



Purpose

This document describes how to repair the databases used by Nagios XI.

Target Audience

This document is intended for use by Nagios XI Administrators.

Additional Documents

Nagios administrators are urged to read the following document related to the Nagios XI database:

- Nagios XI Database Optimization
 - <https://assets.nagios.com/downloads/nagiosxi/docs/Nagios-XI-Database-Optimization.pdf>

Problem Symptoms

If you experience high load on your Nagios XI server and the MySQL process (mysqld) appears to be consuming large amounts of CPU, it may be a symptom of one or more crashed tables. The steps outlined below allow you to repair the MySQL database tables used by Nagios XI.

Important Information

Historically MySQL has been the database used by Nagios XI, however in RHEL/CentOS 7.x onwards MariaDB is used instead of MySQL. MariaDB is simply a fork of the MySQL database, the commands used are the same however some of the output differs slightly.

Separate to this, Nagios XI versions before 5.x used a PostgreSQL database for storing the Nagios XI preferences. In Nagios XI 5.x this was moved over to the MySQL database.

The following applies:

- Fresh installations of Nagios XI will no longer use PostgreSQL
- Upgrading a previous version of Nagios XI will continue to use the PostgreSQL database

This is highlighted where necessary in the steps below. If you are unsure, execute the following command on your Nagios XI server:

```
awk '/"nagiosxi" => array\(\({getline;print}\)' /usr/local/nagiosxi/html/config.inc.php
```

Which should output one of the following:

```
"dbtype" => 'pgsql',  
    or  
"dbtype" => 'mysql',
```

Database Backups

Before attempting to repair database tables, you should ensure that you have recent backups of the database in case of catastrophic failure in the recovery process. Nagios XI includes a MySQL backup script that places database backups in the `/store/backups/mysql/` directory of the Nagios XI server. Verify that this directory contains recent and valid backups before continuing with the repair process.

The following documentation explains in detail the backup and restore steps in Nagios XI:

<https://assets.nagios.com/downloads/nagiosxi/docs/Backing-Up-And-Restoring-Nagios-XI.pdf>

Repairing MySQL Tables

Establish a terminal session to your Nagios XI server as the **root** user.

Versions Of Nagios XI 2014 Onwards

Execute the following command:

```
/usr/local/nagiosxi/scripts/repair_databases.sh
```

This script which will automatically repair all databases (`nagios`, `nagiosql`) (`nagiosxi` in XI 5.x). Once the script has completed, please review all of the output generated for any errors. For any errors please refer to the troubleshooting section in this document.

Versions Of Nagios XI BEFORE 2014

Stop the MySQL database server with the following command:

```
service mysqld stop
```

Run the Nagios XI database repair script with the following command:

```
/usr/local/nagiosxi/scripts/repairmysql.sh nagios
```

The script will check and repair all tables in the `nagios` MySQL database. This process may take several minutes to complete, depending on the size of your database. You can re-run the repair script on the `nagiosql` database. Once the script has completed, please review all of the output generated for any errors. For any errors please refer to the troubleshooting section in this document.

Once the script has completed, start the MySQL database server with the following command:

```
service mysqld start
```

Troubleshooting

If you receive an error, similar to this one:

```
SQL: DELETE FROM nagios_logentries WHERE logentry_time < FROM_UNIXTIME(1293570334)
      SQL:      SQL Error [ndoutils] :</b> Table './nagios/nagios_logentries' is marked as
crashed and last (automatic?) repair failedCLEANING ndoutils TABLE 'notifications'...
```

You may need to run a force repair on the tables:

```
service mysqld stop
cd /var/lib/mysql/nagios
myisamchk -r -f nagios_<corrupted_table>

service mysqld start
rm -f /usr/local/nagiosxi/var/dbmaint.lock
php /usr/local/nagiosxi/cron/dbmaint.php
```

If you receive an error, similar to this one:

```
Error : Incorrect file format 'nagios_systemcommands'
error : Corrupt
```

You will need to execute the following command to fix the table:

```
service mysqld start
echo 'repair table nagios_systemcommands use_frm;' | mysql -t -u root -pnagiosxi nagios
service mysqld restart
```

Then check the log file for errors:

MySQL

```
tail -n 20 /var/log/mysqld.log
```

MariaDB

```
tail -n 20 /var/log/mariadb/mariadb.log
```

In certain instances, it may be necessary to truncate (empty) one or more tables. The following commands provide examples of how to truncate both the `logentries` and `notifications` tables in the `nagios` MySQL database:

```
mysql -u ndoutils -pn@gweb nagios -e 'TRUNCATE TABLE nagios_logentries'  
mysql -u ndoutils -pn@gweb nagios -e 'TRUNCATE TABLE nagios_notifications'
```

After you truncate tables, you should repeat the repair process outlines in the previous section.

If you receive this error:

```
myisamchk: error: 'nagios_commenthistory.MYI' is not a MyISAM-table
```

This means that the MySQL tables are in the wrong format and they need to be converted. Before you convert them, do a full backup of the server in case there are any issues. To convert all `InnoDB` Tables to `MyISAM` (all databases) follow these steps:

Execute the following command to enter the `mysql` command interface (`nagiosxi` is the default root MySQL/MariaDB password):

```
mysql -u root -p'nagiosxi'
```

You are now logged into the mysql command interface, this is indicated by the `mysql>` OR `MariaDB [(none0)]>` prompt.

Run the following command to convert all of the tables (this is one long command that is wrapped over two lines):

```
SELECT CONCAT('ALTER TABLE ', TABLE_SCHEMA, '.', TABLE_NAME, '
engine=MyISAM;') FROM information_schema.TABLES WHERE ENGINE = 'InnoDB';
```

Now you can exit the mysql command interface:

```
quit
```

After this, you can run the following to repair the MYSQL databases.

```
mysqlcheck -f -r -u root -pnagiosxi --all-databases
```

Once the command has completed, please review all of the output generated for any errors.

If you have run out of disk space on your Nagios XI server, the following KB article can provide solutions to resolving this issue:

<https://support.nagios.com/kb/article.php?id=26>

Once you've resolved the disk space issue you should run the repair database script again.

Finishing Up

This completes the documentation on repairing the Nagios XI databases.

If you have additional questions or other support related questions, please visit us at our Nagios Support Forums:

<https://support.nagios.com/forum>

The Nagios Support Knowledgebase is also a great support resource:

<https://support.nagios.com/kb>