

Chapter 11



Maintenance And Disaster Recovery

11.1 BVE Database Maintenance

The provisioning server stores all the configuration information in an Object Oriented database called Poet FastObjects, while the DGE components use a relational database such as MySQL, Oracle, etc. These databases need to be backed up periodically as a safety measure, as it will allow you to fall back to the last backed up version in the event of a database corruption. In normal operating mode, the Poet database may have objects in memory and writing data to the database files randomly. It is not recommended that the database files be backed up while Poet is writing to the databases.

NetVigil comes with a backup utility that should be used to backup the BVE database in proper manner. The script sends special signals to the Poet database to flush all in-memory objects to disk and allows an external backup program to copy the database files. Once the backup operation has been completed, the script sends signal to Poet to resume normal operation. While the backup operation is in progress, Poet will continue to operate normally and cache all write transactions.

On Unix platforms, the backup utility is run from the NetVigil cron job (`NETVIGIL_HOME/utils/runPeriodicTasks.pl`) nightly (see “Scheduled tasks (cron jobs)” on page 25). By default these backup utilities create a tar-gzipped archive in the `/var/backup` directory with names of the form `netvigil-mm-dd-yy, hh-mm.tar.gz`. If you would like to create these files somewhere else, edit the `01d_50_db_backup.sh` script to specify the destination by changing the `backupPath` variable. (Whether you use the default or some other location, make sure that there is sufficient disk space for the backup files.)

To backup the provisioning database:

While NetVigil is running:

```
% cd NETVIGIL_HOME  
utils/db_backup.sh
```

Use `db_backup.cmd` on Windows platforms instead.

You can also export the provisioning database into XML using:

```
utils/databaseUtil.pl --action export --file provdb.xml
```

❑ To restore a copy of the provisioning database:

In order to restore a copy of the provisioning database, simply uncompress and un-tar the archive into the `NETVIGIL_HOME` directory. You must stop NetVigil before restoring the database.

```
% /etc/init.d/netvigil stop  
% cd NETVIGIL_HOME  
% cd database  
% mv provisioning provisioning.OLD  
% mv provisioningdict provisioningdict.old  
% cd ..  
% gunzip -c /var/backup/netvigil-mm-dd-yy, hh-mm.tar.gz | tar xvf  
- database/provisioning database/provisioningdict  
% /etc/init.d/netvigil start
```

❑ Repairing the Provisioning Database

In order to repair a corrupted provisioning database, use the following commands. You should consult with Fidelity support before using these commands:

```
cd "\\Program Files\Fidelity Netvigil"  
poet\bin\ptadmin -check database\provisioning  
poet\bin\ptadmin -reorg database\provisioning
```

If you get any errors, then you should contact Fidelity support before attempting to restart NetVigil.

11.2 DGE database Maintenance

The DGE database is located in the directory `database/mysql/aggregateddatadb` with the extension “.MYD.” NetVigil comes with a utility to create a fast snapshot of the DGE database by locking all the databases and then saving the raw databases directly.

❑ Backing up the DGE database:

```
cd NETVIGIL
utils/db_backup.sh
```

On Windows, use the `db_backup.cmd` command instead.

If you want to change the location of the backups, you must edit the `db_backup.sh` script.

❑ To restore the DGE database:

```
% cd NETVIGIL_HOME
% etc/netvigil.init stop
% cd database
% mv aggregateddatadb aggregateddatadb.OLD
% tar xf /var/backup/netvigil-mm-dd.tar aggregateddatadb
% cd NETVIGIL_HOME
% utils/db_repair.sh # to do a consistency check
% etc/netvigil.init start
```

❑ Repairing the MySQL DGE Database

To repair the DGE database indexes, shutdown NetVigil first. Then run the following command to rebuild the indexes:

```
cd NETVIGIL_HOME
utils/db_repair.sh
```

This will use the `myisamchk` command to rebuild the indexes. If you do not have enough disk space to rebuild the database, edit the `db_repair.sh` file and uncomment the “-o” option instead of the “-r” option.

□ Exporting the database to SQL

If you are moving the database between platforms, you will need to export the database into a SQL file using the following commands:

```
bin/mysqldump --defaults-file=NETVIGIL_HOME/etc/mysql.conf --opt  
aggregateddatadb > /var/backup/backup-db.sql
```

Additional information on backing up MySQL databases can be obtained from the following URLs:

<http://www.mysql.com/doc/en/mysqldump.html>

<http://www.mysql.com/doc/en/Backup.html>

To import the database back into MySQL, use the following commands:

```
% /etc/init.d/netvigil.init stop  
% cd /tmp  
% gunzip -c /var/backup/netvigil-mm-dd-yy,hh-mm.tar.gz | tar xvf  
- aggregateddatadb.sql  
% cd NETVIGIL_HOME  
% cd database  
% mv aggregateddatadb aggregateddatadb.OLD  
% cd ../mysql/bin  
% mysql --defaults-file=../etc/mysql.conf aggregateddatadb <  
/tmp/aggregateddatadb.sql  
% rm /tmp/aggregateddatadb.sql  
% /etc/init.d/netvigil.init start
```

11.2.1 Optimizing the DGE Database

You can rebuild the indexes and also run optimize. This command should only be run if you are experiencing slowness and Fidelia Support has advised you to run this command:

```
cd NETVIGIL_HOME  
utils/db_optimize.sh
```

11.3 Transferring NetVigil to Another Platform

The following description is for transferring an existing copy of NetVigil from a Unix platform to a Windows platform.

1. Install a fresh copy of NetVigil on the Windows servers. Make sure that the Windows host has been restarted after the installation is complete. Once the server is back online, shutdown NetVigil (which will start automatically) using the Service Controller. The same needs to be done on the Linux host using “etc/netvigil.init stop”.
2. Export the provisioning database from Linux host using following commands (substitute proper path names):

```
sh> cd /usr/local/netvigil/poet/bin
sh> LD_LIBRARY_PATH=/usr/local/netvigil/poet/lib
sh> export LD_LIBRARY_PATH
sh> ./ptxml -export -file /tmp/provdb.xml \
    -base ../../database/provisioning
```

Once the command completes, copy “/tmp/provdb.xml” to a temporary location on the Windows host

3. Import the data into the provisioning database on Windows host by opening a command window and executing the following commands:

```
c:
cd "\Program Files\Fidelia Netvigil"
utils\databaseUtil.pl --action import \
--file \path\to\provdb.xml
```

When asked if you want to “proceed with this operation”, answer “y” (w/o the quotes). The command may take a few minutes depending on how many objects were configured in the database from the Linux host

4. For transferring the DGE database, you can create a zip archive of “\$NETVIGIL/database/mysql/aggregateddatadb” directory and extract the files under the same directory on the Windows host
5. Finally, remember to copy your permanent license (“etc/licenseKey.xml”) from the Linux host to the Windows host

Steps 2 and 3 are only applicable for migrating the host that is running BVE/Web Application. Likewise, step 4 is only for the DGE host.

11.4 Password Recovery

Open command prompt and execute the following commands, substituting correct drive letter and path as necessary:

```
c:
```

```
cd "\Program Files\Fidelia Netvigil"  
utils\databaseUtils.pl --action export --file provdb.xml
```

This should create a file named “provdb.xml” which can be edited to reset the password. Search for the “superuser” entry and remove the entire “crypt” prefix along with the encrypted password. Replace this with a cleartext password (with no crypt prefix).

```
<loginName code="Ansi" lang="en">superuser</loginName>  
[...]  
<password code="Ansi" lang="en">{crypt}xyzabc</password>
```

Then import the edited file back into the database using:

```
utils\databaseUtils.pl --action import --file provdb.xml
```

Answer Y when prompted if you wish to replace the existing database. Then restart NetVigil.

11.5 Expire Messages From Message Window

You can “expire” messages in bulk via the MySQL client manually. First, open the message windows and record the “Device Address” for the device in question. Then log into each NetVigil host and execute the following commands:

```
cd/opt/netvigil  
etc/dgedb.init admin dge  
(at 'mysql>' prompt)  
update alarms set expireTime = 1081262436203 where  
  deviceAddress = 'n.n.n.n' and expireTime = -1;  
\q
```

where n.n.n.n is the IP address noted above. Once the database table has been updated, the messages should no longer show up on the message window.

11.6 Changing IP Address of BVE

Since the Provisioning Database stores all device and test parameters, aggregation scheme, test schedules, action profiles, etc. the DGE component needs to know what the IP address of the host is where the Provisioning Database is running. Likewise, since the database

contains information on user accounts, various limits and permissions, service definitions, etc. the Web Application component also needs to communicate with the Provisioning Database on a regular basis.

□ On the BVE:

1. etc/netvigil.xml

Locate the following section:

```
<provisioning name="provisioning"  
  host="n.n.n.n"  
  [...]
```

and change the old IP address n.n.n.n to the new IP address of the BVE.

Also configure the JMS server by updating the IP address in the following section of the above file:

```
<jms host="n.n.n.n"  
  [...]
```

2. etc/openjms-mysql.xml

Locate and update the IP address in the following section of this file:

```
<ServerConfiguration host="n.n.n.n" embeddedJNDI="true" />
```

□ On the DGE:

1. Edit etc/netvigil.xml as described above to update the IP address of the provisioning server.

Once the configuration files have been updated, restart NetVigil components on all hosts, starting with the Provisioning Database host first to apply the change.

