Grantium 6.0.0.0

Product Installation Guide

Contents

Preface

Introduction

The *Grantium Product Installation Guide* provides a general guideline for deploying Grantium on a supported JBoss, WebLogic, or WebSphere application server with a Microsoft SQL Server or Oracle database. This guide also provides guidelines for integrating Grantium with Cognos Business Intelligence for reporting.

Intended Audience

This document is intended for system administrators — those users who have knowledge of the operating system, application server, Web server, database, and other system components. During the installation and configuration of these components, refer to the manufacturer's documentation for detailed instructions.

CHAPTER 1

Document Conventions

Chapter Contents

Cautions, Notes, and Tips

Caution	A Caution appears before procedures or steps that must be strictly observed to avoid loss of data.
Note	A Note contains important information to help you perform a procedure or step correctly.
Tip	A Tip makes recommendations about best practices or suggests alternative methods that may not be obvious. A Tip is not essential to your basic understanding of a procedure or step.

Directory Nomenclature, URL, and Path Placeholders

In this manual, you are often instructed to browse to a specific directory within the Grantium installation.

Note	Throughout this manual, paths are represented using the Microsoft Windows convention of a backslash (\) between the drive or server name, the directories, and the file name. Linux users must use the forward slash (/) in a path before the root directory, between directories, and after the last item in the path if it is a directory.

For the purpose of this manual, the following terms are used to refer to specific home or root directories:

$JBOSS_HOME – Specifies the parent directory containing the JBoss installation. For example, jboss-eap-6.0.

$WEBLOGIC_DOMAIN_HOME – Specifies the path to the home directory of the domain containing the WebLogic Server instance(s) on which Grantium resides. For example, Oracle\Middleware\user_projects\domains*[Domain_Name]*.

${WAS_INSTALL_ROOT} – Specifies the parent directory containing the WebSphere installation. For example, Program Files\ibm\WebSphere\AppServer.

$GRANTIUM_HOME – Specifies the parent directory containing the Grantium installation files. For example, Grantium_Installation_Files.

$GRANTIUM_DATA – Specifies the parent directory containing the Grantium data files. For example, AA_GrantiumData.

$MOD_CLUSTER_HOME – Specifies the parent directory containing the mod_cluster httpd binaries. For example, mod_cluster-*[Version]*-*[Platform]*-*[Bit Version]*\httpd-*[Version]*.

The path to these directories is specific to your installation. As such, the following conventions are observed to indicate placeholders for user-specific information and information that should be typed exactly as shown:

For	Convention	Example
Placeholders	Information specific to the user is indicated by square brackets with the requested information to be supplied by the user indicated in italic. Replace the square brackets and its contents with the requisite information.	On your application server, browse to *$JBOSS_HOME* **\bin** For example, if the path to the root of your JBoss application server is C:\apps\jboss-eap-6.0, then browse to C:\apps\jboss-eap-6.0\bin.
Elements that must be entered exactly as shown	Bold text specifies text that must be typed exactly as shown.	

CHAPTER 2

Prerequisites

Chapter Contents

Before you begin this installation, consult the *Grantium 6.0 Supported Platforms Guide* for the hardware and software required to install and deploy Grantium.

In addition, verify that you have installed the prerequisite software and obtained the prerequisite system configuration information.

CHAPTER 3

Setting up the Application Server

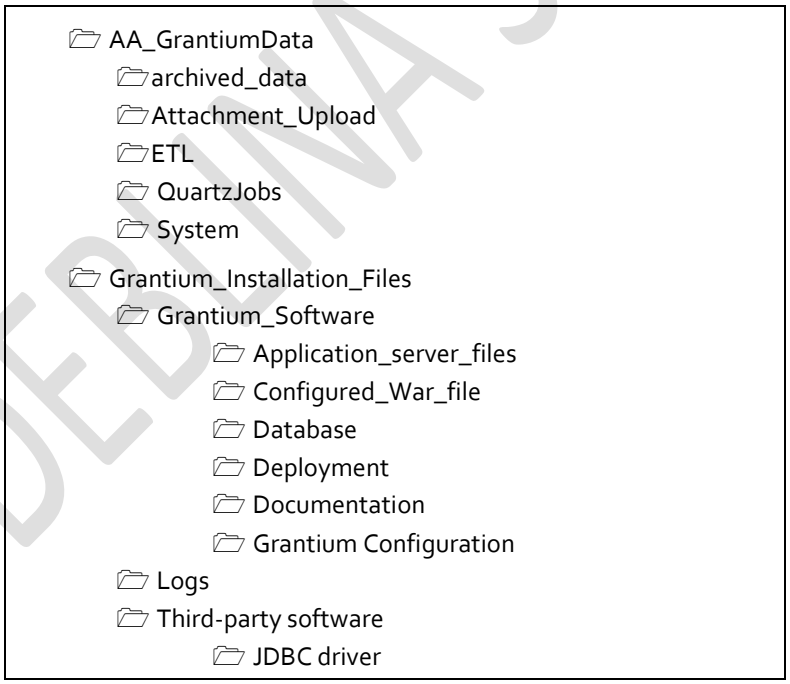
Chapter Contents

Creating the Grantium Directory Structure

For the installation, you must set up the prescribed Grantium directory structure on your application server.

To create the Grantium directory structure

1. Create the following directory structure on the data drive of your application server.



2. Set Read and Modify permissions on all the directories for the user that the application server will be using or running as.

Downloading the Grantium Software

Once you have created the directory structure, you must login to the CSDC Grantium Support site to download the Grantium software and place the downloaded files into the appropriate Grantium directories on your application server.

To download the Grantium software

1. Log on to the CSDC Grantium Support site: **http://support.grantium.com/G3_Global/Releases/Release_6.0.0.0**.
2. Download the Grantium 6.0.0.0 software package.
3. Place the files from the package into the following Grantium directories:

Grantium Directories	Grantium Download Package
🗁 Grantium_Installation_Files	
🗁 Grantium_Software_Version_*[version_number]*	
🗁 Application_server_files	Install\Deployment\WebSphere.zip Install\Quartzjobs\QuartzJobs.zip Install\ETL.ZIP\ETL.zip Install\archived_data\archived_data.zip Install\LimitedAccessFeatures.zip\Limit Access Features.properties Custom Extensions (Optional)
🗁 Configured_War_file	
🗁 Database	Install\Deployment\database.zip
🗁 Deployment	Install\Deployment\grantium.war
🗁 Documentation	Install_Documents and Specification_Documents
🗁 Grantium Configuration	Install\Data_Load.zip* **NOTE:** You many also place any files provided to you by the CSDC Inc. Client Services team into this directory, such as the files necessary to import the configuration. For example, e.Forms, lookups, users, and license key, in this directory.
🗁 Third-party software	N/A

Grantium Directories	Grantium Download Package
🗁 JDBC driver	Place one of the JDBC drivers into the JDBC driver directory. **SQL Server** Install\Deployment\JDBC.zip\jtds-1.3.0.jar or Install\Deployment\JDBC.zip\sqljdbc4.jar **Oracle** Install\Deployment\JDBC.zip\ojdbc6.jar

Extracting the QuartzJobs Files

Prior to installing Grantium, you must extract the core QuartzJobs files to the AA_GrantiumData\QuartzJobs directory for access by the Quartz Scheduler in the Grantium application.

The quartzJobs.zip directory contains two sub-directories:

CoreQuartzJobs – This directory contains all the core quartz jobs required by the Grantium application.

OptionalQuartzJobs– This directory contains custom quartz jobs that only need to be installed in special circumstances, such as using Grants.gov (US only).

To extract the QuartzJobs files

1. Navigate to the *$GRANTIUM_HOME***Grantium_Software_Version_[***version_number***]\Application_server_files** software directory.
2. Unzip the **quartzJobs.zip** file to the same directory.
3. Open the unzipped **quartzJob** directory, and then open the **CoreQuartzJobs** directory.
4. Copy the contents of the **CoreQuartzJobs** directory to the *[drive]***:\AA_GrantiumData\QuartzJobs** directory.
5. If you want to install any of the optional quartz jobs, navigate to *$GRANTIUM_HOME***Grantium_Software_Version_[***version_number***]\Application_server_files software\quartzJobs\OptionalQuartzJobs** directory.
6. Copy the required quartz jobs to the *[drive]***:\AA_GrantiumData\QuartzJobs** directory.

CHAPTER 4

Installing the Grantium Database

Chapter Contents

Extracting the Grantium Database Package

Prior to installing the Grantium database, you must unzip the Database.zip file to a Microsoft Windows machine that can connect to the database server.

To extract the Grantium Database Package

1. Copy the unchanged Grantium database.zip file from the *$GRANTIUM_HOME***Grantium_Software_Version_[***version_number***]\Database** directory to the Windows machine from which you will install the Grantium database.
2. Extract the **database.zip** file.

Installing the Grantium Database

Initially, Grantium extracts, copies, and installs the required files to the appropriate directories. After the setup is complete, the Grantium database and Web directories require further configuration to finalize the installation.

In Windows, you must run batch files from the command prompt.

Note

Prior to installing the Grantium database, ensure you have installed SQL *Plus (Oracle) or SQLCMD (SQL Server) on the Microsoft Windows machine from which you will install the Grantium database. See **Error! Reference source not found.** on page **Error! Bookmark not defined.**.

Note	Prior to installing the Grantium database, ensure you have gathered the requisite information about your database in **Error! Reference source not found.** on page **Error! Bookmark not defined.**.
Note	To install the Grantium database, you must be logged on as an Administrator or a user with equivalent privileges.

- Do one of the following:

If your database is	Do this
SQL Server	Installing the Grantium Database on SQL Server on page 9.
Oracle	Installing the Grantium Database on Oracle on page 10.

Installing the Grantium Database on SQL Server

Note	Prior to installing the Grantium database, you must have created a blank database in SQL Server where the database name and the schema name are the same name.

To install the Grantium Database on SQL Server

1. Click **Start,** and then click **Run,** and then type **cmd,** and click **OK** to open Command Prompt.
2. At the command prompt, specify the drive and path to which you unzipped the **database.zip.**
3. At the command prompt, change the directory to specify the path to **database\install\sqlserver** and press ENTER.

Note	You must specify at least one valid locale: en_CA, fr_CA, and/ or en_US. Multiple values must be separated by a colon. For example, en_CA:fr_CA. The first entry is used as the default locale.

4. At the command prompt, type **G3_6_0_SQLServer_Setup.bat** *[Server Name OR Server Name\Instance Name] [SA Password] [Grantium Owner Name] [Grantium Owner Password] [Grantium User Name] [Grantium User Password] [Database Name] [Locale(s)]*.

   For example,

   G3_6_0_SQLServer_Setup.bat Hostname password123 grantium ownerpassword grantium_user userpassword grantium en_CA

5. Since this is an initial install of the database, at the prompt to continue, type **y** and press ENTER.

   The database logs are stored at **database\install\sqlserver\logsG360_0**.

Installing the Grantium Database on Oracle

Note	If you plan to store Grantium in its own tablespace, create the custom tablespace for the Oracle Grantium DB prior to installing the Grantium database.

To install the Grantium Database on Oracle

1. Click **Start**, and then click **Run**, and then type **cmd**, and click **OK** to open Command Prompt.
2. At the command prompt, specify the drive to which you unzipped the **database.zip.**
3. At the command prompt, change the directory to specify the path to **database\install\oracle** and press ENTER.

Note	You must specify at least one valid locale: en_CA, fr_CA, and/ or en_US. Multiple values must be separated by a colon. For example, en_CA:fr_CA. The first entry is used as the default locale.

4. At the command prompt, type **G3_6_0_Oracle_Setup.bat** *[Oracle TNS Name] [SYSTEM Password] [Grantium Owner Schema Name] [Grantium Owner Password] [Grantium User Schema Name] [Grantium User Password] [Tablespace Name] [Locale(s)]*.

   For example,

   G3_6_0_Oracle_Setup.bat G3Prod sys_pass Grantium ownerpassword Grantium_User userpassword GRANTIUM_DATA en_CA

5. Since this is an initial install of the database, at the prompt to continue, type **y** and press ENTER.

   The database logs are stored at **database\install\oracle\logsG3\logsG360_0**.

CHAPTER 5

Running the Grantium Data Mart ETL Scripts

Chapter Contents

Running the Grantium Data Mart ETL Scripts

As of version 2.7, Grantium supports an integrated mechanism to extract data from Grantium and transform and load that data into a standard Data Mart.

Grantium uses ETL transformations to transfer standard data to a set of predefined Data Mart tables. Grantium processes standard transformation files that define the source of the data, the transformations on that data, and the destination for the transformed data in the Data Mart. A scheduled job within Grantium executes the transformations. The scheduled job can be configured to run at any interval.

The ETL setup scripts create a new database user and schema as specified by "*[Grantium Datamart User Schema Name]*"

Note	Prior to running the Grantium Data Mart ETL scripts, ensure you have gathered the requisite information about your Grantium Data Mart database in **Error! Reference source not found.** on page **Error! Bookmark not defined.**.
Note	To install the Grantium Data Mart database, you must be logged on as an Administrator or a user with equivalent privileges.

To run the Grantium Data Mart ETL scripts

- Do one of the following:

If your database is	Do this
SQL Server	Running the ETL Scripts for SQL Server on page 12.
Oracle	Running the ETL Scripts for Oracle on page 13.

Running the ETL Scripts for SQL Server

The Data Mart database is created in the file associated to the PRIMARY filegroup of the SQL Server database. This container should have enough space to hold all tables and indexes of the Data Mart database.

The Data Mart database size can vary greatly depending on the number of selected e.Form fields and the number of submissions associated to these fields. As a result, the initial file size can vary between 25% and 50% of the space used by the Grantium database.

CSDC Systems Inc. recommends allocating the same amount of space to the Grantium Data Mart database as the Grantium database. Going forward, you must closely monitor the file size whenever the field mappings change and adjust the size accordingly.

In the case when the file is not large enough to accommodate the Data Mart refresh, SQL Server will extend the file by the amount specified in the Autogrowth parameter. This may cause a degradation of the Refresh performance when the ETL scripts are first run. In this case, limit the number of extends by setting the AutoGrowth to approximately 100 MB.

Note

Prior to running the Grantium Data Mart ETL scripts, you must have created a blank database in SQL Server.

To run the ETL scripts for SQL Server

1. Click **Start**, and then click **Run**, and then type **cmd**, and click **OK** to open Command Prompt.
2. At the command prompt, specify the drive to which you unzipped the **database.zip**.
3. At the command prompt, change the directory to specify the path to **database\install\sqlserver** and press ENTER.
4. At the command prompt, type **G3_6_0_ETL_SQLServer_Setup.bat** *[Server Name OR Server Name\Instance Name] [SA Password] [Grantium Data Mart UserSchema Name] [Grantium Data Mart User Password] [Grantium Data Mart Database Name]*.

For example, G3_6_0_ETL_SQLServer_Setup.bat hostname password123 grantium_dm password123 grantium_dm

5. Since this is an initial install of the database, at the prompt to continue, type **y** and press ENTER.

   The database logs are stored at **database\install\sqlserver\logsG360etl**.

Running the ETL Scripts for Oracle

The space allocated to the tablespace where you create the Data Mart database user must be large enough to hold all tables and indexes. The Data Mart database size can vary greatly depending on the number of selected e.Form fields and the number of submissions associated to these fields. As a result, the initial tablespace size can vary between 25% and 50% of the space used by the Grantium database. To address this, CSDC Systems Inc. recommends using a different tablespace than the tablespace allocated to Grantium.

In addition, CSDC Systems Inc. recommends allocating the same amount of space to the Grantium Data Mart database as the Grantium database. Going forward, you must closely monitor the tablespace size whenever the field mappings change and adjust the size accordingly.

In the case when the tablespace is not large enough to accommodate the Data Mart refresh, Oracle will extend the tablespace if the auto extend feature is turned on. This may cause a degradation of the Refresh performance when the ETL scripts are first run. In this case, limit the number of extends by setting the extend to approximately 100 MB. CSDC Systems Inc. recommends creating one tablespace that will be made up of one or a few data files.

Note

If you plan to store the Grantium Data Mart in its own tablespace, create the custom tablespace prior to installing the Grantium Data Mart database.

To run the ETL scripts for Oracle

1. Click **Start**, and then click **Run**, and then type **cmd**, and click **OK** to open Command Prompt.
2. At the command prompt, specify the drive to which you unzipped the **database.zip**.
3. At the command prompt, change the directory to specify the path to **database\install\oracle** and press ENTER.
4. At the command prompt, type **G3_6_0_ETL_OracleServer_Setup.bat** *[Oracle TNS Name] [SYSTEM Password] [Grantium Data Mart Owner Schema Name] [Grantium Data Mart Owner Password] [Grantium Data Mart Tablespace Name]*.

   For example, G3_6_0_ETL_OracleServer_Setup.bat orcl01 password grantium_dm password datamart
5. Since this is an initial install of the database, at the prompt to continue, type **y** and press ENTER.

   The database logs are stored at **database\install\oracle\logsG360etl**.

CHAPTER 6

Configuring the Application Server

Chapter Contents

In preparation for deploying Grantium, you must configure your application server. The configuration procedures are specific to each application server.

To configure the application server

- Do one of the following:

If your application server is	Do this
JBoss	See *Configuring the JBoss Application Server* on page 14 .
WebLogic	See **Error! Reference source not found.** on page **Error! Bookmark not defined.** .
WebSphere	See **Error! Reference source not found.** on page **Error! Bookmark not defined.**.

Configuring the JBoss Application Server

On your JBoss application server, you must configure the following in preparation for deploying Grantium: configure your JVM settings; deploy a JDBC driver; configure your Grantium and Grantium Data Mart data sources; and configure the mail service.

Note

If you are deploying Grantium in a clustered topology, consult Appendix A Clustering and Grantium on page **Error! Bookmark not defined.**.**Error! Reference source not found.Error! Reference source not found.Error! Reference source not found.Error! Reference source not found.**

Configuring the JBoss JVM Options Settings

On your JBoss application server, you must configure the following Java virtual machine (JVM) settings:

- Maximum heap memory and permanent generation space
- JVM operating mode
- Unique name of the Grantium instance (if you have two or more Grantium instances running on the same network)
- Default Java file encoding
- JGroup message parameters (in the rare case that you must change the default JGroups multicast parameters because the default values do not work on your network)

Note	JVM options have a large impact on performance. Increase the memory allocation if the suggested JVM memory options are not sufficient for your deployment needs. **Error! Reference source not found.Error! Reference source not found.Error! Reference source not found.Error! Reference source not found.**

To configure the JBoss JVM Options settings

1. On your application server, browse to *$JBOSS_HOME***bin**.

Note	For the purpose of this documentation, JBoss runs in standalone mode. Therefore, all JBoss runtime configuration is added to the *standalone.conf.bat* file. If you are running JBoss in domain mode, you must add the runtime configuration to the *domain.conf.bat* file.

2. In an advanced text editor, open the **standalone.conf.bat** file.
3. Update the JVM memory allocation pool parameters to set the maximum heap memory (-Xmx) to at least 4GB as follows:

   set "JAVA_OPTS=-Xms2G –Xmx4G -XX:MaxPermSize=256M"

4. On the line above **:Java_OPTS_SET**, add the following configuration to set the JVM to run in server mode:

   set "JAVA_OPTS=%JAVA_OPTS% -Server

5. If you have two or more Grantium instances running on the same network, append after the *-Server* the following configuration to set the unique name of the Grantium instance

   -Dg3.channel.suffix=*[unique_name]*

6. Append after the *-Dg3.channel.suffix=[unique_name]* the following parameter to set the default Java file encoding:

   -Dfile.encoding=UTF-8

For example:

set "JAVA_OPTS=%JAVA_OPTS% -Server -Dg3.channel.suffix=*[unique_name]* -Dfile.encoding=UTF-8

Note	In rare cases, you may need to change the default JGroups multicast parameters because the default values do not work on your network. Consult your network administrator to assign a set of unique multicast parameters to the Grantium installation.

7. If you need to modify the default JGroups multicast parameters, append after the *-Dg3.channel.suffix=[unique_name]* the following parameters to ensure that the JGroups messaging functions properly:

   -Djgroups.udp.mcast_addr=*[multicast address]* **-Djgroups.udp.mcast_port=***[multicast port]* **-Djgroups.bind_addr=***[local machine IP address of the NIC]*

   For example, the complete set of parameter from steps 4 to 7 may look as follows:

   set "JAVA_OPTS=%JAVA_OPTS% -Server -Dg3.channel.suffix=*Instance1* -Djgroups.udp.mcast_addr=*225.1.2.3* -Djgroups.udp.mcast_port=*30240* -Djgroups.bind_addr=*192.168.1.48* -Dfile.encoding=UTF-8

8. Save your changes.
9. If you're deploying Grantium in a multi-node deployment, repeat the above procedure for each node in your instance.

Deploying the JDBC Driver

Depending on your system configuration, you must deploy either the Oracle or SQL Server JDBC 4-compliant driver or the SQL Server JDBC 3-compliant jtds driver from the JBoss EAP Admin Console.

If your database is SQL Server and you want to use the jtds driver, you must install the driver for the version of Java being used to run JBoss EAP. For Java 7, install the *jtds-1.3.0.jar*.

If you want to deploy the JDBC-4 compliant driver, you must install the driver for the database you are using. For SQL Server, install the *sqljdbc4.jar*, and for Oracle, install the *ojdbc6.jar*.

Note	By default, JBoss uses the Java version referenced by the *JAVA_HOME* environment variable. The *JAVA_HOME* environment variable should reference a Java 7 JRE location. The *standalone.conf.bat* file can be modified to set the value of the *JAVA_HOME* environment variable to specify the path to the Java directory to use. The *standalone.conf.bat* file is located at *$JBOSS_HOME*\bin.

To deploy the JDBC driver

1. Start your JBoss application server.
2. Log on to the **JBoss EAP Admin Console**.

3. Click **Runtime**.
4. In the left navigation pane, expand the **Server** node, and then click **Manage Deployments**.
5. Click **Add Content**.
6. Do one of the following:

If you want to install	Do this
jtds driver for the JAVA 7 runtime (Recommended) (SQL Server only)	Browse to *$GRANTIUM_HOME***Grantium_Installation_Files\Third-party software\JDBC drivers**, and click the **jtds-1.3.0.jar** file.
JDBC4-compliant driver for SQL Server	Browse to *$GRANTIUM_HOME***Grantium_Installation_Files\Third-party software\JDBC drivers**, and click the **sqljdbc4.jar** file.
JDBC-4 compliant driver for Oracle	Browse to *$GRANTIUM_HOME***Grantium_Installation_Files\Third-party software\JDBC drivers**, and click the **ojdbc6.jar** file.

7. Click **Next**, and then click **Save**.
8. Click **Enable**, and then click **Confirm**.

Configuring the Data Sources

In the JBoss EAP Admin console, you must configure the data source definitions for both your Grantium database and Grantium Data Mart database.

To configure the data sources

1. If necessary, log on to the **JBoss EAP Admin Console**.
2. Click **Profile**.
3. In the left navigation pane, expand the **Connector** node, and then click **Datasources**.
4. Click **Add**.
5. Do one of the following:

To configure the	Do this
Grantium data source	In the **Name** box, type **grantiumDB**. In the **JNDI Name** box, type **java:/jdbc/grantiumDB**.
Grantium Data Mart data source	In the **Name** box, type **grantiumDatamartDB**. In the **JNDI Name** box, type **java:/jdbc/grantiumDatamartDB**.

6. Click **Next**.

7. From the registered JDBC drivers list, click the JDBC driver you deployed in the section *Deploying the JDBC Driver* on page 16, and then click **Next**.
8. In the **Connection URL** box, type the URL to connect to your Grantium database:

If you have a	Do this
SQL Server database with the jtds driver (jtds-1.3.0.jar)	Type **jdbc:jtds:sqlserver://***<server>[:<port>][/<database>][;Instance>=<instance_name>]*.
SQL Server database with the Microsoft driver (sqljdbc4.jar)	Type **jdbc:sqlserver://***[serverName[\instanceName][:portNumber]][;databaseName=value][;property=value]]*.
Oracle database (ojdbc6.jar)	Type **jdbc:oracle:thin:**@*<server>*:*<port>*:*<SID>*.

9. In the **Username** box, type the user name with which to authenticate to connect to the database.
10. In the **Password** box, type the password with which to authenticate to connect to the database.
11. Click **Done**.
12. From the **Available Datasources** list, click the data source you just created.
13. On the **Attributes** tab, click **Edit**, set the values for the settings below, and then click **Save**:

Setting Name	Value
Share Prepared Statements	Checked (true)
Statement Cache Size	100

14. On the **Connection** tab, click **Edit**, and set the values for the settings below, and then click **Save**:

Setting Name	Value
Transaction Isolation Level	TRANSACTIONS_READ_COMMITTED
Use JTA	Checked (true)
Use CCM	Checked (true)

Note	Connection pool settings have a large impact on performance. If you have a high number of concurrent users and the suggested settings are not sufficient for your deployment needs, increase the size of connection pool. **Error! Reference source not found.Error! Reference source not found.Error! Reference source not found.Error! Reference source not found.**

15. On the **Pool** tab, click **Edit**, set the values for the settings below, and then click **Save**:

Setting Name	Value
Min Pool Size	50
Max Pool Size	99
Prefill enabled	Checked (true)

16. From the **Available Datasources** list, click the data source you just configured, and then click **Enable**, and then click **Confirm**.
17. Repeat steps 4 to 16 to configure the Grantium Data Mart data source.

Configuring the Mail Service

In the JBoss EAP Admin console, you must configure the mail service between the application server and the mail server using the default mail session with the JNDI name of java:jboss/mail/Default.

To configure Email

1. If necessary, log on to the JBoss EAP Admin Console.
2. Click **Profile**.
3. In the left navigation pane, expand the **General Configuration** node, and then click **Socket Binding**.
4. From the **Socket Binding Groups** list, click **standard-sockets**, and then click **View**.
5. Click the **Outbound Remote** menu.
6. From the **Remote Socket Bindings** list, click **mail-smtp**, and then click **Edit**.
7. In the **Host** box, type the host name or IP address of the mail server to which to connect.
8. In the **Port** box, type the port number of the mail server to which to connect. For example, port 23 for the default insecure SMTP port or port 443 for the default secure SMTP port.
9. Click **Save**.
10. Do one of the following:

If	

If	
Authentication is required to connect to the mail server or the port specified is for a secure SSL connection	Go to step 11.
The connection is anonymous and the port specified is not secure	Go to step 16.

11. In the left navigation pane, expand the **Connector** node, and then click **Mail**.
12. From the **Available Mail Sessions** list, click **java:jboss/mail/Default,** and then click **View**.
13. Click **Edit**.
14. Do any of the following:

If	
Authentication is required to connect to the mail server	In the **Username** box, type the user name with which to authenticate to connect to the mail server. In the **Password** box, type the password with which to authenticate to connect to the mail server.
The port specified is for a secure SSL connection	Click to select the **Use SSL?** check box.

15. Click **Save**.
16. Stop and restart your JBoss application server for your changes to take effect.

CHAPTER 7

Modifying the grantium.war

Chapter Contents

Copying the Grantium WAR file

Before you can configure the Grantium WAR file, you must copy the unchanged Grantium WAR file to the Configured_War_file directory.

To copy the Grantium WAR file

- Copy the unchanged Grantium WAR file from the *$GRANTIUM_HOME***Grantium_Software_Version_***[***version_number***]****Deployment** directory to the *$GRANTIUM_HOME***Grantium_Software_Version_***[***version_number***]****Configured_War_file** directory.

Modifying hibernate.properties (SQL Server 2005 Only)

If you are running a Microsoft SQL Server 2005 RDBMS, you must configure hibernate to use Snapshot Isolation to resolve the known deadlock issue on SQL Server 2005.

To modify the hibernate.properties file

1. If necessary, browse to *$GRANTIUM_HOME***Grantium_Software_Version_***[***version_number***]****Configured_War_file.**
2. Using 7-Zip, open the **grantium.war** file.
3. Browse to the **WEB-INF\classes** directory, and using your advanced text editor, open the **hibernate.properties** file.
4. Add the following line to the file:

   Hibernate.connection.isolation=4096
5. Save and close the file.
6. When 7-Zip asks if you want to update the archive, click **OK**.

7. Reopen the **hibernate.properties** file to confirm your changes

Excluding Sensitive Data from Diagnostics (Optional))

In Grantium, the Diagnostics feature displays statistics about the environment in which Grantium runs, including system-level information about the environment and hardware used to run Grantium; application-level information about the software components used by Grantium and the application runtime; Grantium-specific information about the entities within Grantium; and Grantium usage/activity data. For more information about the statistics collected by Grantium, consult the *Grantium Administrator Guide.*

By customizing the Grantium WAR file, you can exclude sensitive data from being reported on the *Diagnostics* page and exported to HTML and XML files. To do so, you must create a text file (.txt) called *diagnostics_exclusions.properties*; list the diagnostic string key(s) that correspond to the diagnostic information to be excluded in *diagnostics_exclusions.properties* file and set the value of each key to equals false (for example, Java_VMName=false); and then place the *diagnostics_exclusions.properties* file in the *WEB-INF\classes* directory of the configured *grantium.war* file.

Note	You cannot exclude any activity counter data displayed on the *Activity* tab of the *Diagnostics* page.
Tip	Post Installation, you can look up exclusion keys in either '*Appendix B*' of the *Grantium Administrator Guide* or the *Diagnostics.xml* export file included in the Download Support Package. The exclusion key corresponds to the lowest level XML tag that holds the data. For example, CPU Architecture has the XML tag <CPUArchitecture> and can be excluded by adding CPUArchitecture=false to the diagnostics_exclusions.properties file.

To exclude sensitive data from Diagnostics

1. Using a text editor, create a file called *diagnostics_exclusions.properties*.
2. In "*Appendix B*" of the *Grantium Administrator Guide*, lookup the key for the diagnostic information you want to exclude from being reported by Grantium.
3. In your *diagnostics_exclusions.properties* file, add *[String Key Name]*=**false**. For example, Java_HomeDir=false.
4. If you want to exclude additional pieces of diagnostic information, repeat step 3 on a new line for each additional piece of diagnostic information you want to exclude.
5. Save your changes.
6. If necessary, browse to *$GRANTIUM_HOME***Grantium_Software_Version_***[***version_number***]\\Configured_War_file.**
7. Using 7-Zip, open the **grantium.war** file.

8. Browse to the **WEB-INF\classes** directory.
9. Drag a copy of your *diagnostics_exclusions.properties* file to the **WEB-INF\classes** directory.
10. Exit 7-Zip.
11. Reopen the **grantium.war** file to confirm your changes.

Deploying the Grantium WAR file in JBoss

From the JBoss EAP Admin console, you can deploy the Grantium WAR file.


Note

Prior to deployment, review the JBoss application server log for errors that would prevent a successful deployment of the Grantium WAR file.

For the purpose of this documentation, JBoss runs in standalone mode. Therefore, the JBoss log is found at *$JBOSS_HOME***standalone\log**. If you are running JBoss in domain mode, you must add review the log at *$JBOSS_HOME***domain\log**.

To deploy the Grantium WAR file (JBoss)

1. Start your JBoss application server.
2. Log on to the **JBoss EAP Admin Console**.
3. Click **Runtime**.
4. In the left navigation pane, expand the **Server** node, and then click **Manage Deployments**.
5. Click **Add Content**.
6. Browse to *$GRANTIUM_HOME***Grantium_Installation_Files\Configured_WAR_file**, and click the **grantium.war** file.
7. Click **Next**, and then click **Save**.
8. Click **Enable**, and then click **Confirm**.

   Upon deploying the Grantium WAR file, the grantium.log file is created in *$JBOSS_HOME***bin**.

Deploying the Grantium WAR file in WebSphere


Note

Prior to starting this procedure, ensure that the *DefaultWorkManager* (JNDI Name wm/default) and the *DefaultTimerManager* (JNDI Name tm/default) appear in the *Work managers* and *Timer managers* lists, respectively.

In the *WebSphere Integrated Solutions Console*, expand the *Resources* and *Asynchronous beans* node, and then click *Work managers* or *Timer managers*.

To deploy the Grantium WAR file in WebSphere

1. Log on to the **WebSphere Integrated Solutions Console**.

2. In the left pane, expand the **Applications** and **Application Types** nodes.
3. Click **WebSphere enterprise applications**.
4. Click **Install**.
12. Click **Browse, and then** browse to *$GRANTIUM_HOME***Grantium_Software_Version_***[***version_number***]\Configured_War_file,** and then click **grantium.war**.
13. Click **Next**.
14. If necessary, click **Fast Path**, and then click **Next**.
15. Click to clear the **Create MBeans for resources** check box, and then click **Next**.
16. Click **Next** again.
17. For each resource reference, click **Browse,** map the resource reference to the resource JNDI name of the same name, and then click **Apply**:

Resource Reference	Resource JNDI Name
tm/default	tm/default
wm/default	wm/default
mail/MailSession	mail/MailSession
jdbc/grantiumDatamartDB	jdbc/grantiumDatamartDB
jdbc/grantiumDB	jdbc/grantiumDB

18. Click **Next**, and then click **Next** again.
19. In the **Context Root** box, type **/grantium,** and then click **Next**.
20. Select the **metadata-complete attribute** check box, and then click **Next**.
21. Click **Finish**.
22. When you see **Application grantium_war installed successfully**, **save** to the master configuration**.**
23. From the **Enterprise Applications** list, click **grantium_war**.
24. Under the **Web Module Properties** group, click **JSP and JSF options**.
25. From the **JSF Implementation** list, click **SunRI1.2,** and then click **OK**.
26. Under the **References** group, click **Shared library references**.
27. Under the **Application** section, select **grantium_war**, and then click **Reference shared libraries**.
28. From the **Available** list, click **MyFaces11**, and move the selection to the **Selected** list.
29. Click **OK,** and then **Save** to the master configuration.
30. Navigate back to the **Enterprise Applications** list.
31. Select **Grantium_war**, and the click **Start**.


Note

The grantium.log is located at *${WAS_INSTALL_ROOT}***\profiles***[WAS_Server_Name]*.

WebSphere logs are located at *${WAS_INSTALL_ROOT}***\profiles***[WAS_Server_Name]***\logs***[WAS_Server_Name]*.

CHAPTER 9

Verifying the Installation

Chapter Contents

Log on to Grantium

After you've deployed the Grantium WAR file, you can open and review the grantium.log and server.log for errors and discrepancies on your application server.

Review each log file. Noting the timestamp of each line logged, look for any discrepancies. For example, the code and the database do not match; cannot find quartzJobs directory; or cannot establish a connection to the database.

Once you have verified the log file, open Grantium and verify that you can log on to the Grantium Program Office using the default Administrator credentials.

To log on to Grantium

1. On your application server, open a supported Web browser.
2. Do one of the following:

If your application server is	Do this
JBoss	Browse to **http://localhost:**<*port*>**/grantium/programOffice.jsf**. For example, if you used the default ports, browse to http://localhost:8080/grantium/programOffice.jsf.
WebLogic	Browse to **http://localhost:** <*port*>**/grantium/programOffice.jsf** For example, if you used the default ports, browse to http://localhost:7001/grantium/programOffice.jsf.
WebSphere	Browse to **http://localhost:** <*port*>**/grantium/programOffice.jsf** For example, if you used the default ports, browse to http://localhost:9080/grantium/programOffice.jsf

A login page displays.

3. Log on to Grantium Program Office using the following credentials:

   User name: admin

   Password: password

4. Click **Login**.

   If successful, you see a menu on the left side of the page. You are ready to configure Grantium.

Configuring System Settings

Now that you've deployed Grantium, you must update some system settings in Grantium with the path to directories in your Grantium installation. You must also set the email address to which Grantium exception errors are sent when they occur in Grantium.

To configure the system settings

1. If necessary, browse to your Grantium Program Office site, and log on to Grantium Program Office using the following credentials:

   User name: admin

   Password: password

   Tip

   For security reasons and as a best practice, change the password after initial login.

   In the left navigation pane, click **Change Password**.

2. In the left pane, go to **System Management**>**Configuration**>**System Settings**.
3. In the **ADMINISTRATOR_EMAIL** box, specify the email address to which exception errors are sent when they occur in Grantium. This is same email address as you specified when you configured the mail service or sessions.
4. If you are licensed for Audit Reporting, in the **AUDIT_REPORTING_EXPORT_DIRECTORY** box, specify the directory in which to save your exported audit history data. For example, C:\AA_GrantiumData\audit_reporting_data\export.
5. In the **ETL_FILE_PATH** box, specify the path to the **ETL** directory. For example, C:\AA_GrantiumData\ETL.
1. In the **UPLOAD_DOCUMENTATION_PATH** box, specify the absolute path to the folder in which you want to store your *Limited Access Features.properties* file and the files uploaded from both *Grant Programs Administration* > *Program Planning* > *Documents* and the *Attachments* formlet in e.Forms.

   By default, this is the *$GRANTIUM_DATA\Attachment_Upload* folder. For example, C:\AA_GrantiumData\Attachment_Upload.


Note

If you chose to the store your *Limited Access Features.properties* file and uploaded files in another directory, you must set the value of the *UPLOAD_DOCUMENTATION_PATH* system setting to the absolute path of the directory to which you copied your Limited Access Features.properties file in **Error! Reference source not found.** on page **Error! Bookmark not defined.**.

6. Click **Save**.