

# Backing up and restoring HP SIM 5.2 or greater data files in an HP-UX and Linux environment



Backing up data files for a PostgreSQL database .....	2
Backing up data files for a PostgreSQL database .....	2
Restoring data files for use with PostgreSQL .....	3
For more information.....	10

HP Systems Insight Manager (HP SIM) uses a PostgreSQL server database to store collected information about the systems on your network. Always back up your database using an appropriate backup schedule. In the event of a catastrophic database problem, this backup can be restored to return HP SIM to operation.

**IMPORTANT:** The procedures in this paper are for backing up and restoring HP SIM core data only from/to the same PostgreSQL database. It is not intended to be used as an example for reinstallation of HP SIM or for data migration. HP does not guarantee the integrity of partner data if you attempt to use these procedures for reinstallation or data migration.

## Backing up and restoring data files for a PostgreSQL database

### Backing up data files for a PostgreSQL database

Backing up the database with PostgreSQL requires changing the HP SIM database user's password and saving the database and associated files.

**Note:** When executing PostgreSQL commands, file path names depend on how and where PostgreSQL is installed. Your actual path name might differ from those provided in the following example.

1. If HP SIM is running, enter **mxstop** in the command line to stop the HP SIM daemons.
2. To verify that all HP SIM mx processes have stopped, run the command **ps -ef | grep mx**.
3. Using the file management utility of your choice, back up the configuration files listed below.

**Table 1. Configuration files that must be backed up**

Directory of file	Description
/etc/opt/mx/config	Directory of configuration files
/var/opt/mx/config/	Additional configuration files
/etc/opt/hp/sslshare/	Shared OpenSSL certificate directory
/var/opt/mx/logs/mx.log	Audit file
/opt/mx/patch	Program updates (required if HP SIM is to be reinstalled)
/opt/mx/bin/server_cert.pem	Certificate used by the command line interface (CLI)
/opt/mx/bin/CLIClientConfig	CLI configuration file
/var/opt/mx/output	(optional) Contains job result output

**Note:** The file permissions must be prepared during the backup process. The Tape Archive (TAR) utility preserves file permissions.

4. Save any existing user-supplied (custom) files contained in the HP SIM directory tree, such as tool definition files (TDEFs), Management Information Bases (MIBs), sign-in prompt, and actions.

5. Open `/etc/opt/mx/config/database.props` file and check the property value for `hp.Database.username`. The default PostgreSQL user for HP SIM is **mxadmin**.
6. The password generated by HP SIM for **mxadmin** must be changed before backing up the database. To change the password, at the HP SIM command line enter the following:

```
/opt/mx/bin/mxpassword -m -x MxDBUserPassword=newpassword
```

Where *newpassword* is the new password.

7. Restart the PostgreSQL service with the **restart** command (full command path might vary depending on the PostgreSQL install location).

For HP-UX:

```
/sbin/init.d/hpsmdb restart
```

For SUSE Linux Enterprise Server 9 and SUSE Linux Enterprise Server 10:

```
/etc/init.d/hpsmdb restart
```

For Red Hat Enterprise Linux (all versions):

```
/etc/rc.d/init.d/hpsmdb restart
```

Or

```
service hpsmdb restart
```

8. Enter the following commands to backup the database:

For HP-UX:

```
cd /opt/hpsmdb/pqsql/bin
```

For Linux:

```
cd /opt/hpsmdb/bin
```

```
./pg_dump -h 127.0.0.1 -U mxadmin -p 50006 insight_v1_0 >  
/tmp/saveHPSIMdb
```

Where:

-h = host name of the server

-U = PostgreSQL user name

-p = port number (to find the port number, open the `/etc/opt/mx/config/database.props` file and find the property value for the `hp.Database.portNumber` property.)

insight\_v1\_0 = HP SIM database name (To find the database name, open the `/etc/opt/mx/config/database.props` file and find the property value for the `hp.Database.databaseName` property.)

saveHPSIMdb = Any file name to save the database

9. When prompted for a password, enter the password defined in step 6.

## Restoring data files for use with PostgreSQL

1. If performing a reinstallation of HP SIM, proceed as directed in the *HP SIM 5.3 Installation Guide* located at:

For Linux:

<http://docs.hp.com/en/418811-003/index.html>

For HP-UX:

<http://docs.hp.com/en/418810-003/index.html>

If you are not performing a reinstallation, proceed with the next step.

2. If HP SIM is running, enter **mxstop** in the command line to stop the HP SIM daemons.
3. Stop the PostgreSQL (HPSMDB) service with the **stop** command (full path might vary depending on the PostgreSQL install location):

For HP-UX:

```
/sbin/init.d/hpsmdb stop
```

For SUSE Linux Enterprise Server 9 and SUSE Linux Enterprise Server 10:

```
/etc/init.d/hpsmdb stop
```

For Red Hat Enterprise Linux (all versions):

```
/etc/rc.d/init.d/hpsmdb stop
```

Or

```
service hpsmdb stop
```

4. To verify that all HP SIM **mx** processes have stopped:

```
ps -ef | grep mx
```

5. For Linux systems:

- a. Verify that the postmaster is running:

```
ps -ef | grep postmaster
```

If postmaster is running, kill the service:

```
kill -9 <process id>
```

- b. Uninstall hpsmdb:

```
rpm -qa | grep hpsmdb | xargs rpm -e
```

```
rm -rf /opt/hpsmdb /var/opt/hpsmdb
```

- c. Install hpsmdb from HP SIM binary:

navigate to where HP SIM binary is, then execute the following command to unpack all RPMs:

```
./sysmgmt.bin --noexec --target mxserver
```

```
cd mxserver
```

```
rpm -i hpsmdb-xxxxxx.rpm
```

where xxxxxx is the appropriate hpsmdb RPM for the Linux and hardware platform refers to *HP Systems Insight Manager 5.3 Installation and Configuration Guide* for Linux manual installation section for details.

6. For HP-UX systems:

- a. Uninstall the the SysMgmtDB with the following command:

```
swremove -x enforce_dependencies=false SysMgmtDB
```

- b. Install SysMgmtDB from the HP SIM Depot file with the following command:

```
swinstall -s /hpsim.depot SysMgmtDB
```

7. Create database with the name "insight\_v1\_0" using the following command:

- For HP-UX enter:  
`cd /opt/hpsmdb/pgsql/bin`

- For Linux enter:

```
cd /opt/hpsmdb/bin
./createdb -O hpsmdb -h 127.0.0.1 -p 50006 -U hpsmdb insight_v1_0
```

8. Create a user named "mxadmin" (with the role superuser with no permission to create the database and user) using the following command:

```
./createuser -h 127.0.0.1 -p 50006 -U hpsmdb mxadmin
```

9. Create the database with the name `insight_v1_0` using the following command:

At the command line, enter:

For HP-UX:

```
cd /opt/hpsmdb/pgsql/bin
./psql -q -h 127.0.0.1 -U mxadmin -p 50006 -f /tmp/saveHPSIMdb -d
insight_v1_0
```

For Linux:

```
cd /opt/hpsmdb/bin
./psql -q -h 127.0.0.1 -U mxadmin -p 50006 -f /tmp/saveHPSIMdb -d
insight_v1_0
```

where

-h = Host name of the server

-U = PostgreSQL user name

-p = port number (to find the port number, open the `/etc/opt/mx/config/database.props` file and find the property value for the `hp.database.portNumber` property.)

`insight_v1_0` = HP SIM database name (To find the database name, open the `/etc/opt/mx/config/database.props` file and find the property value for the `hp.Database.databaseName` property.)

`saveHPSIMdb` = the file name of the backup file to restore (this name is what you used when backing up the database)

### Using an appropriate file management utility, restore the configuration files listed in Table 1. Configuration files that must be backed up

10..

11. Restore any existing user-supplied (custom) files contained in the HP SIM directory tree, such as TDEFs, MIBs, sign-in prompts, and actions.
12. Restart the HP SIM service with the **mxstart** command. The service is started and the data from the backup database is restored.

## Backing up and restoring data files for an Oracle database

The following procedures describe saving (backing up) and restoring data files for a system using an Oracle database with HP SIM. A user with Oracle Database Administrator (DBA) privileges must conduct the backup and restore processes.

## Saving data files for use with Oracle

1. If HP SIM is running, enter `mxstop` in the command line to stop the HP SIM daemons.
2. To verify that all HP SIM “mx” processes have stopped, run the following command:  

```
ps -ef | grep mx
```
3. Using the file management utility of your choice, save the configuration files listed in Table 2.

**Table 2. Configuration files to save**

Directory or file	Description
<code>/etc/opt/mx/config/</code>	Directory of configuration files
<code>/var/opt/mx/config/</code>	Additional configuration files
<code>/etc/opt/hp/sslshare/</code>	Shared openSSL certificate directory
<code>/var/opt/mx/logs/mx.log</code>	Audit file
<code>/opt/mx/patch</code>	Program updates (required if you want to reinstall HP SIM)
<code>/opt/mx/bin/server_cert.pem</code>	Certificate used by the Command Line Interface (CLI)
<code>/opt/mx/bin/CLIClientConfig.cfg</code>	CLI configuration file
<code>/var/opt/mx/output</code>	(optional) Contains job result output

**Note:**

The file permissions must be preserved during the backup process. The Tape Archive (TAR) utility preserves file permissions.

4. Save any existing user-supplied (custom) files contained in the HP SIM directory tree such as tool definition files (TDEFx), Management Information Bases (MIBs), login prompt, and actions.
5. Open the `/etc/opt/mx/config/database.props` file and check the property value for `hp.Database.username`. A user with Oracle Database Administrator (DBA) privileges must conduct the backup and restore process.
6. Back up Oracle data files by Exporting the Database as follows, making note of the database name, DBA user name, and DBA password:
  - a. At the Oracle server console command line, type the following command:
  - b. `set ORACLE_SID=dbname`, where ‘dbname’ is the database to be saved.
  - c. Type the `exp` command and press **Enter**. Table 4 lists the Oracle parameters that will be offered and the recommended action.

**Table 3. Oracle database parameters**

Parameter	Action
Username	Type the username of dba and press <b>Enter</b> .
Password	Type the password of dba-user-password and press <b>Enter</b> .
Array fetch buffer size	Press <b>Enter</b> to select default of 4096.
Export file EXPDAT.DMP <Path\backup.dmp>	Type the file name and path to dump the database and press <b>Enter</b> .
(1) E(ntire database) (2) U(sers) (3) T(ables)	Type E and press <b>Enter</b> .
Export grants (yes/no)	Press <b>Enter</b> to select default of Yes.
Export table data (yes/no)	Press <b>Enter</b> to select default of Yes.
Compress extents (yes/no)	Press <b>Enter</b> to select default of Yes.

After selecting the Compress extents default parameter of Yes, the database backup will be initialized.

## Restoring data files for use with Oracle

To restore the Oracle database from a saved copy, use the following procedure:

1. If using an existing Oracle installation, delete the backed-up database on the Oracle server. This is required because HP SIM requires an empty database for initialization.
2. Create a new database with the same name as that of the backed up database, and create a user with DBA privileges (with the same user name used while backup was taken as in Step 6 of the Saving data files for use with Oracle.
3. Install HP SIM as directed the HP SIM 5.3 Installation and User Guide available at the following URLs:
  - For HP-UX (Unix) – <http://docs.hp.com/en/418810-003/index.html>
  - For Linux – <http://docs.hp.com/en/418811-003/index.html>

**Note:**

The HP SIM command `mxoracleconfig` must be used to configure HP SIM to use an Oracle database.

4. Run `mxinitconfig -a`.
5. If HP SIM is running, type `mxstop` in the command line to stop the HP SIM daemons.
6. To verify that all HP SIM “mx” processes have stopped, run the following command:

```
ps -ef | grep mx
```
7. Restore the configuration files listed in Table 4.

**Table 4. Configuration files to be restored**

Directory or file	Description
/etc/opt/mx/config/	Directory of configuration files
/var/opt/mx/config/	Additional configuration files
/etc/opt/hp/sslshare/ (for HP-UX) etc/opt/hp/sslshare (for Linux)	Shared openSSL certificate directory
/var/opt/mx/logs/mx.log	Audit file
/opt/mx/patch	Program updates (required if you want to reinstall HP SIM)
/opt/mx/bin/server_cert.pem	Certificate used by the Command Line Interface (CLI)
/opt/mx/bin/CLIClientConfig.cfg	CLI configuration file
/var/opt/mx/output	(optional) Contains job result output

8. Restore any existing user-supplied (custom) files contained in the HP SIM directory tree, such as tool definition files (TDEFx), Management Information Bases (MIBs), login prompt, actions, etc.
9. Complete the following steps to restore the database file by importing from the backup created in step 6 of Saving data files for use with Oracle:
  - a. At the Oracle server console, type the following command:

```
set ORACLE_SID=<dbname>
```

where *dbname* is the database just created in step 2.
  - b. Type the command `imp` and press **Enter**. Table 5 lists the Oracle database parameters that will be offered and the recommended action.

**Table 5. Oracle database parameters**

Parameter	Action
Username	Type the username of dba and press <b>Enter</b> .
Password	Type the password of dba-user-password and press <b>Enter</b> .
Insert buffer size	Press <b>Enter</b> to select default of 30720.
Import file EXPDAT.DMP <Path\backup.dmp>	Type the file name and path of the database to restore and press <b>Enter</b> .
List contents of import file only (yes/no)	Press <b>Enter</b> to select default of No.
Ignore create error due to object existence (yes/no)	Press <b>Enter</b> to select default of No.
Import grants (yes/no)	Press <b>Enter</b> to select default of Yes.
Import table data (yes/no)	Press <b>Enter</b> to select default of Yes.
Import entire export file (yes/no)	Press <b>Enter</b> to select default of No.
Username	Type username dba and press <b>Enter</b> .
Table (T) Partition (T:P) Or if done (.)	Type the dot character (.) and press Enter to begin the database restoration.

10.Restart HP SIM service by entering `mxstart`. The HP SIM service starts and all the data from the backup database is restored.

## For more information

For additional information, visit [www.hp.com/go/hpsim](http://www.hp.com/go/hpsim).

© 2006-2009 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

466355-002, 01/2009

