AXIGEN® Quick Installation and Configuration Guide

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Part I: Introduction

Welcome

Congratulations on your decision to evaluate AXIGEN®**.** Currently this product is in beta phase, so it only includes some of the features it will finally include in the commercial version once released. For a complete description of the functions currently available in AXIGEN®, please refer to the *AXIGEN User Manual.*

Structure and purpose of this document

The purpose of this document is to provide a quick guide through the installation and configuration processes for AXIGEN® mail server.

This document serves as a quick installation and configuration guide to administrators of the mail servers in companies where the version beta2 of AXIGEN® application is installed and evaluated.

Important:	This document relates to a **beta** version of **AXIGEN®.** We would really appreciate your feedback on this beta version.

Audience and knowledge requirements

The intended audience for this *Quick Installation and Configuration Guide* is represented by administrators of the mail servers in companies where the version beta2 of AXIGEN® application is installed and evaluated.

In order to build, extract and acquire the correct information from this manual, a regular audience should have:

- A detailed knowledge of general mail server abilities and functions.
- Good comprehension of the RFC requirements.
- Scripting skills, in order to use correctly AXIGEN® Webmail extension capabilities.

Related documentation

Additional information regarding AXIGEN® can be found in the following documents:

- AXIGEN User Manual;
- AXIGEN server side scripting language - Contains relevant information for programmers trying to extend the current HSP abilities (Webmail specific);
- AXIGEN Online documentation.

Part II: Working with AXIGEN

This section describes the specific steps one should follow in order to install and configure the AXIGEN mail server. This section assumes that all required files and knowledge are present. For a detailed list of the files required in this section, please refer to the AXIGEN User Manual.

Quick Installation and Configuration - Steps

The steps to be taken in order to install and configure the AXIGEN® mail server are:

- Unzip the original installation package. Read the Example: Installing AXIGEN® under RedHat and SuSE section in this document and the corresponding sections from the AXIGEN User Manual for more information on how to unzip the installation files;
- Install AXIGEN files. Read the Example: Installing AXIGEN® under RedHat and SuSE section in this document and the corresponding sections from the AXIGEN User Manual for more information on how to install the product;
- Configure axigen.cfg, as explained in the Configuring AXIGEN section of this document and in the **General server configuration** section of the *AXIGEN User Manual*, in order to adjust the `axigen.cfg` file to your specific environment;
- Start the AXIGEN server. Read the Example: Starting/stopping/restarting AXIGEN® under RedHat, Debian, Gentoo and SuSE distributions section in this document and the corresponding sections from the AXIGEN User Manual for information on how to start AXIGEN®;
- Create domains/accounts for your AXIGEN installation. You can find more information in the Creating/Changing accounts and domains in AXIGEN® section of this document.
- Reconfigure axigen.cfg (if needed).
- Reload AXIGEN server. This way the changes committed in the `axigen.cfg` file can take effect (domains and accounts operations are made on-the-fly). Read the Example: Starting/stopping/restarting AXIGEN® under RedHat, Debian, Gentoo and SuSE distributions section in this document for information on how to reload AXIGEN®.

Example: Installing AXIGEN® under RedHat and SuSE

Here are the steps to be taken in order to install AXIGEN® under RedHat and SuSE.

1. Installation

The installation kit consists in the INSTALL, UNINSTALL, README and axigen-0.8.14b2-1.i386.rpm files.

In order to install the RPM package, you must issue (while logged in as root) the following command, from the same directory with the rpm file:

```
rpm -ivh axigen-0.8.14b2-1.i386.rpm
```

After the installation, no daemons or related application will be started.

2. Configuration

Before you start AXIGEN®, you need to configure it. You can do that by modifying the main configuration file (please refer to the *General configuration parameters* section from the *AXIGEN User Manual* for more information).

3. Starting AXIGEN®

In both RedHat and SuSE, the AXIGEN server can be started via its initscript, by issuing

```
/etc/init.d/axigen start
```

Example: Starting/stopping/restarting AXIGEN® under RedHat, Debian, Gentoo and SuSE distributions

In RedHat, Debian, Gentoo and SuSE distributions, you can start the server with the following command:

```
/etc/init.d/axigen start
```

To stop the server, you can issue:

```
/etc/init.d/axigen stop
```

In order to restart AXIGEN®'s daemon (in order to reload the new configuration settings, for instance), you can use the 'restart' parameter:

```
/etc/init.d/axigen restart
```

To view AXIGEN®'s daemon status, you can pass the 'status' parameter:

```
/etc/init.d/axigen status
```

In Slackware, you can use the same commands, applied to the `/etc/rc.d/rc.axigen` initscript, instead of `/etc/init.d/axigen`, e.g. for starting the server, you can issue:

```
/etc/rc.d/rc.axigen start
```

Creating/Changing accounts and domains in AXIGEN®

AXIGEN domains and accounts can be created using the 'provisioner' tool (while AXIGEN server is started).

The communication between AXIGEN and the provisioner tool is done via a local socket specified by the 'provisionSocket' parameter in axigen.cfg configuration file (in the server configuration section). By default, the provisioner socket resides in:

```
/var/opt/axigen/run/.provision
```

Here are the steps to follow for creating AXIGEN accounts and domains when AXIGEN server is started:

Step 1. Creating the domain database (ddb)

To create a domain database (ddb), use the provisioner tool:

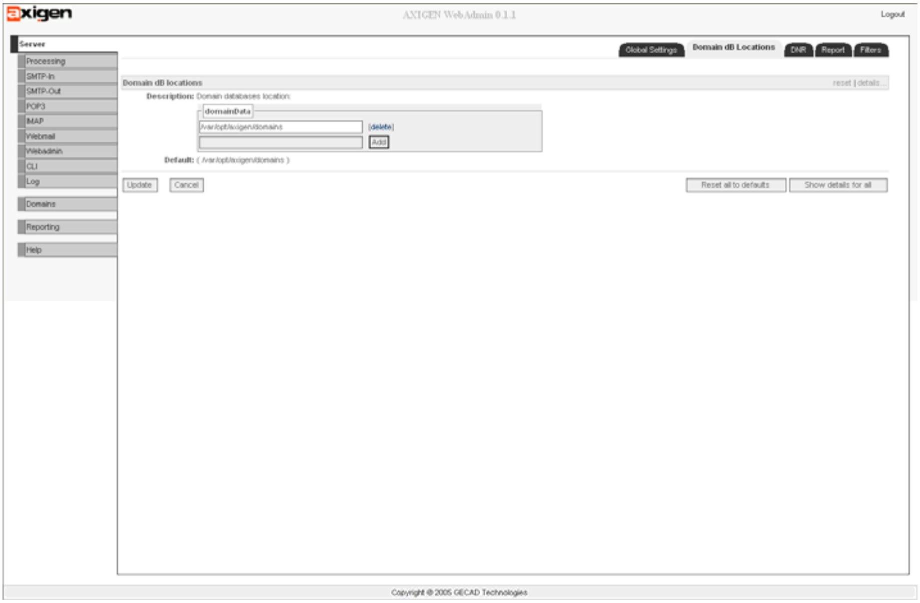
```
provisioner --create-ddb /var/opt/axigen/domains 0
```

where

```
/var/opt/axigen/domains
```

is the folder containing the domains in this domain database, and 0 is the ID of this domain database (accepted values for ID: 0-255).

You can change the domain database location anytime using the **Server - Domain dB Locations** page in the WebAdmin tool.


AXIGEN WebAdmin 0.1.1
Logout
Server
Processing
SMTP-In
SMTP-Out
POP3
IMAP
Webmail
Webadmin
CLI
Log
Domains
Reporting
Help
Global Settings
Domain dB Locations
DNR
Report
Filters
reset | details...
[delete]
Add
Update
Cancel
Reset all to defaults
Show details for all
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Domain dB locations

Description: Domain databases location:

domainData: /var/opt/axigen/domains

Default: (/var/opt/axigen/domains)

Figure 1: The WebAdmin's Server - Domain dB Locations page.

Step 2 (automatic): Creating domains.ans and ddbid.00 files

After issuing the command on Step 1 above, the following two files are created in the /var/opt/axigen/domains folder:

- domains.ans (domains.AxigenNameStorage) is a binary file containing data about domain names and IDs registered in this domain database.
- ddbid.00 (where 00 is the ID of the domain database in 2 hexa capital characters).

Note: The ddbid.00 file has a length of 0 and is only used for identifying the location where the domain database with the ID corresponding to this extension resides. If this file is deleted or the extension is modified, the domain database is considered corrupted and the domains contained herein cannot be loaded anymore.

Step 3: Registering the new domain database on the server

To register the new domain database on the server, use:

```
provisioner --register-ddb /var/opt/axigen/domains
```

This registration operation of a database on AXIGEN server also triggers the loading of any eventual domain created in the domain database.

Step 4. Adding a new domain

To add a new domain, use the provisioner tool:

```
provisioner --add-domain /var/opt/axigen/domains /tmp/domain.cfg
```

where

```
/var/opt/axigen/domains
```

is the location of the domain database where the domain is added (this domain database must be registered on AXIGEN server), and

```
/tmp/domain.cfg
```

is a .txt file containing all the domain attributes. The syntax of this file is similar to the one of the main axigen.cfg configuration file. For more information, please refer to the Configuring domains in AXIGEN section in this document.

Step 5 (automatic): Creating the domain ID

The server generates a 24 bits ID for this newly created/added domain, represented by 6 hexa characters. A domain database can therefore include 2^24 domains at most. A folder is created in `/var/opt/axigen/domains`, with the name formed by the first 3 hexa characters and a sub-folder in this folder, with its name represented by the last 3 characters from the domain ID.

Example, for ID = 123ABC:

```
/var/opt/axigen/domains/123/ABC/
```

Step 6 (automatic): Writing the domain name and ID

In the domains.ans file from the domain database, the domain name and ID are written.

Step 7 (automatic): Creating the domain.abs file

In the folder corresponding to the domain, a 'domain.abs' (domain.AxigenBinaryStorage) file is created, containing all the domain attributes (in binary format) that are read from the .txt file.

Step 8 (automatic): Creating the rcpts.ans file

In the same folder, a binary file named 'rcpts.ans' is created. This file will keep the recordings with the recipients' names and IDs. By "rcpts" one should currently think of user accounts.

Step 9 (automatic): Loading the domain info on the server

The information corresponding to this domain is loaded on the server, meaning the domain is active and you can now work with/change it.

Step 10. Adding an user to an existing domain

To add an user to an existing domain:

```
provisioner --add-account axigen.com /tmp/account.cfg
```

where

`'axigen.com'`

is the name of the domain where the user is added (this domain must be loaded on AXIGEN server), and

`/tmp/account.cfg`

is a .txt file containing the configuration for this account. The syntax of this file is similar to the one of axigen.cfg. For more information, please refer to the Configuring accounts in AXIGEN section in this document.

Step 11 (automatic): Selecting the account location

From the domain's 'accountStorages' set, the server selects (according to the 'accountStorageTopology' parameter) a location for this account. The ID for the selected location is represented on 8 bits (so we can have a maximum of 256 locations), that are the most representative 8 bits from the 32 bits ID of the account. Therefore an account storage contains at most 2^(32-8)=2^24 accounts, and a domain contains at most 2^32 accounts. The default location for 'accountStorages' is:

```
location_DDB_domain/id1/id2/accounts/
```

where id1, id2 are the 6 characters of the domain ID.

Step 12 (automatic): Creating the account ID

A 24 bits ID is generated for an account, identifying uniquely this account in an account storage location.

Step 13 (automatic): Creating the account storage

Based on the hexa representation of the ID, just like when saving domains, a folder and a sub-folder are created in the selected location for the account storage, with the name of the folder including the first 3 characters and the name of he sub-folder including the last 3 characters.

Example for an account with id=AAABBB, domain id=123ABC

```
location_DDB_domain/123/ABC/accounts/AAA/BBB
```

Step 14 (automatic): Saving the account configuration

The configuration of the account is saved in this folder, in the 'account.abs' binary file.

Note:	If the 'messageStorages' set from the server configuration contains locations for saving the domain's messages, these folders are created. The default location for message storage will therefore be in this case location_DDB_domain/123/ABC/storage

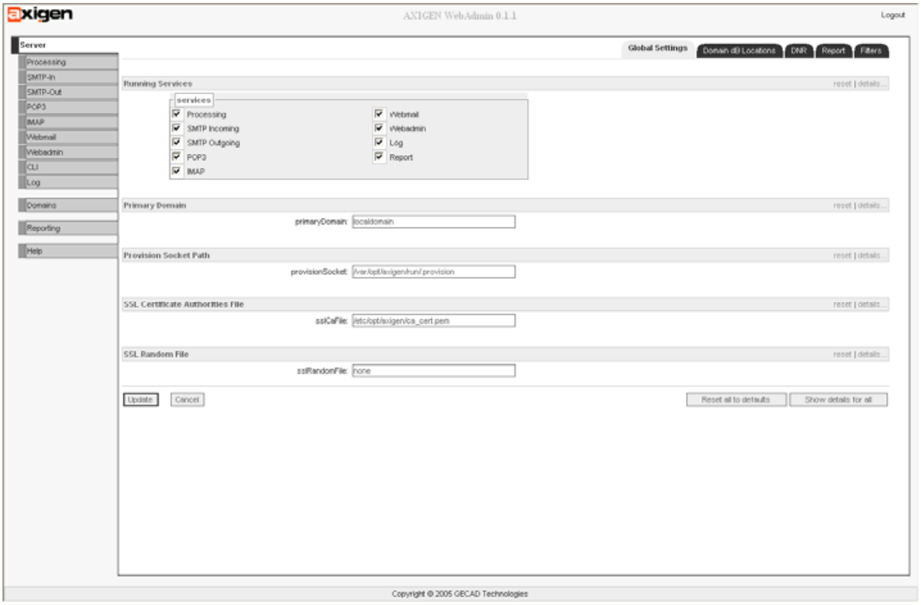
Part III: Configuring AXIGEN

This section describes the basic configuration options available in the current version of the AXIGEN mail server. For more information and a complete description of all the parameters in the product, please consult the AXIGEN User Manual.

Basic configuration

Step 1: Specifying the services to be run by AXIGEN

You can instruct AXIGEN to run any combination of the following services: smtpIncoming, processing, smtpOutgoing, imap, pop3, log, webmail, webadmin, report. Use the **`services`** parameter in the axigen.cfg configuration file (for initial configuration) or the **Server - Global Settings** page in the WebAdmin tool for specifying the services run by AXIGEN.


AXIGEN WebAdmin 0.1.1
Logout
Server
Processing
SMTP-In
SMTP-Out
POP3
IMAP
Webmail
Webadmin
CLI
Log
Domains
Reporting
Help
Global Settings
Domain dB Locations
DNR
Report
Filters
reset | details...
Update
Cancel
Reset all to defaults
Show details for all
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Running Services

services

☑ Processing
☑ SMTP Incoming
☑ SMTP Outgoing
☑ POP3
☑ IMAP
☑ Webmail
☑ Webadmin
☑ Log
☑ Report

Primary Domain

primaryDomain: localdomain

Provision Socket Path

provisionSocket: /var/opt/axigen/run/.provision

SSL Certificate Authorities File

sslCaFile: /etc/opt/axigen/ca_cert.pem

SSL Random File

sslRandomFile: none

Figure 2: The WebAdmin's Server - Global Settings page

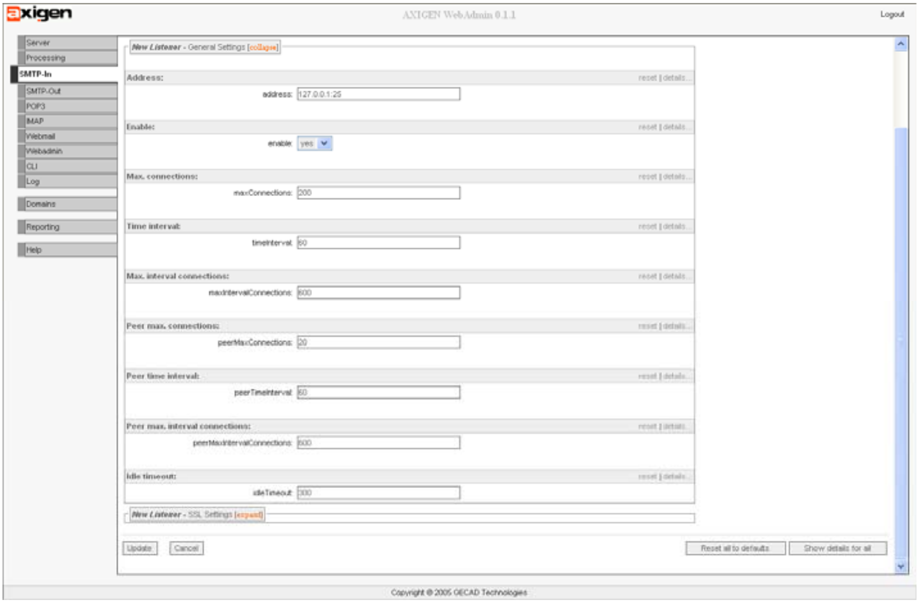
Step 2: Specifying the primary domain

Use the `primaryDomain` parameter in the axigen.cfg configuration file (for initial configuration) or the **Server - Global Settings** page in the WebAdmin tool for specifying the primary domain for AXIGEN®. If this parameter is not set, its value is obtained automatically by calling the standard `getdomainname()` function.

You can use the WebAdmin's **Server – Global Settings** page to modify the primary domain.

Step 3: Specifying the IP address for listeners

Once you specified the services to be run and the primary domain, basically you end up with a functional product. AXIGEN comes with a set of functional default values, and the only information required by the product from you has been specified in Step 1 and Step 2 above. All you have to do now is to restart the server, as described in the [Example: Starting/stopping/restarting AXIGEN® under RedHat, Debian, Gentoo and SuSE distributions]() section in this document. But restarting the AXIGEN server before Step 3 will not make the computer where the AXIGEN is installed visible in your network. To solve this, you have to specify the IP address for the listeners used by AXIGEN's modules. You can do this by using the **address** attribute in the corresponding Service/listener page of the WebAdmin tool.


axigen
AXIGEN WebAdmin 0.1.1
Logout
Server
Processing
SMTP-In
SMTP-Out
POP3
IMAP
Webmail
Webadmin
CLI
Log
Domains
Reporting
Help
reset | details...
Update
Cancel
Reset all to defaults
Show details for all
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New Listener - General Settings [collapse]

Address:
address: 127.0.0.1:25

Enable:
enable: yes

Max. connections:
maxConnections: 200

Time interval:
timeInterval: 60

Max. interval connections:
maxIntervalConnections: 600

Peer max. connections:
peerMaxConnections: 20

Peer time interval:
peerTimeInterval: 60

Peer max. interval connections:
peerMaxIntervalConnections: 600

Idle timeout:
idleTimeout: 300

New Listener - SSL Settings [expand]

Figure 3: The WebAdmin's Add new listener page for SMTP Incoming module.

Step 4 (optional): Other configuration options available

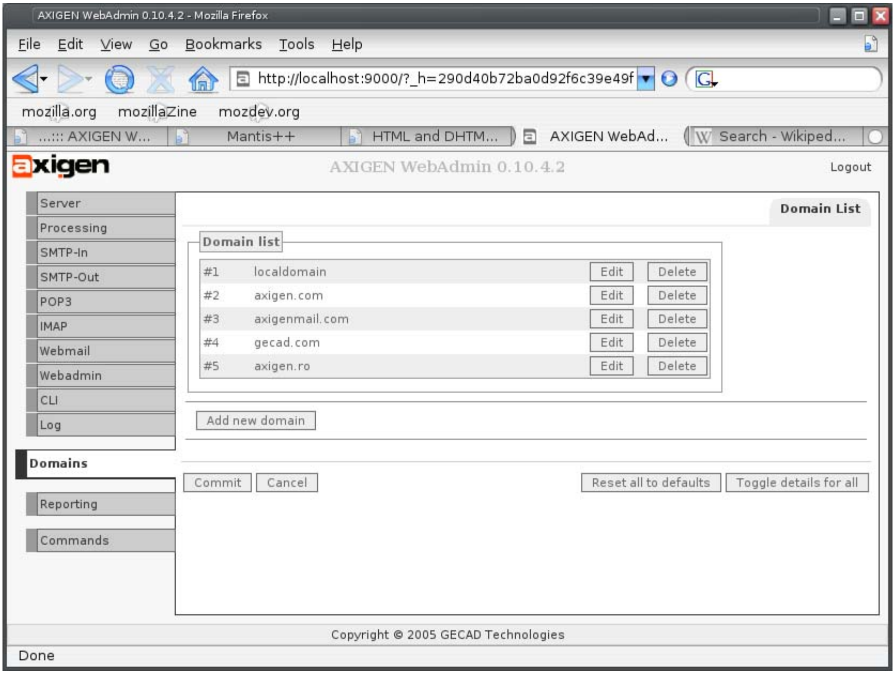
Before restarting the server, you might want to consider using the additional configuration features that are available in the product. These additional configuration features can be changed anytime using the axigen.cfg file or the corresponding pages in the WebAdmin tool. The additional configuration options available are not within the scope of this document. You can find an in-depth description of these additional configuration options in the *AXIGEN User Manual.*

Step 5: Restarting the server

In order to apply the eventual changes in the configuration file, please restart the AXIGEN mail server.

Configuring domains in AXIGEN

The domain.cfg file containing the domain configuration is used when a domain is added or modified.


AXIGEN WebAdmin 0.10.4.2 - Mozilla Firefox
File
Edit
View
Go
Bookmarks
Tools
Help
http://localhost:9000/?_h=290d40b72ba0d92f6c39e49f
mozilla.org
mozillaZine
mozdev.org
.....: AXIGEN W...
Mantis++
HTML and DHTM...
AXIGEN WebAd...
Search - Wikiped...
AXIGEN WebAdmin 0.10.4.2
Logout
Server
Processing
SMTP-In
SMTP-Out
POP3
IMAP
Webmail
Webadmin
CLI
Log
Domains
Reporting
Commands
Domain List
Add new domain
Commit
Cancel
Reset all to defaults
Toggle details for all
Copyright © 2005 GECAD Technologies
Done

Domain list

#1	localdomain	Edit	Delete
#2	axigen.com	Edit	Delete
#3	axigenmail.com	Edit	Delete
#4	gecad.com	Edit	Delete
#5	axigen.ro	Edit	Delete

Figure 4: The WebAdmin's Domains page.

In this file you can configure general information about domain (name, alias, assigned IP address, AXIGEN® services and Sieve scripts enabled for this domain), Webmail-specific data, topology and storage specific information. Once created, a domain.cfg file must be loaded in AXIGEN server as described in the Creating/Changing accounts and domains in AXIGEN section of this document.

Configuring accounts in AXIGEN

The account.cfg file contains the configuration for an individual user account. This file is used when a new user is created or an existing user is modified.

In this file you can configure general information about user (name, alias, password, personal data), Webmail and IMAP-specific data. Once created, an account.cfg file must be loaded in AXIGEN server as described in the Creating/Changing accounts and domains in AXIGEN section of this document.

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