



vSpace Management Center for the N-series

NComputing vSpace Management Center Welcome vmcadmin | Sign out
Version: 3.0.12

[Dashboard](#) | [Device Management](#) | [Group Management](#) | [Settings](#) | [Help](#)

Dashboard >

Dashboard

8 N-series Device(s)

N400 7 Online 1 Offline

Log Activity [Export](#) [Advanced Search](#)

| Event | Type | Name | IP Address | Description | Timestamp |
|--------------------------|-------------------|--------------|------------|--|------------------------------|
| Terminal client activity | Management Server | VMC.qa.local | 10.4.8.23 | Device 'mnc400:20001044' updated its configuration | Wed Jun 27 09:53:45 PDT 2012 |
| Terminal client activity | Management Server | VMC.qa.local | 10.4.8.23 | Device 'mnc400:20001313' updated its configuration | Wed Jun 27 09:46:14 PDT 2012 |
| Terminal client activity | Management Server | VMC.qa.local | 10.4.8.23 | Device 'mnc400:20001313' updated its configuration | Wed Jun 27 09:38:54 PDT 2012 |
| Terminal client activity | Management Server | VMC.qa.local | 10.4.8.23 | Device 'mnc400:20001232' updated its configuration | Wed Jun 27 09:34:19 PDT 2012 |
| Terminal client activity | Management Server | VMC.qa.local | 10.4.8.23 | Device 'mnc400:20001010' updated its configuration | Wed Jun 27 09:23:54 PDT 2012 |

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User Manual

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1.0 vSpace Management Center Overview

For organizations deploying the NComputing N-series thin clients for Citrix HDX, vSpace Management Center provides a highly scalable, flexible and easy to use single point of device management. With its web-based console, IT administrators can manage their N-series devices from anywhere, anytime. vSpace Management Center helps organize a deployment whether it is a single site or multiple sites – and makes it easy to perform management tasks remotely including firmware updates, configuration changes, device resets and more. By allowing administrators to access and manage all N-series devices from a single location, regardless of the size or number of deployment sites, vSpace Management Center dramatically reduces the administrative overhead needed to maintain and control their environment.

Key Features and Attributes

- **Centralized:** access an entire N-series deployment from a single console
- **Scalable:** manage 100, 1000 or 10,000 devices across multiple networks and locations
- **Simple:** easy to install and use with a flexible web-based user interface
- **Profile-based configuration:** assign devices to common profiles for scalable management of device settings
- **1:1 or 1:many management:** use profiles for 1:many management or push settings to an individual device
- **Easy firmware updates:** the firmware update wizard simplifies device updates and scheduling
- **Simple status:** the dashboard with logging and group views enables rapid assessment of your environment's status
- **Consolidated install:** install the complete vSpace Management Center via one installer in under 10 minutes
- **Comprehensive logging:** system events are continually logged to aid in troubleshooting and to confirm actions
- **Delegated Administration:** supports two levels of management for “view-only” and “edit-capable” access and can be easily configured via Active Directory/LDAP

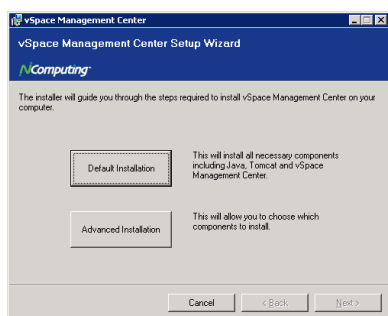
This user manual provides a comprehensive guide to the features offered by vSpace Management Center as well as a detailed explanation of their functions. From remotely updating device firmware to backing up critical information and settings, this document will walk you through each step of using vSpace Management Center's powerful administrative toolset.

2.0 Installation and Registration

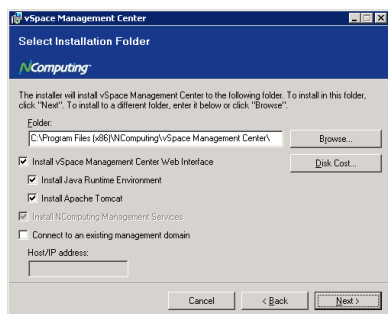
This section of the guide will walk you through the installation and registration process for vSpace Management Center. Keep in mind that this document assumes the user has already acquired both the vSpace Management Center installation software and a number of licenses appropriate for their environment. For the latest NComputing software version please visit the NComputing software download site at <http://www.ncomputing.com/softwaredownload>.

2.1 Software Installation

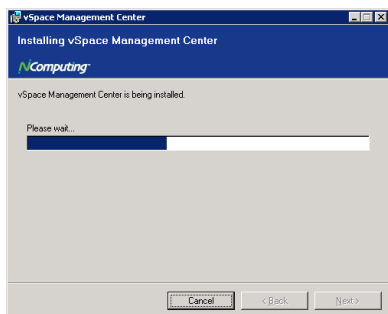
The begin installation, run the vSpace Management Center installation (vSpace Management Center Installer.msi) and proceed as directed through the installation process.



You will be given the option to perform a “Default” or “Advanced” installation. The Default method automatically installs all components necessary to run vSpace Management Center. This includes Java and Apache Server.



The Advanced method gives you more control over which components are installed. You will also have the option to automatically join your new server to an existing vSpace Management Center management zone if this is not the first management server you have installed in your environment.



Once you have selected your installation method, proceed as directed through the installation process until you are notified that the process is complete. At this point a system restart will be required.

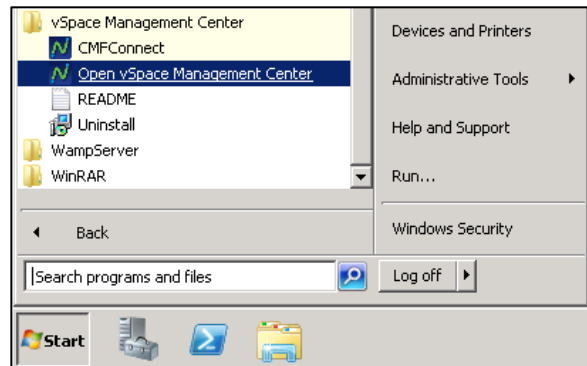
Note: Attempting to complete the installation process or run vSpace Management Center without the presence of Java and Apache Server will result in an error message. See the troubleshooting section for more information.

2.2 Registration

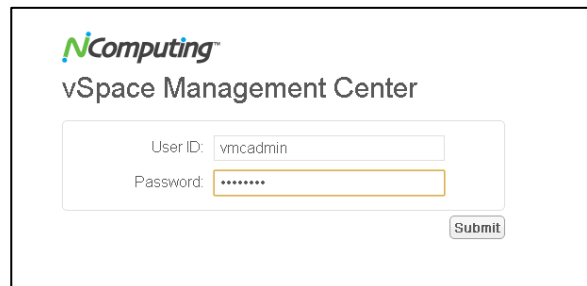
Each new install of vSpace Management Center includes a trial license for 30 days with up to 100 managed devices. For information on adding license keys to your vSpace Management Center server, review the [Registration and Licensing](#) section of this user manual.

2.3 Starting vSpace Management Center

Once you have successfully completed the installation process, you can access the vSpace Management Center user interface by opening the vSpace Management Center folder in the Windows Start menu (on the server you installed on). Click “Open vSpace Management Center” to launch the user interface within your default web browser. You can also access the interface from other computers on your network by opening a browser and entering the IP address of your server followed by: “:8080/vmc” For example, if your vSpace Management Center server’s IP address is: 192.168.1.10, then enter: “192.168.1.10:8080/vmc” in your browser.



Opening the vSpace Management Center user interface requires a User ID and Password. When you start vSpace Management Center for the first time, enter the default User ID (“vmcadmin”) and Password (“vmcadmin”) and click “Submit.”



Note: It is recommended that you clear your browser’s cache prior to using vSpace Management Center for the first time and between updates.

3.0 vSpace Management Center Dashboard

The dashboard is the first screen you will see when connecting to your vSpace Management Center server. From here, you are presented with a brief summary of device and server status. By using the navigation bar along the top of the screen, you can access each of the management modules. This section will outline each of the functions available to you from this screen.

The screenshot shows the vSpace Management Center dashboard. At the top, there is a navigation bar with the following items: Dashboard (selected), Device Management, Group Management, Settings, and Help. The dashboard content includes a summary for '8 N-series Device(s)' with '7 Online' and '1 Offline' status. Below this is a 'Log Activity' section with a table of events.

| Event | Type | Name | IP Address | Description | Timestamp |
|--------------------------|-------------------|--------------|------------|--|------------------------------|
| Terminal client activity | Management Server | VMC.qa.local | 10.4.8.23 | Device 'mcn400:20001044' updated its configuration | Wed Jun 27 09:53:45 PDT 2012 |
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3.1 The Navigation Bar

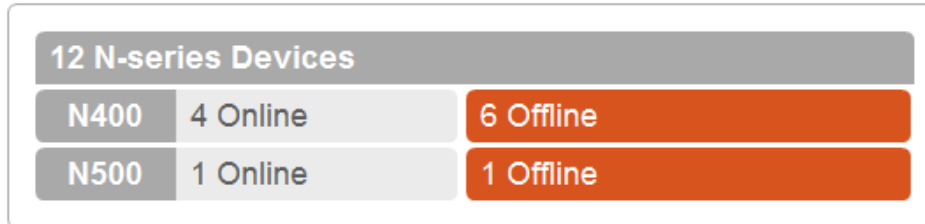
The Navigation Bar is your primary means of navigating between vSpace Management Center’s various modules. As seen below, it offers access to Device Management, Group Management, vSpace Management Center Settings, as well as the Help feature.

This image shows a close-up of the navigation bar. It features a breadcrumb navigation feature at the bottom left that reads 'Dashboard >'. The navigation bar itself contains the following items: Dashboard (selected), Device Management, Group Management, Settings, and Help.

Note the breadcrumb navigation feature to the bottom left of the Navigation Bar. As you navigate deeper within vSpace Management Center, this will track each step you have taken and give you the ability to step backwards through vSpace Management Center until you have returned to the Dashboard.

3.2 The Dashboard Summary

The Dashboard Summary provides at-a-glance information on the connection status of your access devices.



3.3 Log Activity

The Log Activity section of the dashboard presents a detailed breakdown of recent server and device activity. You can search for specific log information through the use of the Advanced Search button located at the top right of the activity list.

Log Activity [Export](#) [Advanced Search](#)

| Event | Type | Name | IP Address | Description | Timestamp |
|--------------------------|-------------------|--------------|------------|--|------------------------------|
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The Advanced Search Options menu allows you to search for activities by time and date, activity type, keyword search, and by a singular or range search. Once you have entered the criteria you wish to search by, press the “Search” button to begin your search.

Advanced search options x

Date Range
 From To

Activity Type

Keywords

Singular or range search by

You can export search results to HTML, XLS, or CSV file formats using the “Export” button located to the top left of the Log Activity section.

Export the data on this screen as a:

HTML document

XLS file

CSV file

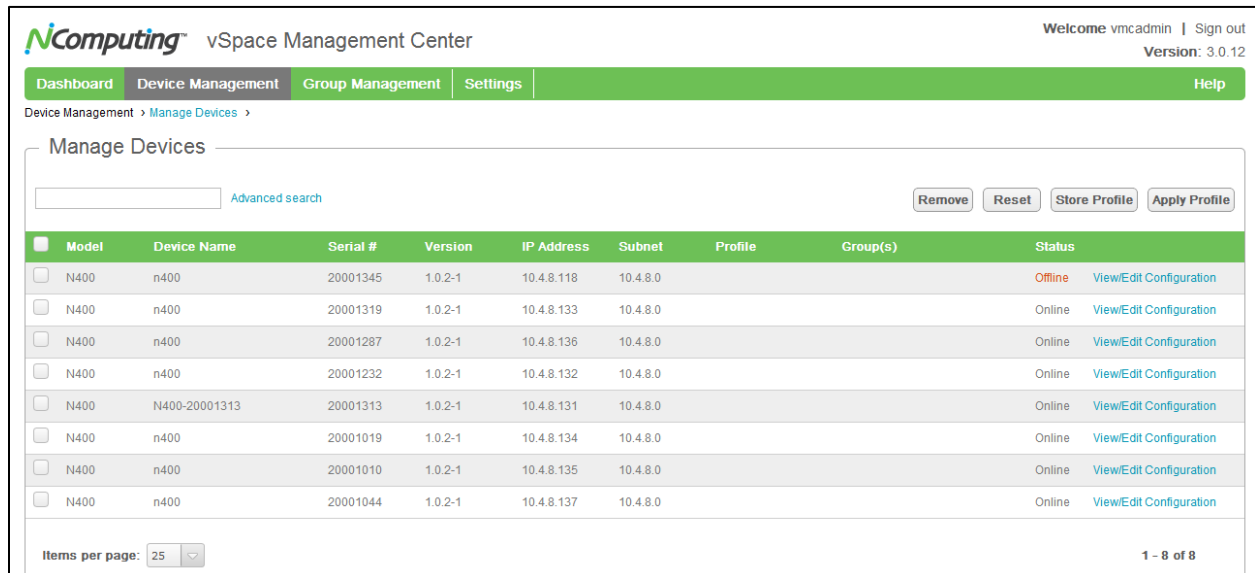
4.0 Device Management



The Device Management module of vSpace Management Center allows administrators to remotely configure their devices, create and manage device profiles, and push firmware updates. This section of the manual will outline each of these functions in detail.

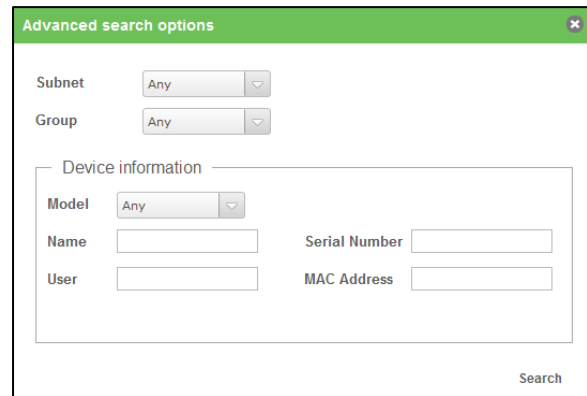
4.1 Manage Devices

The Manage Devices screen presents the user with a list of each of the devices that they currently have linked with vSpace Management Center. From this screen you can perform basic administrative tasks such as applying or storing profiles, resetting devices, and verifying device information such as: Device Name, IP address, Serial Numbers, Firmware versions, and Device Model.



4.2 Advanced Search

By clicking “Advanced Search” at the top left of the Manage Devices screen, you gain access to the Advanced Search Options menu. From here, you can search for devices by specifying a number of details including Subnet and Device Group, or specific device information such as Device Model, Name, Serial Number, MAC address, or even the name of the user currently logged in to the device.



4.3 Remove, Reset, Store Profile, Apply Profile



Along the top right section of the Manage Devices screen are four buttons that will allow you to perform common management functions. Select one or more devices by clicking the checkbox to the left of the devices in question and then click on the desired function.

Remove

Remove the selected device(s) from vSpace Management Center. See section [Section 7.1 Adding a Device to vSpace Management Center](#) if you wish to link the device(s) with vSpace Management Center again in the future. Note that you will only be able to remove devices that show up as being “offline.” If no devices are currently offline, the “Remove” button will be grey and inactive.

Reset

Reset the selected device(s). NOTE: Be sure to verify whether the device is currently in use as this will immediately interrupt the user’s session and restart the device (similar to powering off the device and powering it back on).

Store Profile

Store the configuration options currently in use by this device as a profile that can later be applied to any device of the same model.

Apply Profile

Select from a list of currently stored device profiles and apply that profile to the selected device(s). NOTE: Be sure to verify whether the device is currently in use as this will immediately interrupt the user’s session.

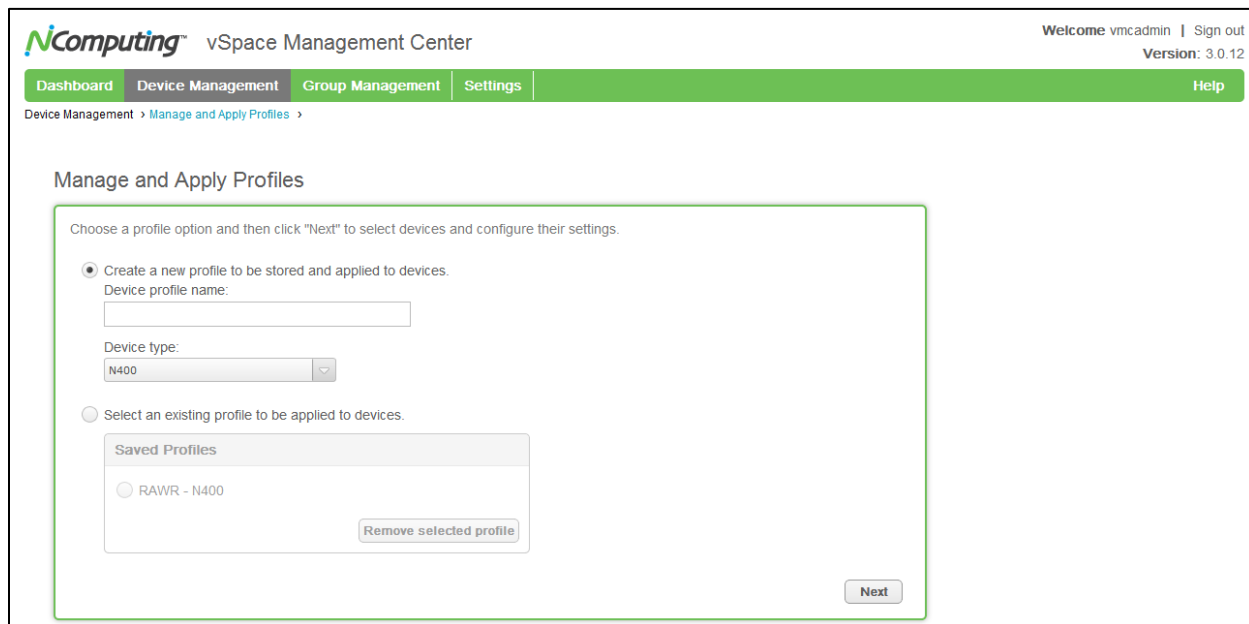
4.4 View/Edit Configuration

To the far right of each device entry you will find a link called “View/Edit Configuration”. Clicking this button will bring up an interface that allows you to view and make changes to the device you selected. These options will vary by device model. The interface for making these changes is similar to the interface for creating and editing profiles per the following section. The only difference is that when you are in the View/Edit Configuration screens, the data in the fields for the specific device will be pre-populated.

4.5 Manage and Apply Profiles

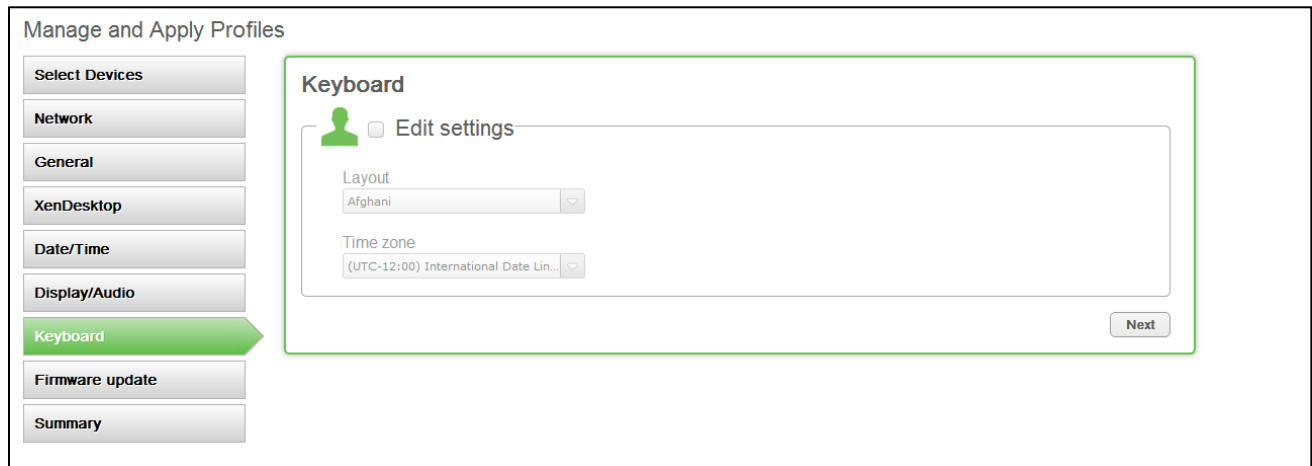
The Manage and Apply Profiles screen allows you to create, view or edit device profiles. A profile is a common set of configurations for a particular device type in your environment. When you create a profile, you can associate one or more devices to that profile – and from that point on, the devices will continue to be associated with the profile. This means that if you later edit the profile settings, all devices associated with that profile will be updated with the new settings as well. This makes it very easy to manage common settings in a large number of devices simultaneously.

To begin, choose whether you wish to create a new profile or work with a previously stored profile.

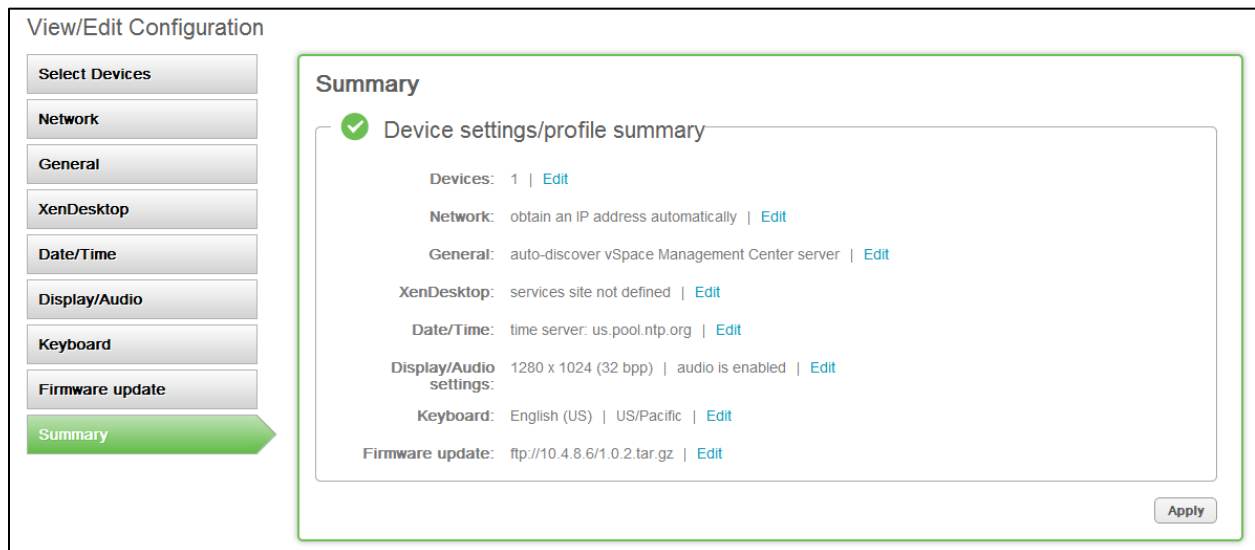


Click “Next” and you will be taken to the profile wizard where on the first screen you can select/edit the devices that will be associated with this profile. Then step through each of the following screens to set the configuration for your profile. Note that a profile does not need to include all the settings of the device. For example, you may wish to have some settings configured uniquely for each device and not set by the common profile. To enable this, each component of the profile can be enabled or disabled by checking the box at the top of each section labeled with “Edit Settings.” If this section is unchecked for a specific profile, the local data in the device will be preserved and not affected by the profile.

For example, in the image below, the Keyboard settings will not be associated with the profile since the “Edit Settings” box is not checked.



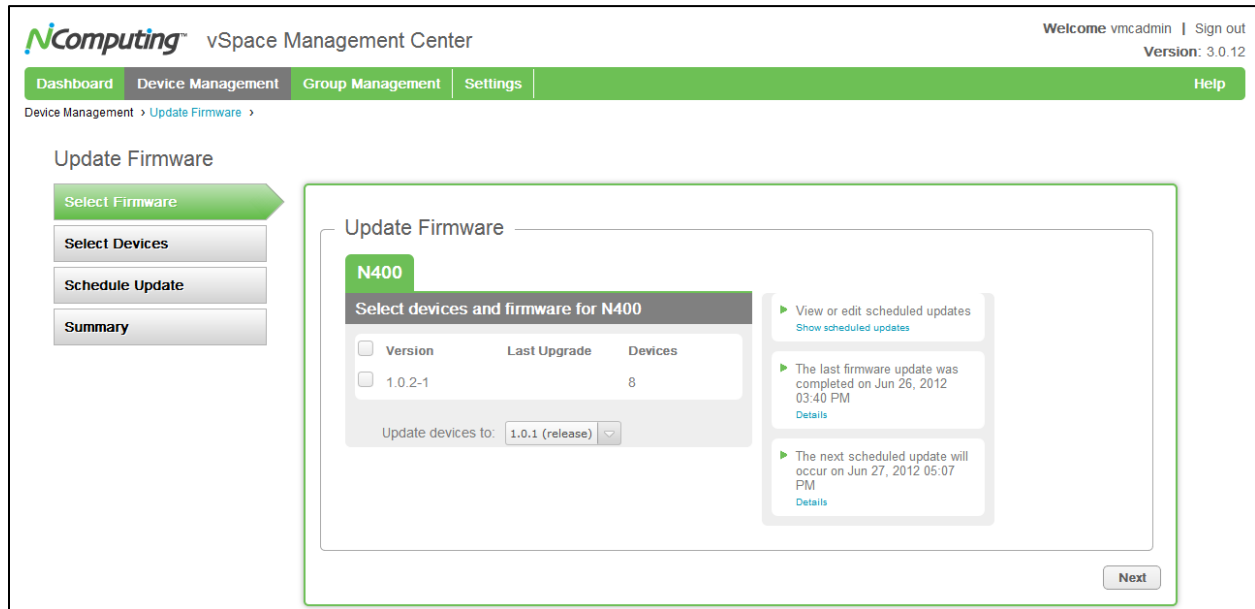
Proceed through the wizard to configure (or skip) each setting screen. The last screen shows a summary of the settings and has the “Apply” button. When you click the “Apply” button the settings in the profile will be pushed to all of the devices that you associated it with. Note that you can also store and apply profiles from the Manage Devices screen, by using an existing device’s settings as a template (see section 7.3 Configuring devices using device profiles).



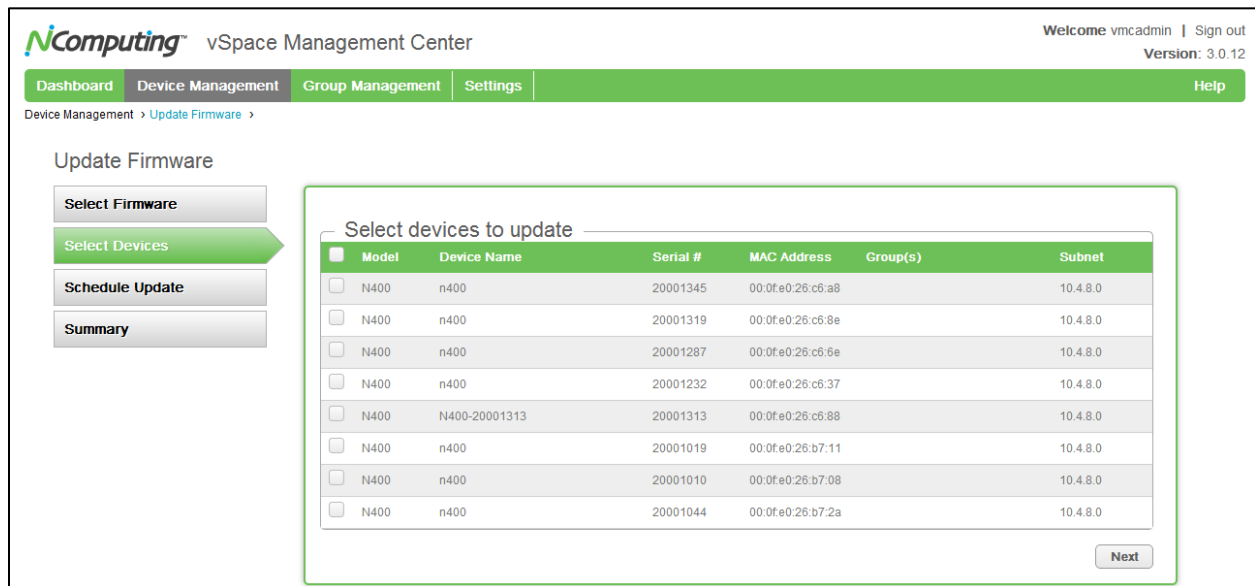
IMPORTANT: Note that if at any time, you overwrite a profile’s setting in a particular device by either changing the setting manually via the local user interface on the N-series device or by using the edit configuration function (see 4.1 Manage Devices) then that manually-configured setting will no longer pull from the profile and the device will always use this manually overridden setting. If you wish to revert the device to use the profile for that setting, you must first remove the device from the profile (edit profile, deselect the device, and apply the profile) and then re-attach it (edit profile, select the device, and apply the profile).

4.6 Update Firmware

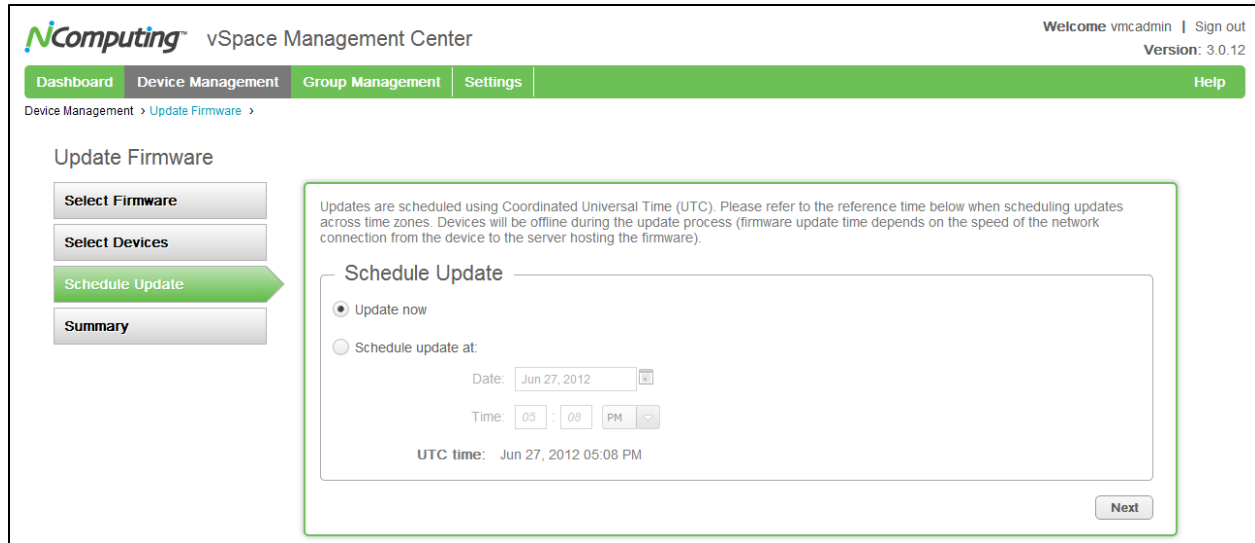
The Update Firmware screen allows you to select from a list of currently available firmware versions and then push a selected version of firmware to one or more devices.



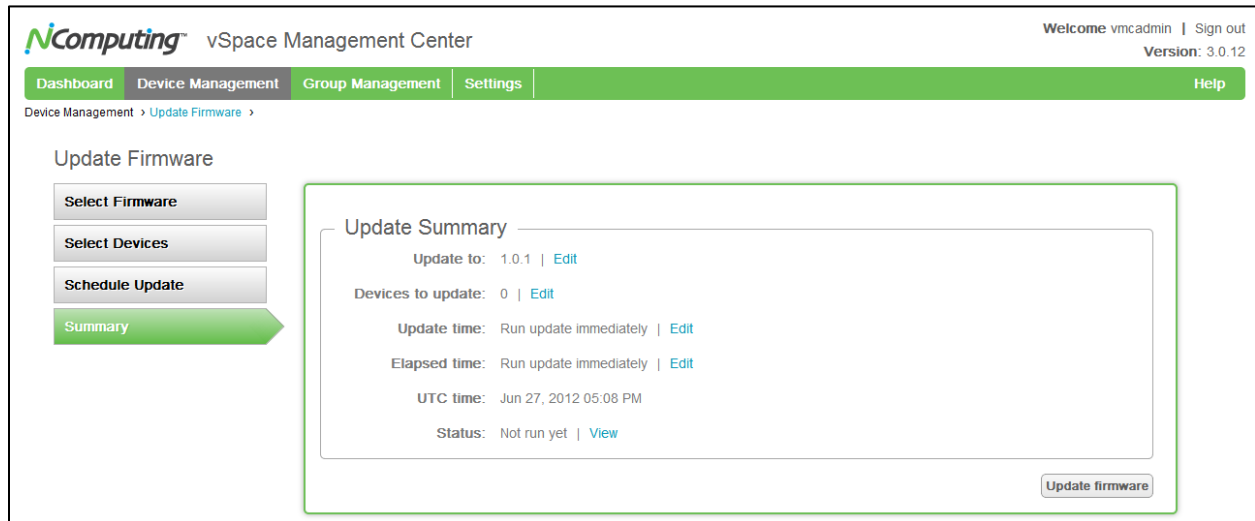
To begin a firmware update, select the firmware version from the list provided for the device model in question, and then press “Next”. To upload new firmware versions for your devices refer to 6.1 Manage Firmware



Next, select the devices you wish to push this firmware to and press “Next”.



At this stage, you'll be given the option to push the firmware immediately, or schedule the update for a future date and time. This is especially useful if you wish to perform the update later in the day when usage is at a minimum (firmware updates will cause a device reboot and will disconnect users from their session). Press "Next" when you have selected a time for the update.



Lastly, you will be presented with a summary of the choices you have made including firmware version, device to be updated, the timing of the update, and other details. Once you are satisfied with the update plan, press "Update firmware" to initiate the update.

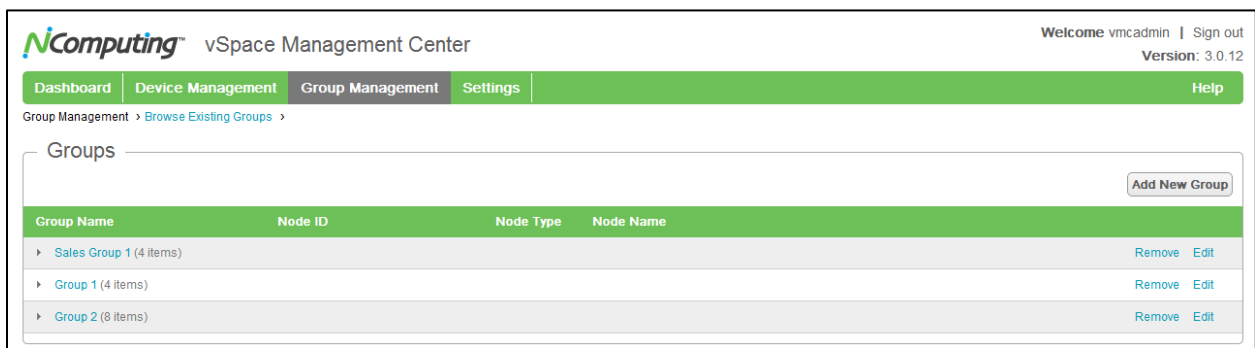
5.0 Group Management



The Group Management module of vSpace Management Center allows administrators to create and maintain Device and Server Groups. This allows administrators to create logical groupings that correspond to device models, geographical locations, or usage needs.

5.1 Browse Existing Groups

You can view all currently existing Groups by selecting “Brows Existing Groups” from the Group Management menu.

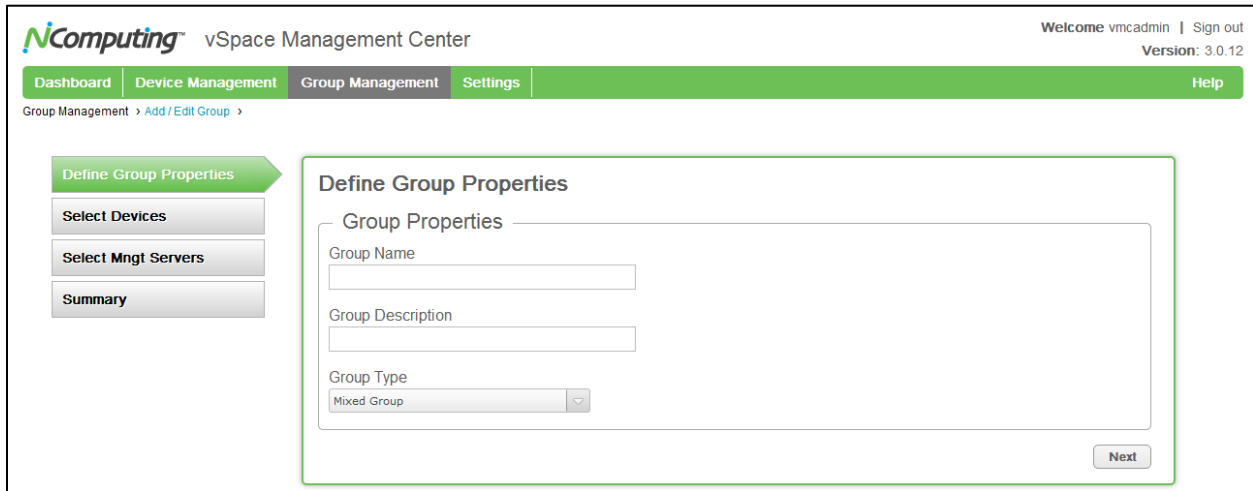


Each group can be expanded to display a list of the individual devices and management servers contained within that group. You can remove individual members of the group by clicking “Remove” to the right of the list. You can also remove or edit the entire group by clicking the “Remove” or “Edit” button to the right of the group name.

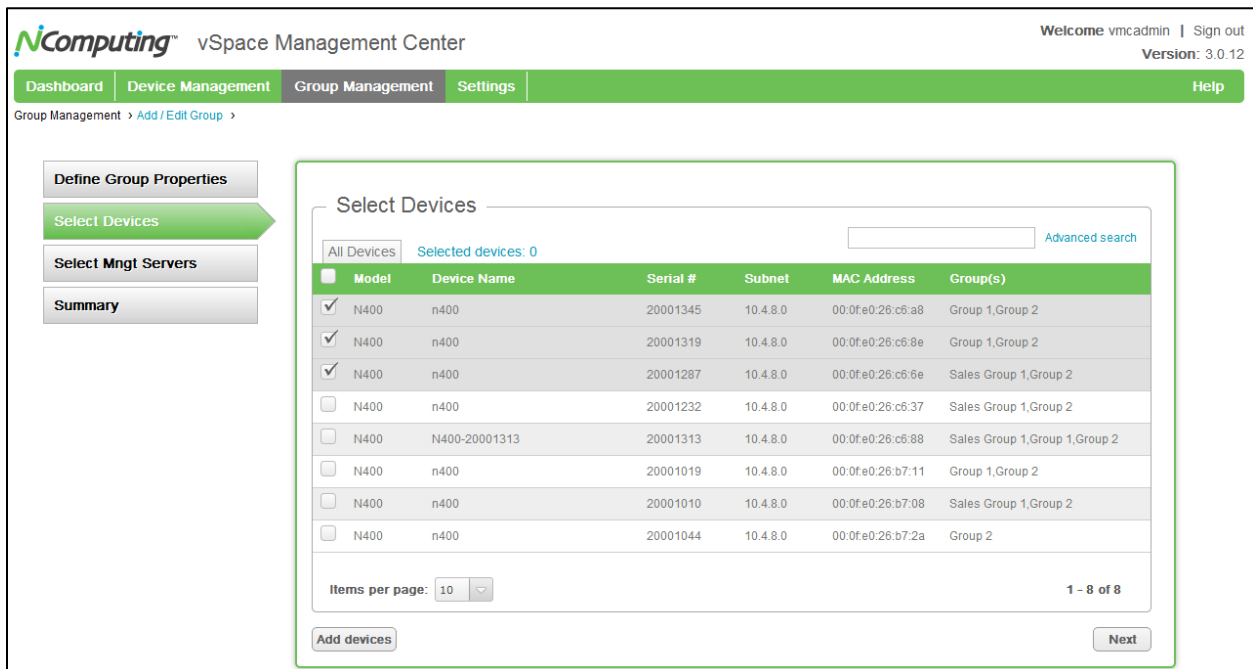
To create a new group, click the “Add New Group” button at the top right of the screen.

5.2 Add / Edit Group

To create a new Group, select “Add / Edit Group” from the Group Management menu.



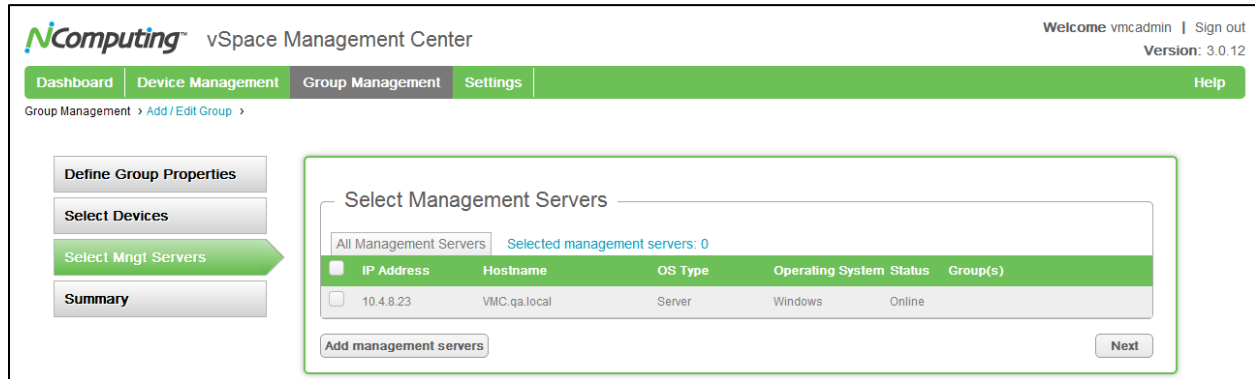
Begin by defining the group you wish to create by selecting a Group Name and Description. Lastly, select whether the group will contain devices, management servers, or a combination of both (a Mixed Group). Once you click “Next”, you’ll be taken to a list of currently available Devices that you can select for inclusion in your new Group.



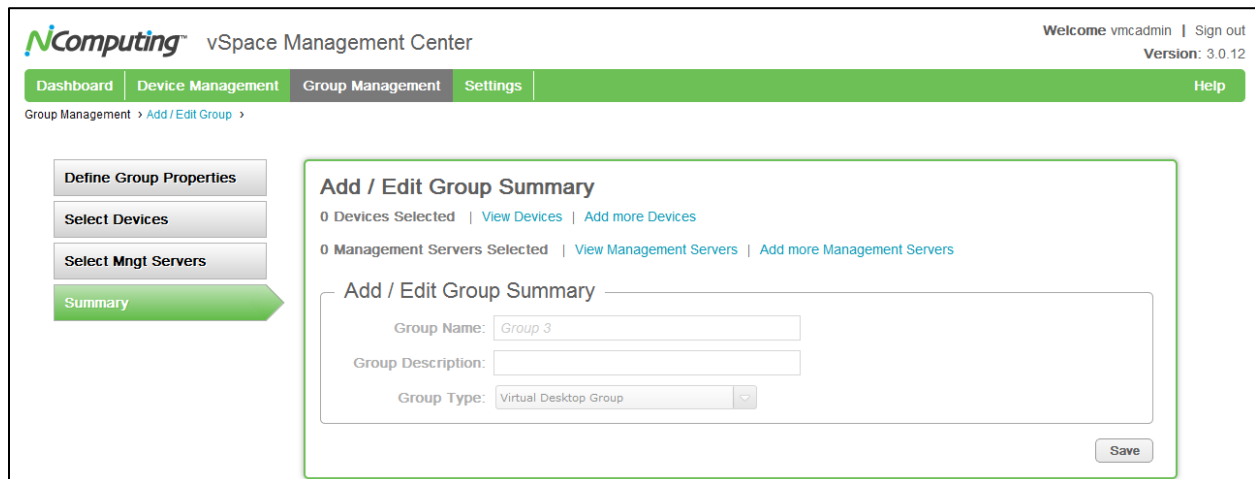
Next, click the checkbox next to the device(s) you wish to include in your group. Click the “Add Devices” button to the bottom left of the screen to add these to your group. You can view the currently selected Devices by clicking the “Selected Devices” tab at the top of the screen, and return to the “All Virtual Devices” tab to add additional devices if desired.

NOTE: You can search for Devices with specific characteristics by using the Advanced Search function at the top right of the screen.

Once you are done selecting devices, click the “Next” button.

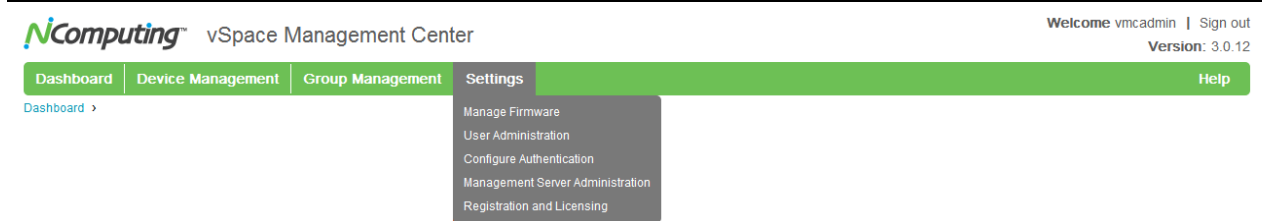


If you wish to include Management Servers in your Group, you may do so at this stage. Click the check box next to the Server(s) you wish to add and click “Add Management Servers”. Click “Next” when you are satisfied with your selections.



Once you have finished selecting Devices and/or Servers for your Group, you will be presented with a summary of the Group. Note that even at this stage in the group creation process, you are still free to go back and add or remove devices and servers as needed. To complete the group creation process, click the “Next” button to the bottom right of the screen.

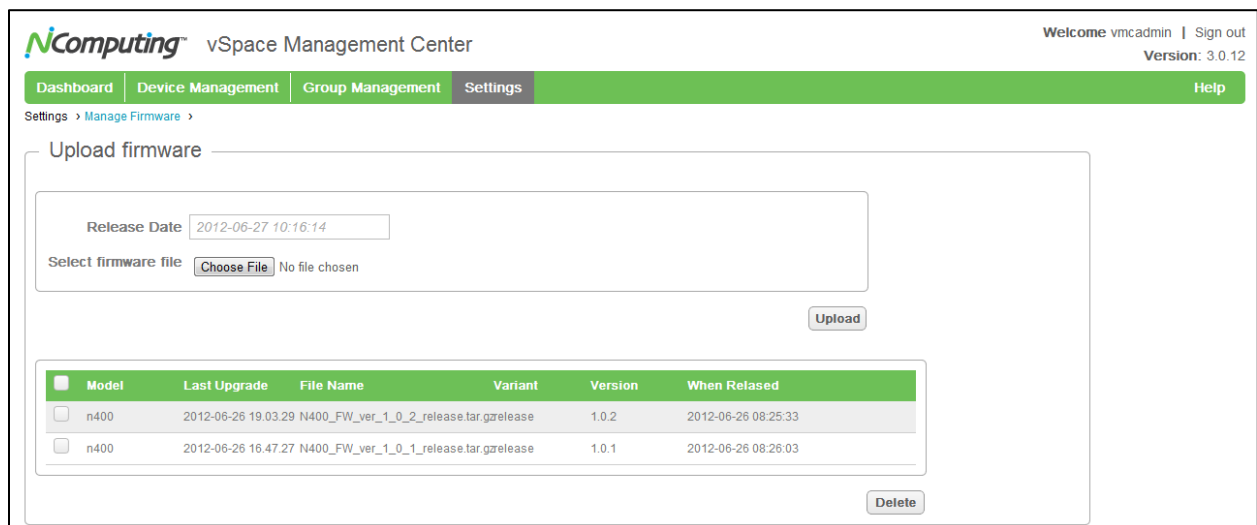
6.0 Settings



The Settings module allows you to configure the vSpace Management Center server itself, configure Authentication Settings, upload firmware to be distributed to devices, as well as other server specific tasks such as registration.

6.1 Manage Firmware

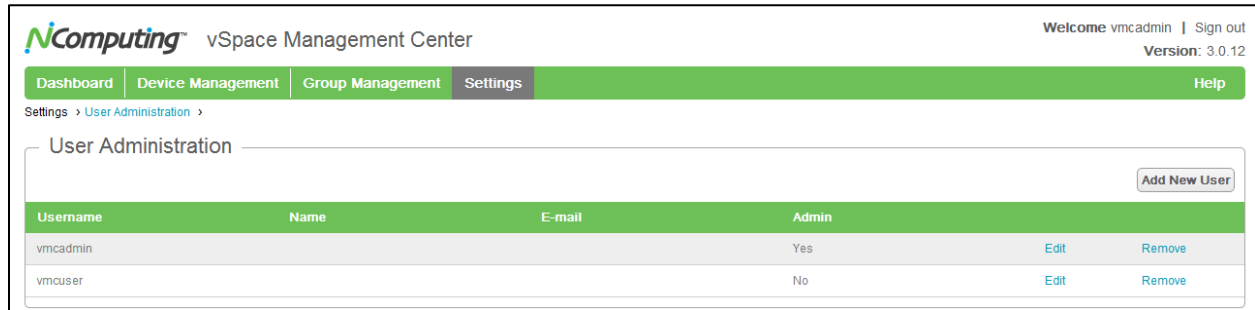
The Manage Firmware section of the Settings module allows you to update your inventory of device firmware as new versions become available.



To add a new firmware build, click the “Choose File” button at the top of the screen and navigate to the file’s location within Windows. All currently stored firmware builds are displayed in a list at the bottom of the screen.

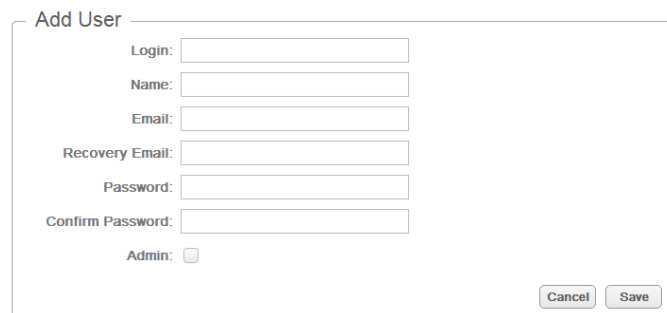
6.2 User Administration

The User Administration screen allows you to create and configure custom user accounts with varying access to vSpace Management Center servers in the event that you do not wish to use Active Directory or a generic LDAP directory service for centralized authentication.



Existing user accounts are displayed at the bottom of the screen. To add a new user, click the “Add New User” button to the right of the screen.

Enter the required account information into the fields provided and select whether the user is to be given admin rights. If enabled, they will have full administrative control over vSpace Management Center servers and their associated devices. If unchecked, they will connect as guests with view-only privileges.

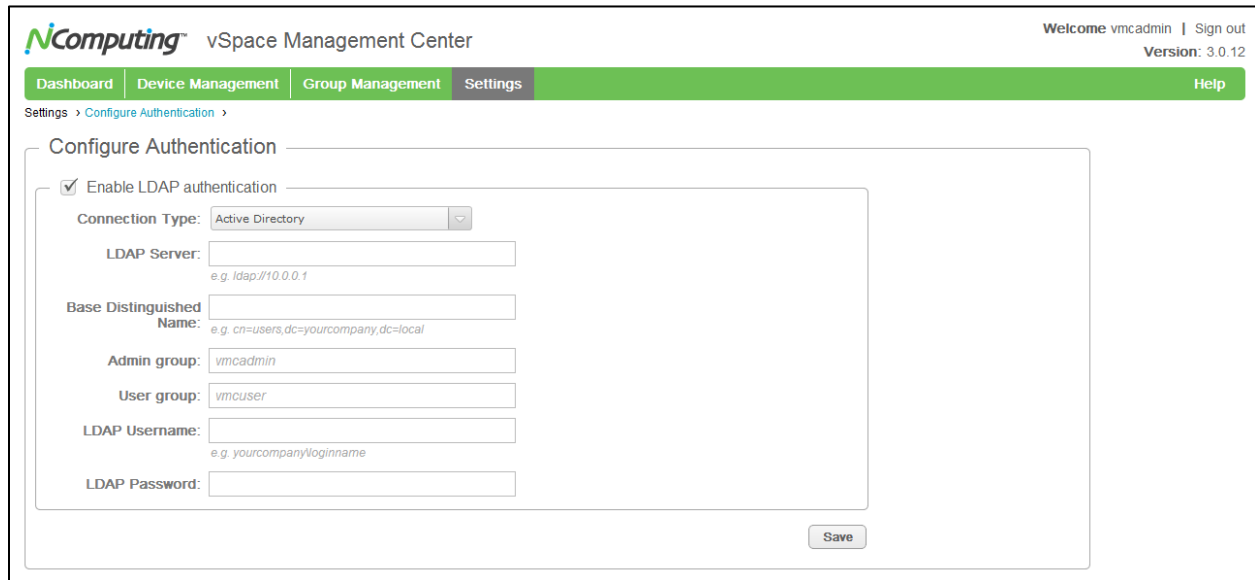


Once you are satisfied with the information entered, press the “Save” button to complete the process. The associated user will then be able access your vSpace Management Center server(s) using these credentials. You can return to the User Administration screen at any time to modify these settings.

NOTE: If authentication to vSpace Management Center is configured for use with Active Directory or a generic LDAP directory, then most of the options within the User Administration screen will be disabled to prevent them from conflicting with domain permissions.

6.3 Configure Authentication

The Configure Authentication screen allows administrators to choose how users can authenticate to vSpace Management Center, either through using Active Directory or another vendors generic LDAP based directory service. This allows multiple levels of administrative access ranging from view-only privileges within vSpace Management Center servers to full editing permissions.



Firstly, select whether or not you wish for vSpace Management Center to use Active Directory or a generic LDAP based directory service. By unchecking the “Enable Authentication” box, vSpace Management Center will rely on the local vSpace Management Center user accounts you create within the User Administration section of the Settings module.

If enabled, you are given the choice between Active Directory integration or LDAP. Use the fields provided to enter the name and location of your domain controller. Then enter the user credentials of a valid domain admin account. Once done, press the “Save” button to the bottom right of the screen.

NOTE: The username and password are only used to verify a successful connection with Active Directory/generic LDAP directory service.

6.4 Management Server Administration

The Management Server Administration screen allows administrators to control how multiple vSpace Management Center servers relate to one another and sets logging parameters.

Under the **Management Server Properties** section of this screen, you can decide whether new management servers automatically join your current server’s vSpace Management Center zone, or whether they must be allowed to do so via manual acceptance. You can also set the limit for events in your event log within a certain timeframe.

The **Join management zone** section of the screen allows you to manually join an existing vSpace Management Center zone by connecting to a server within that zone. If this is the first time a connection between vSpace Management Center servers has occurred within your domain, a new zone will be created automatically and your servers will enter a master / slave relationship based on the order in which they were joined. In a scenario where server B joins server A, server A becomes the master. In other words: the joining server becomes the slave and the server it joins becomes the master.


Lastly, the bottom of the screen displays a list of servers within the current server’s zone. This list includes servers that have already been joined and servers that are awaiting approval to join. If this screen is viewed from the master server, you can accept or reject server applications from this list. You can also view the Management Zone ID from this section of the screen, which is unique to each zone.

Servers in management zone
 Management zone ID: a242e54b-5e2b-4fbd-aa49-b907e8841c8d

| Hostname | IP Address | Operating System | Group(s) | Status | Zone status |
|--------------|------------|------------------|----------|--------|-------------|
| VMC.qa.local | 10.4.8.23 | Windows | | Online | Master |

6.5 Registration and Licensing

The Registration and Licensing screen provides you with a summary of your current vSpace Management Center licensing status and lets you add license keys. The initial registration process consists of filling out the **Contact Information** section of this screen, and then adding a license key as outlined below.


vSpace Management Center
Welcome vmcadmin | Sign out
Version: 3.0.12

Dashboard
Device Management
Group Management
Settings
Help

Settings > Registration and Licensing >

Registration and Licensing

After entering or editing your contact information, add your vSpace Management Center license key by clicking "Add" and follow the prompts on the next screen.

Contact Information

Name: John Rippen
 Company: NComputing Inc.
 Address: 250 Hemsted Dr
 Country: United States of America
 City: Redding
 State/Province: CA
 Zip: 96002
 E-mail: jrrippen@ncomputing.com
 Phone: 5302290881
 Reseller/Dealer: NComputing
 Type of Use: Other

Current Status

Registration status: Not registered
 Online device limit: 100
 Devices online: 7
 In compliance? Yes, Trial mode.

| Installed License Key | Date Entered | Expiration Date | Online Device Limit | Applicable Version |
|-----------------------|--------------|-----------------|---------------------|--------------------|
| TRIAL | 2012-04-20 | 2012-07-26 | 100 | |

The **Current Status** section to the right of the screen displays basic information on your current vSpace Management Center registration status and licensing scheme. The bottom of the screen lists each of your currently installed licenses. Note that licenses can be continually added to vSpace Management Center to accommodate an increase in the volume of managed devices over time as a deployment grows.

| Installed License Key | Date Entered | Expiration Date | Online Device Limit | Applicable Version |
|-----------------------|--------------|-----------------|---------------------|--------------------|
| TRIAL | 2012-04-20 | 2012-07-26 | 100 | |

To add licenses to your vSpace Management Center installation, click the **“Add”** button to the bottom left of the Registration and Licensing screen and enter the serial number(s) of the license(s) in question. Note that the Add button will not appear until you have filled out the Contact Information section.

Add License

Please enter your license key below and click “Submit”. Note that you must have entered your contact data on the previous screen to activate the key.

vSpace Management Center License Key:

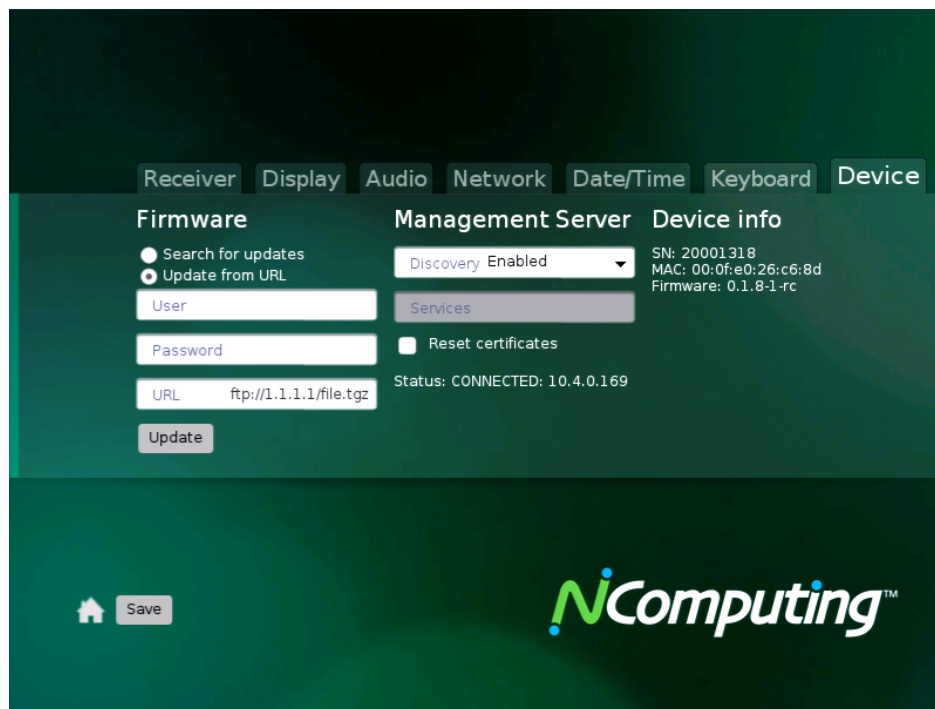
7.0 Common Usage Scenarios

This section of the user manual includes several common usage scenarios that demonstrate the use of vSpace Management Center to perform some common administrative tasks such as selecting and pushing firmware updates to multiple devices simultaneously, configuring devices using profiles, and backing up vSpace Management Center server files.

7.1 Adding an N-series device to vSpace Management Center

In this scenario we'll go over the task of linking NComputing N-series devices to vSpace Management Center so that they can be remotely managed using the vSpace Management Center toolset.

1. Enter the **Settings Menu** from your N-series device and click the **Device Tab**.

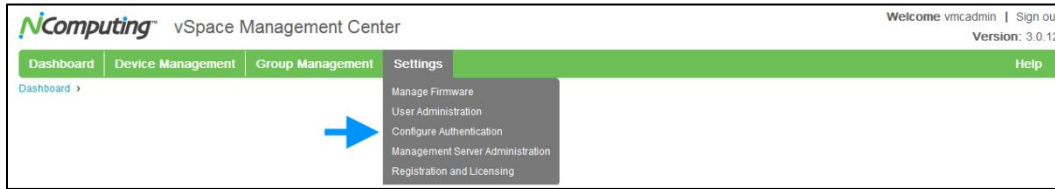


2. By setting **Discovery** to Enabled (default setting), your N-series device will automatically join any vSpace Management Center server within its subnet.
3. (Optional): If there is no vSpace Management Center server within your device's subnet, or you wish to manually enter the vSpace Management Center server's location, you may do so by disabling Discovery and entering the IP address or Fully Qualified Domain Name in the **Services** field.

Note: You can also configure your DHCP Server to automatically direct N-series devices to a vSpace Management Center server. Visit http://www.ncomputing.com/kb/Configuring-DHCP-for-Automatic-N-series-Configuration_338.html for more details.

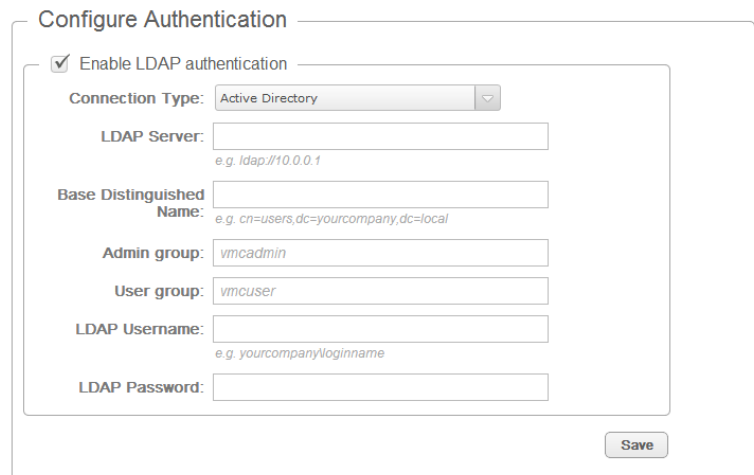
7.2 Configuring vSpace Management Center with Active Directory

To help keep your account management centralized within your environment, vSpace Management Center includes the option for users to authenticate to vSpace Management Center via Active Directory.



1. From the **Settings** module, navigate to the **Configure Authentication** screen.
2. Check the box next to “Enable LDAP Authentication” and then select “Active Directory” from the **Connection Type** dropdown.

3. Enter the URL of your Active Directory server in the **LDAP Server** field.
4. Enter the name of your Domain in the **Base Distinguished Name** field.



The screenshot shows the 'Configure Authentication' form. The 'Enable LDAP authentication' checkbox is checked. The 'Connection Type' dropdown is set to 'Active Directory'. The form contains the following fields:

- LDAP Server:** [Text input field] with a hint: e.g. ldap://10.0.0.1
- Base Distinguished Name:** [Text input field] with a hint: e.g. cn=users,dc=yourcompany,dc=local
- Admin group:** [Text input field] with the value: vmcadmin
- User group:** [Text input field] with the value: vmcuser
- LDAP Username:** [Text input field] with a hint: e.g. yourcompanyloginname
- LDAP Password:** [Text input field]

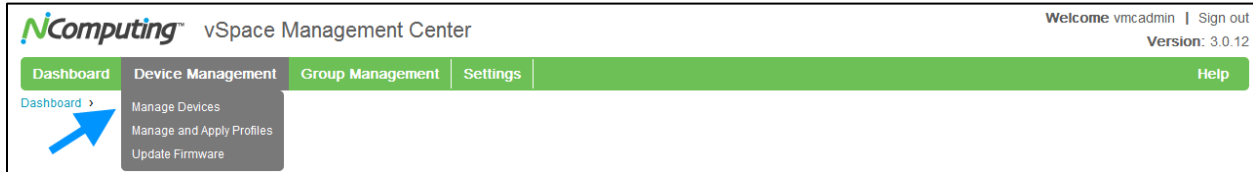
 A 'Save' button is located at the bottom right of the form.

5. Enter the admin and user group names you wish to use for vSpace Management Center administrators and users. Default values are provided, but you can use an alternate naming scheme if you desire.
6. Supply the Username and Password of a user account with access to your Active Directory server in the LDAP Username and Password fields, and then press the “Save” button to the bottom right of the screen.
7. Lastly, Using Active Directory Users and Computers on your AD server, create two new user groups with the group names you selected in **step 5**. vSpace Management Center will convey the appropriate privileges to members of these groups. (Users = read only. Admins = read/edit.)

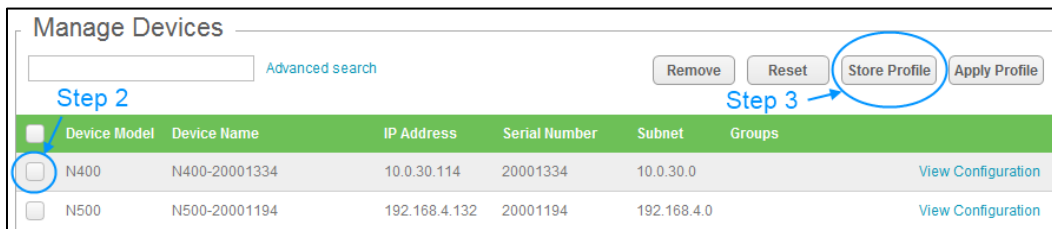
7.3 Configuring devices using device profiles

In this scenario we'll describe the process of creating, managing, and pushing device profiles to your NComputing devices.

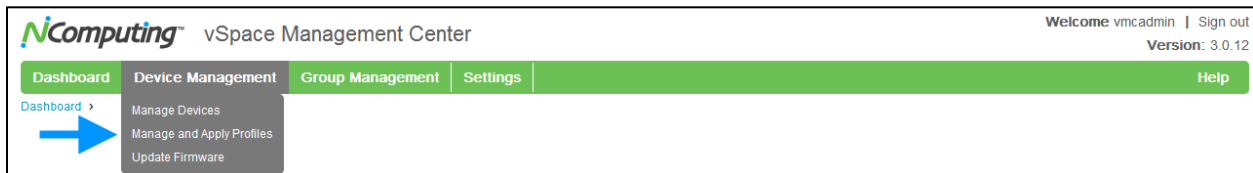
A device profile can be created from scratch or imported from any device in your deployment. For the purpose of this scenario, we'll import a profile, save it as a preset, and then push that profile out to additional devices. To do so, follow these steps:



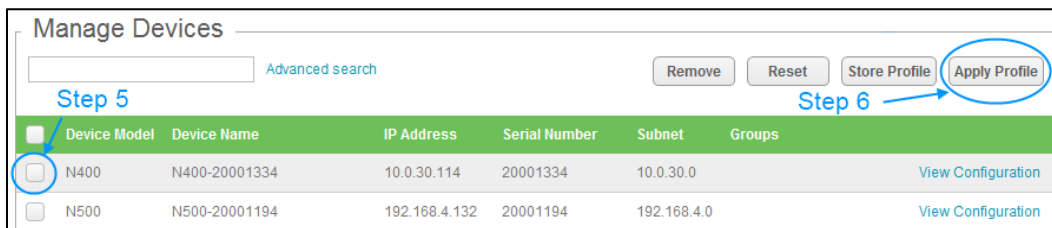
1. From the **Device Management** module within vSpace Management Center, open the **Manage Devices** screen.



2. Select the device whose profile you wish to store by checking the checkbox to its left.
3. Click the “Store Profile” button to the top right of the screen to proceed through the profile storing dialog.



4. (Optional): You can review and make alterations to the profile you have just created from the **Manage and Apply Profiles** screen within the **Device Management** module.



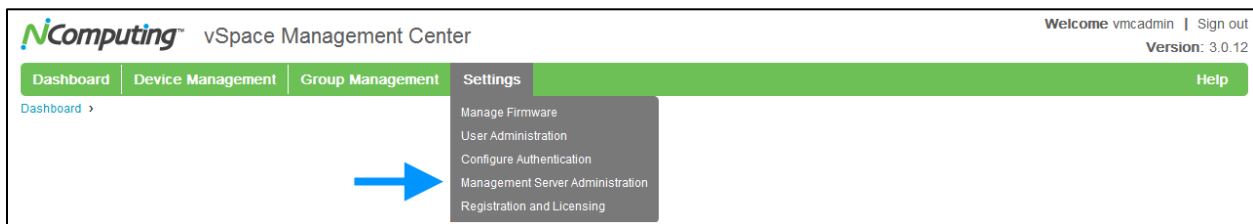
5. From the **Manage Devices** screen, select the device(s) you wish to push your new profile using the checkboxes as in step 2.
6. Once you are satisfied with your selection, click the “Apply Profile” button to apply your new profile to the selected device(s).

7.4 Adding a new vSpace Management Center server to your vSpace Management Center Zone

A group of vSpace Management Center servers working together to manage your NComputing deployment is referred to as a “management zone” or simply “zone.” In this scenario we’ll discuss the task of adding additional vSpace Management Center servers to your zone as well as outline some of the benefits that multiple servers can offer administrators.

vSpace Management Center servers will automatically join each other to form a management zone if they are within the same subnet and the Management Server Auto-Acceptance feature is enabled. If the Auto-Acceptance feature is not enabled, or differing subnets separate your vSpace Management Center servers, use the following steps to manually join them together:

Joining a Zone from within vSpace Management Center:



1. Open the **Management Server Administration** section of the **Settings** module within vSpace Management Center.
2. In the **Join management zone** field, enter the IP address or fully qualified domain name of the vSpace Management Center server you wish to join in the Host field, with the appropriate port (1284 by default).

Join management zone

Specify a Master management server to join its management zone.

Hostname/IP:

Port:

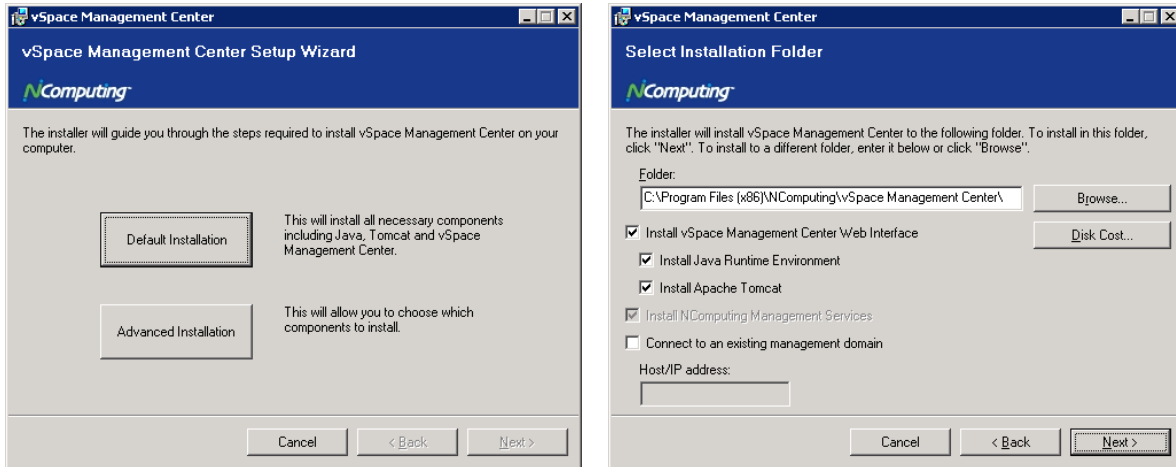
NOTE: If you already have a vSpace Management Center Zone comprised of multiple vSpace Management Center servers, you’ll need to join the master server within that Zone. The master server is flagged as such in the server list at the bottom of the Management Server Administration screen on all servers within the Zone (as seen below).

3. From the server you elected to join, accept the join request which should now appear at the bottom of the Management Server Administration screen. This completes the process and creates a vSpace Management Center Zone.

| Hostname | IP Address | Operating System | Group(s) | Status | Zone status |
|--------------|------------|------------------|----------|--------|-------------|
| VMC.qa.local | 10.4.8.23 | Windows | | Online | Master |

Joining a Zone during Installation:

In addition to joining from the Settings module, you can also perform this task automatically when you install vSpace Management Center. This option is available to you as part of the installer.



During the installation process, select the Advanced Installation option. In the dialog that follows, check the option titled “Connect to an existing management zone”. Enter the the IP address of the vSpace Management Center server you wish to join and proceed with installation. Your new vSpace Management Center server will automatically join with your existing Zone once the installation process is complete.

Joining a Zone from Windows:

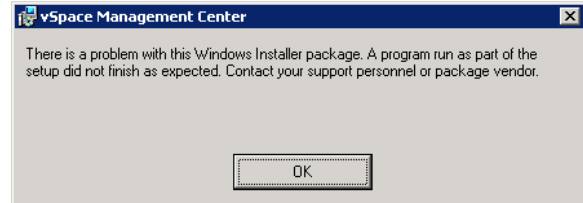
Lastly, you can use the CMFconnect utility included with vSpace Management Center to join your server to a Zone.

1. From the Windows Start menu, click on vSpace Management Center as you would to launch the management interface.
2. Click the CMFconnect utility to launch the connection dialog and proceed as directed through the utility to join your vSpace Management Center to an existing Zone.

8.0 Troubleshooting

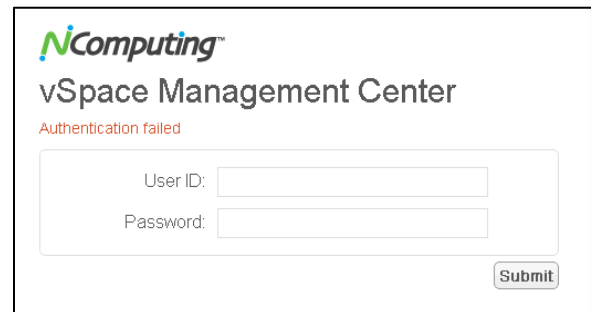
Error: There is a problem with this Windows Installer package.

Both Java and Apache Server are required for vSpace Management Center to function properly. If you encounter this error during installation, check to make sure that you have successfully installed both of these components and try again. For your convenience, installers for both of these products are included as part of the “Default” vSpace Management Center installation method.



Error: Authentication failed

If you receive this error while attempting to log in to the vSpace Management Center user interface, check that you are using the correct credentials and try again. Also check that your caps lock and num lock settings are not interfering with the correct entry of your User ID and Password.



My device doesn't show up in vSpace Management Center

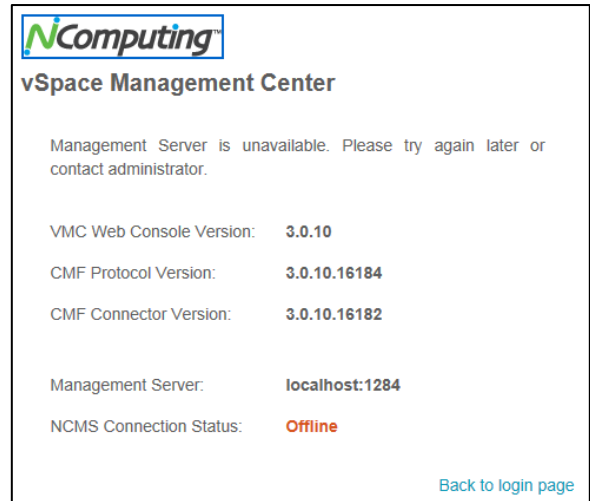
Make sure that you've added the device to vSpace Management Center. Note that this doesn't necessarily happen automatically. Refer to [Section 7.1 Adding a Device to vSpace Management Center](#) within this document for detailed instructions. For information on configuring your DHCP server to automatically link NComputing devices to vSpace Management Center, review the following Knowledge Base article: http://www.ncomputing.com/kb/Configuring-DHCP-for-Automatic-N-series-Configuration_338.html

Also, be sure that your firewall and network security resources are configured to allow vSpace Management Center to communicate with devices in your environment. For detailed information on Firewall and Antivirus configuration for NComputing products, review the following Knowledge Base article: http://www.ncomputing.com/kb/Configuring-Firewall-and-Antivirus-for-NComputing-Products_63.html

Management Server Connection Status: Offline

An offline status can be an indication that the NC Management Server service is not currently running on the host system.

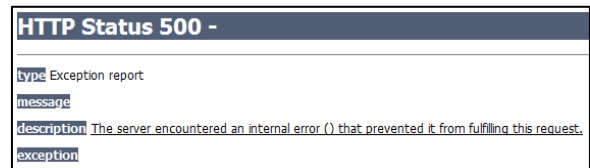
To check the status of the Management Server service, open the Services window under Start->Administrative Tools on the host system or simply run “services.msc” from the start menu. Once opened, search for “NC Management Server”.



The screenshot shows the vSpace Management Center interface. At the top left is the NComputing logo. Below it, the title "vSpace Management Center" is displayed. A message states: "Management Server is unavailable. Please try again later or contact administrator." Below this message, several system versions are listed: VMC Web Console Version: 3.0.10, CMF Protocol Version: 3.0.10.16184, and CMF Connector Version: 3.0.10.16182. The Management Server is listed as localhost:1284, and the NCMS Connection Status is shown as Offline in red text. A "Back to login page" link is located at the bottom right of the interface.

HTTP Status 500 Error

An HTTP Status 500 error can usually be resolved by simply clearing your browser’s cache. This error may present itself in certain rare cases including when the browser cache is not cleared after a new version of VMC is installed, as outlined in the installation section of this manual.



The screenshot shows an "HTTP Status 500 -" error report. The report includes the following fields: type (Exception report), message, description (The server encountered an internal error () that prevented it from fulfilling this request.), and exception.

9.0 Support and Additional Resources



The Help module of the Navigation bar can direct you to several of NComputing's support resources. These resources are outlined below:

NComputing Technical Support

To request Technical Support for NComputing products, please visit the NComputing Support page at <http://www.ncomputing.com/support>

NComputing Knowledge Base

For additional technical documentation, solutions, and how-toe's, visit <http://www.ncomputing.com/kb/>

NComputing Community Forums

For access to community-driven solutions, discussions, and other resources, visit <http://community.ncomputing.com/>

9.1 Disclaimers and Legal Information

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