOOL TCM_BP32K;
CREATE REGULAR TABLESPACE TALLYUSER PAGESIZE 16 K MANAGED BY DATABASE USING ( FILE '<path_name>	allyuser.dat' <size>) EXTENTSIZED 32 PREFETCHSIZE 16 BUFFERPOOL TCM_BP16K;
CREATE SYSTEM TEMPORARY TABLESPACE TALLYTEMP PAGESIZE 32 K MANAGED BY SYSTEM USING ('/db2index/<database_name>/tallytemp') BUFFERPOOL TCM_BP32K;
CREATE LONG TABLESPACE TALLYLONG PAGESIZE 32 K MANAGED BY DATABASE USING ( FILE '<path_name>	allylong.dat' <size>) EXTENTSIZED 32 PREFETCHSIZE 16 BUFFERPOOL TCM_BP32K;
CREATE USER TEMPORARY TABLESPACE TALLYTEMP_USER MANAGED BY SYSTEM USING ('/db2index/<database_name>/tallytemp_user.dat') BUFFERPOOL TCM_BP16K;
```

where:

- `database_name`—Specifies the name of your TrueComp database.
- `path_name`—Specifies an integer number. Here tablespace size is represented in 16K. For example 6400 is equal to 100M (6400*16*1024=100M).
- `size`—Specifies an existing directory name on your database server. This directory is the location where tablespace data files are stored.

**Creating a Callidus Database User for DB2**

Execute the following statements to create a TrueComp database user with the necessary permissions:

```sql
CONNECT TO <TrueComp DB2 database>;
GRANT USE OF TABLESPACE tallydata TO USER <TrueComp DB User>;
GRANT USE OF TABLESPACE tallyindex TO USER <TrueComp DB User>;
GRANT USE OF TABLESPACE tallyuser TO USER <TrueComp DB User>;
GRANT USE OF TABLESPACE tallylong TO USER <TrueComp DB User>;
GRANT USE OF TABLESPACE tallytemp_user TO USER <TrueComp DB User>;
GRANT USE OF TABLESPACE USERSPACE1 TO USER <TrueComp DB User>;
GRANT BINDADD ON DATABASE TO <TrueComp DB User>;
GRANT CONNECT ON DATABASE TO <TrueComp DB User>;
GRANT CREATE_EXTERNAL_ROUTINE ON DATABASE TO <TrueComp DB User>;
GRANT CREATE_NOT_FENCED_ROUTINE ON DATABASE TO <TrueComp DB User>;
GRANT CREATETAB ON DATABASE TO <TrueComp DB User>;
GRANT SELECT ON SYSIBM.SYSDUMMY1 TO USER <TrueComp DB User>;
DISCONNECT ALL;
```
TrueComp Datamart Requirements

This section documents the configuration necessary to prepare the database for the installation of the TrueComp Datamart. For more detailed information on installing the TrueComp Datamart, see the TrueComp Datamart Installation Guide.

This section contains the following section:

- Tablespace/File Group Requirements (see page 19)
- Database User Requirements (see page 19)

Tablespace/File Group Requirements

TrueComp Datamart requires the following tablespaces/file groups:

- tallydata
- tallyindex

Create these tablespaces prior to running the TrueComp Datamart schema creation script. The script will place each table and index in the appropriate space.

Database User Requirements

The following sections describe user requirements for each database type.

Oracle

For Oracle, the following privileges are required by the database user used to access TrueComp Datamart:

- CREATE PROCEDURE (during installation only)
- CREATE TABLE
- CREATE TYPE (during installation only)
- UNLIMITED TABLESPACE
- CREATE VIEW (to run the Callidus TrueAnalytics base extension schema script)

Note: The CREATE TABLE privilege must be explicitly granted. This privilege is granted to the default CONNECT role; however, the DBA that creates the TrueComp Datamart database user must explicitly grant CREATE TABLE for the TrueCompETL utility to work.

During installation, the CREATE PROCEDURE and CREATE TYPE privileges are also required.

The TrueComp Datamart database user must have the CREATE TABLESPACE privilege, or a database administrator can create the required tablespaces as instructed in the TrueComp Datamart Installation Guide.

Following installation, only CREATE TABLE and UNLIMITED TABLESPACE are required.
MS SQL Server

For MS SQL Server, the user should own the database (be assigned the dbo role). If you want to import dump files, the user also needs to have the dbcreator role assigned to it.

Create a database (for example, tcdatamart). Create a login that is the database owner (dbo). You will create the schema and stored procedures as the dbo. If you run sp_helpusers, you should see something like the following:

<table>
<thead>
<tr>
<th>UserName</th>
<th>GroupName</th>
<th>LoginName</th>
<th>DefDBName</th>
<th>UserID</th>
</tr>
</thead>
<tbody>
<tr>
<td>dbo</td>
<td>db_owner</td>
<td>tcdatamart</td>
<td>tcdatamart</td>
<td>1</td>
</tr>
</tbody>
</table>

IBM DB2

For DB2, execute the following statements to create a TrueComp Datamart database user with the necessary permissions:

```sql
CONNECT TO <TrueComp Datamart DB2 database>;
GRANT USE OF TABLESPACE tallydata TO USER <TC Datamart DB User>;
GRANT USE OF TABLESPACE tallyindex TO USER <TC Datamart DB User>;
GRANT USE OF TABLESPACE USERSPACE1 TO USER <TC Datamart DB User>;
GRANT CONNECT ON DATABASE TO <TC Datamart DB User>;
GRANT CREATE_EXTERNAL_ROUTINE ON DATABASE TO <TC Datamart DB User>;
GRANT CREATE_NOT_FENCED_ROUTINE ON DATABASE TO <TC Datamart DB User>;
GRANT CREATETAB ON DATABASE TO <TC Datamart DB User>;
GRANT DROP_SCHEMA ON DATABASE TO <TC Datamart DB User>;
GRANT SELECT ON SYSIBM.SYSDUMMY1 TO USER <TC Datamart DB User>;
DISCONNECT ALL;
```

Web Server Requirements

Callidus recommends the use of a web server so that users do not directly connect to the application server. If you plan to use a web server, you must configure an appropriate redirector plugin.

See the documentation from your application server vendor for detailed instructions on configuring your web server and the redirector plugin.

For supported version information, see “Additional Components” on page 8.
Application Server Requirements

This section contains some required and recommended configuration options for deploying Callidus applications on a supported application server.

You must use a web server to front-end the application server in deployment topologies where Callidus Software web applications are not co-located on the application server instance that hosts Callidus Portal.

If you are deploying Callidus Applications in a secure environment that uses SSL, you must configure the web server port so that it can accept requests using the secure protocol (HTTPS). Refer to your application server and web server documentation for detailed information.

Irrespective of the web server you are using, you must configure an appropriate redirector plug-in to channel user requests from the web server to the application server.

For more information, consult the documentation for your application server.

WebLogic

Non-Callidus applications cannot share a domain with Callidus applications.

Java 2 Security can be enabled or disabled.

If you want a clustered application server environment, review WebLogic documentation on how to set up a clustered application server group.

Updating the Classpath with JDBC Driver Path

The Java Virtual Machine (JVM) uses the classpath setting in the WebLogic startup script to locate essential files that WebLogic needs to access. For Callidus applications other than TrueComp, you must update the classpath definition in the WebLogic startup script to include the path where the JDBC driver files are copied.

Note: The following procedure is unnecessary for TrueComp. The TrueComp installation creates a deployment script called startTCServer that includes the correct classpath setting.

To update the WebLogic startup script:

1. Using a text editor, open the WebLogic startup script of the domain where you installed the Callidus Software application. The default name of this file is startWebLogic.cmd (Windows), or startWebLogic.sh (UNIX).
2. Locate the classpath setting.
3. Append the absolute path to the JDBC driver files (including the file name) appropriate for your database. The expected location of the JDBC driver files is <CALLIDUS_HOME>/common/lib/jdbc, for example, C:\Callidus\common\lib\jdbc. If you are using an Oracle 10.2.0.4 driver, your classpath must contain the following entry:
   <CALLIDUS_HOME>/common/lib/jdbc/ojdbc14.jar
If you are using an Oracle 11.1.0.7 driver, your classpath must contain the following entry:

- `<CALLIDUS_HOME>/common/lib/jdbc/ojdbc5.jar`

If you are using a SQL Server database, your classpath must contain the following entry:

- `<CALLIDUS_HOME>/common/lib/jdbc/sqljdbc.jar`

If you are using a DB2 database, your classpath must contain the following entries:

- `<CALLIDUS_HOME>/common/lib/jdbc/db2jcc.jar`
- `<CALLIDUS_HOME>/common/lib/jdbc/db2jcc_license_cu.jar`

**Note:** In the previous examples, replace `<CALLIDUS_HOME>` with the absolute path of the directory where Callidus Software application files are installed (for example, C:\Callidus).

4. Save and close the WebLogic startup script.
5. Restart WebLogic Server.

The updated classpath is echoed in the WebLogic console at the beginning of the startup process. Check this setting to verify that the updated classpath has taken effect.

### WebSphere

For WebSphere application servers on Windows, you need an Administrator account to deploy Callidus Software applications.

For WebSphere application servers on UNIX systems, the user must have the WebSphere Application Server Administrator privilege.

Install Callidus Software application files from the account that will be used to run scripts to deploy Callidus Software applications to WebSphere.

Refer to WebSphere documentation for instructions on how to install the WebSphere application server.

- Select Custom Installation (instead of Typical Installation) when running the WebSphere Installer.
- If you plan use an external web server, specify the web server plugin appropriate for the web server you plan to use (Sun Java System Web Server 6).
- Java 2 Security and Global Security can be enabled or disabled. Refer to WebSphere documentation for more information.
- Non-Callidus applications cannot be installed on the same cell as Callidus applications.

### Specifying Credentials for Global Security

When WebSphere Global Security is enabled, WebSphere requires all administrative scripting clients to provide credentials. Callidus Software applications use the `wsadmin` scripting client for automated deployment, and will result in a security exception during deployment if credentials are not specified in WebSphere. To specify credentials for scripting clients in WebSphere, the `soap.client.props` file can be modified as described in the following procedure.

**Note:** Complete the following procedure before you deploy Callidus Software applications on WebSphere Application Server with Global Security enabled.
Specifying credentials in the `soap.client.props` file:

1. Navigate to:
   ```
   <websphere-install>/properties/
   ```
2. Set the following properties in the `soap.client.props` file:
   ```
   com.ibm.SOAP.securityEnabled = true
   com.ibm.SOAP.loginUserId = <admin user>
   com.ibm.SOAP.loginPassword = <admin password>
   ```

The Callidus Software application can now be deployed. After deployment, the `soap.client.props` file can be edited to remove authentication information.

**Clustering**

This section provides information on how to support the installation of Callidus Software products onto one or more servers within a cluster. Clustering is supported on WebLogic and WebSphere.

*Note:* If for any reason you need to restart the application server on which the Callidus product is deployed (for example, when making a customization), you must restart all application servers in the cluster that include the product for the changes to take effect.

**WebLogic Clustering**

This procedure is targeted to experienced WebLogic deployment engineers. You should know how to use the Configuration Wizard and Administration Console and be familiar with the various `.xml` and `.policy` files that might need editing as part of application deployment onto WebLogic.

Refer to BEA WebLogic Server documentation during this procedure. These documents are available from BEA at the following URL:

http://e-docs.bea.com/wls/docs92/index.html

*Note:* `<DOMAIN>` represents the directory of the WebLogic domain that you want to configure (that is, the domain with the Managed Servers).
To set up the WebLogic cluster:

1. Install and configure the WebLogic application server cluster. Refer to the WebLogic cluster documentation at:
   http://e-docs.bea.com/wls/docs92/cluster/index.html
2. Install the Callidus Software product, and create the EAR file.
3. Use the WebLogic Administration Console to deploy the EAR file to the cluster.

**WebSphere Clustering**

This procedure is targeted to experienced WebSphere deployment engineers. You should know how to use the Administrative Console and be familiar with other requirements for the application deployment on WebSphere.

Refer to IBM WebSphere Server documentation during this procedure. These documents are available from the IBM Publications Center at the following URL:

To set up the WebSphere cluster:

1. Install and configure the WebSphere application server cluster. Refer to the WebSphere clustering documentation at:
   

2. Install the Callidus Software product, and create the EAR file.

3. Use the WebSphere Administrative Console to deploy the EAR file to the cluster.
Connection Points Information

The following information is provided for experienced application server administrators. These options are configured automatically if you choose the scripted deployment during installation.

Note: Callidus applications require a non-XA database driver.
Note: JNDI names must be exact.

**TrueComp**

<table>
<thead>
<tr>
<th>Callidus Repository JDBC Data Source name</th>
<th>TCDatasource-&lt;application ID&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Callidus Repository JDBC Data Source JNDI name</td>
<td>TCDatasource-&lt;application ID&gt;</td>
</tr>
<tr>
<td>JMS Connection Factory name</td>
<td>CallidusTopicFactory</td>
</tr>
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<td>JMS Connection Factory JNDI name</td>
<td>CallidusTopicFactory</td>
</tr>
<tr>
<td>JMS topic name</td>
<td>CallidusTopic-&lt;application ID&gt;</td>
</tr>
<tr>
<td>JMS topic JNDI name</td>
<td>CallidusTopic-&lt;application ID&gt;</td>
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</table>

**Callidus Portal**

<table>
<thead>
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<th>CallidusPortalDB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Callidus Repository JDBC Data Source JNDI name</td>
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</tr>
<tr>
<td>Callidus Repository JDBC Connection Pool name</td>
<td>CallidusPortalDBPool</td>
</tr>
<tr>
<td>Callidus Repository JDBC Provider name</td>
<td>CallidusPortalJDBC</td>
</tr>
<tr>
<td>Callidus Repository J2C Authentication Data alias</td>
<td>CallidusPortalAuthData</td>
</tr>
<tr>
<td>TrueComp Datamart Data Source name</td>
<td>CallidusDatamartDB</td>
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## TrueInformation

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## Callidus TrueAnalytics

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</thead>
<tbody>
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</table>
## TrueProducer

<table>
<thead>
<tr>
<th>Callidus Repository JDBC Data Source name</th>
<th>DataSource-TrueProducer-&lt;application ID&gt; where &lt;application ID&gt; is the application ID specified in the deploy.properties file.</th>
</tr>
</thead>
<tbody>
<tr>
<td>JDBC Data Source JNDI name</td>
<td>jdbc/TrueProducerDB/&lt;application ID&gt; where &lt;application ID&gt; is the application ID specified in the deploy.properties file.</td>
</tr>
<tr>
<td>JMS Server name</td>
<td>CallidusJMSServer</td>
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<tr>
<td>Topic Factory name</td>
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</tr>
<tr>
<td>SMTP Mail Configuration name</td>
<td>mail/TrueProducerMS/&lt;application ID&gt; where &lt;application ID&gt; is the application ID specified in the deploy.properties file.</td>
</tr>
</tbody>
</table>
Installing Third-Party Software

The third-party software versions required by the supported platform stacks are available on the ftp server as follows:

- Informatica\Informatica-8.6\
- Business_Objects\BOE_XI_R3\
- Actuate\Actuate9_sp2\

Select the files for your specific stack based on database and system requirements. For example, for Informatica installed with a DB2 database and AIX operating system select the following file:

Informatica\Informatica-8.6\pc86_aix64.tar
Callidus Third-Party Support Policies

Database Policy

Customers can move to the latest database patch after testing it in their environment. If the customer experiences issues with the latest patch, Callidus Software reserves the right to direct the customer to the vendor or ask the customer to move back to a supported patch.

Application Server Policy

Customers can move to the latest application server patch after testing it in their environment. If the customer experiences issues with the latest patch, Callidus Software reserves the right to direct the customer to the vendor or ask the customer to move back to a supported patch.

TrueComp uses JMS for internal product messaging and only supports the JMS providers that are built into the application server. No external JMS providers are supported.

Supported Application Server Packages

Callidus Software applications are supported on WebSphere Base and WebSphere Network Deployment. Callidus Software applications are supported on WebLogic Server.

Clustered Application Server Support

TrueComp, TrueProducer, TrueInformation, Callidus TrueAnalytics, and Callidus Portal support clustering on WebLogic and WebSphere.

Client and Browser Policies

Callidus Software applications are supported on patch-level upgrades of Windows XP higher than the version listed in this document. Callidus Software applications are supported on patch-level upgrades to Internet Explorer higher than the version listed in this document.

Callidus Software Server OS Patch Policy

Callidus Software requires that any server OS patch that the customer applies to a TrueComp environment is also supported by the third-party software used by Callidus Software applications. Customers are required to check third-party vendors to ensure OS patch support. This server OS patch policy applies to the database server, application server, web server, Actuate, and Informatica servers.

The customer must also check the Sun Microsystems web site for the JVM release that is bundled with the grid/command-line utilities to ensure that the bundled JVM also supports the OS patch. The customer must apply any JVM patches. If the OS patch is supported by the Callidus third-party vendors and the JVM bundled with TrueComp utilities, then Callidus Software will support the patch configuration.
Actuate and BusinessObjects Policies

Callidus Software applications are supported on patch-level upgrades to either Actuate or BusinessObjects to the versions listed in this document. Callidus Software reviews service pack releases of Actuate or BusinessObjects upon request. We review the changes made by the vendor and determine the risk of allowing a customer to move to that service pack. Customers can move to the service pack at their own risk before Callidus Software responds. If the customer moves to a service pack release without Callidus Software’s consent and experiences issues, Callidus Software reserves the right to direct the customer to the vendor or ask the customer to move back to a supported service pack.

Callidus LDAP Policy

Callidus Software supports Sun Java System Directory Server and Microsoft Active Directory. Non-standard LDAP features like Active Directory’s Global Catalog are not supported.