

How To Configure Nagios XI Multi-Tenancy Support

Purpose

This document describes how to configure Nagios XI to support multi-tenancy, to allow multiple users or clients to share access to a single Nagios XI instance, while ensuring those specific users have access only to hosts and services they are authorized for.

Target Audience

This document is designed for use by Nagios administrators, hosted service providers and companies that wish to expose different hosts and services to different departments, different clients, or similar situations where there needs to be segregated access to monitored entities.

Additional Resources

In addition to this document, Nagios administrators should be familiar with the following technical documents available at the Nagios Library (<http://library.nagios.com>):

- XI Users and Contacts

These documents provide supporting documentation needed to successfully implement multi-tenancy with Nagios XI.

Multi-Tenancy Overview

Multi-tenancy allows administrators to configure Nagios XI in such a way that the following criteria can be met:

- A single Nagios XI instance can monitor hosts and services for multiple users (clients)
- Each user (client) can only see the hosts and services they are authorized for

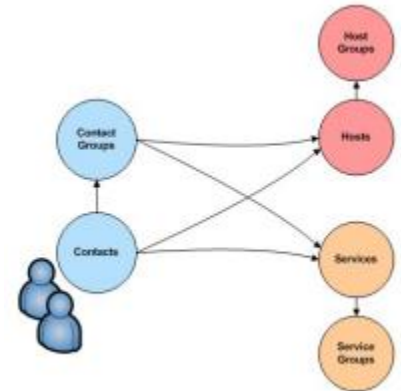
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Permissions and Multi-Tenancy

A key component of multi-tenancy is the ability to restrict a given user's permissions to allow them to see and control only hosts and services they are authorized for. Nagios XI automatically determines what hosts and services a user is authorized to see based on their relationship to those hosts and services.

By default, Nagios XI grants the users permission to see and control hosts and services that are configured to:

- Send alerts to the user (contact).
- Send alerts to a contact group of which the user (contact) is a member.



A key to understanding the relationships between objects and the corresponding permissions that contacts have is knowing how different types of objects relate to each other:

- Users (contacts) may belong to one or more contact groups
- Hosts and services may be configured to send alerts to multiple contacts or contact groups
- Hosts and services may be members of one or more host groups or service groups, respectively

Getting Started

This guide will take you through the steps of configuring Nagios XI to support multi-tenancy, including:

- Creating users / contacts
- Defining contact groups
- Configuring hosts and services
- Defining host groups

Let's get started!

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Administrative Login

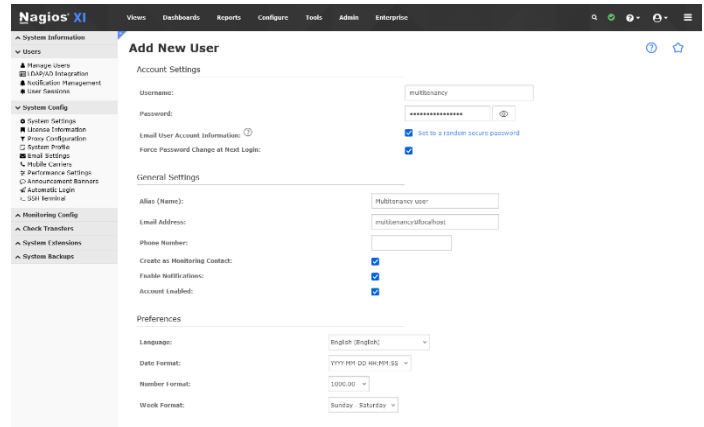
You will need to perform operations which require administrator access in the following steps, so login to Nagios XI as the *nagiosadmin* user...

Creating Users / Contacts

The first step in creating a multi-tenant Nagios installation is the creation of multiple user accounts.

You can create new user accounts in Nagios XI by accessing the **Admin** → **Manage Users** menu and selecting the **Add New User** option.

Each user that you create is automatically added as a monitoring contact that can be referenced in later configuration steps.



The screenshot shows the Nagios XI web interface for adding a new user. The page is titled "Add New User" and is part of the "Admin" section. The left sidebar contains a navigation menu with options like "System Information", "Users", "System Config", "Monitoring Config", "Check Trainers", "System Extensions", and "System Backups". The main content area is divided into several sections: "Account Settings", "General Settings", and "Preferences".

- Account Settings:** Includes fields for "Username" (set to "multitenancy"), "Password" (masked with asterisks), "Email User Account Information" (checked), and "Force Password Change at Next Login" (checked).
- General Settings:** Includes "Alias (Name)" (set to "Multitenancy user"), "Email Address" (set to "multitenancy@localhost"), "Phone Number" (empty), "Create as Monitoring Contact" (checked), "Enable Notifications" (checked), and "Account Enabled" (checked).
- Preferences:** Includes "Language" (set to "English (English)"), "Date Format" (set to "YYYY-MM-DD HH:MM:SS"), "Number Format" (set to "1000.00"), and "Week Format" (set to "Sunday - Saturday").

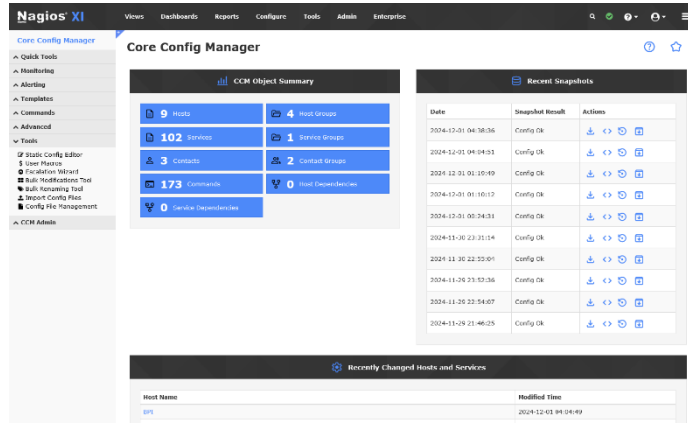
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Defining Contact Groups

It is considered best practice to define one or more contact groups that can be used to categorize the contacts you create. Contact groups can be used to group contacts by company/client, department, team, or other logical grouping.

You can add a new contact group by:

- Entering the *Nagios Core Config Manager* (**Admin** → **Core Config Manager**)
- Selecting the **Contact Groups** menu item
- Clicking the **Add New** button in the Contact Group Management screen



Contact Groups

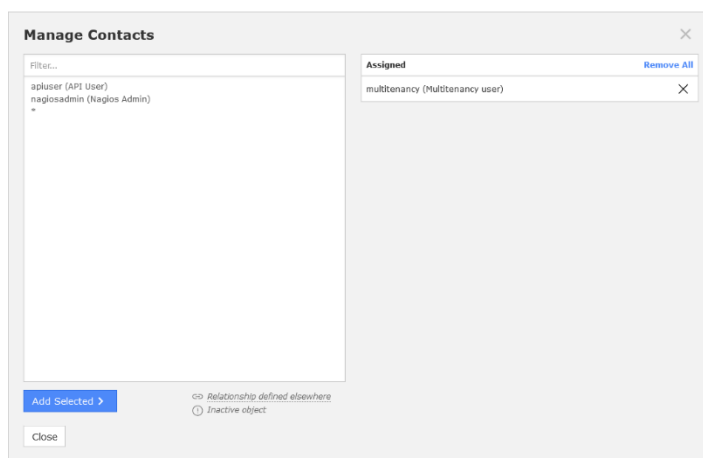
[+ Add New](#) *Displaying 1-2 of 2 results*

<input type="checkbox"/>	Contact Group Name	Alias	Active	Actions	ID
<input type="checkbox"/>	admins	Nagios Administrators	Yes		1
<input type="checkbox"/>	xi_contactgroup_all	All Contacts	Yes		2

[+ Add New](#) [Apply Configuration](#) With checked Go Results per page 15

When adding a new contact group, you will define a name and description for the group and select the members that should belong to it. Members can either be individual members or group members. Groups members are other contact groups that are themselves a member of this group (a sub-group allowing for multiple group relationships on different levels).

Remember to save your settings after you modify a contact group and apply the configuration when done.



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Configuring Hosts and Services

To grant users permission to see specific hosts and services, you must configure that user to be a notification contact for those hosts and services.

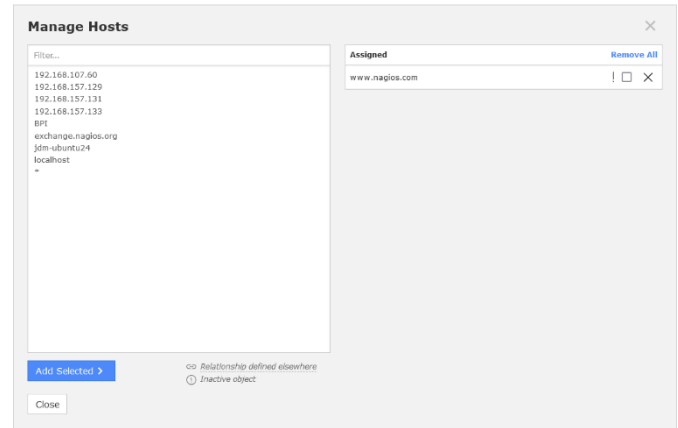
When configuring new hosts and services using the Monitoring Wizard, you can simply select the appropriate contact(s) and/or contact group(s) that should receive notifications for the host and services on the **Notification Settings** page. The contacts and contact groups you select on this screen will have the ability to view the status of these hosts and services when they login to Nagios XI.

If you create your users and/or contact groups *after* creating hosts and services, you can easily re-configure the hosts or services to use those new contacts and/or contact groups. This is accomplished by selecting the **Re-configure this host/service** option under the **Configure** tab when you are viewing detailed information on a specific host or service.

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Defining Host Groups

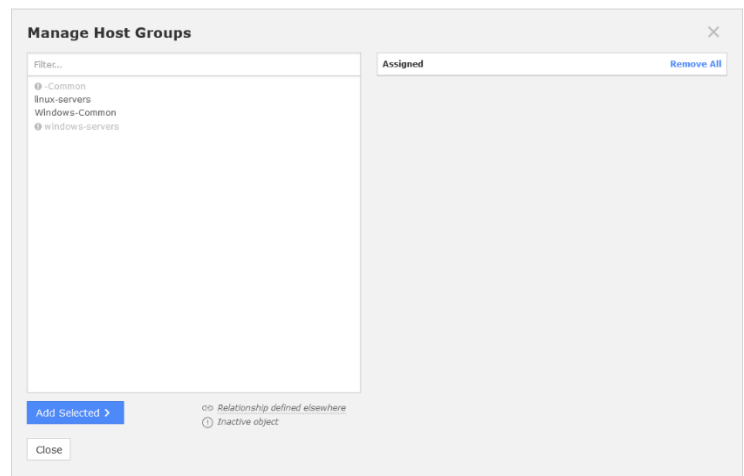
Host groups allow you to group hosts in a logical manner, making it easier for users to get a quick view of their network infrastructure. They will not have an impact on the notifications or access control but will make it easier for both your users to grasp what they are looking at and for you as the administrator to quickly pinpoint where problems are occurring.



You can define new host groups by:

- Entering the *Nagios Core Config Manager* (**Admin** → **Core Config Manager**)
- Selecting the **Host Groups** menu item
- Clicking the **Add New** button in the Host Group Management screen

Like contact groups, you can create host groups that have individual hosts and other host groups as their members.



Remember to choose the **Apply Configuration** option when you are done making configuration changes.

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Service Groups

Service groups work in a similar way to host groups, in that they allow you to group services together in a way that makes sense for users who need to view the status of your infrastructure. The process for creating service groups is like that of creating host groups, so we will not cover it here.

You can define new service groups by:

- Entering the *Nagios Core Config Manager* (**Admin** → **Core Config Manager**)
- Selecting the **Service Groups** menu item
- Clicking the **Add New** button in the Service Group Management screen

An Example

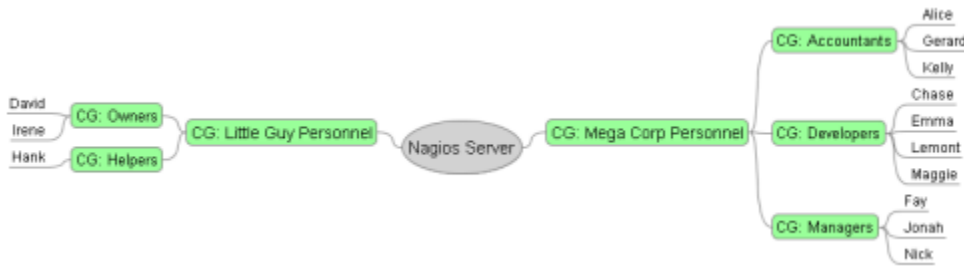
We configured Nagios XI with a sample setup to test and document the multi-tenancy features available. The information below describes how we setup our Nagios XI instance, and the end-result of our configuration.

The configuration diagrams follow the pattern shown in the image below. Elements of the diagram show the relationships between hosts, host groups, contacts, and contact groups.

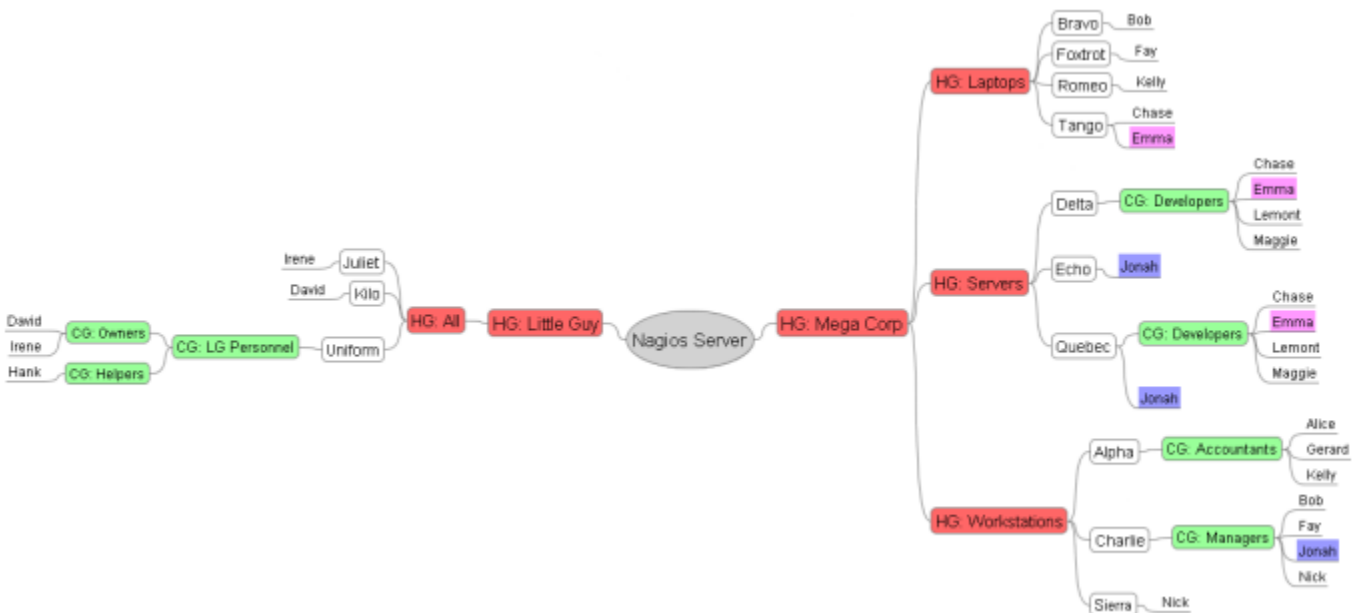


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We defined two client companies - Little Guy and Mega Corp - each of which had a single top-level contact group covering their entire company. Those top-level contact groups then had other sub-groups as their members, which were used to define roles or departments within the company. The sub-groups then had individual employees as their members. The image below represents the configuration we created.



Top-level host groups were configured to contain each company's respective infrastructure elements. Sub-level host groups were defined to narrow the scope of included infrastructure elements for Mega Corp. The diagram below shows the hosts that are defined as members of various hostgroups, along with the contact(s) and/or contact group(s) that were assigned to each host for notification purposes.



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Administrator View

We configured Nagios XI using the *nagiosadmin* account. This account was an administrator, so it had permission to view all hosts, services, and groups that were defined. The screenshot to the right shows the hostgroups that were visible to the administrator under the Hostgroup Overview screen once we finished configuring everything.

The screenshot displays the Nagios XI Administrator View. It includes several summary tables and host group details:

- Host Group Status:** Overview of host groups.
- Host Status Summary:**

Up	Down	Unreachable	Pending
15	16	2	7
Unhandled	Problems	All	
36	36	9	98
- Service Status Summary:**

Ok	Warning	Unknown	Critical	Pending
15	16	2	7	
Unhandled	Problems	All		
36	36	9	98	
- Multitenancy (Multitenancy):**

Host	Status	Services
www.nagios.com	Up	4 Ok
- Windows-Common (Windows-Common):** No status information found.
- Linux Servers (linux-servers):**

Host	Status	Services
193.108.137.131	Down	1 Ok 3 Critical
193.108.137.135	Down	2 Ok 3 Critical
idm-ubuntu24	Up	20 Ok 15 Warning 1 Unknown 14 Critical
localhost	Up	14 Ok

Non-Admin View #1: Jonah

We created a *Jonah* user that appeared in three different places (highlighted in blue) in the diagram on the previous page. *Jonah* was configured as a direct notification contact for the hosts *Echo* and *Quebec*, and indirectly as a notification contact for *Charlie* via his membership in the *Managers* contact group. These relationships are summarized in the diagram below.



We logged into Nagios XI as *Jonah* and selected the Hostgroup Overview screen to see what hosts and host groups *Jonah* could see. The screenshot to the right shows that *Jonah's* view was limited to include only the hosts *Echo*, *Quebec*, and *Charlie*.

The screenshot displays the Nagios XI Non-Admin View for user *Jonah*. It includes several summary tables and host group details:

- Host Group Status:** Overview of host groups.
- Host Status Summary:**

Up	Down	Unreachable	Pending
0	0	0	0
Unhandled	Problems	All	
0	0	1	
- Service Status Summary:**

Ok	Warning	Unknown	Critical	Pending
0	0	0	0	0
Unhandled	Problems	All		
0	0	4		
- Multitenancy (Multitenancy):**

Host	Status	Services
www.nagios.com	Up	4 Ok

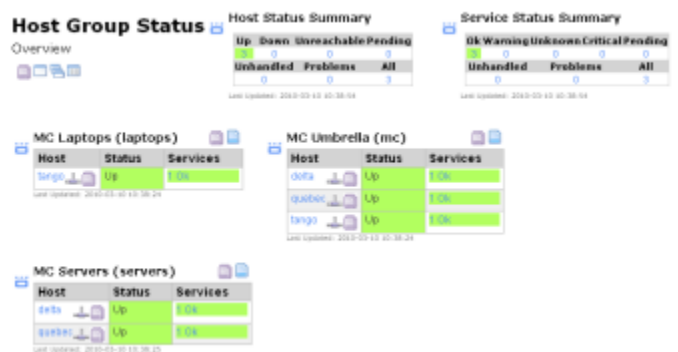
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Non-Admin View #2: Emma

Another user *Emma* (highlighted in pink) was directly defined as the notification contact for the host *Tango* and indirectly for *Delta* and *Quebec* through her membership in the *Developers* contact group.



As seen in the image to the right, *Emma* could only see the *Delta*, *Tango*, and *Quebec* servers when she logged in.



Conclusion

As you can see in the examples above, *Jonah* and *Emma* only see the hosts they have permission to. Neither sees any indication whatsoever of the other company (Little Guy) or any of their assets, nor of things within their own company that they have not been assigned as a notification contact for. That provides both security from the administrator's perspective and simplicity from the end user's perspective.

You can easily configure Nagios XI to support the same type of host grouping and user-specific permissions we demonstrated to enable effective multi-tenancy features.

Finishing Up

This completes the documentation on configuring multitenancy in Nagios XI.

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

[Visit Nagios Support Forum](#)

[Visit Nagios Knowledgebase](#)