

# VMware Ready n-Command MSP

P/N 1700845G1

## GETTING STARTED

The n-Command<sup>®</sup> Managed Service Provider (MSP) virtual appliance is a powerful and easy-to-use network management system. It is VMware<sup>®</sup> Ready<sup>™</sup> Certified and can be installed on a VMware host. Included in this quick start guide is your virtual machine (VM) n-Command MSP serial number, instructions for importing the virtual appliance, and getting started with n-Command MSP. You will need the following serial number to complete the installation:

**Serial Number for VM n-Command MSP:** (affix serial label here)

## SOFTWARE REQUIREMENTS AND LIMITATIONS

The n-Command MSP virtual appliance has been tested and is VMware Ready Certified on ESXi version 5.0. All standard VMware tools are supported. Installers are expected to have some familiarity with VMware and the vSphere<sup>®</sup> client before attempting to install this software. Select a network location for the VM that has domain naming service (DNS) access and IP connectivity to the target devices.

The VM installation uses an OVA (open virtualization appliance) file, which is a single file archive containing an OVF (open virtualization format) virtual machine definition and supporting files. ADTRAN provides two OVA files which differ in minimum hardware requirements. Select the appropriate OVA file based on your hardware profile as follows:

Minimum Hardware Installation Requirements		
	4-core	8-core
Available disk space for the virtual hard disk (.vmdk)	250 GB	850 GB
Available memory (8 GB RAM is the maximum usable by the VM)	8 GB	32 GB
Available processor cores	4 cores	8 cores

## NETWORK SECURITY CONSIDERATIONS

For maximum security, n-Command MSP should be deployed in a DMZ behind a firewall. The following considerations should be made to ensure proper operation when deployed in this manner.

Inbound connections are necessary for the n-Command MSP user interface, as well as device management. The following ports should be configured to allow inbound connections for proper operation (inbound traffic can be restricted to management subnets and those containing ADTRAN Operating System (AOS) devices):

- TCP 80 (Auto-link and user interface over HTTP; optional if using HTTPS)
- TCP 443 (Auto-link and user interface over HTTPS)
- TCP 8443 (Auto-link over HTTPS)
- TCP 5060 (VQM reporter; optional if not using VQM reporter)

- UDP 5060 (VQM reporter; optional if not using VQM reporter)
- UDP 161 (SNMP agent; optional if not using the SNMP functionality)
- UDP 162 (SNMP trap proxy; optional if not using the SNMP trap proxy functionality)

Additionally, the following outbound ports are required to allow access to your configured NTP servers, SMTP servers, and AOS devices:

- UDP port 123 (NTP)
- TCP port 25 (SMTP)
- TCP port 80 (Used to force device check-ins)
- TCP port 443 (Used to force device check-ins)

## REGISTER N-COMMAND MSP

To complete these steps, you need access to the ADTRAN support website (<http://www.adtran.com>) as a registered user.

1. Open a browser window and navigate to <http://www.adtran.com>.
2. Select **Support > Product Registration > Register a product** from the drop-down menu.
3. Log in using your ADTRAN user name and password (select the **Login** link). If you have not previously registered as a user at ADTRAN's support website, select the **Register an account** link, and follow the prompts.
4. Once logged into the support website, enter the n-Command MSP serial number in the field provided under **Product Registration - Step 1**, and select **Continue**. The serial number is shown in the serial number box on [page 1](#).



5. Select **Continue Product Registration** from **Product Registration - Step 2**. A final confirmation page displays. The product registration is complete.

Leave this browser page open to return to later in the installation process.

## IMPORT THE VIRTUAL APPLIANCE OVA

You must download the OVA file from the ADTRAN support website, and import the virtual appliance on the VMware host that will run the n-Command MSP application. (You must have registered an n-Command MSP product before you can download the file.)

1. Open a second browser window and navigate to <http://www.adtran.com/ncommandvm>.
2. Download the OVA file from the **n-Command MSP VMware OVF Package** link under **Software Downloads**. There are two OVA files provided for download. Select the OVA file that meets your hardware profile as outlined in [Software Requirements and Limitations](#).

3. Launch the vSphere Client on your PC. Choose **Deploy OVF Template** from the **File** menu. When the wizard launches, follow the prompts and enter the required information. If you change the name, you can view the original version name in the notes section of the virtual machine. Select **Next** at each menu to continue.
4. Select the **Thick provisioned format** option and select **Next** when prompted.
5. At the **Ready to Complete** wizard menu, select **Finish**. This will import the OVA, extract the OVF file within it, and create the virtual machine. This process takes a few minutes.

### CONFIGURE THE VIRTUAL MACHINE

The virtual appliance should now appear as a virtual machine in your vSphere Client inventory. To configure the network interface for the VM:

1. Select the VM in the left-hand pane.
2. Under the **Getting Started** tab, select **Edit virtual machine settings**.
3. Select **Network Adapter 1** and select the network connection to associate to it. Repeat this process for **Network Adapter 2**.
4. You can navigate to **ESXi's Configuration > Networking** tab for a list of available virtual switches.



*ADTRAN does NOT recommend or support changing the virtual machine specifications. These specifications were qualified through VMware. If the CPU and memory allocations are modified, n-Command MSP may not function properly.*

### START THE VM APPLIANCE AND CONFIGURE NETWORK SETTINGS

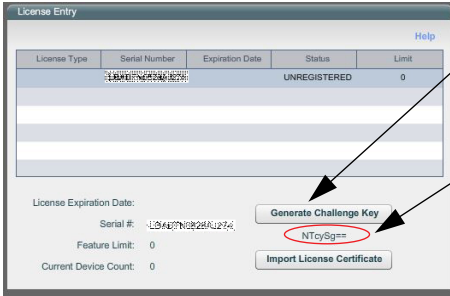
1. Right-click the VM and select **Power > Power On**. The console of the machine is visible as it boots.
2. Choose to use Dynamic Host Configuration Protocol (DHCP) or enter a static IP address, Gateway, and Netmask.
3. Enter the n-Command MSP serial number.
4. When the VM completes its boot process, the console displays the Management Console IPv4 address. Make a note of the IPv4 address displayed as this is the address of your virtual machine.

### ACCESS THE N-COMMAND MSP GUI

1. To access the n-Command MSP GUI, open a browser and enter the assigned IPv4 address in the browser address line.
2. Enter the user name and password to log into n-Command MSP (the default are **admin** and **adtran**, respectively).

### GENERATE A CHALLENGE KEY

The initial GUI menu appears with the **License Entry** dialog box displayed. Select **Generate Challenge Key** to display a challenge key. Leave this dialog box open to return to it later.



Select **Generate Challenge Key** to display a challenge key.

The challenge key appears in the dialog box. This key is used to license your product at [www.adtran.com](http://www.adtran.com).

### LICENSING N-COMMAND MSP

Next, you must generate a license certificate and upload it to the server to complete the licensing process. Return to the open browser from [Register n-Command MSP](#) where you should still be logged in with your ADTRAN user name.

1. Select **n-Command MSP Licensing** from any of the n-Command MSP products listed in the **Registered Products** list.
2. Select **Get License Key** from the same line as the n-Command MSP server you are registering.
3. Enter the challenge key from the n-Command MSP GUI that you generated previously (refer to [Generate a Challenge Key](#)) and select **Generate License Key**.
4. A license key is generated and emailed to the registered user. Save the file (containing the license certificate). You will upload it to the n-Command MSP server in the next step.
5. Return to the n-Command MSP GUI. Select **Import License Certificate** from the **License Entry** dialog box, and locate the saved email attachment. It may take a few minutes to import.
6. Select **Update** to save the new information.

You have successfully registered and licensed your server. Successful licensing is confirmed by the population of a **License Expiration Date**, **Feature Limit**, and **Current Device Count** displayed in the **License Entry** dialog box.

### ADDITIONAL RESOURCES

Refer to the online n-Command MSP Help available from the **Help** link within your software for more information about using the program. Alternatively, use your mobile device with quick response (QR) code reader to scan the QR code (below) for immediate access to the online Help.

