



## Purpose

This document describes how to configure optimal database settings for Nagios XI to help increase performance. Nagios XI stores current and historical information in various databases in order to facilitate reports and provide users with instant information on monitored elements. Over time the Nagios XI database tables may grow to excessive size, resulting in poor performance and high disk space and disk I/O utilization.

## Target Audience

This document is intended for use by Nagios XI Administrators looking to optimize their installation for increased monitoring performance.

## Accessing Performance Settings

You configure database performance settings by navigating to **Admin > System Config > Performance Settings > Databases** tab.

### Performance Settings

Pages	Dashlets	Databases	Subsystem	Auto-Running	Backend Cache	Snapshots	PDF/JPG Exporting
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These options allow you to specify data retention, and optimization intervals for the databases Nagios XI uses.

#### Nagios XI Database

<b>Max Commands Age:</b>	<input type="text" value="480"/>	Max time in minutes to keep commands.
<b>Max Events Age:</b>	<input type="text" value="480"/>	Max time in minutes to keep events.
<b>Max SNMP Trap Age:</b>	<input type="text" value="90"/>	Max time in DAYS to store SNMP trap data in the database.
<b>Max Scheduled Reports History Age:</b>	<input type="text" value="365"/>	Max time in DAYS to store scheduled report log data.
<b>Max Expired Auth Token Age:</b>	<input type="text" value="24"/>	Max time in HOURS to store expired auth tokens in the database.
<b>Max Expired Session Age:</b>	<input type="text" value="24"/>	Max time in HOURS to store expired (no longer active) session data in the database.
<b>Max Audit Log Age:</b>	<input type="text" value="180"/>	Max to keep audit log entries in days.
<b>Optimize Interval:</b>	<input type="text" value="60"/>	Max time in minutes between optimization runs.

Several options are available for tuning database performance settings.

### Nagios XI Database Settings

The Nagios XI database is where the Nagios XI applications settings are stored.

**Max Commands Age** and **Max Events Age** both decide how long Nagios XI will retain processed subsystem commands and events for review.

**Max SNMP Trap Age** is how long Nagios XI will store SNMP trap data.

**Max Expired Auth Token Age** is how long Nagios XI will store expired auth tokens.

**Max Expired Session Age** is how long Nagios XI will store expired session data.

**Max Audit Log Age** is how long Nagios XI will store Audit Log entries.

The **Optimize Interval** determines how often the database optimization script is run.

### NDOUtils Database Settings

The NDOUtils database is used to store current and historical monitoring information. Depending on how many objects are being monitored by your Nagios XI server will affect how large this database can grow to.

The NDOUtils database can have the most affect on the overall performance of your Nagios XI server, hence adjusting these options can improve the overall performance of your Nagios XI server.

#### NDOUtils Database

<b>Max External Commands Age:</b>	<input type="text" value="7"/>	Max time in DAYS to keep external commands.
<b>Max Log Entries Age:</b>	<input type="text" value="90"/>	Max time in DAYS to keep log entries.
<b>Max Notifications Age:</b>	<input type="text" value="90"/>	Max time in DAYS to keep notifications.
<b>Max State History Age:</b>	<input type="text" value="730"/>	Max time in DAYS to keep state history information.
<b>Max Timed Events Age:</b>	<input type="text" value="5"/>	Max time in minutes to keep timed events.
<b>Max System Commands Age:</b>	<input type="text" value="5"/>	Max time in minutes to keep system commands.
<b>Max Service Checks Age:</b>	<input type="text" value="5"/>	Max time in minutes to keep service checks.
<b>Max Host Checks Age:</b>	<input type="text" value="5"/>	Max time in minutes to keep host checks.
<b>Max Event Handlers Age:</b>	<input type="text" value="5"/>	Max time in minutes to keep event handlers.
<b>Optimize Interval:</b>	<input type="text" value="60"/>	Max time in minutes between optimization runs.

Recommended values for various NDOUtils database settings are provided in the table below.

Option	Recommended Setting	Description
Max External Commands Age	7	Retains last 7 days of external commands
Max Log Entries Age	90	Retains last 90 days of log entries
Max Notifications Age	90	Retains last 90 days of notifications
Max State History Age	730	Retains last 2 years of state history
Max Timed Events Age	5	Retains last 5 minutes of timed events
Max System Commands Age	5	Retains last 5 minutes of system commands
Max Service Checks Age	5	Retains last 5 minutes of service checks
Max Host Checks Age	5	Retains last 5 minutes of host checks
Max Event Handlers Age	5	Retains last 5 minutes of event handlers
Optimize Interval	60	Optimizes the database every 60 minutes

## NagiosQL Database Settings

The NagiosQL database is where Core Configuration Manager stores the Nagios XI object configurations.

### NagiosQL Database

**Max Logbook Age:**  Max time in minutes to keep logbook records.

**Optimize Interval:**  Max time in minutes between optimization runs.

The available settings are as follows:

- **Max Logbook Age** – How long to retain logbook records for the audit log
- **Optimize Interval** – Similar to the other databases, specifies how often to run the optimization script

The defaults of 480 minutes and 60 minutes respectively are likely sufficient for most environments.

## Database Repair

If you experience high load on your Nagios XI server and the MySQL process (mysqld) appears to be consuming large amounts of CPU, your Nagios XI database may require repair.

Instructions on repairing the Nagios XI MySQL database can be found in the following documentation:

[Repairing The Nagios XI Database](#)

## Finishing Up

This completes the documentation on database optimization in Nagios XI.

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>