

# Database Access For Development Purposes

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## Overview

Nagios XI comes as a ready to go monitoring system delivered as a virtual machine (VM). I have spent a bit of time developing Configuration Wizards, Components and Dashlets for Nagios XI and during this time I have needed to look at the backend databases to understand where data is stored and how.

I am very much well a graphical user interface (GUI) kind of person, so when it comes to test and development, I will use a GUI if I can. The purpose of this document is to show you how you can access the backend databases from a Windows 7 PC using two different database management applications.

Specifically you need to perform some configuration steps for each database system to allow access from the Windows 7 PC.

## The Databases

There are two different database systems running on Nagios XI.

### MySQL

This database system is used for Nagios Core. The data that is stored in this database is for all of the monitoring configurations like host and service object definitions.

### PostgreSQL

This database system is used for the Nagios XI configurations. Things like user accounts and dashlet settings are just a few examples of what is stored in this database.

# Requirements

## Nagios XI VM

This document is based on a running virtual machine of Nagios XI downloaded from the Nagios Enterprise website. It is recommended to be running the most up to date release version of Nagios XI. This guide may also be helpful for admins who have deployed Nagios XI manually in their environment, however keep in mind that your configuration might be slightly different to the Nagios XI VM so some steps may not be verbatim.

At the time of writing this document I was using a Nagios IX 2011R3.2 VM.

## Applications

There are a couple of programs I use throughout this guide:

- Putty is used to remotely access your Nagios XI server to perform console commands
  - <http://www.chiark.greenend.org.uk/~sgtatham/putty/>
- MySQL Workbench is the GUI I use for connecting to the MySQL databases
  - <http://www.mysql.com/products/workbench/>
  - Version 5.2.33 was used when I created this document
- pgAdmin III is the GUI I use for connecting to the PostgreSQL databases
  - <http://www.pgadmin.org>
  - Version 1.14.3 was used when I created this document
- nano is a text based editor that I use in the CentOS shell
  - I have steps below showing you how to make sure nano is installed

You will need to download these apps and install them before proceeding.

### Putty

The first time you connect to the Nagios XI server it will present a warning dialog box about the Nagios XI host not being in the local cache, click Yes and you will not be prompted again.

I highly recommend that you use Putty for all of your shell commands. The reason why is that copy and paste is your friend ... all the steps here can be copied to the Putty session to save you time and typing errors.

### nano

I really like the text editor nano, it's much easier to use than vi so I always install it. Sometimes it is already installed in the Nagios XI VM so this step is not always necessary.

- Establish a Putty session to your Nagios XI VM
- Username: **root**
- Password: Your root Password (nagiosxi by default)
- Type **yum install nano** and press **Enter**
- *Wait while nano is installed*
- You can now run nano by typing **nano** and pressing **Enter**

This completes installing nano.

# MySQL

## Configuring MySQL

- Establish a Putty session to your Nagios XI VM
- Username: **root**
- Password: Your root Password (nagiosxi by default)

Firstly we need to edit the MySQL config and define the IP address of the Nagios XI VM. My Nagios XI VM uses the IP address 192.168.100.64 so this is what I will use in the steps below.

- Type **nano /etc/my.cnf** and press **Enter**
  - Under the **[mysqld]** section we need to add the following line
    - **bind-address=192.168.100.64**
  - Press **Ctrl + X**
  - Type **y**
  - Press **Enter**
- Additionally we need to restart the mysqld service
- Type **/etc/init.d/mysqld restart** and press **Enter**

Now we must add a user account to the MySQL database to allow remote access. I will be using the username **troy** and the password **troypassword** .

- Type **mysql -u root -p mysql** and press **Enter**
  - When prompted for a password the default password is **nagiosxi**
  - Type **CREATE USER 'troy'@'%' IDENTIFIED BY 'troypassword';** and press **Enter**
  - Type **GRANT ALL PRIVILEGES ON \*.\* TO 'troy'@'%' WITH GRANT OPTION;** and press **Enter**
  - Type **CREATE USER 'troy'@'localhost' IDENTIFIED BY 'troy';** and press **Enter**
  - Type **GRANT ALL PRIVILEGES ON \*.\* TO 'troy'@'localhost' WITH GRANT OPTION;** and press **Enter**
  - Type **exit** and press **Enter**

Last step is to allow the CentOS firewall inbound traffic on port 3306.

- Type **/sbin/iptables -I INPUT -p tcp --destination-port 3306 -j ACCEPT** and press **Enter**
- Type **service iptables save** and press **Enter**

## Connect To MySQL

- Open MySQL Workbench

First we must define a connection.

- Click the pull down menu **Database** and select **Manage Connections**
  - **Click** the **New** button
  - Connection Name: **My Nagios XI VM**
  - Connection Method: **Standard (TCP/IP)**
  - **Parameters** tab
    - Hostname: **192.168.100.64**
    - Port: **3306**
    - Username: **troy**
    - **click** the **Store in Vault ...** button
      - Password: **troypassword**
      - Click **OK**
    - Default Schema: **leave this blank**
  - **Click** the **Test Connection** button
    - If everything is correct you will receive the message connection parameters are correct
    - Click **OK**
  - **Click** the **Close** button

Now we can connect to the MySQL database on the Nagios XI VM.

- Click the pull down menu **Database** and select **Query Database**
  - Stored Connection: **My Nagios XI VM**
  - Click **OK**
- You are now connected to the MySQL database on your Nagios XI VM.

This completes the MySQL chapter.

# PostgreSQL

## Configuring PostgreSQL

- Establish a Putty session to your Nagios XI VM
- Username: **root**
- Password: Your root Password (nagiosxi by default)

Firstly we need to edit the PostgreSQL config and define the subnet that my Windows 7 PC is on, which is **10.254.1.0/24** in this example.

- Type **nano /var/lib/pgsql/data/postgresql.conf** and press **Enter**
  - Under the **# CONNECTIONS AND AUTHENTICATION** section we need to add the following line (*press page down three times and you should be at that section*)
    - **listen\_addresses = '\*'**
  - Press **Ctrl + X**
  - Type **y**
  - Press **Enter**
- Type **nano /var/lib/pgsql/data/pg\_hba.conf** and press **Enter**
  - Under the **# IPv4 local connections:** section we need to add the following line (*press page down three times and you should be at that section*)
    - **host all all 10.254.1.0/24 trust**
  - Press **Ctrl + X**
  - Type **y**
  - Press **Enter**
- Additionally we need to restart the postgresql service
- Type **/etc/init.d/postgresql restart** and press **Enter**

Last step is to allow the CentOS firewall inbound traffic on port 5432.

- Type **/sbin/iptables -I INPUT -p tcp --destination-port 5432 -j ACCEPT** and press **Enter**
- Type **service iptables save** and press **Enter**

## Connect To PostgreSQL

- Open pgAdmin III

First we must define a connection.

- Click the pull down menu **File** and select **Add Server**
  - **Properties** tab
    - Name: **My Nagios XI VM**
    - Host: **192.168.100.64**
    - Port: **5432**
    - Service: leave this blank
    - Maintenance DB: **postgres**
    - Username: **nagiosxi**
    - Password: **nagiosxi**
      - *This is the default password in the Nagios XI VM*
    - Store password: **tick**
  - Click **OK**
- You will now be **connected** and your connection will appear in the **left** pane under **Object browser**

Every other time you open pgAdmin III, double click on the **My Nagios XI VM** server under the **Object browser** in the **left** pane.

This completes the PostgreSQL chapter.

## My Nagios XI Projects

I have created a handful of projects for Nagios XI for various reasons. Some of them are very useful indeed so I suggest you check them out, you can view them all here via this link:

- <http://exchange.nagios.org/directory/Owner/Box293/1>

## Discount Offer

Get a **10%** discount on your Nagios XI Unlimited Nodes license when purchased through this link:

- <http://www.nagios.com/nagiosxi10?ref=box293>

## About Me

My name is Troy and I am a Cloud Computing Expert and also a Nagios XI developer based in Newcastle Australia. I can be contacted a few ways:

- Through the Nagios [forums](#) as the user Box293
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