

iConcur

AXIOM 2012

AXIOM SERVER GUIDE

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Introduction

Axiom is an enterprise Requirements Management platform that gives teams the ability to collaboratively develop and manage requirements, use cases and other common analysis and design artifacts.

This document describes how to install and configure the Axiom 2012 Server for the Linux and Windows operating systems.

Pre-Installation Requirements

Hardware

- 512 MB RAM
- 1 GHz CPU
- 1 GB hard disk space

Operating Systems

- Windows XP, 2000, 2003, Vista, and 7 (32-bit)
- Windows XP, 2000, 2003, Vista, and 7 (64-bit)
- Linux 32-bit
- Linux 64-bit



Note: Because of the complexity of the installation process, the Axiom server installer requires a Linux desktop environment such as KDE or GNOME be installed.

Installation Procedure

This section of the Getting Started Guide explains how to install the Axiom server on Linux and Microsoft Windows.

Downloading the Axiom Server Installer

1. From a browser, navigate to <http://www.iconcur-software.com/download.html>.
2. Click the appropriate download link for your operating system.
3. If necessary, unzip the contents of the downloaded file.

Running the Axiom Server Installer

1. Launch the Axiom Server installer executable:
 - On windows, double-click on Axiom_Server_2012.exe
 - On Linux run:

```
sudo bash ./Axiom_Server_2012.sh
```

The **Welcome** screen appears.

2. On the **Welcome** screen, select the **Next >** button.

The **License Agreement** page is displayed.

3. Read the license agreement and select the **I accept the agreement** radio button.
4. Select the **Next >** button.

The **Select Destination Directory** page appears.

5. Click **Next >** on the **Select Destination Directory** page, to install the Axiom Server in the default folder.

The **Database Selection** page appears.

6. Choose whether you want to use Axiom's embedded database or an external database.

Select the **Embedded Database** option if you are evaluating Axiom; please note however that this database will not provide the scalability and stability required by most organizations.



Warning: While the embedded database is good for the purpose of evaluating Axiom, it is not suitable for production use. It is strongly recommended that you use an external database.

Select the **Standard Database Connection** to configure a connection to one of the following database providers:

- Oracle

- MySQL
- Microsoft SQL Server
- PostgreSQL

For the rest of this document we will assume that you have selected the **Database Connection** option.

7. Select the **Next >** button.

The **Database Connection Settings** page appears.

8. On the **Database Connection Settings** page, select a database type. When a database type is selected, the default values for the database will be displayed in the fields below.
9. Enter the name of your database in the **Database** field. You may need to create a database instance if one does not already exist.
10. Enter the appropriate values in the **host**, **port**, **user name** and **password** fields.
11. Select the **Test Connection** button to verify that the database connection parameters that you entered are correct.
12. Select the **Next >** button.

The **User Configuration** screen is displayed.

13. Choose how you want to maintain the Axiom's user base.

To maintain users in the Axiom database, select **Maintain users in the Axiom server** (the default option). This is a good option to select if you do not have an LDAP enabled directory server or you are evaluating Axiom.

To connect Axiom with an external LDAP-enabled directory server such as Active Directory or OpenLDAP, select the **Connect Axiom with your directory server** radio button.

For the rest of this document, we will assume that you have selected the **Connect Axiom with your directory server** option; however, please feel to select whatever option you feel is appropriate.

14. Select the **Next >** button.

The **Directory Server Connection Settings** page is displayed.

15. Select the appropriate directory server type from the **Server Type** drop down. Once selected, the remaining fields will be populated with sample connection data.
16. Review and, if necessary, change the remaining fields.
17. Select the **Test Connection** button to validate the connection to the remote directory server.
18. Select the **Next >** button.

The **User Mapping** page is displayed.

19. The **User Mapping** page allows you to define how Axiom loads user information from your directory server. The default values displayed here depend on the directory server type selected in the previous page (**Directory Server Connection Settings**). At this point, you may want to check with your directory server's administrator to make sure that these values are correct.
20. Once you feel that you have entered the correct values, click the **Test Settings** button. When this button is pressed a random user is fetched from your directory server and displayed. If necessary, you can now make the appropriate adjustments to your user mapping.
21. Press the **Next >** button.

The **Group Mapping** page is displayed.

22. The **Group Mapping** page is similar to the **User Mapping** page. This page lets you define how Axiom loads group information from your directory server.
23. Verify that the group mapping settings are correct and press the **Next >** button.

The **Administrator Accounts** page is displayed.

24. The **Administrator Accounts** page allows you to specify which of your directory server users will be considered Axiom system administrators.

Enter the unique ID of a user that will be an administrator and select the **Add Admin** button. Once the **Add Admin** button is pressed, the installer will attempt to fetch the specified user from your directory server. If the user ID is valid then the user will be added to the list below.



Warning: You must select at least one Axiom system administrator before continuing.

25. Select the **Next >** button.

The **Install Sample Project** page is displayed.

26. Check the **Install the "Agiveo Financial" sample project** checkbox to initialize your Axiom Server with a sample project.
27. Select the **Next >** button.

The installation process begins.

Starting the Axiom Server

Windows

Once installed, the Axiom server will be configured to run as a Windows service and should be started automatically. You can verify that the server service is running by taking the following steps:

1. **Start.**
2. Click **Control Panel**.
3. Double-click **Administrative Tools**.
4. Double-click **Services**.
5. Locate **Axiom Server** in the **Service** window.
6. Verify that the **Axiom Server** service has a status of **“Started”**.

Linux

From the command shell:

1. Change to the server's bin directory (e.g. /opt/Axiom/bin).
2. `sudo ./run.sh`

To validate that the server has successfully started, follow the instructions in the [Validating Server Startup](#) section of this guide.

Validating Server Startup

Windows

To verify that the server has started on Windows, check the status of the Axiom Server service:

1. **Start.**
2. Click **Control Panel.**
3. Double-click **Administrative Tools.**
4. Double-click **Services.**
5. Locate **Axiom Server** in the **Service** window.
6. Verify that the **Axiom Server** service has a status of **“Started”**.

You can also, run the twiddle.bat batch file in the server’s bin folder:

1. Open a command prompt.
2. CD to the bin folder of your Axiom server. For example:

```
cd "\Program Files (x86)\Axiom Server\bin"
```

3. Run twiddle.bat (just replace “host” with your server’s host name):

```
twiddle.bat --server=host:11099 get jboss.system:type=ServerInfo"
```

If startup is successful then you should see output similar to:

```
ActiveThreadCount=51
AvailableProcessors=2
OSArch=x86
MaxMemory=517013504
HostAddress=10.168.1.104
JavaVersion=1.6.0_01
OSVersion=6.1
JavaVendor=Sun Microsystems Inc.
TotalMemory=171048960
ActiveThreadGroupCount=8
OSName=Windows Vista
FreeMemory=100700504
HostName=ATL0LT136
JavaVMVersion=1.6.0_01-b06
JavaVMVendor=Sun Microsystems Inc.
JavaVMName=Java HotSpot(TM) Server VM
```

Linux

1. From the command shell, CD to the server's bin directory (e.g. /opt/Axiom/bin).
2. Run `twiddle.sh` with the following parameters (replacing "host" with the name of your computer):

```
./twiddle.sh --server=host:11099 get "jboss.system:type=ServerInfo"
```

If startup is successful then you should see output similar to:

```
ActiveThreadCount=50
AvailableProcessors=4
OSArch=i386
MaxMemory=517013504
HostAddress=127.0.0.1
JavaVersion=1.6.0_11
OSVersion=2.6.38-8-generic-pae
JavaVendor=Sun Microsystems Inc.
TotalMemory=170459136
ActiveThreadGroupCount=7
OSName=Linux
FreeMemory=103800272
HostName=office
JavaVMVersion=11.0-b16
JavaVMVendor=Sun Microsystems Inc.
JavaVMName=Java HotSpot(TM) Server VM
```

Stopping the Axiom Server

Windows

On windows, the preferred way to shutdown the server is to stop the Axiom Server service:

1. **Start.**
2. Click **Control Panel.**
3. Double-click **Administrative Tools.**
4. Double-click **Services.**
5. Locate **Axiom Server** in the **Service** window.
6. Right-click on the **Axiom Server** service and select **Stop** from the context menu.

Linux

On Linux, the preferred way to shutdown the server is via the shutdown.sh script. For example:

```
/opt/Axiom/bin/shutdown.sh --server=localhost:11099 -S
```

Or, you can kill the server by locating its PID and killing the process. For example:

```
Ps aux | grep Axiom.*run.sh  
sudo kill - 9 <PID>
```

Resetting the Administrator Password

If you forget your administrator password and you are using Axiom's embedded user management feature then you can reset your password by taking the following steps:

Windows

1. Open a command prompt.
2. Go to the bin directory of your Axiom server. For example:

```
cd "\\Program Files (x86)\Axiom Server\bin"
```

3. Run the reset password batch file passing in the new administrator password:

```
resetpassword.bat secret
```

Linux

1. Open a command shell.
2. Change to the bin directory of your Axiom server. For example:

```
cd /opt/Axiom/server/bin
```

3. Run the reset password script while passing in the new administrator password:

```
sudo resetpassword.sh secret
```

Firewall Configuration

The Axiom server has four socket based services that open listening ports. In this section, we list the ports that need to be opened when the Axiom server is behind a firewall and needs to be accessed by remote Axiom clients.

The following are the ports opened by the Axiom server:

- 3873 - EJB3 remoting.
- 11093 - JBoss message queue.
- 11098 - JBoss naming service RMI port.
- 11099 - The JBoss naming service port.

Logging

The Axiom server's log files contain information that can be valuable when troubleshooting problems. The log files are located in the following location relative to Axiom's root folder:

```
server\default\log
```

If the Axiom server is installed on Microsoft Windows then you will typically find your log files in the following location:

```
C:\Program Files (x86)\Axiom Server\server\default\log
```

Likewise, if you have installed the Axiom server on Linux then they will probably be located here:

```
/opt/Axiom/server/default/log
```

In this folder you will find two log files, a `boot.log` file that contains information regarding server startup, and the `server.log` file that contains output from the running server.

Since the Axiom server is based on version 3.2.4 of the JBoss application server, a wealth of information regarding log configuration can be found on the JBoss website:

- <http://community.jboss.org/wiki/Logging>
- <http://docs.jboss.org/process-guide/en/html/logging.html>

Backing Up the Axiom Database

In this section, we will discuss how the embedded Axiom database can be backed up manually. If you are using an external database (such as Oracle) then please consult your database documentation for backup instructions.

The embedded Axiom database is located in the following location relative to your install folder:

```
server/default/data/hypersonic
```

If the Axiom server is installed on Microsoft Windows then it is likely that you'll find your database here:

```
C:\Program Files (x86)\Axiom Server\server\default\data\hypersonic
```

Likewise, if you have installed the Axiom server on Linux then it will probably be located here:

```
/opt/Axiom/server/default/data/hypersonic
```

To backup your database:

1. [Stop the Axiom server.](#)
2. Once the server has fully shut down, make a copy of the hypersonic folder.
3. [Start the Axiom server.](#)

Reconfiguring The Axiom Server

During its lifetime, you may need to reconfigure the Axiom server. The easiest way to reconfigure Axiom is to simply rerun the [Axiom Server Installer](#). The following are the recommended steps to reconfigure the Axiom server with the Axiom Server installer:

1. [Stop the Axiom Server](#).
2. [Backup the Axiom database](#).
3. Run the [Axiom Server Installer](#).
4. [Start the Axiom Server](#).

Binding the Axiom Server to a Static IP Address

By default, when the Axiom server starts, it will bind to the name of the host computer. This means, for example, if you are running Axiom on a computer named “MyAxiomServer” then you can only connect to the server using “MyAxiomServer” in the client’s login screen. In other words, you will be unable to connect to the server using the IP address or “localhost”.

If you wish to have Axiom bind to a static IP address then you will need to change the server’s startup script. In this section we will discuss how to make such a change.

Windows

On Microsoft Windows, take the following steps to configure the server to bind to a static IP address:

1. [Stop the Axiom Server](#).
2. In Windows Explorer, open C:\Program Files(x86)\Axiom Server\bin.
3. Make a backup copy of run.bat.
4. Right-click on run.bat.
5. Select **edit**.
6. Search for %COMPUTERNAME%.
7. Replace %COMPUTERNAME% with the computer’s static IP address. For example:

```
"%JAVA%" %JAVA_OPTS% ^
-Djava.endorsed.dirs="%JBOSS_ENDORSED_DIRS%" ^
-classpath "%JBOSS_CLASSPATH%" ^
org.jboss.Main -b 192.168.50.125 %*
```

8. Save run.bat.
9. [Start the Axiom Server](#).
10. [Validate the configuration change](#).

Linux

On Linux, the server can be configured to bind to a static IP address by taking the following steps:

1. [Stop the Axiom Server](#).
2. In a command shell, change to the server’s bin directory (e.g. /opt/Axiom/bin).

3. Make a backup copy of `run.sh`.
4. Edit `run.sh` (e.g. `sudo gedit run.sh`).
5. Around line 12, you should see the following line:

```
BINDTO=$(hostname)
```

Set the `BINDTO` variable to your IP address. For example:

```
BINDTO=10.168.1.110
```

6. Save `run.sh`.
7. [Start the Axiom Server](#).
8. [Validate the configuration change](#).

Validate the Configuration Change

After starting the Axiom server, you should [validate that the server started](#) successfully. Furthermore, you should verify that the server is now bound to the static IP address by checking the `boot.log` file:

1. Open `Axiom/server/default/log/boot.log`.
2. Search for `"jboss.bind.address"`.
3. Verify that `jboss.bind.address` is set to the correct IP address, for example:

```
10:19:53,899 DEBUG [ServerInfo] jboss.bind.address: 10.168.1.115
```

Customer Support

Customers who have signed up for Axiom Support and Maintenance, as well as prospective customers who are evaluating Axiom, are eligible for customer support. Our highly trained staff is ready to assist you with any questions or problems that might arise as you install and configure the Axiom server.

For customer support contact information, visit: <http://www.iconcur-software.com/support.html>. If you experience a problem with your Axiom server then please have the following information available when you contact support:

- Server Logs
- Database Type
- Operating System

