Dell Wyse Management Suite

Version 2.1 Administrator's Guide

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Notes, cautions, and warnings

NOTE: A NOTE indicates important information that helps you make better use of your product.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

Contents

1

Introduction to Wyse Management Suite

Wyse Management Suite is the next generation management solution that enables you to centrally configure, monitor, manage, and optimize your Dell Wyse thin clients. It also offers advanced feature options such as cloud and on-premises deployment, manage-from-anywhere option by using a mobile application, enhanced security such as BIOS configuration and port lockdown. Other features include device discovery and registration, asset and inventory management, configuration management, operating system and applications deployment, real-time commands, and monitoring, alerts, reporting, and troubleshooting of endpoints.

Topics:

Editions of Wyse Management Suite

Wyse Management Suite is available in the following editions:

- **Standard (Free)**—The Standard edition of the Wyse Management Suite is available only for an on-premise deployment. You do not require a license key to use the Standard edition. The Standard edition is suitable for small and medium businesses.
- **Pro (Paid)**—The Pro edition of Wyse Management Suite is available for both on-premise and cloud deployment. You require a license key to use the Pro edition. It provides subscription-based licensing. With the Pro solution, organizations can adopt a hybrid model and float licenses between on-premises and cloud. The Pro on-premise edition is suitable for small, medium, and large businesses. For a cloud deployment, the Pro edition can be managed on non-corporate networks (home office, third party, partners, mobile thin clients, and so on).

  NOTE: Licenses can be floated easily between cloud and on-premise installation.

  The Pro edition of the Wyse Management Suite also provides:

  - A mobile application to view critical alerts, notifications, and send commands in real time.
  - Enhanced security through two-factor identification and Active Directory authentication for role-based administration
  - Advanced app policy and reporting

  NOTE: Cloud services are hosted in the U.S. and Germany. Customers in countries with data residency restrictions may not be able to take advantage of the cloud-based service.

The Wyse Management Suite web console supports internationalization. On the lower-right corner of the page, from the drop-down menu, select any of the following languages:

- English
- French
- Italian
- German
- Spanish
- Chinese
- Japanese

Wyse Management Suite Feature Matrix

The following table provides information about the features supported for each subscription type:

Table 1. Feature matrix for each subscription type

Features	Wyse Management Suite Standard	Wyse Management Suite Pro-private cloud	Wyse Management Suite Pro-cloud edition
Highly scalable solution to manage thin clients	Free up to 10,000 devices	50,000 devices and more	1 million devices and more

Table 1. Feature matrix for each subscription type (continued)

Features	Wyse Management Suite Standard	Wyse Management Suite Pro-private cloud	Wyse Management Suite Pro-cloud edition
License key	Not required	Required	Required
Group based management	√	√	√
Multi-level groups and inheritance	√	√	√
Configuration policy management	√	√	√
Operating system patch and image management	√	√	√
View effective configuration at device level after inheritance	√	√	√
Application policy management	√	√	√
Asset, inventory and systems management	√	√	√
Automatic device discovery	√	√	√
Real-time commands	√	√	√
Smart scheduling	√	√	√
Alerts, events and audit logs	√	√	√
Secure communication (HTTPS)	√	√	√
Manage devices behind firewalls	Limited*	Limited*	√
Mobile application	X	√	√
Alerts using email and mobile application	X	√	√
Scripting support for customizing application installation	X	√	√
Bundle applications to simplify deployment and minimize reboots	X	√	√
Delegated administration	X	√	√
Dynamic group creation and assignment based on device attributes	X	√	√
Two-factor authentication	√	√	√
Active directory authentication for role based administration.	X	√	√
Multi-tenancy	X	√	√
Enterprise grade reporting	X	√	√
Multiple repositories	X	√	√

Table 1. Feature matrix for each subscription type (continued)

Features	Wyse Management Suite Standard	Wyse Management Suite Pro-private cloud	Wyse Management Suite Pro-cloud edition
Enable/disable hardware ports on supported platforms	X	√	√
BIOS configuration on supported platforms	X	√	√
Export and import policy configuration	X	√	√
Repository assignment to application policy	X	√	√
Shutdown commands for thin clients	√	√	√
Wyse Management Suite console timeout	X	√	√
Policy order	X	√	√
Streamlined the application selection as per the operating system	√	√	√
Option to configure alias	X	√	√
Subnet mapping	√	√	√
Batch upload	X	√	√
Dynamic Schema Configuration	√	√	√
Enrollment validation	√	√	√
Select group for ThinOS	X	√	√
Wyse Management Suite Repository	X	√	√

NOTE: *__The asterisk indicates that you can manage the devices by using Wyse Management Suite only in a secure firewall work environment. You cannot manage thin clients beyond the purview of the firewall settings.__

2

Getting started with Wyse Management Suite

This section provides information about the general features to get you started as an administrator and manage thin clients using Wyse Management Suite.

Topics:

Log in to Wyse Management Suite on public cloud

To log in to the Wyse Management Suite console, you must have a supported web browser that is installed on your system. To log in to the Wyse Management Suite console, do the following:

1. Access the public cloud (SaaS) edition of the Wyse Management Suite by using one of the following links:
   - **US data center**—us1.wysemanagementsuite.com/ccm-web
   - **EU data center**—eu1.wysemanagementsuite.com/ccm-web
2. Enter your username and password.
3. Click **Sign In**.

   If you log in to the Wyse Management Suite console for the first time, if a new user is added, or if a user license is renewed, the **Terms and Condition** page is displayed. Read the terms and conditions, select the respective check boxes, and click **Accept**.

NOTE: You receive your login credentials when you sign up for the Wyse Management Suite trial on www.wysemanagementsuite.com or when you purchase your subscription. You can purchase the Wyse Management Suite subscription from the Dell Sales team or from your local Dell partner. For more details, see www.wysemanagementsuite.com.

NOTE: An externally accessible repository must be installed on a server with a DMZ while using the pro edition of Wyse Management Suite on the public cloud. Also, the Fully Qualified Domain Name (FQDN) of the server must be registered in the public DNS.

Changing your password

To change the login password, do the following:

1. Click the account link in the upper-right corner of the management console.
2. Click **Change Password**.

NOTE: It is recommended to change your password after logging in for the first time. The default username and password for additional administrators are created by the Wyse Management Suite account owner.

Logging out

To log out from the management console, do the following:

1. Click the account link at the upper-right corner of the management console.
2. Click **Sign out**.

Prerequisites to deploy Wyse Management Suite on the private cloud

Table 2. Prerequisites

Description	10,000 devices or less	50,000 devices or less	120,000 devices or less	Wyse Management Suite – Software repository
Operating system	Windows Server 2012 R2, Windows Server 2016, or Windows Server 2019 Standard Supported language pack—English, French, Italian, German, Spanish, Japanese, and Chinese (preview release)			
Minimum disk space	40 GB	120 GB	200 GB	120 GB
Minimum memory (RAM)	8 GB	16 GB	32 GB	16 GB
Minimum CPU requirements	4	4	16	4
Network communication ports	The Wyse Management Suite installer adds Transmission Control Protocol (TCP) ports 443, 8080, and 1883 to the firewall exception list. The ports are added to access the Wyse Management Suite console and to send push notifications to the thin clients. · TCP 443—HTTPS communication · TCP 1883—MQTT communication · TCP 3306—MariaDB (optional if remote) · TCP 27017—MongoDB (optional if remote) · TCP 11211—Memcached · TCP 5172, 49159—End-User Management Software Development Kit (EMSDK)—optional and required only to manage Teradici devices The default ports that are used by the installer may be changed to an alternative port during installation.			The Wyse Management Suite repository installer adds TCP ports 443 and 8080 to the firewall exception list. The ports are added to access the operating system images and application images that are managed by Wyse Management Suite.
Supported browsers	Internet Explorer version 11 Google Chrome version 58.0 and later Mozilla Firefox version 52.0 and later Edge browser on Windows—English only			

- The Overlay Optimizer version 1.0 and installation scripts are provided with the Wyse Management Suite Installer. Administrator must run the scripts to enable the Overlay Optimizer to be made available in Wyse Management Suite.
- The Dell Secure Client version 1.0 installation scripts are provided with the Wyse Management Suite Installer. Administrator must run the scripts to enable the Dell Secure Client to be made available in Wyse Management Suite.

NOTE: **`WMS.exe` and `WMS_Repo.exe` must be installed on two different servers. You must install the Wyse Management Suite remote repository for the public cloud. For private cloud, you must install the Wyse Management Suite remote repository and local repository. The software can be installed on a physical or a virtual machine. Also, it is not necessary that the software repository and the Wyse Management Suite server have the same operating system.**

Functional areas of management console

The Wyse Management Suite console is organized into the following functional areas:

- The **Dashboard** page provides information about the current status on each functional area of the system.
- The **Groups & Configs** page employs a hierarchical group policy management for device configuration. Optionally, subgroups of the global group policy can be created to categorize devices according to corporate standards. For example, devices may be grouped based on job function, device type, and so on.

- The **Users** page enables local users and users who are imported from the Active Directory to be assigned global administrator, group administrator, and viewer roles to log in to Wyse Management Suite. Users are given permissions to perform operations based on the roles that are assigned to them.
- The **Devices** page enables you to view and manage devices, device types, and device-specific configurations.
- The **Apps & Data** page provides management of device applications, operating system images, policies, certificate files, logos, and wallpaper images.
- The **Rules** page enables you to add, edit, and enable or disable rules such as auto grouping and alert notifications.
- The **Jobs** page enables you to create jobs for tasks such as reboot, Wakeup On LAN, and application or image policy that need to be deployed on registered devices.
- The **Events** page enables you to view and audit system events and alerts.
- The **Portal Administration** page enables you to configure various system settings such as local repository configuration, license subscription, active directory configuration, and two-factor authentication.

Configuring and managing thin clients

- **Configuration management**—Wyse Management Suite supports a hierarchy of groups and subgroups. Groups can be created manually or automatically based on the rules that are defined by the system administrator. You can organize the groups based on the functional hierarchy, for example marketing, sales, and engineering, or based on the location hierarchy, for example, country/region, state, and city.

  NOTE: In the Pro edition, you can add rules to create groups. You can also assign devices to an existing group depending on the device attributes such as subnet, time zone, and location.

  You can also configure the following:

  - Settings that apply to all devices in the tenant account which are set at the Default Policy group. These settings are the global set of parameters that all groups and subgroups inherit from. The settings that are configured at lower-level groups take precedence over the settings that were configured at the parent or higher-level groups.

    For example,

    - Configure the policies for default policy group (parent group). After configuring the policies, check the custom group (child group) policies. Same sets of policies are applied to child group as well. Configurations in Default Policy Group settings are the global set of parameters that all groups and subgroups inherit from parent group.
    - Configure different settings for the custom group. The custom group receives both the payloads, but devices in the Default Policy Group do not receive the payload that is configured for Custom Policy Group.
    - Configure different settings for the custom group. The settings that are configured at lower-level groups take precedence over the settings that were configured at the parent or higher-level groups.
  - Settings that are specific to a particular device which can be configured from the **Device Details** page. These settings, like lower-level groups, take precedence over the settings that are configured in the higher-level groups.

  When you create and publish the policy, the configuration parameters are deployed to all the devices in that group including the subgroups.

  After a policy is published and propagated to the devices, the settings are not sent again to the devices until you make a change. New devices that are registered, receive the configuration policy that is effective for the group to which it was registered. This includes the parameters that are inherited from the global group and intermediate level groups.

  Configuration policies are published immediately, and cannot be scheduled for a later time. A few policy changes, for example, display settings, may force a reboot.
- **Application and operating system image deployment**—Applications and operating system image updates can be deployed from the **Apps & Data** tab. Applications are deployed based on the policy groups.

  NOTE: Advanced application policy allows you to deploy an application to the current and all subgroups based on your requirement. Operating system images can be deployed to the current group only.

  Wyse Management Suite supports standard and advanced application policies. A standard application policy allows you to install a single application package. The device restarts during installing an application. Reboot the device before and after each application installation. With an advanced application policy, multiple application packages can be installed with only two reboots. This feature is available only in the Pro edition. Advanced application policies also support execution of pre-and-post installation scripts that may be required to install a particular application.

  You can configure standard and advanced application policies to be applied automatically when a device is registered with Wyse Management Suite or when a device is moved to a new group.

  Deployment of application policies and operating system images to thin clients can be scheduled immediately or later based on the device time zone or any other specified time zone.

- **Inventory of devices**—This option can be located by clicking the **Devices** tab. By default, this option displays a paginated list of all the devices in the system. You can choose to view a subset of devices by using various filter criteria, such as groups or subgroups, device type, operating system type, status, subnet, and platform or time zone.

  To go to the **Device Details** page for that device, click the device entry that is listed on this page. All the details of the device are displayed.

  The **Device Details** page also displays all the configuration parameters that are applicable to that device, and also the group level at which each parameter is applied.

  This page also enables to set configuration parameters that are specific to that device by enabling the **Device Exceptions** button. Parameters that are configured in this section override any parameters that were configured at the groups and/or global level.
- **Reports**—You can generate and view reports based on the predefined filters. To generate reports, click the **Reports** tab on the **Portal Administration** page.
- **Mobile application**—You can receive alert notifications and manage devices using the mobile application—**Dell Mobile Agent** available for the Android devices. To download the mobile application and the **Dell Mobile Agent Getting Started Guide**, click the **Alerts and Classification** tab on the **Portal Admin** page.

Wyse Device Agent

The Wyse Device Agent (WDA) is a unified agent for all thin client management solutions. If you install WDA, you can manage thin clients using Wyse Management Suite.

The following three types of customer security environments are supported by the Wyse Device Agent:

- **Highly secured environments**—To mitigate the risk against rouge DHCP or DNS server for new device discovery, administrators must log in to each device individually and configure the Wyse Management Suite server URL. You can use either CA-signed or self-signed certificates. However, Dell recommends that you use a CA-signed certificate. In Wyse Management Suite private cloud solution with self-signed certificate, the certificate should be manually configured in every device. Also, the certificate must be copied to the `Agent Configuration` folder to preserve the certificate and mitigate the risk against rouge DHCP or DNS server even after you reimage the device.

  The `Agent Configuration` folder is available at the following location:

  - Windows Embedded Standard devices—`%SYSTEMDRIVE%\\Wyse\\WCM\\ConfigMgmt\\Certificates`
  - ThinLinux devices—`/etc/addons.d/WDA/certs`
  - ThinOS devices—`wnos/cacerts/`

  NOTE: You must import the certificate to a thin client running ThinOS operating system using a USB drive or FTP paths.
- **Secured environments**—To mitigate the risk against rouge DHCP or DNS server for new device discovery, administratos must configure Wyse Management Suite server using CA-signed certificates. The device can fetch the Wyse Management Suite server URL from the DHCP/DNS records and perform the CA validation. Wyse Management Suite private cloud solution with self-signed certificate requires the certificate to be pushed to the device after first registration if the device does not have the certificate before registration. This certificate is preserved even after you reimage or restart the device to mitigate the risk against rouge DHCP or DNS server.
- **Normal environments**—The device obtains the Wyse Management Suite server URL from the DHCP/DNS records for Wyse Management Suite private cloud that is configured with CA-signed or self-signed certificate. If CA validation option is disabled on the device, Wyse Management Suite administrator is notified after you register the device for the first time. In this scenario, Dell recommends that the administrators perform a certificate push to the device where the server is configured with self-signed certificate. This environment is not available for public cloud.

3

Installing or upgrading Wyse Device Agent

This section provides information about how to install or upgrade Wyse Device Agent on your thin clients, such as Windows Embedded Standard, Linux, and ThinLinux devices by using Wyse Management Suite.

- **Windows Embedded Standard devices**—Wyse Device Agent version 1.4.x can be downloaded from support.dell.com. You can install or upgrade Wyse Device Agent on Windows Embedded Standard devices using any of the following methods:
  - Installing Wyse Device Agent manually
  - Upgrading Wyse Device Agent using Wyse Management Suite application policy

  NOTE: You can also upgrade the Wyse Device Agent manually by double-clicking the latest version of Wyse Device Agent .exe file.

  NOTE: Wyse Device Agent can be installed on Windows Embedded Standard 7 operating system only if KB3033929 is available.
- **Linux and ThinLinux devices**—Wyse Device Agent can be installed or upgraded on Linux and ThinLinux devices by using Wyse Management Suite. For more information, see Installing or upgrading Wyse Device Agents on ThinLinux and Linux clients.

Topics:

- Installing Wyse Device Agent manually on a Windows Embedded device
- Upgrading Wyse Device Agent using Wyse Management Suite application policy
- Installing or upgrading Wyse Device Agents on ThinLinux and Linux clients

Installing Wyse Device Agent manually on a Windows Embedded device

Steps

1. Copy the `WDA.exe` file to the thin client.
2. Double-click the `WDA.exe` file.
3. Click **Yes**.

   NOTE: A warning message is displayed when an older version of Wyse Device Agent or HAgent is installed on the device.
4. In the **Group token** field, enter a group token. This is an optional field.
   To skip this step, click **Next**. You can enter the group token details later in the Wyse Device Agent User Interface.
5. From the **Region** drop-down list, select the region of the Wyse Management Suite public cloud server.
   After successful installation, the Wyse Management Suite public cloud server automatically registers the device to the Wyse Management Suite console.

Upgrading Wyse Device Agent using Wyse Management Suite application policy

Prerequisites

It is recommended that you use the Wyse Management Suite application to upgrade Wyse Device Agent. In the Wyse Management Suite private cloud setup, the latest Wyse Device Agent packages for Windows Embedded Standard are available in the local repository. If you are using a public cloud, or a remote repository on a private cloud, copy the `WDA.exe` file to the `thinClientApps` folder in the repository.

Steps

1. After the `WDA.exe` file is copied to the repository, go to **Apps and Data**, and create a standard application policy with this package—see Create and deploy standard application policy to thin clients.

   NOTE: Advanced application policy is supported only from Wyse Device Agent 14.x onwards. It is recommended that you use the standard application policy when you upgrade Wyse Device Agent from 14.x. You can also use the advanced application policy for upgrading Wyse Device Agent from 14.x to latest versions.

2. Go to the **Jobs** page and schedule a job to upgrade the Wyse Device Agent.

   NOTE: For upgrading Windows Embedded Standard Wyse Device Agent from 13.x version to 14.x version, it is recommended that you use HTTP as the repository protocol.

   After a successful installation, the status is sent to the server.

Installing or upgrading Wyse Device Agents on ThinLinux and Linux clients

Prerequisites

- To install Wyse Device Agents on Dell Wyse 3040 Thin Clients with ThinLinux version 2.0, image version 2.0.14, and Wyse Device Agent version 3.0.7, you must install the `wda3040_3.0.10-01_amd64.deb` file, and then install the `wda_3.2.12-01_amd64.tar` file.
- You must install the platform utility add-on and Wyse Device Agent add-on for Linux thin clients. You can install `wda_x.x.x.tar` file for ThinLinux thin clients.

About this task

You can install or upgrade add-ons by using any of the following options:

- Using INI parameters
- Add-ons Manager
- RPM commands

Steps

1. If you are using a public cloud or a remote repository on a private cloud, copy the RPM files to the `thinClientApps` folder of the repository. By default, the latest Wyse Device Agents and platform utility RPMs for Linux and ThinLinux clients are available in the local repository.
2. Go to the **Jobs** page and schedule a job to upgrade the platform utility add-on.

   You must wait until the platform utility add-on is successfully installed on your thin client.

   NOTE: Install a platform utility add-on first, and then install a Wyse Device Agent add-on. You cannot install the latest Wyse Device Agents before installing the latest platform utility add-on.

3. On the **Jobs** page, schedule a job to upgrade Wyse Device Agent on the client.

   NOTE: The Linux client restarts after installing the Wyse Device Agent add-on version 2.0.11.

4

Registering and configuring a new device using Wyse Management Suite

Topics:

Register and configure a new Windows Embedded Standard device using Wyse Management Suite

Steps

1. Install Wyse Device Agent on your thin client—see Installing or upgrading Wyse Device Agent.
2. Register your thin client to Wyse Management Suite—see Registering Windows Embedded Standard thin clients to Wyse Management Suite by using Wyse Device Agent.

   NOTE: You can also register the devices using any of the following methods:

   - **Using DHCP option tags—see Register devices by using DHCP option tags.**
   - **Using DNS SRV record—see Registering devices by using DNS SRV record.**

   NOTE: When the Enrollment Validation option is enabled, the manual or auto-discovered devices are in Enrollment Validation Pending state in the Devices page. The tenant can select a single device or multiple devices in the Devices page and validate the enrollment. The devices are moved to the intended group after they are validated. For more information about how to validate the devices, see Enrollment validation.

3. Add the device to your desired group (optional)—see Managing groups and configs.
4. Configure the thin client using any of the following options:
   - Using the **Groups and Configs** page—see Edit the Windows Embedded Standard policy settings.
   - Using the **Devices page**—see Managing Devices.

Register and configure a new ThinOS 8.x device using Wyse Management Suite

Steps

1. From the desktop menu of the thin client, go to **System Setup** > **Central Configuration**. The **Central Configuration** window is displayed.
2. Enter the **Group Registration Key** as configured by your administrator for the wanted group.
3. Select the **Enable WMS Advanced Settings** check box.
4. In the **WMS server** field, enter the Wyse Management Server URL.
5. Enable or disable CA validation based on your license type. For public cloud, select the **Enable CA Validation** check box. For private cloud, select the **Enable CA Validation** check box if you have imported certificates from a well-known certificate authority into your Wyse Management Suite server.

To enable the CA validation option in the private cloud, you must install the same self-signed certificate on the ThinOS device as well. If you have not installed the self-signed certificate in the ThinOS device, do not select the **Enable CA Validation** check box. You can install the certificate to the device by using Wyse Management Suite after registration, and then enable the CA validation option.

6. To verify the setup, click **Validate Key**.

   NOTE: If the key is not validated, verify the group key and WMS server URL which you have provided. Ensure that ports mentioned are not blocked by the network. The default ports are 443 and 1883.

7. Click **OK**.

   NOTE: When the Enrollment Validation option is enabled, the manual or auto-discovered devices are in Enrollment Validation Pending state in the Devices page. The tenant can select a single device or multiple devices in the Devices page and validate the enrollment. The devices are moved to the intended group after they are validated. For more information about how to validate the devices, see Enrollment validation.

   The device is registered to Wyse Management Suite.

8. Log in to Wyse Management Suite.
9. Add the device to your desired group (optional)—see Managing groups and configs.
10. Configure the thin client using any of the following options:
    - Using the **Groups and Configs** page—see Edit the ThinOS policy settings.
    - Using the **Devices page**—see Managing Devices.

Register and configure a new ThinOS 9.x device using Wyse Management Suite

Steps

1. From the desktop menu of the thin client, go to **System Setup** > **Central Configuration**. The **Central Configuration** window is displayed.
2. Enter the **Group Registration Key** as configured by your administrator for the wanted group.
3. Select the **Enable WMS Advanced Settings** check box.
4. In the **WMS server** field, enter the Wyse Management Server URL.
5. Enable or disable CA validation based on your license type. For public cloud, select the **Enable CA Validation** check box, and for private cloud, select the **Enable CA Validation** check box if you have imported certificates from a well-known certificate authority into your Wyse Management Suite server.

   To enable the CA validation option in the private cloud, you must install the same self-signed certificate on the ThinOS device as well. If you have not installed the self-signed certificate in the ThinOS device, do not select the **Enable CA Validation** check box. You can install the certificate to the device by using Wyse Management Suite after registration, and then enable the CA validation option.

6. To verify the setup, click **Validate Key**.

   NOTE: If the key is not validated, verify the group key and WMS server URL which you have provided. Ensure that ports mentioned are not blocked by the network. The default ports are 443 and 1883.

   An alert window is displayed.

7. Click **OK**.
8. Click **OK** in the **Central Configuration** window.

   NOTE: You can also register the devices using any of the following methods:

   - **Using DHCP option tags—see Register devices by using DHCP option tags.**
   - **Using DNS SRV record—see Registering devices by using DNS SRV record.**

   NOTE: When the Enrollment Validation option is enabled, the manual or auto-discovered devices are in Enrollment Validation Pending state in the Devices page. The tenant can select a single device or multiple devices in the Devices page and validate the enrollment. The devices are moved to the intended group after they are validated. For more information about how to validate the devices, see Enrollment validation.

   The device is registered to Wyse Management Suite.

9. Log in to Wyse Management Suite.
10. Add the device to your desired group (optional)—see Managing groups and configs.

11. Configure the thin client using any of the following options:
    - Using the **Groups and Configs** page—see Edit the ThinOS 9.x policy settings.
    - Using the **Devices page**—see Managing Devices.

Register and configure a new Linux or ThinLinux device using Wyse Management Suite

Steps

1. Install Wyse Device Agent on your thin client—see Installing or upgrading Wyse Device Agent.
2. Register your thin client to Wyse Management Suite—see Register Linux/ThinLinux thin clients to Wyse Management Suite by using Wyse Device Agent.

   NOTE: You can also register the devices using any of the following methods:

   - **Using DHCP option tags—see Register devices by using DHCP option tags.**
   - **Using DNS SRV record—see Registering devices by using DNS SRV record.**

   NOTE: When the Enrollment Validation option is enabled, the manual or auto-discovered devices are in Enrollment Validation Pending state in the Devices page. The tenant can select a single device or multiple devices in the Devices page and validate the enrollment. The devices are moved to the intended group after they are validated. For more information about how to validate the devices, see Enrollment validation.

3. Add the device to your desired group (optional)—see Managing groups and configs.
4. Configure the thin client using any of the following options:
    - Using the **Groups and Configs** page—see Edit the ThinLinux policy settings or Edit the Linux policy settings.
    - Using the **Devices page**—see Managing Devices.

Register and configure a new Wyse Software Thin Client using Wyse Management Suite

Steps

1. Install Wyse Device Agent on your thin client—see Installing or upgrading Wyse Device Agent.
2. Register your thin client to Wyse Management Suite—see Register Wyse Software Thin Client to Wyse Management Suite by using Wyse Device Agent.

   NOTE: You can also register the devices using any of the following methods:

   - **Using DHCP option tags—see Register devices by using DHCP option tags.**
   - **Using DNS SRV record—see Registering devices by using DNS SRV record.**

   NOTE: When the Enrollment Validation option is enabled, the manual or auto-discovered devices are in Enrollment Validation Pending state in the Devices page. The tenant can select a single device or multiple devices in the Devices page and validate the enrollment. The devices are moved to the intended group after they are validated. For more information about how to validate the devices, see Enrollment validation.

3. Add the device to your desired group (optional)—see Managing groups and configs.
4. Configure the thin client using any of the following options:
    - Using the **Groups and Configs** page—see Edit the Wyse Software Thin Client policy settings.
    - Using the **Devices page**—see Managing Devices.

5

Wyse Management Suite dashboard

The **Dashboard** page enables you to view the status of a system, and the recent tasks that are performed within the system. To view a particular alert, click the link in the **Alerts** section. The **Dashboard** page also enables you to view the device summary.

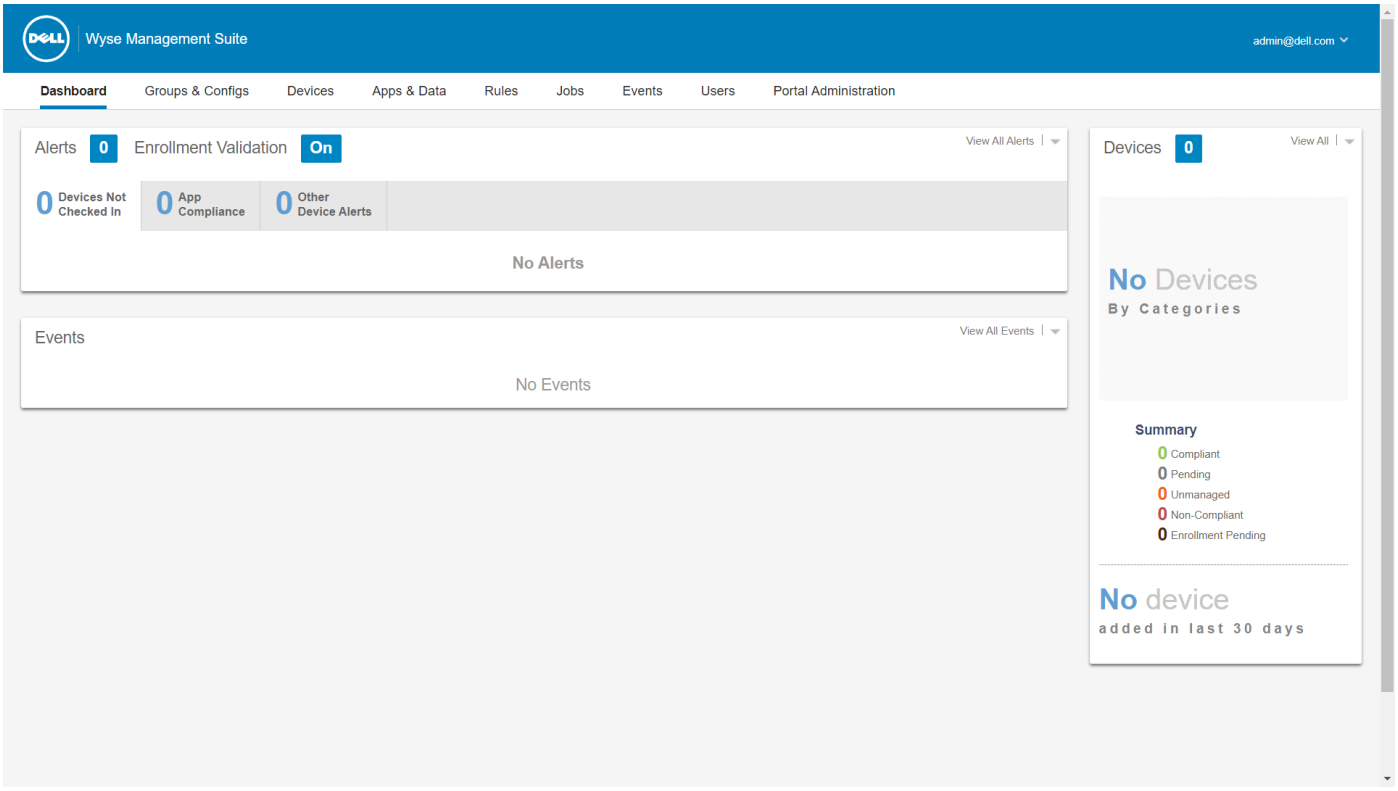

Figure 1. Dashboard

Topics:

- View alerts
- View the list of events
- View the device status
- Enable Enrollment Validation
- Change user preferences
- Access online help
- Change your password
- Log out from the management console

View alerts

The **Alerts** section displays the summary of all the alerts.

Steps

1. Click **Dashboard**.
   The alerts summary is displayed.
2. Click **View All Alerts**.
   The following attributes are displayed in the **Events** page:

- **Devices Not Checked In**
- **App Compliance**
- **Other Device Alerts**

View the list of events

The **Events** section displays the summary of events that have occurred in the last few days.

Steps

1. Click **Dashboard**.
   The events summary is displayed.
2. Click **View All Events**.
   The **Events** page is displayed with list of all the events.

View the device status

The **Display** section provides the summary of device status.

Steps

1. Click **Dashboard**.
   The devices summary is displayed.
2. Click **View All**.
   The **Devices** page is displayed with list of all the registered devices. The **Summary** section displays the device count based on the following device status category:
   - **Compliant**
   - **Pending**
   - **Unmanaged**
   - **Non-Compliant**
   - **Enrollment Pending**

Enable Enrollment Validation

You can enable **Enrollment Validation** to enable administrators to control the manual and auto registration of thin clients to a group.

Steps

1. Click **Dashboard**.
2. Click the **ON/OFF** button next to the **Enrollment Validation** option.
   You are redirected to the **Other Settings** option in the **Portal Administration** page.
3. Enable or disable the **Enrollment Validation** option.

Change user preferences

You can change the user preferences, such as alert notification, policy settings, and page size.

Steps

1. On the upper-right corner of the **Dashboard** page, click the login drop-down menu.
2. Click **User Preferences**.
   The **User Preferences** window is displayed.
3. Click **Alerts**, and select the appropriate check boxes to assign an alert type—Critical, Warning or Info—for notifications from your emails and mobile applications.
4. Click **Policies**, and select the **Ask me if I want to use the ThinOS Wizard mode** check box to display the **Select ThinOS Configuration Mode** window every time you configure the ThinOS policy settings.
5. Click **Page size**, and enter a number from 10 to 100 in the **Number Of Items Per Page** text box. This option enables you to set the number of items displayed on each page.

Access online help

Steps

1. On the upper-right corner of the **Dashboard** page, click the login drop-down menu.
2. Click **WMS Help**.
   The **Support for Wyse Management Suite** page is displayed.

Change your password

Steps

1. On the upper-right corner of the **Dashboard** page, click the login drop-down menu.
2. Click **Change Password**.
   The **Change Password** window is displayed.
3. Enter the current password.
4. Enter the new password.
5. Reenter the new password for confirmation.
6. Click **Change Password**.

Log out from the management console

Steps

1. On the upper-right corner of the **Dashboard** page, click the login drop-down menu.
2. Click **Sign out**.

6

Managing groups and configurations

The **Groups & Configs** page enables you to define policies that are required to configure your devices. You can create sub groups of the global group policies and categorize devices based on your requirements. For example, devices may be grouped based on job functions, device type, and so on.

For each group, you can define policies for the following operating systems:

- **ThinOS**
  - **ThinOS**
  - **ThinOS 9.x**
- **WES**
- **Linux**
- **ThinLinux**
- **Teradici**
- **Wyse Software Thin Client**

Devices inherit policies in the order that they are created. The settings that are configured in a default policy group are applied as default settings in all the policies listed in the default policy group. In a group, all devices present in that group have default policy group as their default setting.

On the **Device Details** page, you can create an exception for a device in the group to have a subset of policies that are different from the group default.

The configuration for a particular asset with details of where configurations are set—Global, Group, and the Device levels—are displayed on the page. The option to create exceptions is available on the page. The **Exception** settings are applicable only for that selected devices.

NOTE:

When you modify the lower-level policies, a bullet symbol is displayed next to the policy. This symbol indicates that the policy is an override to a higher-level policy. For example, System Personalization, Networking, Security, and so on. When you modify policies, an asterisk (*) is displayed next to the policy. This symbol indicates that there are unsaved or unpublished changes. To review these changes before publishing them, click the View pending changes link.

If a policy configuration has to be prioritized between the different levels, then the lowest-level policy takes precedence.

After you configure the policy settings, thin clients are notified about the changes. Changes take effect immediately after configuring the thin clients.

NOTE: Certain settings such as BIOS configuration for Windows Embedded Standard requires a restart for the changes to take effect. However, for most of the settings on ThinOS, you must restart the device for the changes to take effect.

The policies are enforced in the following precedence:

- Global
- Group
- Device

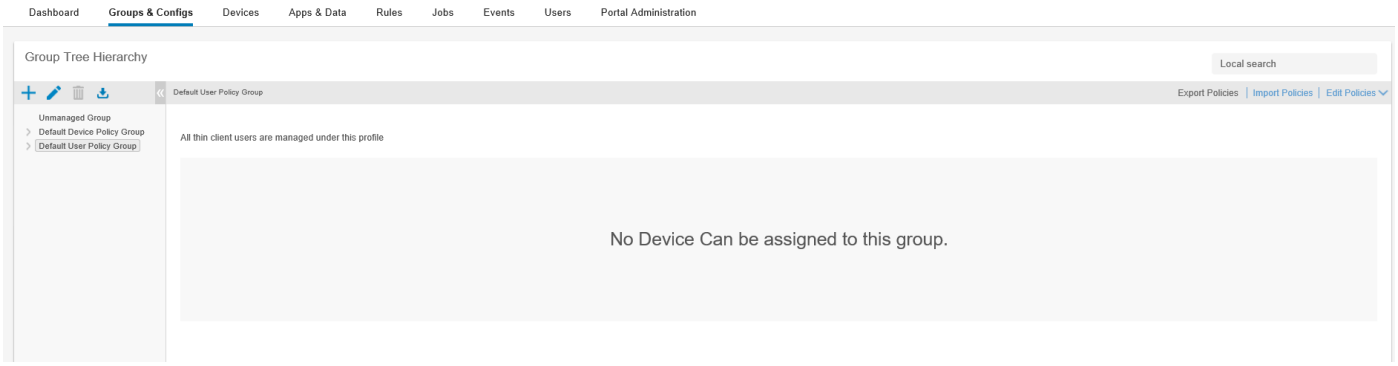

Figure 2. Groups and Configs

Topics:

Edit an unmanaged group

Devices that belong to the unmanaged group do not use licenses or receive configuration or application-based policies. To add devices to an unmanaged group, use the unmanaged group device registration key as part of auto registration or manual device registration.

Steps

1. On the **Groups & Configs** page, select **Unmanaged Group**.
2. Click .
   The **Editing Unmanaged Group** page is displayed. The **Group Name** displays the name of the group.
3. Edit the following details:
   - **Description**—Displays a brief description of the group.
   - **Group Token**—Select this option to enable the group token.
4. Click **Save**.

NOTE: For a public cloud, the group token for an unmanaged group must be enabled to register devices. For a private cloud, the group token for an unmanaged group is automatically enabled.

Create a default device policy group

You can create groups for the global device group policies and categorize devices based on your requirements.

Steps

1. On the **Groups & Configs** page, click the **Default Device Policy Group** option.
2. Click +.
3. In the **Add New Group** dialog box, enter the **Group Name**, **Description**, **Domain** and **AD Attribute Name**.

   NOTE: Select the This is a ThinOS Select group parent option to create a parent select group for ThinOS devices. For more information, see Create a ThinOS Select group.

4. In the **Registration** tab, select the **Enabled** check box under Group Token.
5. Enter the group token.
6. In the **Administration** tab, you can select the name of group administrators who are tasked with managing this group. From the **Available Group Admins** box, select the particular group and click the right arrow to move it to the **Assigned Group Admins** box. To move one group from the **Assigned Group Admins** to **Available Group Admins**, do the reverse. This step is optional.
7. Click **Save**.

   The group is added to the list of available groups on the **Groups & Configs** page.

   NOTE: The devices can be registered to a group by entering the group token which is available in the Groups and Configs page for the respective group.

Create a ThinOS Select group

Steps

1. On the **Groups & Configs** page, click the **Default Device Policy Group** option.
2. Click +.
3. In the **Add New Group** dialog box, enter the **Group Name** and **Description**.
4. Select the **This is a ThinOS Select group parent** option.
5. Select the name of the group administrators who are tasked with managing this group. From the **Available Group Admins** box, select the particular group and click the right arrow to move it to the **Assigned Group Admins** box. To move one group from the **Assigned Group Admins** to **Available Group Admins**, do the reverse. This step is optional.
6. Click **Save**.

   The group is added to the list of available groups on the **Groups & Configs** page.

   To add sub groups to the created parent group, click the parent group on the **Groups & Configs** page, and follow the steps that are mentioned in Create device policy group.

   NOTE: The parent select group can have 10 child select group and you can register the devices to child select group.

   NOTE: Profiles can be configured for other operating systems. The created profiles are the same as other custom groups.

Edit a default device policy group

Steps

1. Go to the **Groups & Configs** page and select the **Default Device Policy Group**.
2. In the **Editing Default Device Policy Group** dialog box, edit the required group information.
3. Click **Save**.

Edit a ThinOS select group

Steps

1. Go to the **Groups & Configs** page and click the ThinOS select group that you want to edit.
2. Click .
3. In the **Editing Default Policy group** dialog box, edit the group information such as **Group Name** and **Description**.
4. In the **Administration** tab, you can select the name of group administrators who are tasked with managing this group. From the **Available Group Admins** box, select the particular group and click the right arrow to move it to the **Assigned Group Admins** box. To move one group from the **Assigned Group Admins** to **Available Group Admins**, do the reverse. This step is optional.
5. Click **Save**.

Remove a ThinOS select group

As an administrator, you can remove a group from the group hierarchy.

Steps

1. In the **Groups & Configs** page, select the ThinOS select group that you want to delete.
2. Click .
   A warning message indicating that this action removes one or more groups from the group tree hierarchy is displayed.
3. From the drop-down list, select a new group for users and devices in the current group.
4. Click **Remove Group**.

   NOTE: When you remove a group from the group hierarchy, all users and devices that belong to the deleted group are moved to the custom, default, or unmanaged group.

   NOTE: When you delete the select group, the devices of removed group cannot be moved to another select group.

Configure a global level policy

Steps

1. In the **Groups & Configs** page, from the **Edit Policies** drop-down menu, select a device type.

   The policy settings of the respective device type are displayed.
2. Select the policy setting you want to configure and click **Configure this item**.
3. After configuring the options, click **Save and Publish**.

Create a user policy group

You can create groups for the global user group policies and categorize users and devices based on their user groups.

Steps

1. On the **Groups & Configs** page, click the **Default User Policy Group** option.
2. Click .
3. In the **Add New Group** dialog box, enter the **Group Name**, **Description**, **Domain**, **AD Attribute** and **AD Attribute Name**.
4. Select the name of the group administrators who are tasked with managing this group.
5. From the **Available Group Admins** box, select the particular group and click the right arrow to move it to the **Assigned Group Admins** box.

   To move one group from the **Assigned Group Admins** to **Available Group Admins**, do the reverse.
6. Click **Save**.

   The group is added to the list of available groups on the **Groups & Configs** page.

NOTE: A user policy group must be mapped to an AD group or an organizational unit, but not both.

7. Select the **Device Group Mapping** option to import user groups with device mapping to control the configurations that are applied to all device groups by default.

   NOTE: This feature is available only on Wyse Management Suite Pro license. You can import 100 user groups to Wyse Management Suite.

Edit a user policy group

Steps

1. Go to the **Groups & Configs** page and select the default user policy group.
2. Click .
3. In the **Editing Default User Policy group** dialog box, edit the required group information.
4. Click **Save**.

Import a user policy group

Steps

1. On the **Groups & Configs** page, click the **Default User Policy Group** option.
2. Click .
3. In the **Bulk Import** dialog box, browse the .csv file.
   The .csv file must contain the details in the following order:
   - Group name
   - Description
   - Domain
   - AD attribute
   - AD attribute name
4. Click **Import**.

Import a user policy group from Active Directory

Steps

1. Log in to the Wyse Management Suite private cloud.
2. Go to **Portal Admin** > **Console Settings** > **Active Directory**.
3. Click the **AD information** tab.
4. Click .
5. Select **AD user group** under **AD Authentication and onetime Import** and click **Import group**.
   You can see the user policy groups that are created in the **Default User Policy Group** tab under the **Groups & Configs** page.

   NOTE: You must use remote repository UI to import user policy groups from Active Directory on public cloud.

Remove a group

As an administrator, you can remove a group from the group hierarchy.

Steps

1. In the **Groups & Configs** page, select the group that you want to delete.

2. Click  .
   A warning message indicating that this action removes one or more groups from the group tree hierarchy is displayed.
3. From the drop-down list, select a new group for users and devices in the current group.
4. Click **Remove Group**.

   NOTE: When you remove a group from the group hierarchy, all users and devices that belong to the deleted group are moved to a selected group.

Configure a device level policy

Steps

1. In the **Devices** page, click the device you want to configure.
   The **Device Details** page is displayed.
2. In the **Device Configuration** section, click **Create/Edit Exceptions**.

Export group policies

The **Export Policies** option enables you to export the policies from the current group. This option is available for Wyse Management Suite PRO license users.

Steps

1. From the **Groups & Configs** page, select the group that you would like to export policies from. The group must have configured policies.
2. Click **Export Policies**.
   The **Export Policies** screen is displayed.
3. Select the device type policies to export.
   The following options are available:
   - All device type policies—All device type policies are exported.
   - Specific device type policies—Select one or more device types from the drop-down list. Only the selected device type policies are exported.
4. Click the **Yes** button to export the selected device type policies.
   Parent group policies are not exported. Only policies that are configured at the selected or targeted group level are exported.
5. Click the download link or right-click the file, and then click **Save as** to save the `JSON` file.

   NOTE: The passwords are encrypted in the exported file. The file name is in `[Group Name]-[ALL]-[Exported Date & Time]UTC.json` format.

Importing group policies

The **Import Policies** option enables you to import the policies. This option is available for Wyse Management Suite PRO license users. You can import the group policies from the **Groups & Configs** page or from the **Edit Policies** page.

Import group policies from Groups and Configs page

Steps

1. On the **Groups & Configs** page, select your preferred group.

   If the destination group contains policies of the same device type as the imported ones, they are removed and new ones are added.
2. Click **Import Policies**.
   The **Import Policies Wizard** screen is displayed.
3. Select the mode of importing the group policies from the selected group.
   The following options are available:
   - From an existing group—Select a group from the drop-down list. Policies from that group are copied to the current group.

- From an exported file—Browse the `.json` file. Policies from that file are copied to the current group.

4. Click **Next**.
5. Select the device type configurations to import.
   The following options are available:
   - All device type policies—All configured device type policies are imported to the current group.
   - Specific device type policies—Select one or more device types from the dropdown list. Only the selected device type policies are imported to the current group.
6. Click **Next**.
   A preview of the policies in the selected group is displayed.
7. Click **Next**.
   The summary of the import process is displayed. The following types of warnings can be displayed:
   - **Imported <operating system type> policies are applied to group <group name>**—When you are importing the operating system configurations to a group that does not contain any of the configurations.
   - **<Operating system type> policies already exists for the <group name> group. Existing <operating system type> policies are removed policies are applied**—When you are importing new operating system type configurations to a group that contains the operating system type configurations.
   - **Importing policies from a file that contains dependencies to inventory files will fail. To allow this import, use the import option from the "Edit Policies" window**—When you are importing the device type configurations from a file that contains references to inventory files.
8. Click **Import**.

   NOTE: Only the device type configurations that are selected can be imported and policies that are defined in the target group for the selected device type are removed before applying the new policies of the same device type.

   NOTE: While you importing the group policies, the passwords are not imported. The administrator must re-enter the password in all password fields.

Import group policies from Edit Policies page

Steps

1. On the **Groups & Configs** page, select your preferred group.
2. Click **Edit Policies** and select your preferred option.
3. Click **Import**.
   The **Import Policies Wizard** screen is displayed.
4. Select the mode of importing the group policies from the selected group. The following options are available:
   - From an existing group—Select a group from the drop-down list. Policies from that group are copied to the current group.
   - From an exported file—Browse the `.JSON` file. Policies from that file are copied to the current group.
5. Click **Next**.
   A preview of the policies in the selected group is displayed.
6. Click **Next**.The summary of the import process is displayed. The following types of warnings can be displayed:
   - **Imported <device type> policies will be applied to group <group name>**—When you are importing the device type configurations to a group that does not contain any of these device type configurations.
   - **<Device type> policies already exists for the <group name> group. Existing <device type> policies will be removed and imported policies will be applied**—When you are importing the device type configurations to a group that contains the device type configurations.
   - **Importing policies from a file that contains dependencies to inventory files will fail. To allow this import, use the import option from the "Edit Policies" window**—When you are importing the device type configurations from a file that contains references to inventory files.
7. Click **Import**.

   NOTE: When you import a policy from a file, and if there are references or invalid dependencies, the import fails and an error message is displayed. Also, if the file to be imported has a reference or dependency file, go to Edit policy page of the respective device type and then import the group policies.

Results

If the destination group contains policies of the same device type as the imported ones, they are removed and new ones are added.

NOTE: While you importing the group policies, the passwords are not imported. The administrator must re-enter the password in all password fields.

Edit the ThinOS policy settings

Steps

1. Click **Groups & Configs**.
   The **Groups & Configs** page is displayed.
2. Click the **Edit Policies** drop-down menu.
3. Click **ThinOS**.
   The **Select ThinOS Configuration Mode** window is displayed.
4. Select your preferred mode to configure the policy settings. The available modes are:
   - Wizard Mode
   - Advanced Configuration Mode

   NOTE: To set the ThinOS Advanced Configuration as the default mode, select the check box.
5. After configuring the policy settings, click **Save and Publish**.

   NOTE: The thin client reboots if you make any changes to the following settings:
   - **BIOS setting**
   - **DP audio**
   - **Jack popup**
   - **Terminal name**
   - **Ethernet speed**
   - **Display change—resolution, rotate, refresh, dual display, and multiple display**
   - **System mode—VDI, Storefront, and Classic**
   - **LPT port bind**

ThinOS—Wizard mode

Use this page to configure the most frequently used parameters for the ThinOS devices.

Steps

1. Select **Wizard** as the mode of configuration.
2. Configure the options are required.
3. Click **Next** to go to the next policy setting.
4. Click **Save & Publish** after you configure the options.

   NOTE: To go to ThinOS advanced configuration mode, click Continue.

ThinOS—Advanced mode

Use this page to configure the advanced policy settings for the ThinOS devices.

Steps

1. Select **Advanced Configuration** as the mode of configuration.
2. Configure the options as required.
3. Click **Save & Publish** to save and publish your configuration.

NOTE: To go back to the ThinOS page, click Remove Policy.

Edit the ThinOS 9.x policy settings

Prerequisites

- Create a group with a group token for the devices you want to push the application package.
- Register the thin client to Wyse Management Suite.

Steps

1. Go to the **Groups & Configs** page, and select a group.
2. From the **Edit Policies** drop-down menu, click **ThinOS 9.x**.
   The **Configuration Control | ThinOS** window is displayed.
3. Click the **Advanced** option.

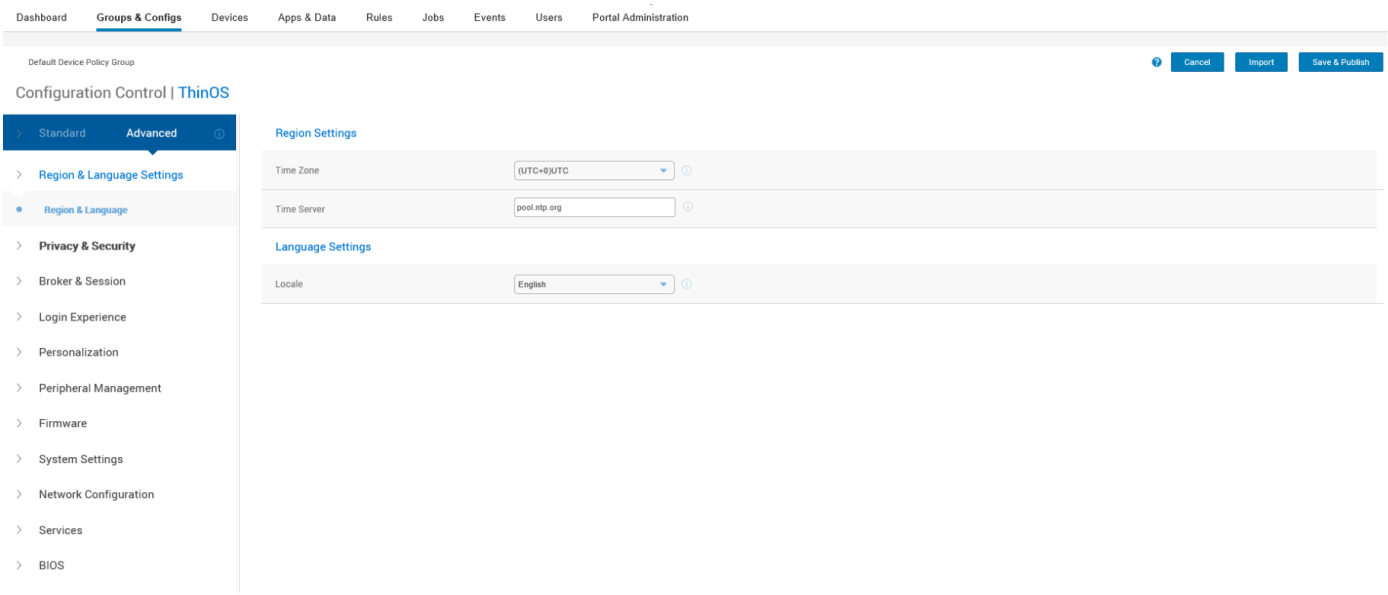

Figure 3. Advanced option

4. Select the options that you want to configure.

   NOTE: BIOS settings support has been added in Wyse Management Suite 2.1.

5. In the respective fields, click the option that you want to configure.
6. Configure the options as required.
7. Click **Save & Publish**.

   NOTE: After you click Save & Publish, the configured settings are also displayed in the Standard tab.

BIOS configurations for ThinOS 9.x

About this task

BIOS configuration settings can be configured to ThinOS 9.x devices using Wyse Management Suite 2.1. You can deploy the BIOS packages using the **Groups & Configs** page, or using the subnet mapping option.

NOTE: This feature is available only with Wyse Management Suite Pro license.

Steps

1. Go to the **Groups & Configs** page, and select a group.
   The Configuration Control | ThinOS window is displayed.
2. From the **Edit Policies** drop-down menu, click **ThinOS 9.x**.
3. Click **Advanced**.
4. In the **BIOS** field, click **select your platform** to choose the platform where you want to configure the BIOS settings.

Upload and push OS packages

Prerequisites

- Create a group in Wyse Management Suite with a group token. Use this group token to register the ThinOS 9.x devices.
- Register the thin client to Wyse Management Suite.

Steps

1. Go to the **Groups & Configs** page, and select a group.
2. From the **Edit Policies** drop-down menu, click **ThinOS 9.x**.
   The **Configuration Control || ThinOS** window is displayed.
3. Click **Advanced.**
4. In the **Firmware** field, select **OS Firmware Updates**.
5. Click **Select the ThinOS Firmware to deploy** drop-down menu, select, and upload the BIOS package.

   NOTE: You can upload and deploy multiple firmware packages from the remote repository, tenant cloud repository or operator cloud repository.

6. Click **Save & Publish**.
   The thin client restarts and the BIOS package is installed.

Upload and push BIOS packages

Prerequisites

- Create a group in Wyse Management Suite with a group token. Use this group token to register the ThinOS 9.x devices.
- Register the thin client to Wyse Management Suite.

Steps

1. Go to the **Groups & Configs** page, and select a group.
2. From the **Edit Policies** drop-down menu, click **ThinOS 9.x**.
   The Configuration Control | ThinOS window is displayed.
3. Click **Advanced**.
4. In the **Firmware** field, click **BIOS Firmware Updates**.
5. From the **Select the ThinOS BIOS to deploy** drop-down menu, select the package.

   NOTE: You can upload and deploy multiple firmware packages from the remote repository, tenant cloud repository or operator cloud repository. You can upload 10 packages from tenant cloud repository.

6. Click **Save & Publish**.
   The thin client restarts and the application package is installed.

   You can also upload BIOS firmware from **Apps & Data** on Wyse Management Suite 2.1 as mentioned in the following steps:

   a. Go to the **Apps & Data** page.
   b. Click on **OS Image Repository** and select **ThinOS 9.x**.
   c. Click **Add BIOS file** to browse and add the file you want to add to the repository.

      NOTE: This feature is available only on Wyse Management Suite Pro license.

Upload and push ThinOS 9.x application packages using Wyse Management Suite

Prerequisites

- Create a group in Wyse Management Suite with a group token. Use this group token to register the ThinOS 9.x devices.
- Register the thin client to Wyse Management Suite.

Steps

1. Go to the **Groups & Configs** page, and select a group.
2. From the **Edit Policies** drop-down menu, click **ThinOS 9.x**.
   The **Configuration Control | ThinOS** window is displayed.
3. Click **Advanced**.
4. In the **Firmware** field, click **Application Package Updates**.
5. From the **Select the ThinOS Package(s) to deploy** drop-down menu, select the package.

   NOTE: You can upload and deploy multiple firmware packages from the remote repository, tenant cloud repository or operator cloud repository.

6. Click **Save & Publish**.
   The thin client restarts and the application package is installed.

Edit the Windows Embedded Standard policy settings

Steps

1. Click **Groups & Configs**.
   The **Groups & Configs** page is displayed.
2. Click the **Edit Policies** drop-down menu.
3. Click **WES**.
   The **WES** page is displayed.
4. After configuring the policy settings, click **Save and Publish**.

Edit the Linux policy settings

Steps

1. Click **Groups & Configs**.
   The **Groups & Configs** page is displayed.
2. Click the **Edit Policies** drop-down menu.
3. Click **Linux**.
4. After configuring the policy settings, click **Save and Publish**.

Edit the ThinLinux policy settings

Steps

1. Click **Groups & Configs**.
   The **Groups & Configs** page is displayed.
2. Click the **Edit Policies** drop-down menu.
3. Click **ThinLinux**.
4. After configuring the policy settings, click **Save and Publish**.

Edit the Wyse Software Thin Client policy settings

Steps

1. Click **Groups & Configs**.
   The **Groups & Configs** page is displayed.
2. Click the **Edit Policies** drop-down menu.
3. Click **Wyse Software Thin Client**.
   The **Wyse Software Thin Client** page is displayed.
4. After configuring the policy settings, click **Save and Publish**.

Edit the Cloud Connect policy settings

Steps

1. Click **Groups & Configs**.
   The **Groups & Configs** page is displayed.
2. Click the **Edit Policies** drop-down menu.
3. Click **Cloud Connect**.
4. After configuring the policy settings, click **Save and Publish**.

7

Managing devices

This section describes how to perform a routine device management task by using the management console. To locate the inventory of the devices, click the **Devices** tab. You can view a subset of the devices by using various filter criteria, such as groups or subgroups, device type, operating system type, status, subnet, platform, or time zone.

You can sort the device list based on the following:

- Type
- Platform
- Operating system version
- Serial number
- IP address
- Last user details
- Group details
- Last check-in time
- Registration status
- Write filter status

To view the **Device Details** page of a particular device, click the device entry that is listed on the page. All the configuration parameters of the device and the group level at which each parameter is applied are displayed on the **Device Details** page.

You can set the configuration parameter that is specific to the device. Parameters that are configured in this section override any parameters that were configured at the groups and/or at the global level.

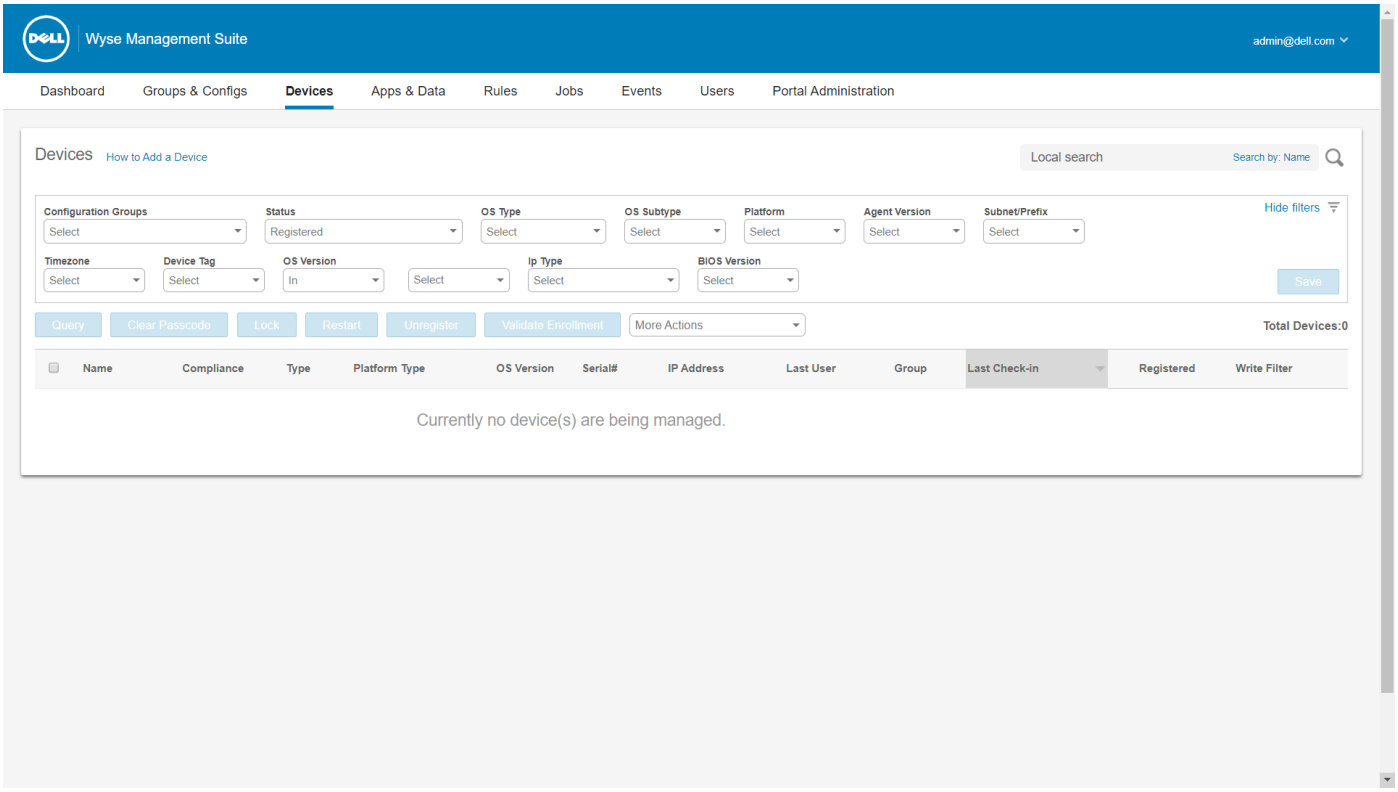

Figure 4. Devices page

Topics:

- Methods to register devices to Wyse Management Suite
- Search a device by using filters

- Save the filter in Devices page
- Query the device status
- Lock the devices
- Restart the devices
- Unregister the device
- Enrollment Validation
- Reset the device to factory default settings
- Change a group assignment on the Devices page
- Send messages to a device
- Activate the device
- View the device details
- Manage the device summary
- View the system information
- View device events
- View the installed applications
- Rename the thin client
- Configure remote shadow connection
- Shutting down devices
- Tag a device
- Device compliance status
- Pulling Windows Embedded Standard or ThinLinux image
- Request a log file
- Troubleshooting your device

Methods to register devices to Wyse Management Suite

You can register a thin client to the Wyse Management Suite by using any of the following methods:

- Register manually through the User Interface provided by the Wyse Device Agent (WDA) on the device.
- Register automatically by configuring the appropriate option tags on the DHCP server.
- Register automatically by configuring the appropriate DNS SRV records on the DNS server.

NOTE:

- For a public cloud, register a thin client by providing the Wyse Management Suite URL, and the group token for the group to which you want to register the device.
- For a private cloud, register a thin client by providing the Wyse Management Suite URL, and the group token—optional for the group to which you want to register this device. Devices are registered to the unmanaged group, if the group token is not provided.

Register ThinOS devices by using Wyse Device Agent

To register the ThinOS devices manually, do the following:

Steps

1. From the desktop menu of the thin client, go to **System Setup** > **Central Configuration**.
   The **Central Configuration** window is displayed.
2. Click the **WDA** tab. The WDA service automatically runs after the client boot up process is complete.

   WMS is selected by default.
3. Select the **Enable Wyse Management Suite** check box to enable Wyse Management Suite.
4. Enter the **Group Registration Key** as configured by your administrator for the wanted group.
5. Select the **Enable WMS Advanced Settings** option, and enter the WMS server or MQTT server details.
6. Enable or disable CA validation based on your license type. For public cloud, select the **Enable CA Validation** check box, and for private cloud, select the **Enable CA Validation** check box if you have imported certificates from a well-known certificate authority into your Wyse Management Suite server.

To enable the CA validation option in the private cloud, you must install the same self-signed certificate on the ThinOS device as well. If you have not installed the self-signed certificate in the ThinOS device, then, do not select the **Enable CA Validation** check box. You can install the certificate to the device by using Wyse Management Suite after registration, and then enable the CA validation option.

NOTE:

- **A warning message is displayed if you disable CA validation. You must click Ok to confirm.**
- **For the public cloud version of Wyse Management Suite in USA data-center, do not change the default WMS server and MQTT server details. For the public cloud version of Wyse Management Suite in Europe data-center, use the following:**
  - **CCM Server—eu1.wysemanagementsuite.com**
  - **MQTT Server—eu1-pns.wysemanagementsuite.com:1883**
- **A warning message is displayed if the server address contains http. You must click Ok to confirm.**

7. To verify the setup, click **Validate Key**. The device automatically restarts after the key is validated.

   NOTE: If the key is not validated, verify the group key and WMS server URL which you have provided. Ensure that ports 443 and 1883 are not blocked by the network.

8. Click **OK**.
   The device is registered to Wyse Management Suite.

Registering Windows Embedded Standard Thin Clients to Wyse Management Suite by using Wyse Device Agent

Prerequisites

Create a group in Wyse Management Suite to register a device.

Steps

1. Open the Wyse Device Agent application.
   The Wyse Device Agent screen is displayed.
2. From the **Management Server** drop-down list, select **Wyse Management Suite**.
3. Enter the server address and the port number in the respective fields.

   NOTE: If the server address contains http, a warning message is displayed. Click Ok to confirm.

4. Enter the group token. For a single tenant, the group token is an optional step.

   NOTE: The group token that is entered in the Group Token field is not displayed in clear text.

5. Enable or disable CA validation that is based on your license type.

   NOTE: If you disable CA validation, a warning message is displayed. Click Ok to confirm.

6. Click **Register**.

Register Wyse Software Thin Client to Wyse Management Suite by using Wyse Device Agent

Prerequisites

Create a group to register a device to Wyse Management Suite.

Steps

1. Open the **Wyse Device Agent** application.
   The **Wyse Device Agent** window is displayed.
2. Enter the device registration details.

3. From the **Management Server** drop-down list, select **Wyse Management Suite**.
4. Enter the server address and the port number in the respective fields.

   NOTE: If the server address contains http, a warning message is displayed. Click Ok to confirm.

5. Enter the group token. For a single tenant, the group token is an optional step.
6. Enable or disable CA validation that is based on your license type.

   NOTE: If you disable CA validation, a warning message is displayed. Click Ok to confirm.

7. Click **Register**.
   After the registration is complete, the **Registered to Wyse Management Suite** message is displayed.

Register ThinLinux thin clients by using Wyse Device Agent

Prerequisites

Create a group in Wyse Management Suite to register a device.

Steps

1. Open the Wyse Device Agent application.
   The Wyse Device Agent screen is displayed.
2. Enter the device registration details.
3. In Wyse Management Suite, enter the Wyse Management Suite server details.
4. Enter the group token.
   For a single tenant, the group token is an optional step.
5. Click **Register**.
   After the registration is complete, the confirmation message is displayed.

Register ThinOS devices by using the FTP INI method

Prerequisites

Create a group to register in Wyse Management Suite.

Steps

1. Create a `wnos.ini` file. Enter the following parameter:

   CCMEnable=`yes/no` **CCMServer**=`FQDN of WMS Server` **GroupPrefix**=`The prefix of the Group Token` **GroupKey**=`The Group Key` **CAVAlidation**=`yes/no` **Discover**=`yes/no`

   For example, to register the ThinOS device to Wyse Management Suite (FQDN of the server is ServerFQDN.domain.com) having with the group token defa-defadefa, and with the CA Validation option enabled, enter the following INI parameter:

   CCMEnable=`yes` **CCMServer**= `is ServerFQDN.domain.com` **GroupPrefix**=`defa` **GroupKey**=`defadefa` **CAVAlidation**=`yes` **Discover**=`yes`

2. Place the `wnos.ini` file inside wnos folder of any FTP path.
3. Go to **Central Configuration** on the ThinOS device.
4. In the **General** tab, provide the FTP path in file servers or path until the parent folder.
5. Enter the FTP credentials if required. If FTP does not need credentials, username and password can be anonymous.
6. Click **OK**, and then restart the thin client.
7. Go to **Central Configuration** on the ThinOS device.
   In the **Wyse Device Agent** tab, observe that the Wyse Management Server details are available in the respective field and the client entry can be seen in Wyse Management Server>Devices page.

Register ThinLinux version 2.0 devices by using FTP INI method

Prerequisites

Create a group to register in Wyse Management Suite.

Steps

1. Create a `wlx.ini` file. Enter the following parameter:

   WMSEnable=`yes\no`

   WMSServer=`https://FQDN of the WMS Server:Port <By default 443 is used>`

   GroupRegistrationKey=`GroupToken present in WMS Server`

   CAValidation=`True/False`

   For example, to register the ThinLinux version 2.0 device to Wyse Management Suite (FQDN of the server is ServerFQDN.domain.com) having with the group token defa-defadefa, and with the CA Validation option enabled, enter the following INI parameter:

   WMSEnable=`yes`

   WMSServer=`https://ServerFQDN.domain.com:443`

   GroupRegistrationKey=`defa-defadefa`

   CAValidation=`True`

2. Place the wlx ini file in the wyse\wlx2 folder.
3. Go to **Settings** and switch to admin on the ThinLinux thin client.
4. Go to **Management** > **INI**.
5. Enter the FTP server URL.
6. Click **Save**, and then restart the thin client.
7. Go to **Management** > **Wyse Device Agent**.
   In the Wyse Device Agent tab, observe that the Wyse Management Server details are available in the respective field and the client entry can be seen in Wyse Management Server>Devices page.

Register ThinLinux version 1.0 devices by using FTP INI method

Prerequisites

Create a group to register in Wyse Management Suite.

Steps

1. Create a `wlx.ini` file and enter the following parameter:

   WMSEnable=`yes\no`

   WMSServer=`https://FQDN of the WMS Server:Port <By default 443 is used>`

   GroupRegistrationKey=`GroupToken present in WMS Server`

   CAValidation=`True/False`

   For example, to register the ThinLinux version 1.0 device to Wyse Management Suite (FQDN of the server is ServerFQDN.domain.com) having with the group token defa-defadefa, and with the CA Validation option enabled, enter the following INI parameter:

   WMSEnable=`yes`

   WMSServer=`https://ServerFQDN.domain.com:443`

GroupRegistrationKey=`defa-defadefa`

CAValidation=`True`

2. Place the wlx ini file in the `wyse\wlx` folder.
3. Go to **Settings** and switch to admin on the ThinLinux thin client.
4. Go to **Management** > **INI**.
5. Enter the FTP server URL.
6. Click **Save**, and then restart the thin client.
7. Go to **Management** > **Wyse Device Agent**.
   In the Wyse Device Agent tab, observe that the Wyse Management Server details are available in the respective field and the client entry can be seen in Wyse Management Server>Devices page.

Registering devices by using DHCP option tags

You can register the devices by using the DHCP option tags.

Table 3. Registering device by using DHCP option tags

Option Tag	Description
Name—WMS **Data Type**—String **Code**—165 **Description**—WMS Server FQDN	This tag points to the Wyse Management Suite server URL. For example, `wmsserver.acme.com:443`, where wmsserver.acme.com is fully qualified domain name of the server where Wyse Management Suite is installed.
Name—MQTT **Data Type**—String **Code**—166 **Description**—MQTT Server	This tag directs the device to the Wyse Management Suite Push Notification server (PNS). For a private cloud installation, the device gets directed to the MQTT service on the Wyse Management Suite server. For example, `wmsservername.domain.com:1883`. To register your devices in Wyse Management Suite public cloud, the device should point to the PNS (MQTT) servers in public cloud. For example, US1:us1-pns.wysemanagementsuite.com EU1:eu1-pns.wysemanagementsuite.com
Name—CA Validation **Data Type**—String **Code**—167 **Description**—Certificate Authority Validation	You can enable or disable CA validation option if you are registering your devices with Wyse Management Suite on private cloud. By default, the CA validation is enabled in the public cloud. You can disable the CA validation in the public cloud as well. Enter **True**, if you have imported the SSL certificates from a well-known authority for https communication between the client and Wyse Management Suite server. Enter **False** , if you have not imported the SSL certificates from a well-known authority for https communication between the client and Wyse Management Suite server.
Name—GroupToken **Data Type**—String **Code**—199 **Description**—Group Token	This tag is required to register the ThinOS devices with Wyse Management Suite on public or private cloud. This tag is optional to register the Windows Embedded Standard or ThinLinux devices with Wyse Management Suite on private cloud. If the tag is not available, then the devices are automatically registered to the unmanaged group during on-premise installation.

NOTE: For detailed instructions on how to add DHCP option tags on the Windows server, see How do I create and configure DHCP option tags.

Registering devices by using DNS SRV record

DNS-based device registration is supported with the following versions of Wyse Device Agent:

- Windows Embedded Systems—13.0 or later versions
- Thin Linux—2.0.24 or later versions
- ThinOS—8.4 firmware or later versions

You can register devices with the Wyse Management Suite server if DNS SRV record fields are set with valid values.

NOTE: For detailed instructions on how to add DNS SRV records on the Windows server, see How do I create and configure DNS SRV record.

The following table lists the valid values for the DNS SRV records:

Table 4. Configuring device by using DNS SRV record

URL/Tag	Description
Record Name—_WMS_MGMT **Record FQDN**—_WMS_MGMT._tcp.<Domainname> **Record Type**— SRV	This record points to the Wyse Management Suite server URL. For example, `wmsserver.acme.com:443`, where wmsserver.acme.com is fully qualified domain name of the server where Wyse Management Suite is installed. **NOTE: Do not use https:// in the server URL, or the thin client will not register under Wyse Management Suite.**
Record Name—_WMS_MQTT **Record FQDN**—_WMS_MQTT._tcp.<Domainname> **Record Type**—SRV	This record directs the device to the Wyse Management Suite Push Notification server (PNS). For a private cloud installation, the device gets directed to the MQTT service on the Wyse Management Suite server. For example, `wmsservername.domain.com:1883`. **NOTE: MQTT is optional for the latest version of Wyse Management Suite.** To register your devices in Wyse Management Suite public cloud, the device should point to the PNS (MQTT) servers in public cloud. For example, US1—us1-pns.wysemanagementsuite.com EU1—eu1-pns.wysemanagementsuite.com
Record Name—_WMS_GROUPTOKEN **Record FQDN**—_WMS_GROUPTOKEN._tcp.<Domainname> **Record Type**— TEXT	This record is required to register the ThinOS devices with Wyse Management Suite on public or private cloud. This record is optional to register the Windows Embedded Standard or ThinLinux devices with Wyse Management Suite on private cloud. If the record is not available, then the devices are automatically registered to the unmanaged group during on-premise installation. **NOTE: Group Token is optional for the latest version of Wyse Management Suite on private cloud.**
Record Name—_WMS_CAVALIDATION **Record FQDN**—_WMS_CAVALIDATION._tcp.<Domainname> **Record Type**—TEXT	You can enable or disable CA validation option if you are registering your devices with Wyse Management Suite on private cloud. By default, the CA validation is enabled in the public cloud. You can disable the CA validation in the public cloud as well. Enter **True**, if you have imported the SSL certificates from a well-known authority for https communication between the client and Wyse Management Suite server. Enter **False** , if you have not imported the SSL certificates from a well-known authority for https communication between the client and Wyse Management Suite server. **NOTE: CA Validation is optional for the latest version of Wyse Management Suite.**

Search a device by using filters

Steps

1. From the **Configuration Groups** drop-down list, select either the default policy group or the groups which are added by an administrator.
2. From the **Status** drop-down list, select any of the following options:
   - **Registration**
     - Registered
     - Pre-registered
     - Not Registered
     - Compliant
     - Enrollment Validation Pending
     - Pending
     - Non-Compliant
   - **Online Status**
     - Online
     - Offline
     - Unknown
   - **Others**
     - Recently Added
3. From the **OS Type** drop-down list, select any of the following operating systems:
   - **Thin Client**
     - Linux
     - ThinLinux
     - ThinOS
     - WES
     - Teradici (Private cloud)
     - Wyse Software Thin Client
4. From the **OS Subtype** drop-down list, select a subtype for your operating system.
5. From the **Platform** drop-down list, select a platform.
6. From the **OS Version** drop-down list, select an OS version.
7. From the **Agent Version** drop-down list, select an agent version.
8. From the **Subnet** drop-down list, select a subnet.
9. From the **Timezone** drop-down list, select the time zone.
10. From the **Device Tag** drop-down list, select the device tag.

Save the filter in Devices page

You can save the current filter as a group by configuring the required filter options.

Steps

1. Enter the **Name** of the filter.
2. Provide a description for the filter in the **Description** box.
3. Select the check box to set the current filter as the default option.
4. Click **Save Filter**.

Query the device status

You can send a command to update the device information and status in the system.

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to find the preferred device.
3. Select the check box of the device.
4. Click **Query**.
   An **Alert** window is displayed.
5. Click **Send Command** to send the query command.

Lock the devices

You can send a command to lock the registered device.

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to find the preferred device.
3. Select the check box of the device.
4. Click **Lock**.
   An **Alert** window is displayed.
5. Click **Send Command** to send the lock command.

Restart the devices

You can send a command to restart a registered device.

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to find the preferred device.
3. Select the check box of the device.
4. Click **Restart**.
   An **Alert** window is displayed.
5. Click **Send Command** to send the restart command.

Unregister the device

You can send a command to unregister a device from Wyse Management Suite.

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to find the preferred device.
3. Select the check box of the device.
4. Click **Unregister**.
   An **Alert** window is displayed.
5. Select the **Force Unregistration** check box.
6. Click **Send Command** to send the unregister command.

NOTE: Force unregister option can be used to remove the device when there is no communication between the server and client. The device is moved to unmanaged state and can be removed from the server entry. Unregister and Force unregister actions can be performed by WES WDA UI also.

Enrollment Validation

When you register a device manually or using DHCP/DNS auto discovery method, the device gets registered to a particular group if the group token is defined. If the group token is not defined, the device gets registered to the unmanaged group.

In Wyse Management Suite, the **Enrollment Validation** option is introduced where the tenant must manually approve before the device is registered to a group.

When the **Enrollment Validation** option is enabled, the auto-discovered devices are in **Pending Validation** state in the **Devices** page. The tenant can select a single device or multiple devices in the **Devices** page and validate the enrollment. The devices are moved to the intended group after they are validated. For more information about how to validate the devices, see Enrollment validation.

NOTE: The Enrollment Validation option is disabled for existing tenants in the public cloud or when you upgrade on-premise tenants.

The validation status of the devices is also displayed in the **Devices** section on the **Dashboard** page.

Validate the enrollment of a device

You can enable **Enrollment Validation** to enable administrators to control the manual and auto registration of thin clients to a group. You can filter the devices in **Pending Validation** state by clicking the **Pending** count in the **Dashboard** page or by selecting the **Enrollment Validation Pending** in the **Status** drop-down list in the **Devices** page.

Prerequisites

- You must enable the **Enrollment Validation** option when you install Wyse Management Suite or in the **Portal Administration** page.
- The device must be in Enrollment Pending state.

Steps

1. Select the check box of the device that you want to validate.
2. Click the **Validate Enrollment** option.
   An **Alert** window is displayed.
3. Click **Send Command**.
   The device moves to the wanted group, and the device is registered.

Reset the device to factory default settings

You can send a command to reset your device to factory default settings.

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to find the preferred device.
3. Select the check box of the device.
4. From the **More Actions** drop-down menu, click **Factory Reset**.
   An **Alert** window is displayed.
5. Enter the reason for the client reset.
6. Click **Send Command**.

Change a group assignment on the Devices page

You can change the group assignment of a device using the **Devices** page.

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to find the preferred device.
3. Select the check box of the device.
4. From the **More Actions** drop-down menu, click **Change Group**.
   The **Change Group Assignment** window is displayed.
5. From the drop-down menu, select a new group for the device.
6. Click **Save**.

Send messages to a device

You can send a message to a registered device using the **Devices** page.

Steps

1. Click **Devices**.
   The **Devices** page is displayed.
2. Apply the filters to find the preferred device.
3. Select the check box of the device.
4. From the **More Actions** drop-down menu, click **Send Message**.
   The **Send Message** window is displayed.
5. Enter the message.
6. Click **Send**.

Activate the device

You can send a command to activate a device if it is turned off or in the sleep mode.

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to find the preferred device.
3. Select the check box of the device.
4. From the **More Actions** drop-down menu, click **Wake On LAN**.
   An **Alert** window is displayed.
5. Click **Send Command**.

View the device details

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to find the preferred device.
   The preferred device list is displayed.
3. Click any of the displayed devices.
   The **Device Details** page is displayed.

Manage the device summary

You can view and manage information about the Notes, Group Assignment, Alerts, and Device Configuration using the **Devices** page.

Steps

1. Click **Devices**.
2. On the **Device Details** page, click **Summary** tab.
   The device summary is displayed.
3. In the right pane, click **Add note**.
   An **Add Note** window is displayed.
4. Type the message in the provided field and click **Save**.
5. In the right pane, click **Change Group Assignment**.
   The **Change Group Assignment** window is displayed.
6. From the drop-down menu, select a new group for the device.
7. Click **Save**.
8. Click **Create/Edit exceptions** to create or edit a device level exception, and configure a particular device policy on the **Devices** page.

View the system information

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to find the preferred device.
   The preferred device list is displayed.
3. Click any of the displayed devices.
   The **Device Details** page is displayed.
4. Click **System Info**.
   The system information is displayed.

View device events

You can view and manage information about the system events pertaining to a device.

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to find the preferred device.
   The preferred device list is displayed.
3. Click any of the displayed devices.
   The **Device Details** page is displayed.
4. On the **Device Details** page, click **Events** tab.
   The events on the device are displayed.

View the installed applications

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to find the preferred device.
   The preferred device list is displayed.
3. Click any of the displayed devices.
   The **Device Details** page is displayed.
4. Click **Installed Apps** tab.

The list of installed applications on the device is displayed.

This option is available for Windows Embedded Standard, Linux, and ThinLinux devices. The following are the attributes that are displayed on the page:

- Name
- Publisher
- Version
- Installed On

NOTE:

The installed applications count increases or decreases based on the installation or uninstallation of the applications. The list is updated when the device checks-in or is queried next.

Rename the thin client

You can use this page to change the hostname of thin clients that run on Windows Embedded Standard, ThinLinux, and ThinOS operating systems.

Steps

1. On the **Devices** page, click the device.
2. From the **More options** drop-down list, select the **Change Host Name** option.
3. Enter the new hostname when prompted.

   NOTE: Host name can only contain alphanumeric characters, and a hyphen.

4. For Windows Embedded Standard devices, the **Reboot** drop-down list is in the **Alert** window. To restart the system, select the **Reboot** option. If the **Reboot Later** option is selected, the device restarts at the configured time, and then the hostname is updated.

   NOTE: A ThinLinux device need not be restarted to update the hostname.

5. Click **Send Command**.
   A confirmation message is displayed.

Configure remote shadow connection

Use this page to enable global and group administrators to access the Windows Embedded Standard, ThinLinux, and ThinOS thin client sessions remotely. This feature is applicable to only to private cloud and is available for both Standard and Pro licenses.

Steps

1. On the **Devices** page, click the device.
2. From the **More options** drop-down list, select the **Remote Shadow (VNC)** option.
   The IP address and the port number of the target thin client is displayed in the **Remote Shadow (VNC)** dialog box.

   NOTE: The default port number is 5900.

3. Change the port number of the target thin client—optional.
4. Click **Connect** to initiate a remote session to the target thin client.

   NOTE: Wyse Management Suite portal supports a maximum of five remote shadow sessions per tenant.

Shutting down devices

Wyse Management Suite enables you to shut down the devices such as Windows Embedded Standard, ThinLinux, and ThinOS thin clients.

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to locate the preferred device.

The preferred device list is displayed.

3. From the **More Options** drop-down list, click **Shutdown Now**.
   The remote command to shut down the device is sent to the selected device. The device responds to the server, and the command is applied successfully.

   NOTE: The Shutdown Now option is not enabled for thin clients running on Linux operating system.

Tag a device

Wyse Management Suite enables you to identify a device or group of devices by using the **Tag Device** option.

Steps

1. Click **Devices**.
   The **Device** page is displayed.
2. Apply the filters to locate the preferred device.
   The preferred device list is displayed.
3. Select one or more devices. From the **More Options** drop-down list, click **Tag Device**.
   The **Set Device Tag** window is displayed.
4. Enter the preferred tag name.
5. Click **Set Tag**.

Device compliance status

By default, the following colors are displayed as the device status:

- Red—when the registered device has not been checked in for more than seven days.
- Gray—When you apply any configuration policy to the device.
- Green—When you apply all the configuration policies to the device.

The default value can be changed from 1 day to 99 days.

The **Online Status** option is located next to the device name. The following colors are displayed in the online status:

- Red—When the device has not sent its heartbeat for more than three attempts .
- Gray—When the device has not sent its heartbeat for more than two attempts but fewer than three attempts.
- Green—When the device sends its heartbeat regularly.

Pulling Windows Embedded Standard or ThinLinux image

Prerequisites

- If you are using Wyse Management Suite 1.3 remote repository, then Recovery/ Recovery + OS pull template are not available in the repository. You must upgrade Wyse Management Suite to 1.4 or later versions to access the templates.
- To perform ThinLinux image pull operation, you must close the **Settings** window in the ThinLinux device. You must perform this operation before pulling an OS/OS+Recovery image from the ThinLinux device.
- To upgrade from ThinLinux 1.x to 2.x, the administrator must update the device with the latest WDA and merlin and then pull the image. This pulled image must be used to upgrade from ThinLinux 1.x to 2.x.

Steps

1. Go to the **Windows Embedded Standard** or **ThinLinux** device page.
2. Select **Pull OS Image** option, from the **More Actions** drop-down list.
3. Enter or select the following details:
   - **Name of Image**—Provide a name for the image. To replace the image with a similar name and the image files which are not completed successfully, click **Override name**.
   - **File repository**—From the drop-down list, select the file repository to where the image is uploaded. There are two types of file repositories:

- Local repository
- Remote Wyse Management Suite repository

- **Pull Type**—Select either **Default** or **Advanced** based on your pull type requirement.
  - When the **Default** pull type is selected, the following options are displayed:
    - Compress
    - OS
    - BIOS
    - Recovery––—For ThinLinux 2.x
  - When the **Advanced** pull type is selected, a drop-down list for selecting the templates is displayed. Select any template which is available by default.

    NOTE: You can use the custom templates that are created manually by editing the existing or default templates.

4. Click **Prepare for Image Pull**.

Results

When the **Pull OS Image** command is sent, the client device receives an image pull request from the server. An image pull request message is displayed on the client side. Click either of the following options:

- **Pull after Sysprep**—The device restarts, and logs in to the operating system in a disabled state. Run the custom Sysprep. After the custom sysprep is complete, the device boots to Merlin operating system and the image pull operation is performed.

  NOTE: This option is applicable for Windows Embedded Standard devices.
- **Pull now**—The device boots to the Merlin operating system and the image pull operation is performed.

Request a log file

You can request a device log from Windows Embedded Standard, ThinOS, and ThinLinux devices. The ThinOS device uploads the system logs. The Windows Embedded Standard uploads Wyse Device Agent logs and Windows Event viewer logs. Linux or ThinLinux uploads Wyse Device Agent logs and system logs.

Prerequisites

The device must be enabled to pull the log file.

Steps

1. Go to the **Devices** page, and click a particular device.

   The device details are displayed.
2. Click the **Device Log** tab.
3. Click **Request Log File**.
4. After the log files are uploaded to the Wyse Management Suite server, click the **Click here** link, and download the logs.

   NOTE: Linux or ThinLinux uploads the log file in `.tar` format. If you are extracting the files on Windows or ThinOS 9.x system , then you require 7zip or any other equivalent file.

Troubleshooting your device

You can view and manage the troubleshooting information using the **Devices** page.

Steps

1. On the **Device Details** page, click **Troubleshooting** tab.
2. Click **Request Screen Shot**.

   You can capture the screenshot of the thin client with or without the client permission. If you select the **Require User Acceptance** check box, then a message is displayed on the client. This option is applicable only for Windows Embedded Standard, Linux, and ThinLinux devices.
3. Click **Request Processes List**, to view the list of the processes running on the thin client.
4. Click **Request Services List**, to view the list of the services running on the thin client.

5. Click **Start Monitoring**, to access the performance metric console.
   On the **Performance metric** console, the following details are displayed:
   - Average CPU last minute
   - Average memory usage last minute

8

Apps and data

This section describes how to perform routine device application tasks, operating system imaging, inventory management, and set policies by using the Wyse management console. The repository names are color coded to indicate the status.

You can configure the following type of policies using the **Apps and Data** page:

- Standard application policy—This policy enables you to install a single application package.
- Advanced application policy—This policy enables you to install multiple application packages.
- Image policy—This policy enables you to install the operating system.

Deployment of application policies and operating system images to the thin clients can be scheduled immediately or later, based on a specific time zone, or time zone that is configured on your device.

The repository name in Wyse Management Suite is displayed as Operator Cloud WMS for the files uploaded by the operator in public cloud. Also, the repository name is displayed as Tenant Cloud Repository for Tenant global admin repository.

But for the private cloud, all repositories are displayed as Tenant Repository which is the local repository.

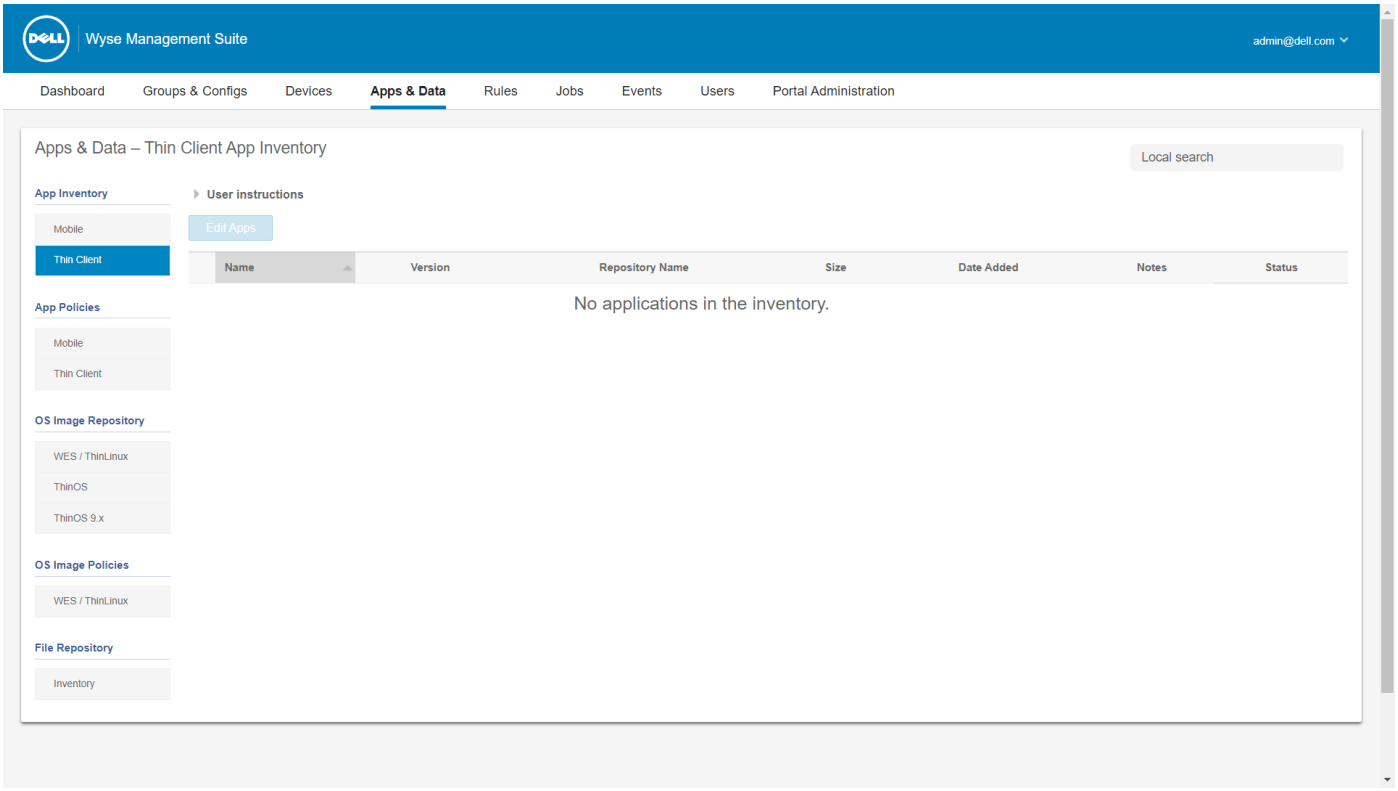

Figure 5. Apps and Data page

Topics:

- Application policy
- Image policy
- Manage file repository

Application policy

Wyse Management Suite supports the following types of application inventories and application deployment policies:

- Configure thin client application inventory

- Configure Wyse Software thin client application inventory
- Create and deploy standard application policy to thin clients
- Create and deploy advanced application policy to thin clients
- Create and deploy standard application policy to Wyse Software Thin Clients
- Create and deploy advanced application policy to Wyse Software Thin Clients

Important notes for Windows-based devices:

- Supports installation for Windows-based applications with extension .msi, .exe, .msu, .msp.

  Application with any other extension is downloaded to `%sytemdrive%\wyse\WDA" Ex: "C:\wyse\WDA`.
- For deploying .exe applications by using Wyse Management Suite, follow the silent installation method. You must enter the appropriate silent parameters if required. For example, **VMware-Horizon-Client-4.6.1-6748947.exe /silent /install /norestart**.
- Supports script deployments with file extensions .bat, .cmd, .ps1, .vbs.

  Script with any other extension is downloaded to `%sytemdrive%\wyse\WDA" Ex: "C:\wyse\WDA`.
- Any script which is pushed by using Wyse Management Suite should be non-interactive which means there is no user interaction that is required during the installation.
- In advanced application policy if there is a script/exe which returns value other than 0 then it is considered as a failure.
- In advanced application policy if pre-install fails then application installation is not continued.
- Any exe/scripts pushed by using standard application is reported as success with error code being updated in job status.
- For applications with extension msi/msu/msp standard error codes is reported. If application returns REBOOT_REQUIRED then device goes through one extra reboot.

Important notes for Linux devices:

- Supports installation for Linux-based applications with extension .bin, .deb for ThinLinux 2.0 and .RPM for Thin Linux 1.0.
- Supports script deployments for ThinLinux devices with extensions .sh.
- In standard or advanced application policy if there is a script/deb/rpm which returns value other than 0 then it is considered as a failure.
- In advanced application policy if pre-install fails then app installation is not continued.

Configure thin client application inventory

Steps

1. Click the **Apps and Data** tab.
2. In the left pane, go to **App Inventory** > **Thin Client**.
   Application details are displayed in the **Thin Client Inventory** window.
3. To add an application to the inventory, place the thin client application files in the `<repo-dir>\repository\thinClientApps` folder.
   Wyse Management Suite Repository sends metadata for all the files to the Wyse Management Suite server periodically.
4. To edit the application, do the following:
   a. Select the uploaded application from the list.
   b. Click **Edit App**.
      The **Edit Application** window is displayed.
   c. Enter the note.
   d. Click **Save**.

      NOTE: Global suffix is added to the applications uploaded by the operator.

   The applications that are present in different repositories are listed once. The **Repository Name** column displays the number of repositories in which the application is present. You can hover over the column to view the name of the repositories. Also, the name of the repository is color coded to specify the availability.

Configure Wyse Software thin client application inventory

Steps

1. Click the **Apps and Data** tab.
2. In the left pane, go to **App Inventory** > **Wyse Software Thin Client**.

3. To add an application to the inventory, place the thin client application files in the `<repo-dir>\repository\softwareTcApps` folder.
   Wyse Management Suite Repository sends metadata for all the files to the Wyse Management Suite server periodically.

Create and deploy standard application policy to thin clients

Steps

1. In the local repository, go to **thinClientApps**, and copy the application to the folder.
2. Go to **Apps & Data** > **App Inventory** > **Thin Client** and verify that the application is registered to Wyse Management Suite.

   NOTE: The App Inventory interface takes approximately two minutes to populate any recently added programs.

3. Go to **Apps & Data** > **App Policies** > **Thin Client**.
4. Click **Add Policy**.
   Add Standard App Policy window is displayed.
5. Enter the **Policy Name**.
6. From the **Group** drop-down list, select the group.
7. From the **Task** drop-down list, select the task.
8. From the **OS Type** drop-down list, select the operating system.
9. Select the **Filter files based on extensions** checkbox to filter the applications.
10. From the **Application** drop-down list, select the application.
    If the application files are available on multiple repositories, then the number of repositories is displayed next to the file name.
11. To deploy this policy to a specific operating system or a platform, select either **OS Subtype Filter** or **Platform Filter**.
12. From the **Apply Policy Automatically** drop-down list, select any of the following options:
    - **Do not apply automatically**—This option does not apply any policy automatically to the devices.
    - **Apply the policy to new devices**—This option automatically applies the policy to a registered device which belongs to a selected group or is moved to a selected group.
    - **Apply the policy to devices on check in**—This option is automatically applied to the device at check-in.

    NOTE: For Windows based devices, specify the silent installation parameters for .exe files to run the application in the silent mode. For example, VMware-Horizon-Client-4.6.1-6748947.exe /silent /install /norestart.

13. To stop the installation process after a defined value, specify the number of minutes in the **Application Installation Timeout** field.
    The default value is 60 minutes.

    NOTE: The Application Installation Timeout option is applicable only for Windows Embedded Standard, Wyse Software thin clients, Linux and Thin Linux devices.

14. Click **Save** to create a policy.
    A message is displayed to enable the administrator to schedule this policy on devices based on group.
15. Select **Yes** to schedule a job on the same page.
16. Select any of the following options:
    - **Immediately**—Server runs the job immediately.
    - **On device time zone**—Server creates one job for each device time zone and schedules the job to the selected date or time of the device time zone.
    - **On selected time zone**—Server creates one job to run at the date or time of the designated time zone.
17. To create the job, click **Preview** and schedules are displayed on the next page.
18. You can check the status of the job by going to the **Jobs** page.

Create and deploy standard application policy to thin clients

Steps

1. In the local repository, go to **softwareTcApps**, and copy the application to the folder.

2. Go to **Apps & Data** > **App Inventory** > **Wyse Software thin client** and verify that the application is registered to Wyse Management Suite.

   NOTE: The App Inventory interface takes approximately two minutes to populate any recently added programs.

3. Click **Add Policy**.
   Add Standard App Policy window is displayed.
4. Enter the **Policy Name**.
5. From the **Group** drop-down list, select the group.
6. From the **Task** drop-down list, select the task.
7. From the **OS Type** drop-down list, select the operating system.
8. Select the **Filter files based on extensions** checkbox to filter the applications.
9. From the **Application** drop-down list, select the application.
   If the application files are available on multiple repositories, then the number of repositories is displayed next to the file name.
10. To deploy this policy to a specific operating system or a platform, select either **OS Subtype Filter** or **Platform Filter**.
11. From the **Apply Policy Automatically** drop-down list, select any of the following options:
    - **Do not apply automatically**—This option does not apply any policy automatically to the devices.
    - **Apply the policy to new devices**—This option automatically applies the policy to a registered device which belongs to a selected group or is moved to a selected group.
    - **Apply the policy to devices on check in**—This option is automatically applied to the device at check-in.

    NOTE: For Windows based devices, specify the silent installation parameters for .exe files to run the application in the silent mode. For example, VMware-Horizon-Client-4.6.1-6748947.exe /silent /install /norestart.

12. To stop the installation process after a defined value, specify the number of minutes in the **Application Installation Timeout** field.
    The default value is 60 minutes.

    NOTE: The Application Installation Timeout option is applicable only for Windows Embedded Standard devices and Wyse Software thin clients.

13. Click **Save** to create a policy.
    A message is displayed to enable the administrator to schedule this policy on devices based on group.
14. Select **Yes** to schedule a job on the same page.
15. Select any of the following options:
    - **Immediately**—Server runs the job immediately.
    - **On device time zone**—Server creates one job for each device time zone and schedules the job to the selected date or time of the device time zone.
    - **On selected time zone**—Server creates one job to run at the date or time of the designated time zone.
16. To create the job, click **Preview** and schedules are displayed on the next page.
17. You can check the status of the job by going to the **Jobs** page.

Enable single sign-on for Citrix StoreFront using standard application policy

To enable single sign-on for Citrix StoreFront, do the following:

- **Scenario 1**—If you want to enable single sign-on for StoreFront on the current version of Citrix Receiver, do the following:
  1. Create and deploy a standard application policy to uninstall the Citrix Receiver using the parameter **`/silent`**.
  2. Create and deploy a standard application policy to install the Citrix Receiver again using the parameter **`/silent /includeSSON /AutoUpdateCheck = Disabled`**.
- **Scenario 2**—If you want to upgrade Citrix Receiver and enable single sign-on for StoreFront, do the following:
  1. Create and deploy a standard application policy to upgrade the Citrix Receiver using the parameter **`/silent /includeSSON /AutoUpdateCheck = Disabled`**.
- **Scenario 3**—If you want to downgrade Citrix Receiver and enable single sign-on for StoreFront, do the following:
  1. Create and deploy a standard application policy to downgrade the Citrix Receiver using the parameter **`/silent /includeSSON /AutoUpdateCheck = Disabled`**.

Create and deploy advanced application policy to thin clients

Steps

1. Copy the application and the pre/post install scripts (if necessary) to deploy to the thin clients.
2. Save the application and the pre/post install scripts in the `thinClientApps` folder of the local repository or the Wyse Management Suite repository.
3. Go to **Apps & Data** > **App Inventory** > **Thin Client** and verify that the application is registered.
4. Go to **Apps & Data** > **App Policies** > **Thin Client**.
5. Click **Add Advanced Policy**.
   Add Advanced App Policy page is displayed.
6. Enter the **Policy Name**.
7. From the **Group** drop-down list, select the group.
8. Select the **Sub Groups** check box to apply the policy to sub groups.
9. From the **Task** drop-down list, select the task.
10. From the **OS Type** drop-down list, select the operating system.
11. Select the **Filter files based on extensions** checkbox to filter the applications.
12. Click **Add app**, and select one or more applications under **Apps**. For each application, you can select a pre and post-install script under **PreInstall**, **PostInstall**, and **Install Parameters**.
13. If you want the system to reboot after the application is successfully installed, select **Reboot**.
14. Click **Add app** and repeat the step to add multiple applications.

    NOTE: To stop the application policy at first failure, select Enable app dependency. If this option is not selected, failure of an application affects the policy implementation.

    If the application files are available on multiple repositories, then the number of repositories is displayed next to the file name.
15. To deploy this policy to a specific operating system or a platform, select either **OS Subtype Filter** or **Platform Filter**.
16. Specify the number of minutes the message dialog box should be displayed on the client.
    A message on the client which gives you time to save your work before the installation begins.
17. To enable delay in implementation of the policy, select the **Allow delay of policy execution** checkbox. If this option is selected, the following drop-down menus are enabled:
    - From the **Max Hours per Delay** drop-down list, select the maximum hours (1–24 hours) you can delay the policy execution.
    - From the **Max delays** drop-down list, select the number of times (1–3) you can delay execution of the policy.
18. From the **Apply Policy Automatically** drop-down list, select any of the following options:
    - **Do not apply automatically**—This option does not apply any policy automatically to the devices.
    - **Apply the policy to new devices**—This option automatically applies the policy to a registered device which belongs to a selected group or is moved to a selected group.
    - **Apply the policy to devices on check in**—This option is automatically applied to the device at check-in.

    NOTE: For Windows based devices, specify the silent installation parameters for .exe files to run the application in the silent mode. For example, VMware-Horizon-Client-4.6.1-6748947.exe /silent /install /norestart.
19. Select the **Skip write filter check** check box to skip the write filter cycles. This option is applicable for Windows Embedded Standard operating system devices and Wyse Software thin client devices.
20. To stop the installation process after a defined value, specify the number of minutes in the **Application Installation Timeout** field. The default value is 60 minutes.

    NOTE: The Application Installation Timeout option is applicable only for Windows Embedded Standard devices and Wyse Software thin clients.
21. Click **Save** to create a policy.
    A message is displayed to enable the administrator to schedule this policy on devices based on group.
22. Select **Yes** to schedule a job on the same page.
23. Select any of the following options:
    - **Immediately**—Server runs the job immediately.
    - **On device time zone**—Server creates one job for each device time zone and schedules the job to the selected date or time of the device time zone.
    - **On selected time zone**—Server creates one job to run at the date or time of the designated time zone.

24. To create the job, click **Preview** and schedules are displayed on the next page.
25. You can check the status of the job by going to the **Jobs** page.

Create and deploy advanced application policy to Wyse Software Thin Clients

Steps

1. Copy the application and the pre/post install scripts (if necessary) to deploy to the thin clients.
2. Save the application and the pre/post install scripts in the `softwareTcApps` folder of the local repository or the Wyse Management Suite repository.
3. Go to **Apps & Data** > **App Inventory** > **Wyse Software thin client** and verify that the application is registered.
4. Go to **Apps & Data** > **App Policies** > **Wyse Software thin client**.
5. Click **Add Advanced Policy**.
   Add Advanced App Policy page is displayed.
6. Enter the **Policy Name**.
7. From the **Group** drop-down list, select the group.
8. Select the **Sub Groups** check box to apply the policy to sub groups.
9. From the **Task** drop-down list, select the task.
10. From the **OS Type** drop-down list, select the operating system.
11. Select the **Filter files based on extensions** checkbox to filter the applications.
12. Click **Add app**, and select one or more applications under **Apps**. For each application, you can select a pre and post-install script under **PreInstall**, **PostInstall**, and **Install Parameters**.
13. If you want the system to reboot after the application is successfully installed, select **Reboot**.
14. Click **Add app** and repeat the step to add multiple applications.

    NOTE: To stop the application policy at first failure, select Enable app dependency. If this option is not selected, failure of an application affects the policy implementation.

    If the application files are available on multiple repositories, then the number of repositories is displayed next to the file name.
15. To deploy this policy to a specific operating system or a platform, select either **OS Subtype Filter** or **Platform Filter**.
16. Specify the number of minutes the message dialog box should be displayed on the client.
    A message on the client which gives you time to save your work before the installation begins.
17. To enable delay in implementation of the policy, select the **Allow delay of policy execution** checkbox. If this option is selected, the following drop-down menus are enabled:
    - From the **Max Hours per Delay** drop-down list, select the maximum hours (1–24 hours) you can delay the policy execution.
    - From the **Max delays** drop-down list, select the number of times (1–3) you can delay execution of the policy.
18. From the **Apply Policy Automatically** drop-down list, select any of the following options:
    - **Do not apply automatically**—This option does not apply any policy automatically to the devices.
    - **Apply the policy to new devices**—This option automatically applies the policy to a registered device which belongs to a selected group or is moved to a selected group.
    - **Apply the policy to devices on check in**—This option is automatically applied to the device at check-in.

    NOTE: For Windows based devices, specify the silent installation parameters for .exe files to run the application in the silent mode. For example, VMware-Horizon-Client-4.6.1-6748947.exe /silent /install /norestart.
19. Select the **Skip write filter check** check box to skip the write filter cycles. This option is applicable for Windows Embedded Standard operating system devices and Wyse Software thin client devices.
20. To stop the installation process after a defined value, specify the number of minutes in the **Application Installation Timeout** field. The default value is 60 minutes.

    NOTE: The Application Installation Timeout option is applicable only for Windows Embedded Standard devices and Wyse Software thin clients.
21. Click **Save** to create a policy.
    A message is displayed to enable the administrator to schedule this policy on devices based on group.
22. Select **Yes** to schedule a job on the same page.
23. Select any of the following options:

- **Immediately**—Server runs the job immediately.
- **On device time zone**—Server creates one job for each device time zone and schedules the job to the selected date or time of the device time zone.
- **On selected time zone**—Server creates one job to run at the date or time of the designated time zone.

24. To create the job, click **Preview** and schedules are displayed on the next page.
25. You can check the status of the job by going to the **Jobs** page.

Image policy

Wyse Management Suite supports the following types of operating system image deployment policies:

- Add Windows Embedded Standard operating system and ThinLinux images to the repository
- Add ThinOS firmware to the repository
- Add ThinOS package file to the repository
- Add ThinOS BIOS file to the repository
- Add Teradici firmware to the repository
- Create Windows Embedded Standard and ThinLinux image policies.

Add Windows Embedded Standard operating system and ThinLinux images to repository

Prerequisites

- If you are using Wyse Management Suite with cloud deployment, go to **Portal Administration** > **Console Settings** > **File Repository**. Click **Download version 2.0** or **Download version 1.4** to download the `WMS_Repo.exe` file and install the Wyse Management Suite repository installer.
- If you are using Wyse Management Suite with on-premise deployment, the local repository is installed during Wyse Management Suite installation process.

Steps

1. Copy the Windows Embedded Standard operating system images or ThinLinux images to the `<Repository Location>\repository\osImages\zipped` folder.

   Wyse Management Suite extracts the files from the zipped folder and uploads the files in the `<Repository Location>\repository\osImages\valid` location. The image extraction may take several minutes depending upon the image size.

   NOTE: For ThinLinux operating system, download the merlin image, for example, `1.0.7_3030LT_merlin.exe`, and copy in the `<Repository Location>\Repository\osImages\zipped` folder.

   The image is added to the repository.
2. Go to **Apps and data** > **OS image repository** > **WES/ThinLinux** to view the registered image.

Add ThinOS firmware to repository

Steps

1. In the **Apps & Data** tab, under **OS Image Repository**, click **ThinOS**.
2. Click **Add Firmware file**.
   The **Add File** screen is displayed.
3. To select a file, click **Browse** and go to the location where your file is located.
4. Enter the description for your file.
5. Select the check box if you want to override an existing file.
6. Click **Upload**.

   NOTE: The file is added to the repository when you select the check box but it is not assigned to any of the groups or devices. To deploy firmware to a device or a group of devices, go to the respective device or group configuration page.

Add ThinOS BIOS file to repository

Steps

1. In the **Apps & Data** tab, under **OS Image Repository**, click **ThinOS**.
2. Click **Add BIOS file**.
   The **Add File** screen is displayed.
3. To select a file, click **Browse** and go to the location where your file is located.
4. Enter the description for your file.
5. Select the check box if you want to override an existing file.
6. Select the platform from the BIOS platform type drop-down list.
7. Click **Upload**.

   NOTE: The file is added to the repository when you select the check box but it is not assigned to any of the groups or devices. To deploy the BIOS file to a device or a group of devices, go to the respective device or group configuration page.

Add ThinOS package file to repository

Steps

1. In the **Apps & Data** tab, under **OS Image Repository**, click **ThinOS**.
2. Click **Add Package file**.
   The **Add File** screen is displayed.
3. To select a file, click **Browse** and go to the location where your file is located.
4. Enter the description for your file.
5. Click **Upload**.

   NOTE: If the application exists in the public repository, the application reference is added to the inventory. Else, the application is uploaded to the public repository and the reference is added to the inventory. Also, ThinOS firmware and BIOS packages that are uploaded by the operator cannot be deleted by tenant administrators.

Add ThinOS 9.x firmware to repository

Steps

1. In the **Apps & Data** tab, under **OS Image Repository**, click **ThinOS 9.x**.
2. Click **Add Firmware file**.
   The **Add File** screen is displayed.
3. To select a file, click **Browse** and go to the location where your file is located.
4. Enter the description for your file.
5. Select the check box if you want to override an existing file.
6. Click **Upload**.

   NOTE: The file is added to the repository when you select the check box but it is not assigned to any of the groups or devices. To deploy firmware to a device or a group of devices, go to the respective device or group configuration page.

Add ThinOS 9.x package file to repository

Steps

1. In the **Apps & Data** tab, under **OS Image Repository**, click **ThinOS 9.x**.
2. Click **Add Package file**.
   The **Add File** screen is displayed.

3. To select a file, click **Browse** and go to the location where your file is located.
4. Enter the description for your file.
5. Click **Upload**.

NOTE: If the application exists in the public repository, the application reference is added to the inventory. Else, the application is uploaded to the public repository and the reference is added to the inventory. Also, ThinOS firmware and BIOS packages that are uploaded by the operator cannot be deleted by tenant administrators.

Create Windows Embedded Standard and ThinLinux image policies

Steps

1. In the **Apps & Data** tab, under **OS Image policies**, click **WES / ThinLinux**.
2. Click **Add Policy**.
   The **Add WES/ ThinLinux Policy** screen is displayed.
3. In the **Add WES/ ThinLinux Policy** page, do the following:
   a. Enter a **Policy Name**.
   b. From the **Group** drop-down menu, select a group.
   c. From the **OS Type** drop-down menu, select an OS type.
   d. From the **OS Subtype Filter** drop-down menu, select an OS subtype filter.
   e. If you want to deploy an image to a specific operating system or platform, select either **OS Subtype Filter** or **Platform Filter**.
   f. From the **OS Image** drop-down menu, select an image file.
   g. From the **Rule** drop-down menu, select any one of the following rules that you want to set for the image policy:
      - Upgrade only
      - Allow downgrade
      - Force this version.
   h. From the **Apply Policy Automatically** drop-down menu, select one of the following options:
      - Do not apply automatically—The image policy is not applied automatically to a device registered with Wyse Management Suite.
      - Apply the policy to new devices—The image policy is applied to a new device registered with Wyse Management Suite.
      - Apply the policy to devices on check in—The image policy is applied to a new device on check in which is registered with Wyse Management Suite.
4. Click **Save**.

Manage file repository

This section enables you to view and manage the file repository inventories, such as wallpaper, logo, EULA text file, Windows wireless profile, and certificate files.

Steps

1. In the **Apps & Data** tab, under **File Repository**, click **Inventory**.
2. Click **Add File**.

   The **Add File** screen is displayed.
3. To select a file, click **Browse** and go to the location where your file is located.
4. From the **Type** drop-down menu, select any one of the following options that suits your file type:
   - Certificate
   - Wallpaper
   - Logo
   - EULA text file
   - Windows Wireless Profile
   - INI File
   - Locale
   - Printer Mappings
   - Font

- Hosts
- Rules

NOTE: To view the maximum size and the supported format of the files that you can upload, click the information (i) icon.

5. Select the check box if you want to override an existing file.

NOTE: The file is added to the repository when you select the check box but it is not assigned to any of the groups or devices. To assign the file, go to the respective device configuration page.

6. Click **Upload**.

How to change wallpaper for all devices belonging to marketing group

Steps

1. Go to the **Apps & Data** tab.
2. In the navigation bar on the left pane, select **Inventory**.
3. Click the **Add File** button.
4. Browse and select the image that you want to use as a wallpaper.
5. For type, select **Wallpaper**.
6. Enter the description, and click **Upload**.

To change the configuration policy of a group by assigning a new wallpaper, do the following:

1. Go to the **Groups & Configs** page.
2. Select a policy group.
3. Click **Edit Policies**, and select **WES**.
4. Select **Desktop Experience** and click **Configure this item**.
5. Select **Desktop Wallpaper**.
6. From the drop-down list, select the wallpaper file.
7. Click **Save and Publish**.

Click **Jobs** to check the status of configuration policy. You can click the number next to the status flag in the **Details** column to check devices with their status.

9

Managing rules

This section describes how to add and manage the rules in the Wyse Management Suite console. The following filtering options are provided:

- **Registration**
- **Unmanaged Device Auto Assignment**
- **Alert Notification**

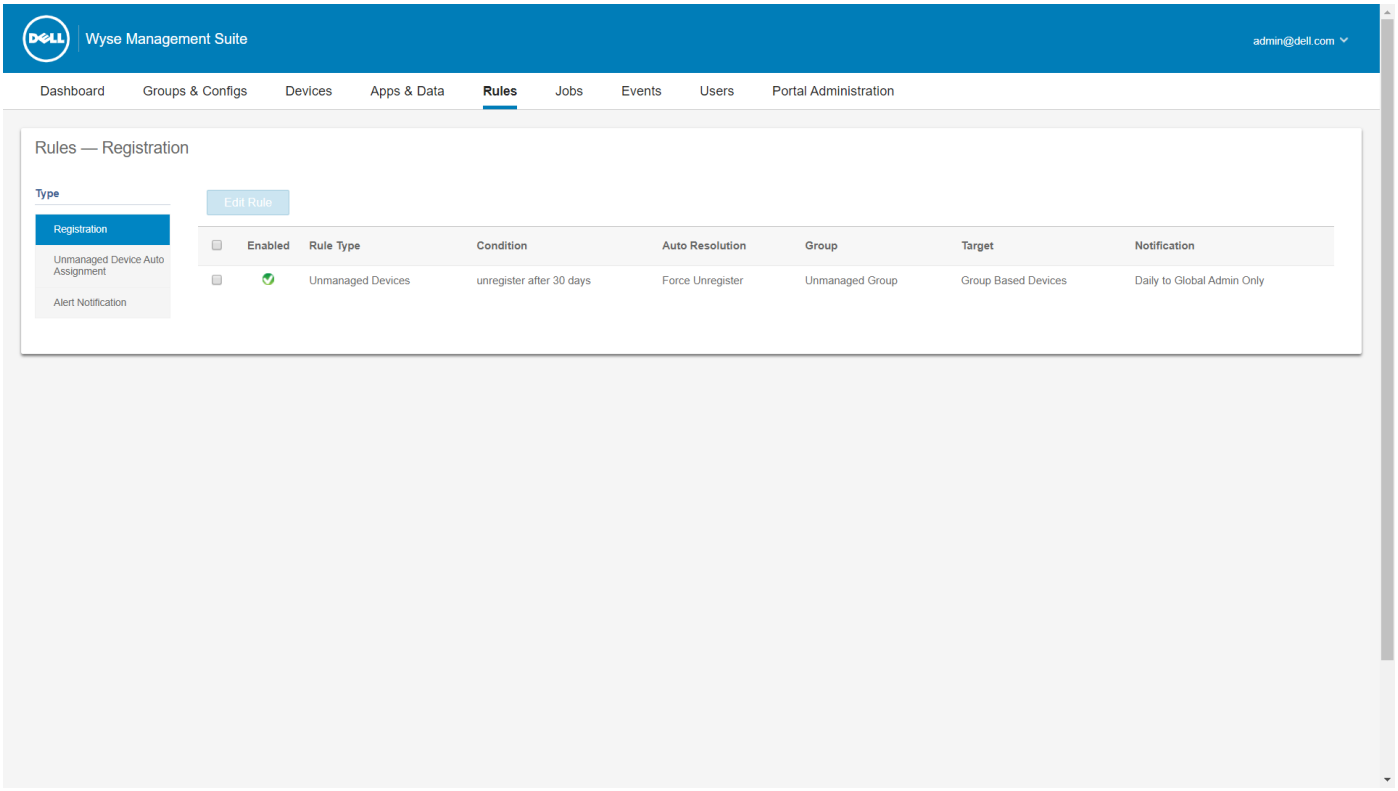

Figure 6. Rules page

Topics:

Edit a registration rule

Configure the rules for unmanaged devices by using the **Registration** option.

Steps

1. Click **Rules**.
   The **Rules** page is displayed.

2. Click **Registration**, and select the unmanaged devices option.
3. Click **Edit Rule**.
   The **Edit Rule** window is displayed.

   You can view the following details:

   - Rule
   - Description
   - Device Target
   - Group
4. From the drop-down menu, select a target client to apply the **Notification Target** option and the time duration to apply the **Notification Frequency** option.

   NOTE: The notification frequency can be configured for every 4 hours, every 12 hours, daily, or weekly basis to the target device.
5. Enter the number of days until you want to apply the rule in the **Apply rule after (1–30 days)** box.

   NOTE: By default, registration of an unmanaged device are unregistered after 30 days.
6. Click **Save**.

Create auto assignment rules for unmanaged devices

Steps

1. Click the **Rules** tab.
2. Select the **Unmanaged Device Auto Assignment** option.
3. Click the **Add Rules** tab.
4. Enter the **Name**, and select the **Destination group**.
5. Click the **Add Condition** option, and select the conditions for assigned rules.
6. Click **Save**.

   The rule is displayed in the unmanaged group list. This rule is applied automatically, and the device is listed in the destination group.

   NOTE: The rules are not applied to devices in Enrollment Pending state.

Edit an unmanaged device auto assignment rule

Steps

1. Click the **Rules** tab.
2. Select the **Unmanaged Device Auto Assignment** option.
3. Select the rule, and click the **Edit** option.
4. Enter the **Name**, and select the **Destination group**.
5. Click the **Add Condition** option, and select the conditions for assigned rules.
6. Click **Save**.

Disable and delete rule for the unmanaged device auto assignment

Steps

1. Click the **Rules** tab.
2. Select the **Unmanaged Device Auto Assignment** option.
3. Select a rule, and click the **Disable Rule** option.

The selected rule is disabled.

4. Select the disabled rule, and click the **Delete Disabled Rule(s)** option.
   The rule is deleted.

Save the rule order

Prerequisites

If multiple rules are present, then you can change the order of a rule to be applied on the devices.

Steps

1. Click the **Rules** tab.
2. Select the **Unmanaged Device Auto Assignment** option.
3. Select the rule which you want to move and then move it to the top order.
4. Click **Save Rule Order**.

   NOTE: You cannot change the IPV6 Prefix rule order.

Add a rule for alert notification

Steps

1. Click the **Rules** tab.
2. Select the **Alert Notification** option.
3. Click **Add Rule**.
   An **Add Rule** window is displayed.
4. From the **Rule** drop-down list, select a rule.
5. Enter the **Description**.
6. From the **Group** drop-down list, select the preferred option.
7. From the drop-down menu, select a target device to apply **Notification Target** and the time duration to apply **Notification Frequency**.
8. Click **Save**.

Edit an alert notification rule

Steps

1. Click the **Rules** tab.
2. Select the **Alert Notification** option.
3. Click **Edit Rule**.
   An **Edit Rule** window is displayed.
4. From the **Rule** drop-down list, select a rule.
5. Enter the **Description**.
6. From the **Groups** drop-down list, select a group.
7. From the drop-down list, select a target device to apply **Notification Target** and the time duration to apply **Notification Frequency**.
8. Click **Save**.

10

Managing Jobs

This section describes how to schedule and manage jobs in the management console.

In this page you can see jobs based on the following filtering options:

- **Configuration Groups**—From the drop-down menu, select the configuration group type.
- **Scheduled by**—From the drop-down menu, select a scheduler who performs the scheduling activity. The available options are:
  - Admin
    - App Policy
    - Image Policy
    - Device Commands
  - System
    - Publish Group Configuration
    - Others
- **OS Type**—From the drop-down menu, select the operating system. The available options are:
  - ThinOS
  - WES
  - Linux
  - Thin Linux
  - Wyse Software Thin Client
- **Status**—From the drop-down menu, select the status of the job. The available options are:
  - Scheduled
  - Running/In Progress
  - Completed
  - Canceled
  - Failed
- **Detail Status**—From the drop-down menu, select the status in detail. The available options are:
  - 1 or more failed
  - 1 or more pending
  - 1 or more In progress
  - 1 or more canceled
  - 1 or more completed
- **More Actions**—From the drop-down menu, select the **Sync BIOS Admin Password** option. The Sync BIOS Admin Password Job window is displayed.

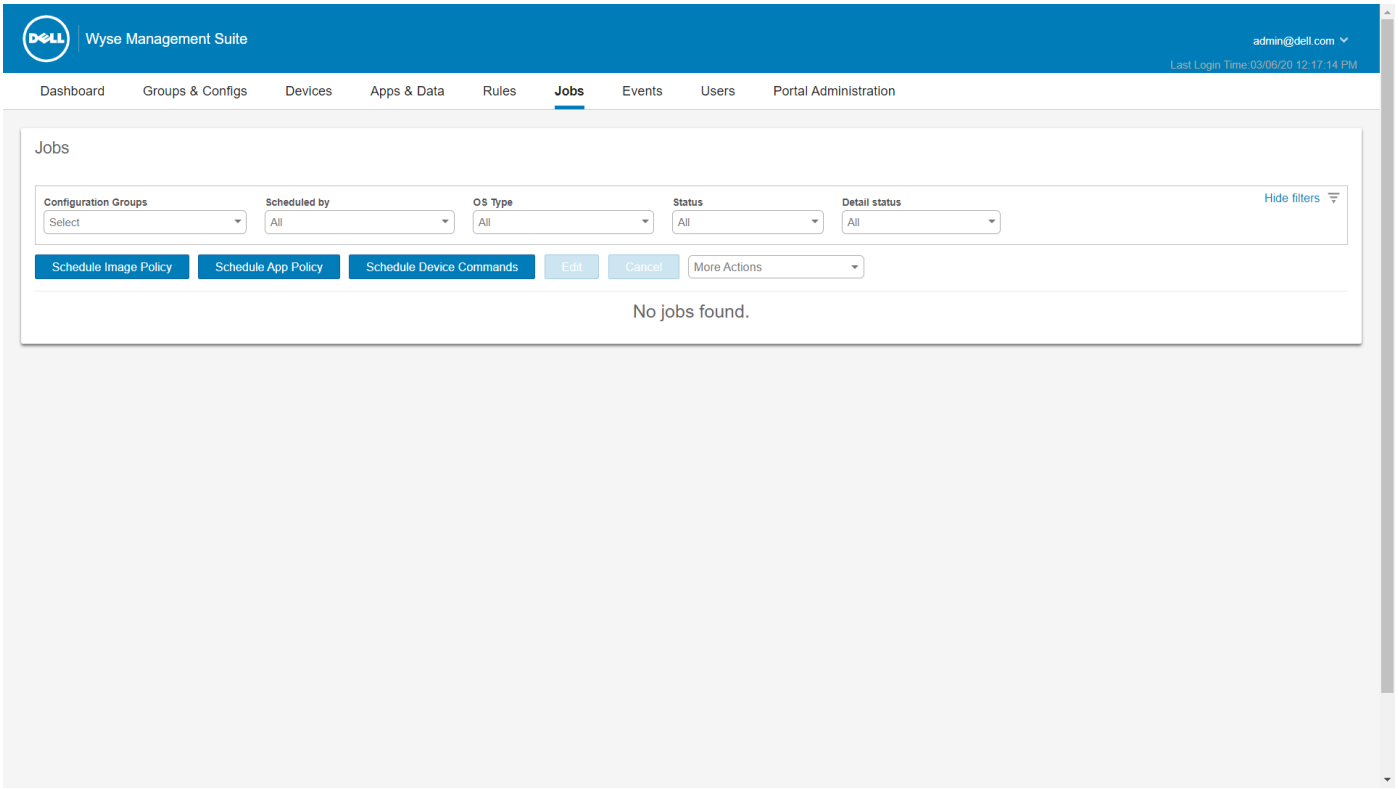

Figure 7. Jobs page

Topics:

- Sync BIOS admin password
- Search a scheduled job by using filters
- Schedule a device command job
- Schedule the image policy
- Schedule an application policy

Sync BIOS admin password

Steps

1. Click **Jobs**.
   The **Jobs** page is displayed.
2. From the **More Actions** drop-down menu, select the **Sync BIOS Admin Password** option.
   The **Sync BIOS Admin Password Job** window is displayed.
3. Enter the password. The password must be a minimum of 4 and a maximum of 32 characters.
4. Select the **Show Password** check box to view the password.
5. From the **OS Type** drop-down menu, select your preferred option.
6. From the **Platform** drop-down menu, select your preferred option.
7. Enter the name of the job.
8. From the **Group** drop-down menu, select your preferred option.
9. Select the **Include All Subgroup** check box to include the subgroups.
10. Enter the description in the **Description** box.
11. Click **Preview**.

Search a scheduled job by using filters

This section describes how to search a scheduled job and manage the jobs in the management console.

Steps

1. Click **Jobs**.
   The **Jobs** page is displayed.
2. From the **Configuration Groups** drop-down menu, select either the default policy group or the groups which are added by an administrator.
3. From the **Scheduled by** drop-down menu, select a scheduler who performs the scheduling activity.
   The available options are:
   - Admin
     - App Policy
     - Image Policy
     - Device Commands
   - System
     - Publish Group Configuration
     - Others
4. From the **OS Type** drop-down menu, select the operating system.
   The available options are:
   - ThinOS
   - WES
   - Linux
   - Thin Linux
   - Wyse Software Thin Client
   - Teradici-Private cloud
5. From the **Status** drop-down menu, select the status of the job.
   The available options are:
   - Scheduled
   - Running/In Progress
   - Completed
   - Canceled
   - Failed
6. From the **Detail Status** drop-down menu, select the status in detail.
   The available options are:
   - 1 or more failed
   - 1 or more pending
   - 1 or more In progress
   - 1 or more canceled
   - 1 or more completed
7. From the **More Actions** drop-down menu, select the **Sync BIOS Admin Password** option.
   The **Sync BIOS Admin Password Job** window is displayed. For more information, see Sync BIOS admin password.

Schedule a device command job

Steps

1. On the **Jobs** page, click **Schedule device command job**.
   The **Device Command Job** screen is displayed.
2. From the **Command** drop-down list, select a command. The available options are:
   - Restart

- Wake on LAN
- Shutdown
- Query

The device command is a recurring job. On selected days of the week and at a specific time the commands are sent to the selected devices.

3. From the drop-down list, select the type of operating system.
4. Enter the name of the job.
5. From the drop-down list, select a group name.
6. Enter the job description.
7. From the drop-down list, select the date or time.
8. Enter/select the following details:
   - **Effective**— Enter the starting and ending date.
   - **Start between**—Enter the starting and ending time.
   - **On day(s)**—Select the days of the week.
9. Click the **Preview** option to view the details of the scheduled job.
10. On the next page, click the **Schedule** option to initiate the job.

Schedule the image policy

Image policy is not a recurring job. Each command is specific to a device.

Steps

1. On the **Jobs** page, click the **Schedule Image Policy** option.
   The **Image Update Job** screen is displayed.
2. From the drop-down list, select a policy.
3. Enter the job description.
4. From the drop-down list, select the date or time.
5. Enter/select the following details:
   - **Effective**—Enter the starting and ending date.
   - **Start between**—Enter the starting and ending time.
   - **On day(s)**—Select the days of the week.
6. Click the **Preview** option to view the details of the scheduled job.
7. Click the **Schedule** option to initiate the job.

Schedule an application policy

Application policy is not a recurring job. Each command is specific to a device.

Steps

1. On the **Jobs** page, click the **Schedule Application Policy** option.
   The **App Policy Job** screen is displayed.
2. From the drop-down list, select a policy.
3. Enter the job description.
4. From the drop-down list, select the date or time.
5. Enter/select the following details:
   - **Effective**—Enter the starting and ending date.
   - **Start between**—Enter the starting and ending time.
   - **On day(s)**—Select the days of the week.
6. Click the **Preview** option to view the details of the scheduled job.
7. On the next page, click the **Schedule** option to initiate the job.

11

Managing Events

In the **Events** page, you can view all events and alerts in the management system using the management console. It also provides instructions on viewing an audit of events and alerts for system auditing purposes.

A summary of events and alerts is used to obtain an easy-to-read daily summary of what has happened in the system. The **Audit** window arranges the information into a typical audit log-view. You can view the timestamp, event type, source, and description of each event in the order of time.

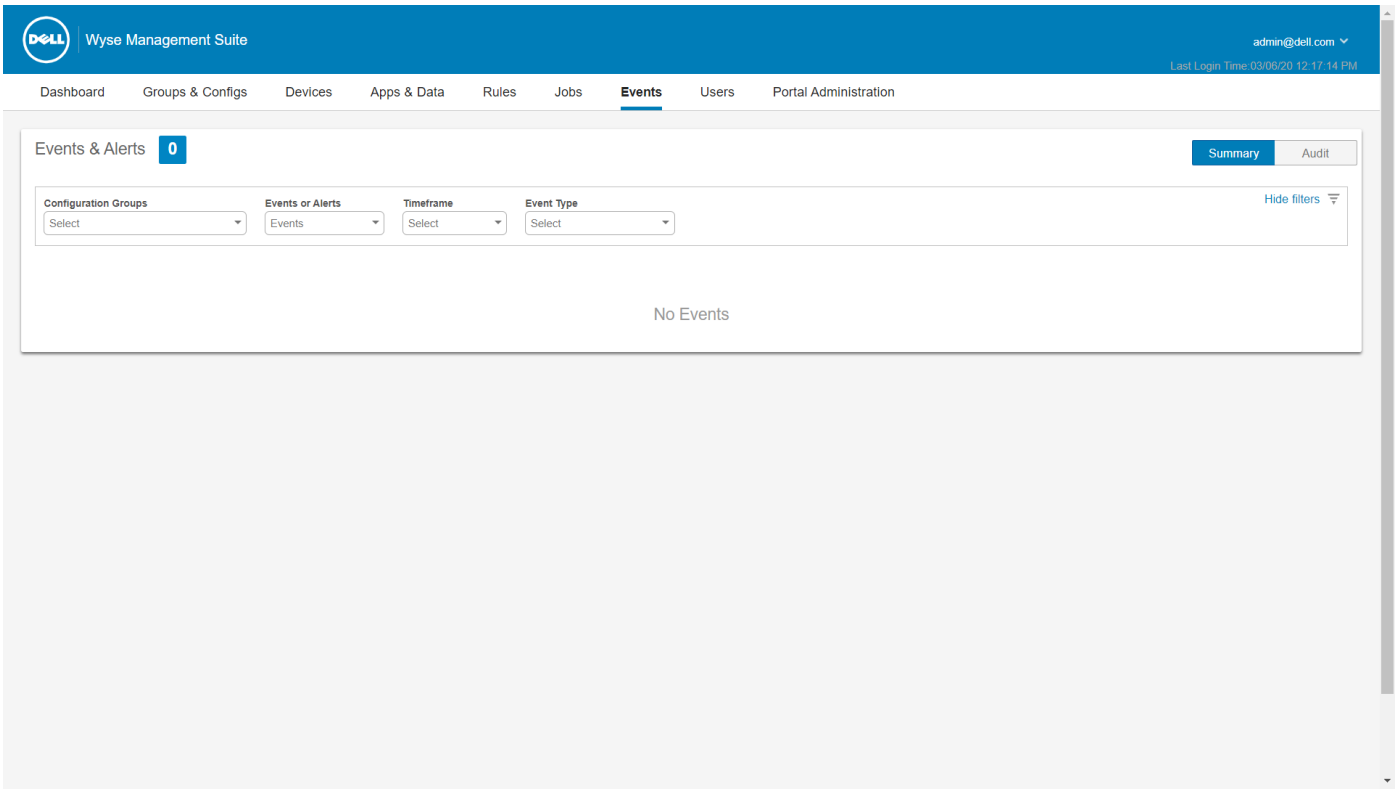

Figure 8. Events page

Topics:

- Search an event or alert using filters
- View the summary of events
- View the audit log

Search an event or alert using filters

Steps

1. Click **Events**.
   The **Events** page is displayed.
2. From the **Configuration Groups** drop-down menu, select either the default policy group or the groups which are added by an administrator.
3. From the **Events or Alerts** drop-down menu, select any one of the following options:
   - Events
   - Current Alerts

- Alert History

4. From the **Timeframe** drop-down menu, select any one of the following operating systems:
   This option enables you to view the events which occurred in a particular timeframe. The available options in the drop-down menu are:
   - Today
   - Yesterday
   - This Week
   - Custom
5. From the **Event Type** drop-down menu, select the operating system.
   All the events are classified under particular groups. The available options in the drop-down menu are:
   - Access
   - Registration
   - Configuration
   - Remote Commands
   - Management
   - Compliance

View the summary of events

The **Events and Alerts** window displays all the events and alerts that have taken place in the system. Go to **Events** > **Summary**.

View the audit log

The **Audit** window arranges the information into a typical audit log-view. You can view the timestamp, event type, source, and description of each event in the order of time.

Steps

1. Go to **Events** > **Audit**.
2. From the **Configuration Groups** drop-down list, select a group for which you want to view the audit log.
3. From the **Timeframe** drop-down list, select the time period to view the events that occurred during that time period.

   NOTE: The audit files are not translated and are available only in English.

12

Managing users

This section describes how to perform a routine user management task in the management console. The following are the two types of users:

- **Administrators**—Wyse Management Suite administrator can be assigned the role of a global administrator, group administrator, or viewer.
  - A Global Administrator has access to all the Wyse Management Suite functions.
  - A Group Administrator has access to all assets and functions for specific groups that are assigned to them.
  - A viewer has read-only access to all the data and can be assigned permissions to trigger the specific real-time commands, such as shutdown and restart.

  If you select administrator, you can perform any of the following actions:

  - Add Admin
  - Edit Admin
  - Activate Admin(s)
  - Deactivate Admin(s)
  - Delete Admin(s)
  - Unlock Admin(s)
- **Unassigned Admins**—Users imported from the AD server are displayed on the **Unassigned admins** page. You can later assign a role to these users from the portal.

  For better and faster management of users, select the users of your choice based on the available filter options. If you select **Unmanaged Users**, you can perform any of the following actions:

  - Edit User
  - Activate User(s)
  - Deactivate User(s)
  - Delete User(s)

NOTE: To import users from the .CSV file, click Bulk Import.

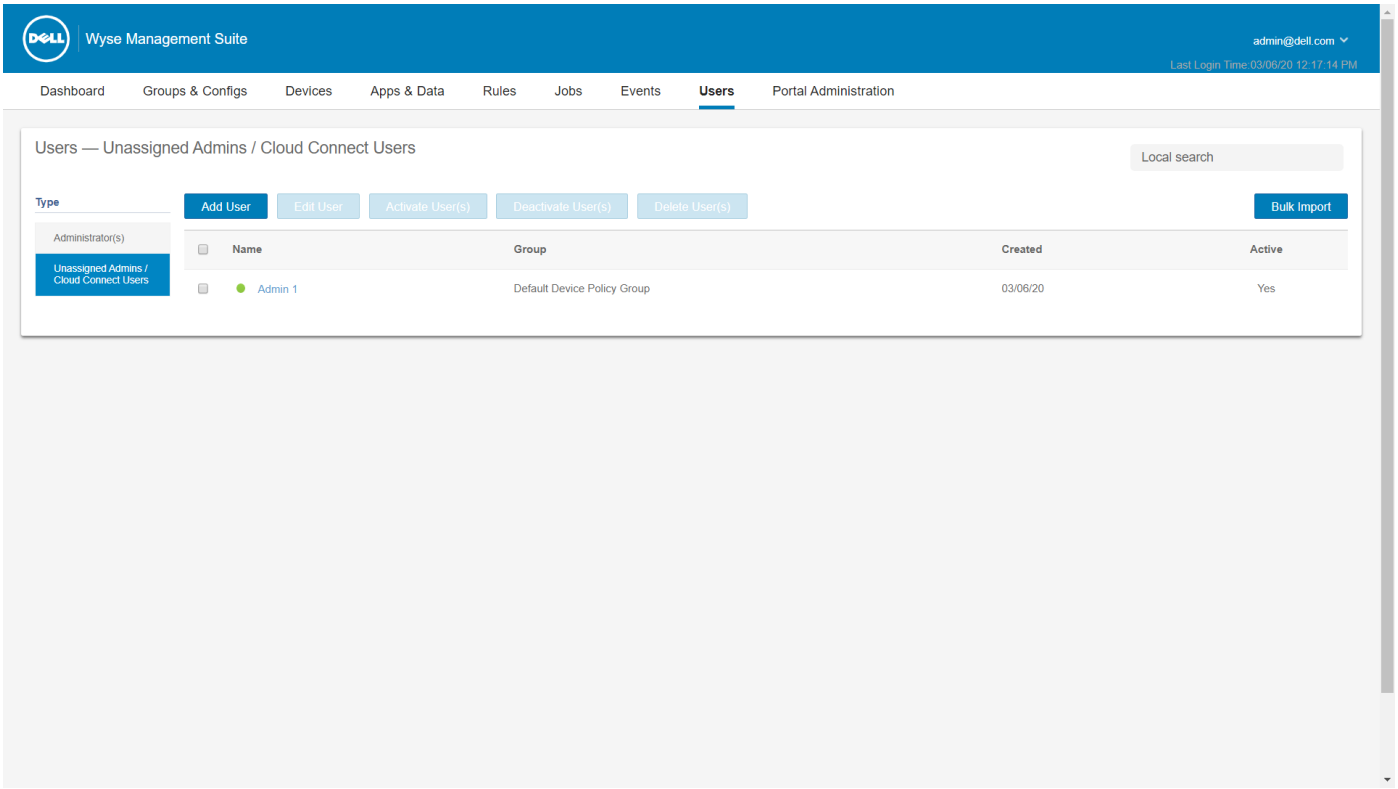

Figure 9. Users page

Topics:

- Add a new admin profile
- Create auto assignment rules for unmanaged devices
- Edit an administrator profile
- Add end user
- Edit an end user
- Create end-user exceptions
- Bulk import end users
- Deleting end user
- Deactivate an administrator profile
- Delete an administrator profile
- Edit a user profile
- Bulk import unassigned administrators or cloud connect users

Add a new admin profile

Steps

1. Click **Users**.
2. Click **Administrator(s)**.
3. Click **Add Admin**.
   The **New Admin User** window is displayed.
4. Enter your email ID and user name in the respective fields.
5. Select the check box to use the same user name as mentioned in the email.
6. Do one of the following:
   - If you click the **Personal Information** tab, enter the following details:
     - First name
     - Last name

- Title
- Mobile phone number

- If you click the **Roles** tab, enter the following details:

a. In the **Roles** section, from the **Role** drop down list, select the **Administrator role**.

- Global Administrator
- Group Administrator
- Viewer

NOTE: If you select the Administrator role as Viewer, the following administrative tasks are displayed:

- **Query Device**
- **Unregister Device**
- **Restart/Shutdown Device**
- **Change Group Assignment**
- **Remote Shadow**
- **Lock Device**
- **Wipe Device**
- **Send Message**
- **WOL Device**

b. In the **Password** section, do the following:

i. Enter the custom password.
ii. To generate any random password, select the **Generate random password** radio button.

7. Click **Save**.

Create auto assignment rules for unmanaged devices

Steps

1. Click the **Rules** tab.
2. Select the **Unmanaged Device Auto Assignment** option.
3. Click the **Add Rules** tab.
4. Enter the **Name** and select the **Destination group**.
5. Click the **Add Condition** option and select the conditions for assigned rules.
6. Click **Save**.
   The rule is displayed in the unmanaged group list. This rule is applied automatically and the device is listed in the destination group.

Edit an administrator profile

Steps

1. Click **Users**.
2. Click **Administrator(s)**.
3. Click **Edit Admin**.
   The **Edit Admin User** window is displayed.
4. Enter your email ID and user name in the respective fields.

   NOTE: When you update the login name, you are forced to log out from the console. Log in to the console using the updated account login name.

5. Do one of the following:

- If you click the **Personal Information** tab, enter the following details:
  - First name
  - Last name

- Title
- Mobile phone number

- If you click the **Roles** tab, enter the following details:

  a. In the **Roles** section, from the **Role** drop down list, select the **Administrator role**.
  b. In the **Password** section, do the following:

     i. Enter the custom password.
     ii. To generate any random password, select the **Generate random password** radio button.

6. Click **Save**.

Add end user

Steps

1. Click the **Users** tab.
2. Click **End Users**.
3. Click **Add User**.
4. Enter the username, domain, first name, last name, email address, title, and phone number
5. Click **Save**.

Edit an end user

Steps

1. Click the **Users** tab.
2. Click **End Users**.
3. Click **Edit End Users**.
4. Enter your email ID and user name in the respective fields.
5. Click **Save**.

Create end-user exceptions

You can configure and deploy settings to an individual user. The settings are applied to the user account and are applied to the thin client when the user logs in. This option is applicable only to thin clients running ThinOS 9.x operating system.

Steps

1. Click the **Users** tab.
2. Click **End Users**.
3. Select a user.
   The **End User Details** page is displayed.
4. Click the **Edit Policies** drop-down menu and select the operating system.
5. Configure the required policies and click **Save and Publish**.

NOTE: This feature is applicable only to thin clients running ThinOS 9.x operating system. There is no limit on the number of end users in the on-premise environment. You can add 10000 users in a public cloud.

Bulk import end users

Steps

1. Click the **Users** tab.
2. Click **End Users**.
3. Click **Bulk Import**.
4. Click **Browse**, and select the .csv file.
5. Click **Import**.

NOTE: You can add up to 100 end users to Wyse Management Suite.

Deleting end user

Steps

1. Click **End Users** tab.
2. Click **Delete End User**.
   An Alert window is displayed. Enter a reason for the deletion to enable the Delete link.
3. Click **Delete**.

Deactivate an administrator profile

Deactivating the admin profile prevents you from logging in to the console, and removes your account from the registered devices list.

Steps

1. Click **Users**.
2. Click **Administrator(s)**.
3. From the list, select a user and click **Deactivate Admin(s)**.
   An alert window is displayed.
4. Click **OK**.

Delete an administrator profile

About this task

Administrator must be deactivated before you delete them. To delete an administrator profile, do the following:

Steps

1. Click **Users**.
2. Click **Administrator(s)**.
3. Select the check box of a particular admin or admins which you want to delete.
4. Click **Delete Admin(s)**.
   An **Alert** window is displayed.
5. Enter a reason for the deletion to enable the **Delete** link.
6. Click **Delete**.

Edit a user profile

Steps

1. Click **Users**.
2. Click **Unassigned Admins**.
3. Click **Edit User**.
   The **Edit Admin User** window is displayed.
4. Enter your email ID and user name in the respective fields.

   NOTE: When you update the login name, you are forced to log out from the console. Log in to the console using the updated account login name.

5. Do one of the following:
   - If you click the **Personal Information** tab, enter the following details:
     - First name
     - Last name

- Title
- Mobile phone number

- If you click the **Roles** tab, enter the following details:

a. In the **Roles** section, from the **Role** drop down list, select the **Administrator role**.
b. In the **Password** section, do the following:

i. Enter the custom password.
ii. To generate any random password, select the **Generate random password** radio button.

6. Click **Save**.

Bulk import unassigned administrators or cloud connect users

Steps

1. Click **Users**.
   The **Users** page is displayed.
2. Select the **Unassigned Admins** option.
3. Click **Bulk Import**.
   The **Bulk Import** window is displayed.
4. Click **Browse** and select the CSV file.
5. Select the user group to which the imported users must be assigned.
6. Click **Import**.

13

Portal administration

This section contains a brief overview of your system administration tasks that are required to set up and maintain your system.

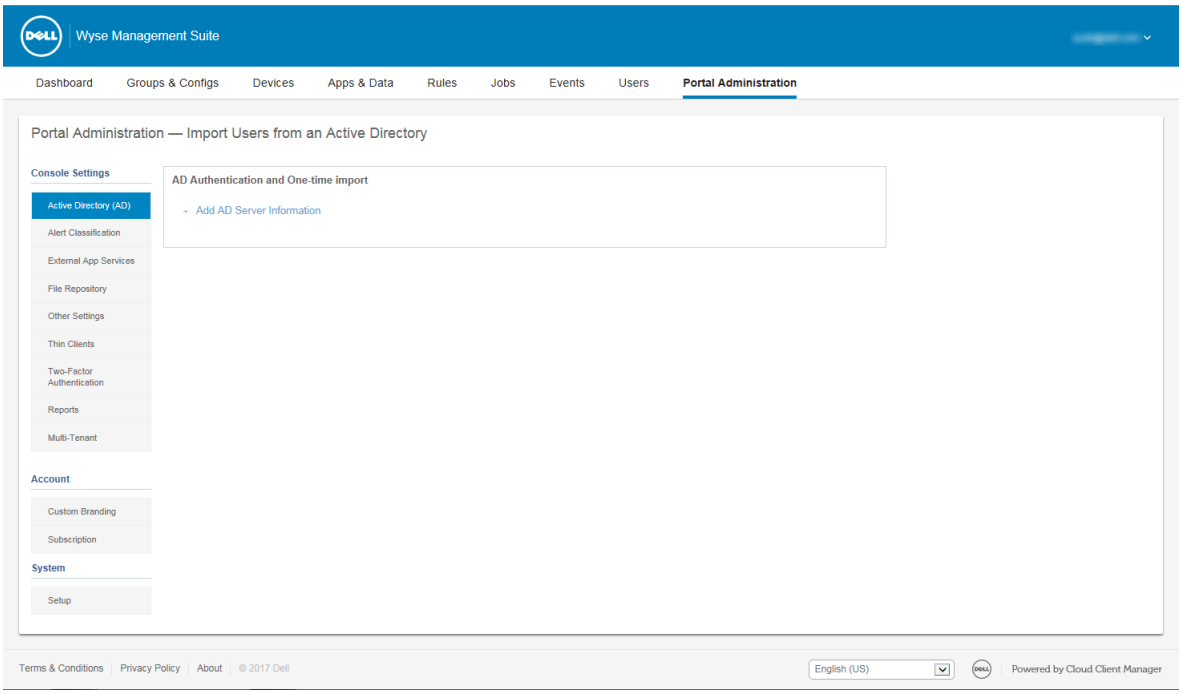

Figure 10. Portal admin

Topics:

Adding the Active Directory server information

You can import Active Directory users and user groups to the Wyse Management Suite private cloud.

Steps

1. Log in to the Wyse Management Suite private cloud.
2. Go to **Portal Admin** > **Console Settings** > **Active Directory (AD)**.
3. Click the **Add AD Server Information** link.
4. Enter the server details such as **AD Server Name**, **Domain Name**, **Server URL**, and **Port**.

5. Click **Save**.
6. Click **Import**.
7. Enter the username and password.

   NOTE: To search groups and users, you can filter them based on Search Base, and Group name contains options. You can enter the values as following:

   - **`OU=<OU Name>`, for example, `OU=TestOU`**
   - **`DC=<Child Domain>, DC=<Parent Domain>, DC=com`, for example, `DC=Skynet, DC=Alpha, DC=Com`**

   You can enter a space after a comma, but you cannot use single or double quotes.

8. Click **Login**.
9. On the **User Group** page, click **Group name** and enter the group name.
10. In the **Search** field, type the group name that you want to select.
11. Select a group.
    The selected group is moved to the right pane of the page.
12. In the **User Name Contents field**, enter the user name .
13. Click **Import Users** or **Import Groups**.

    NOTE: If you provide an invalid name or do not provide a last name, or provide any email address as name, then the entries cannot be imported into Wyse Management Suite. These entries are skipped during the user import process.

    The Wyse Management Suite portal displays a confirmation message with the number of imported active directory users. The imported active directory users are listed at **Users tab** > **Unassigned Admins**.
14. To assign different roles or permissions, select a user and click **Edit User**.

    After you assign the roles to the active directory user, they are moved to the **Administrators** tab on the **Users** page.

Next steps

Active directory users can log in to the Wyse Management Suite Management portal by using the domain credentials. To log in to the Wyse Management Suite portal, do the following:

1. Start the Wyse Management Suite management portal.
2. On the login screen, click the **Sign in with your domain credentials** link.
3. Enter the domain user credentials, and click **Sign In**.

To log in to the Wyse Management Suite portal using child domain credentials, do the following:

1. Start the Wyse Management Suite management portal.
2. On the login screen, click the **Sign in with your domain credentials** link.
3. Click **Change user domain**.
4. Enter the user credentials and the complete domain name.
5. Click **Sign In**.

The imported Active Directory users can be activated or deactivated on the **Users** page by using the global administrator login. If your account is deactivated, you cannot log in to the Wyse Management Suite Management portal.

NOTE: To import the users using LDAPS protocol, complete the following steps:

1. **Import the AD Domain Server Root Certificate into Java Key Store Manually using the keytool. For example, `<C:\Program Files\DELL\WMS\jdk1.8.0_152\jre\bin>keytool.exe> -importcert -alias "WIN-O358EA52H8H" -keystore "<C:\Program Files\DELL\WMS\jdk1.8.0_152\jre\lib\security\cacerts>" -storepass changeit -file "Root Certificate Path"`**
2. **Restart Tomcat service.**

Configuring Active Directory Federation Services feature on public cloud

You can configure Active Directory Federation Services (ADFS) on a public cloud.

Steps

1. On the **Portal Admin** page, under **Console Settings**, click **Active Directory (AD)**.
2. Enter the Wyse Management Suite details to ADFS. To know the location details on the ADFS server where you must upload the Wyse Management Suite .xml files, hover over the **information (i)** icon.

   NOTE: To download the Wyse Management Suite .xml file, click the download link.

3. Set the Wyse Management Suite rules in ADFS. To know the custom claim rule details, hover over the **information (i)** icon.

   NOTE: To view the Wyse Management rules, click the Show WMS Rules link. You can also download the Wyse Management Suite rules by clicking the link that is provided in the Wyse Management Suite Rules window.

4. To configure the ADFS details, click **Add Configuration**, and do the following:

   NOTE: To allow tenants to follow the ADFS configuration, upload the ADFS metadata file.

   a. To upload the .XML file stored on your thin client, click **Load XML file**.
      The file is available at `https://adfs.example.com/FederationMetadata/2007-06/FederationMetadata.xml`.
   b. Enter the details of the entity ID and X.509 signing certificate in the respective boxes.
   c. Enter the ADFS login URL address and the ADFS logout URL address in the respective boxes.
   d. To enable tenants to configure Single Sign-On by using ADFS, select the **Enable SSO login using ADFS** check box. This feature follows the Security Assertion and Markup Language (SAML) standard specification.
   e. To validate the configuration information, click **Test ADFS Login**. This enables tenants to test their setup before saving.

   NOTE: Tenants can activate/deactivate SSO login by using ADFS.

5. Click **Save**.
6. After you save the metadata file, click **Update Configuration**.

   NOTE: Tenants can log in and log out by using their AD credentials that are configured from their ADFS. You must ensure that the AD users are imported to the Wyse Management Suite server. On the login page, click Sign in and enter your domain credentials. You must provide the email address of your AD user and sign in. To import a user to the public cloud , remote repository must be installed. For more information about the ADFS documentation, go to Technet.microsoft.com.

Results

After the ADFS test connection is successful, import the users using AD connector present in the remote repository.

Import unassigned users or user groups to public cloud through active directory

Steps

1. Download and install the file repository, see Accessing file repository. The repository must be installed by using the company network and must have the access to the AD server to pull the users.
2. Register the repository to public cloud. Once registered, follow the steps mentioned on the UI to import the users to Wyse Management Suite public cloud. You can edit the roles of the AD user after importing to Wyse Management Suite public cloud.
3. Set up ADFS on public cloud.

Alert classifications

The Alert page categorizes the alerts as **Critical**, **Warning**, or **Info**.

NOTE: To receive alerts through e-mail, select the Alert Preferences option from the username menu displayed on the upper-right corner.

Select the preferred notification type such as, **Critical**, **Warning**, or **Info** for the following alerts:

- Device health alert
- Device not checked in

Create an Application Programming Interface-API accounts

About this task

This section allows you to create secured Application Programming Interface (API) accounts. This service provides the ability to create special accounts. To configure the external application service, do the following:

Steps

1. Log in to the Wyse Management Suite portal, and click the **Portal Admin** tab.
2. Select **External App Services** under **Console Settings**.
3. Select the **Add** tab to add an API service.
   The **Add External App Services** dialog box is displayed.
4. Enter the following details to add an external application service.
   - Name
   - Description
5. Select the **Auto Approve** check box.
   If you select the check box, approval from the global administrators is not required.
6. Click **Save**.

Access Wyse Management Suite file repository

File repositories are places where **files** are stored and organized. Wyse Management Suite has two types of repositories:

- **Local Repository**—During the Wyse Management Suite private cloud installation, provide the local repository path in the Wyse Management Suite installer. After the installation, go to **Portal Admin** > **File Repository** and select the local repository. Click the **Edit** option to view and edit the repository settings.
- **Wyse Management Suite Repository**—Log in to Wyse Management Suite public cloud, go to ,**Portal Admin** > **File Repository** and download the Wyse Management Suite repository installer. After the installation, register the Wyse Management Suite repository to Wyse Management Suite Management server by providing the required information.

You can enable the **Automatic Replication** option to replicate files that are added to any of the file repositories to other repositories. When you enable this option, an alert message is displayed. You can select the **Replicate existing files** check box to replicate the existing files to your file repositories.

Replicate existing file option is applicable if the repository is already registered. When a new repository is registered, then all the files are copied to the new repository. You can view the file replication status in the **Events** page.

The `Image Pull` templates are not replicated automatically to other repositories. You must copy these files manually.

File Replication feature is supported only on repositories from Wyse Management Suite 2.0 and later versions.

You cannot import self-signed certificate of the remote repository to the Wyse Management Suite server. If the CA Validation is enabled for remote repository, then the replication of files from the remote repository to the local repository fails.

To use Wyse Management Suite repository, do the following:

1. Download the Wyse Management Suite repository from the public cloud console.
2. After the installation process, start the application.

3. On the Wyse Management Suite Repository page, enter the credentials to register the Wyse Management Suite repository to Wyse Management Suite server.
4. If you enable the **Register to Public WMS Management Portal** option, you can register the repository to Wyse Management Suite public cloud.
5. Click the **Sync Files** option to send the sync file command.
6. Click **Check In** and then click **Send Command** to send the device information command to the device.
7. Click the **Unregister** option to unregister the on-premises service.
8. Click **Edit** to edit the files.
9. From the drop-down list of **Concurrent File Downloads** option, select the number of files.
10. Enable or disable **Wake on LAN** option.
11. Enable or disable **Fast File Upload and Download (HTTP)** option.
    - When HTTP is enabled, the file upload and download occurs over HTTP.
    - When HTTP is not enabled, the file upload and download occurs over HTTPS.
12. Select the **Certificate Validation** check box to enable the CA validation for public cloud.

    NOTE: When CA Validation from Wyse Management Suite server is enabled, the certificate should be present in the client. All the operations such as, Apps and Data, Image Pull/Push is successful. If certificate is not present in the client, the Wyse Management Suite server provides one generic audit event message Failed to Validate Certificate Authority under Events page. All the operations such as, Apps and Data, Image Pull/Push is not successful. Also, when CA Validation from Wyse Management Suite server is disabled, the communication from server and client happens in secure channel without Certificate Signature validation.
13. Add a note in the provided box.
14. Click **Save Settings** .

Subnet mapping

From Wyse Management Suite 2.0, you can assign a subnet to a file repository. You can associate a file repository up to 25 subnets or ranges. You can also prioritize the subnets that are associated with the repository.

You can deploy the BIOS packages using subnet mapping from Wyse Management Suite 2.1 .You can upload and deploy multiple firmware packages from the remote repository, tenant cloud repository, or operator cloud repository. This feature is applicable only on Wyse Management Suite Pro license.

NOTE: Subnet Proximity is not supported on ThinOS 9.x devices.

Configure subnet mapping

Steps

1. Go to **Portal Administration** > **File Repositories**.

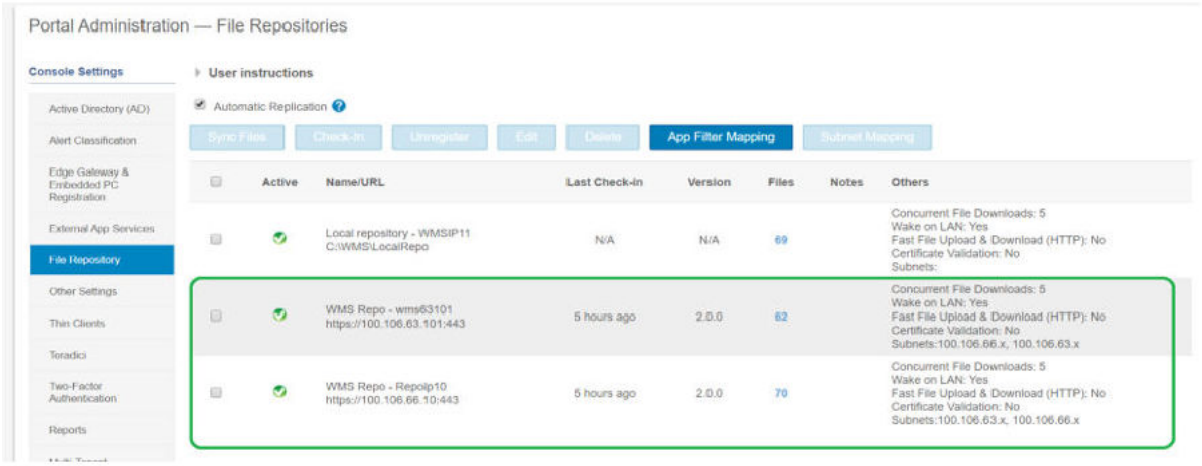

Figure 11. File repository

2. Select a file repository.

3. Click the **Subnet Mapping** option.
4. Enter subnets or ranges, one value per line. You must use hyphen for range separation.
5. Optionally, clear the **Allow devices from subnets not mapped to this file repository to download files from this repository as a fallback method using subnet proximity** check box if you want the file repository to be accessed only through the configured subnets or ranges.

   NOTE: The Allow devices from subnets not mapped to this file repository to download files from this repository as a fallback method using subnet proximity option is selected by default. This feature is not supported on ThinOS 9.x devices.

Configuring other settings

You can use the following settings to enforce the **APNS Warnings**, **License Expiration Warnings**, and other **Self Service Legal Agreements**.

- **Dismiss License Expiration Warning on Dashboard page**—Select this check box to disable the warning for a license expiration from displaying on the **Dashboard** page.
- **Enable Advanced Dell Wyse Cloud Connect options in Android Settings policy configuration page (Note: Professional Tier Only)**—Select this option to enable Advanced Dell Wyse Cloud Connect options in the Android Settings policy configuration page.
- **Heartbeat interval**—Enter the time. The device sends heartbeat signal every 60 minutes to 360 minutes.
- **Checkin interval**—Enter the time. The device sends full checking signal every 8 hours to 24 hours.
- **Not Checked In compliance alert**—Enter the number of days before a device triggers a **Not Checked In compliance alert**. The range is 1–99.
- **WMS Console timeout**—Enter the idle time in minutes after which the user is logged out of the console. This setting can be configured by any global administrator. The default value is 30 minutes.
- **Enrollment Validation**—When the **Enrollment Validation option** is enabled, the auto-discovered devices are in **Pending Validation** state in the **Devices** page. The tenant can select a single device or multiple devices in the **Devices** page and validate the enrollment. The devices are moved to the intended group after they are validated.

Managing Teradici configurations

To add a Teradici server, do the following:

Steps

1. In the **Portal Administration** tab, under **Console Settings**, click **Teradici**.
2. Click **Add Server**.
   The **Add Server** screen is displayed.
3. Enter the **Server Name**. The port number is automatically populated.
4. Select the **CA Validation** check box to enable CA validation.
5. Click **Test**.

Enable Two-Factor authentication

You must have at least two active global administrator users in the system.

Prerequisites

Create two or more global administrators before proceeding to the task.

About this task

1. Log in to the Wyse Management Suite portal and click the **Portal Admin** tab.
2. Click **Two Factor Authentication** under **Console Settings**.
3. You must select the check box to enable the two factor authentication.

   NOTE: Administrators must verify the second authentication factor using one time passcodes to log in to the management portal.
4. You will receive a onetime passcode to your e-mail address. Enter the one time passcode.

By default, you have eight attempts to verify the one time passcode. If you fail to verify the passcode, the account will be locked. Only global administrators can unlock locked accounts.

Enabling multi-tenant accounts

This section allows you to create tenant accounts which can be managed independently of one another. You can manage the organizations independently. Each account must have its own license key and can set up its own set of admin accounts, policies, operating system images, application, rules, alerts, and so on. The high level operator creates these organizations.

To enable multi tenant accounts, do the following:

1. Log in to the Wyse Management Suite portal and click the **Portal Admin** tab.
2. Select **Multi-Tenant** under **Console Settings**.
3. Select the check box to enable multi-tenant option.
4. Enter the following details:
   - User name
   - Password
   - Confirm password
   - Email
5. Click **Save Settings**.

Generate reports

You can download reports of the jobs, devices, groups, events, alerts, and policies. The reports can be shared with the administrator if you want to troubleshoot the end points.

Steps

1. Go to **Portal Admin** > **Reports**.
2. Click the **Generate Report** option.
   The **Generate Report** window is displayed.
3. From the **Type** drop-down list, select the type of the report.
4. From the **Groups** drop-down list, select the group.
5. Select the delimiter.
6. Click **Save**.

Enabling custom branding

About this task

This option allows you to add the name of your company and its logo or brand. You can upload your own header logo, favicon, add a header title, and change header colors to customize the Wyse Management Suite portal. To access and specify custom branding:

Steps

1. Go to **Portal Administrator** > **Account** > **Custom Branding**.
2. Click **Enable Custom Branding**.
3. In **Header Logo**, click **Browse** and select and select the header logo image from the folder location.
   The maximum size of the header logo must be 500*50 pixels.
4. Enter the title under in **Title** option.
5. Select the **Display title in browser window/tab** check box to view the title in the browser.
6. Enter the color codes for **Header background color** and **Header text color**.
7. Click **Browse** and select the **Favicon**.
   The favicon appears in the browser address bar next to the website URL.
   NOTE: You must save the images as .ico files only.
8. Click **Save Settings**.

Manage system setup

You can change the SMTP details, certificates, MQTT details, and external Wyse Management Suite URL details configured during the installation.

From Wyse Management Suite 2.1, the **Dynamic Schema Configuration** is supported for ThinOS 9.x devices that enables you to update the latest configuration settings without any changes on the server side. In public cloud, the Wyse Management Suite operator can upgrade the 9.x configuration user interface. For private cloud—pro feature only—the Global user can upgrade the 9.x configuration user interface. If the **Multi-Tenant** feature is enabled, the Wyse Management Suite operator can upload the latest schema from the **Administration** section,

Steps

1. Log in to the Wyse Management Suite portal and click the **Portal Admin** tab.
2. Click **Setup** under **Systems**.
3. Select the check box to perform server certificate validation for all device-to-server communication.
4. Enter the following details in the **Update SMTP for Email Alerts** area:
   - SMTP server
   - Send from address
   - Username
   - Password
   - Test address

   Current Certificate—Select the **Certificate Validation** check box to enable the CA validation for private cloud. All the communication from the server and the client including file download, operating system image download from Local Repo uses the certificate.

   NOTE: When CA Validation from Wyse Management Suite server is enabled, the certificate should be present in the client. All the operations such as, Apps and Data, Image Pull/Push is successful. If certificate is not present in the client, the Wyse Management Suite server provides one generic audit event message Failed to Validate Certificate Authority under Events page. All the operations such as, Apps and Data, Image Pull/Push is not successful. Also, when CA Validation from Wyse Management Suite server is disabled, then the communication from server and client happens in secure channel without Certificate Signature validation.
5. Select the following options and enter the details:
   - **Key/Certificate**—Upload HTTPS key/certificate file pair (only PEM format is supported).
   - **PKCS-12**—Upload HTTPS PKCS-12 (.pfx, .p12). Apache intermediate certificate is required for IIS pfx.
6. To update the external MQTT details, click the **Change External MQTT** option and configure the details.
7. To update the external Wyse Management Suite URL, click the **Change External WMS URL** option and configure the details.

   NOTE: To revert to the previous configurations click the Revert Last URLs option, and the click Save.
8. If you want to upgrade the 9.x configuration user interface, click **Choose Files** in the **Configuration UI Package** field, and browse to the .zip file.

   NOTE: This option is not available, if the Multi-Tenant feature is enabled.
9. Click **Save**.

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Teradici device management

The Teradici device management section provides the information about managing and discovering the teradici divices. The teradici management console uses SDK's to support management, configuration for tera devices. This is applicable only for Wyse Management Suite private cloud with pro license type.

Topics:

Discovering Teradici devices

Prerequisites

- Install the latest version of Wyse Management Suite on Microsoft Windows 2012 Server or later versions. Threadx 5.x and 6.x devices works with the latest version of the operating system.
- Install and enable the **EMSDK** component.
- The FQDN of the Wyse Management Suite server must be available for **DHCP** or **DNS** configurations.
- `Cert.pem` must be placed in the default path `C:\Program Files\Dell\WMS\Teradici\EMSDK`. It is used to discover Threadx devices.

Security Level

Depending on an endpoint's configured security level, you may also need to provision endpoints with an EBM/EM certificate.

Endpoints configured for medium or high security must have a trusted certificate in their certificate store before they can connect to an EBM or EM. For some endpoints, certificates may be pre-loaded by the vendor as a factory default. Otherwise, you can manually upload certificates using an endpoint's AWI.

Endpoints that are configured for low security do not need an MC certificate in their trusted certificate stores if either of the following is true:

- They are using DHCP discovery or DNS discovery and the DHCP or DNS server has provisioned them with the EBM certificate's fingerprint.
- They are discovered using the manual discovery method.

Table 5. Certificate Requirements for Endpoints

Discovery Method	Low Security	Medium Security	High Security
DHCP/DNS discovery without EBM fingerprint provisioned	Certificate required	Certificate required	Not applicable
DHCP/DNS discovery with EBM fingerprint provisioned	Certificate not required	Certificate required	Not applicable
Discovery initiated by an endpoint configured for a high security environment	Not applicable	Not applicable	Certificate required
Manual discovery initiated by the MC	Certificate not required	Not applicable	Not applicable

Manual discovery from the client

1. Go to, `https://<clientIP>`.
2. Accept the certificate warning message.

3. Enter the administrator password (default password is Administrator) and login.
4. Go to, **upload** > **certificate**. Select the `Cert.pem`file from the default path and click **Upload**.
5. Go to **Configuration** > **Management**. Click the **clear management state** button to register the device to the new Management Server.
6. Set the **manager discovery mode** to manual
7. Enter the **Endpoint Bootstrap Manager URL** in the following format **wss://<IP Address of the WMS server>**

   NOTE: If EMSDK is installed with custom port then provide Endpoint Bootstrap Manager URL in the following format wss://<IP Address:Custom port.
8. Click **Apply**, and then click **Continue.**
9. The **management status** is displayed as Connected to the Endpoint server.

Adding the PCoIP endpoint vendor class to DHCP server

1. Log in to your DHCP server.
2. Right-click the DHCP server in the **SERVERS** pane, and select **DHCP Manager**.
3. Right-click the **IPv4** option, and then select **Define Vendor Classes**.
4. Click **Add** to add a new DHCP vendor class.
5. Enter the **PCoIP Endpoint** in the **Display name** field.
6. Enter the **PCoIP Endpoint** in the **ASCII** column as the Vendor ID.
7. Click **OK** to save the settings.

Configuring DHCP options

1. Right-click the **IPv4** option, and the select **Set Predefined Options**.
2. Select **PCoIP Endpoint** as the **Option** class, and then click **Add**.
3. In the **Option Type** dialog box, enter the name as **EBM URI**, data type as **String**, code as **10**, and description as **Endpoint Bootstrap Manager URI**, and then click **OK**.
4. Click **OK** to save the settings.
5. Expand the DHCP scope to which you want to apply the options.
6. Right-click the **Scope Options**, and then select **Configure Options**.
7. Click the **Advanced** tab, and then select the **PCoIP Endpoint** vendor class.
8. Select the **010 EBM URI** check box, and then enter a valid Management Console URI in the **String** field. Click **Apply**. This URI requires a secured WebSocket prefix, for example, `wss://<MC IP address>:[port number]`. 5172 is the MC's listening port . Entering this port number is an optional step.
9. Click **OK** to save the settings.
10. Select **PCoIP Endpoint** as the **Option** class, and then click **Add**.
11. In the **Option Type** dialog, enter the name as **EBM X.509 SHA-256 fingerprint**, data type as **String**, code as **11**, and the description as **EBM X.509 SHA-256 fingerprint**, and then click **OK**.
12. Expand the DHCP scope to which you want to apply the options.
13. Right-click the **Scope Options**, and then select **Configure Options**.
14. Click the **Advanced** tab, and then select the **PCoIP Endpoint** vendor class.
15. Select the **011 EBM X.509 SHA-256 fingerprint** check box, and paste the SHA-256 fingerprint.
16. Click **OK** to save the settings.
17. Go to the client web browser.
18. Go to **Configuration** > **Management**, and set the **manager discovery mode** to **Automatic**
19. The client is connected to the server which is mentioned in the DHCP server.

Creating the DNS SRV record

1. Log in to the **DNS server**.
2. Right-click the DNS server in the **SERVERS** pane, and the select **DNS Manager** from the context menu.
3. In **Forward Lookup Zones**, right-click the domain, and then select **Other New Records** from the context menu.
4. In the **Resource Record Type** dialog box, select **Service Location (SRV)** from the list, and click **Create Record**.
5. Set **Service** to **_pcoip-bootstrap**, protocol to **_tcp**, and **Port number** to **5172**, which is MC's default listening port. For **Host offering this service**, enter the MC's FQDN.

NOTE: The MC's FQDN must be entered because the DNS specification does not allow an IP address in the SRV records.

6. Click **OK**.

Adding a DNS TXT record

1. In **Forward Lookup Zones**, right-click the domain, and then select **Other New Records** from the context menu.
2. In the **Resource Record Type** dialog box, select the **Text (TXT)** from the list, and then click **Create Record**.
3. Enter the following details:
   a. In the **Record name** field, enter the host name of the Wyse Management Suite server offering the service. The FQDN field is populated automatically. This should match the FQDN of the Wyse Management Suite server.
   b. In the **Text** field, enter **pcoip-bootstrap-cert=** and then paste the Wyse Management Suite server certificate SHA-256 fingerprint.
4. Click **OK**.
5. Go to the client web browser.
6. The client is connected to the Wyse Management Suite server which is mentioned in the DNS server.

Creating SHA-256 fingerprint

1. Start the Mozilla Firefox.
2. Navigate to **Options Advanced** Tab
3. Click **Certificates** to view the certificates.
4. Under **Certificate Manager** , click **Authorities**, and the click **Import**.
5. Browse the certificate, and the click **View**.
6. Copy the **SHA-256** fingerprint.

CIFS use case scenarios

The following use cases are supported in Wyse Management Suite:

- When you select **Wyse Management Suite** as **Setup Type** while installing Wyse Management Suite private cloud.
  - CIFS configuration page is displayed. This page is required as we need to configure the shared folder.
    NOTE: The Configure CIFS User Credentials option is disabled by default.
- When you select **Teradici EMSDK** as **Setup Type** while installing Wyse Management Suite private cloud.
  - For CIFS credentials, you can use an existing account or create a new one.
- When you select both **Wyse Management Suite** and **Teradici EMSDK** as **Setup Type** while installing Wyse Management Suite private cloud.
  - CIFS configuration page is displayed. This page is required as we need to configure the shared folder.
    NOTE: The Configure CIFS User Credentials option is disabled by default.
  - For CIFS credentials, you can use an existing account or create a new one.
- When you install only EMSDK on a system which already has the EMSDK service installed.
  - If Teradici EMSDK is selected then a warning message is displayed when you click **Next** from the **Setup Type** page. The message is **The installer has detected that the Teradici EMSDK is already installed. The EMSDK will be updated if required**. No port number is required.
    - If **Configure CIFS User Credentials** option is selected (By default)
      1. Stop the service.
      2. Update the EMSDK service.
      3. Restart the service. It operates under the same pre-configured user.
    - If **Configure CIFS User Credentials** option is selected with **Use an existing user**option.
      1. Stop the service.
      2. Update the EMSDK service.
      3. Update the service log on user to the one selected.
      4. Restart the service. It operates under the same pre-configured user.

- If **Configure CIFS User Credentials** option is selected with **Create a New User** option.
  1. Stop the service.
  2. Update the EMSDK service.
  3. Update the service log on user to the newly created user.
  4. Restart the service. It operates under the same pre-configured user.

- When you install both **Wyse Management Suite** and **Teradici EMSDK** on a system that has already the EMSDK service installed.
  - Same as **When you install only EMSDK on a system which already has the EMSDK service installed** except that the **Configure CIFS User Credentials** option is selected by default and greyed out. You must enter CIFS credentials.

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Managing license subscription

This section enables you to view and manage the management console license subscription and its usage.

On the **Portal Admin** page, you can view the **Subscription** option. This page provides the following information:

- License Subscription
- License Orders
- License Usage—Registered Thin Client Devices
- Server Information
- Import License—Private cloud
- Export License for Private Cloud—Public cloud

Topics:

Import licenses from Wyse Management Suite public cloud

You can import licenses from Wyse Management Suite public cloud to Wyse Management Suite private cloud.

Steps

1. Log in to Wyse Management Suite Private Cloud console.
2. Go to **Portal Administration** > **Accounts** > **Subscription**.
3. Enter the Wyse Management Suite public cloud details:
   - Username
   - Password
   - Data center
   - Number of TC seats
   - Number of Edge Gateway and Embedded PC seats
   - Number of Wyse Software Thin Client seats
4. Click **Import**.

   NOTE: Wyse Management Suite private cloud must be connected to Wyse Management Suite public cloud.

Export licenses to Wyse Management Suite Private Cloud

You can export licenses to Wyse Management Suite Private Cloud from Wyse Management Suite public cloud.

Steps

1. Log in to Wyse Management Suite public cloud console.
2. Go to **Portal Administration** > **Accounts** > **Subscription**.
3. Enter the number of thin client seats that must be exported to Wyse Management Suite Private Cloud.
4. Click **Export**.

5. Copy the generated license key.
6. Log in to Wyse Management Suite Private Cloud console.
7. Go to **Portal Administration** > **Accounts** > **Subscription**.
8. Enter the generated license key in the box.
9. Click **Import**.

Thin client licenses allocation

You can allocate the thin client licenses between Wyse Management Suite Private Cloud and Wyse Management Suite Public Cloud account.

Steps

1. Log in to the Wyse Management Suite Public Cloud console.
2. Go to **Portal Administration** > **Accounts** > **Subscription**.
3. Enter the number of thin client seats.

   NOTE: The thin client seats should be manageable in the Public Cloud. The entered number of thin client seats must not exceed the number displayed in Manageable option.

4. Click **Export**.

   NOTE: The number of Public Cloud licenses is adjusted based on the number of thin client seats exported to the Private Cloud.

5. Copy the generated license key.
6. Log in to Wyse Management Suite Private Cloud console.
7. Go to **Portal Administration** > **Accounts** > **Subscription**.
8. Import the exported license key to the Private Cloud.

   NOTE: The license cannot be imported if it has insufficient thin client seats to manage the number of devices currently being managed in the Private Cloud. In this case repeat steps 3–8 to allocate the thin client seats.

License orders

In public cloud, the **License Orders** section displays the list of placed orders including the expired licenses. By default, expired orders are not displayed. Select the **Include expired orders** check box to view the expired orders. The expired orders are displayed in red color, and the orders which expire in 30 days or less are displayed in orange.

NOTE: This feature is not applicable for on-premises deployment as it does not display the order history. However, the on-premises license order history is available when you log in to the public cloud portal as tenant admin.

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Firmware upgrade

You can use Wyse Management Suite to upgrade your firmware.

Topics:

Upgrading ThinLinux 1.x to 2.1 and later versions

If you want to pull a customized image from TL 2.x before you upgrade, you must prepare the ThinLinux 2,x and then upgrade the ThinLinux 1.x image.

Prepare the ThinLinux 2.x image

Prerequisites

Use Wyse Management Suite version 1.4 or later versions to upgrade the ThinLinux build version 2.0.19 or 2.1 to 2.2.

Steps

1. Go to www.dell.com/support.
2. Click **Product Support**, enter the **Service Tag** of your thin client, and then press **Enter**.

   NOTE: If you do not have Service Tag, manually browse for your thin client model.

3. Click **Drivers and downloads**.
4. From the **Operating system** drop-down list, select **ThinLinux**.
5. Download the `merlin_nonpxe-4.0.1-0 0.04.amd64.deb` and `wda_3.4.6-05_amd64.tar` add-on.
6. Copy the downloaded add-on to `<drive C>/wms/localrepo/repository/thinClientsApps/`.
7. On the thin client running ThinLinux 2.x, go to **Settings** > **Management** > **Wyse Device Agent**.
8. Register the device to the Wyse Management Suite server.
9. Close the **Settings** window.

   NOTE: If the Settings window is not closed, the Profile Locked error is displayed after you deploy the image.

10. Log in to the Wyse Management Suite console.
11. Create and deploy app policy for `merlin_nonpxe-4.0.1-0 0.04.amd64.deb` and `wda_3.4.6-05_amd64.tar` add-ons.
12. Reboot the thin client.
13. Log in to the Wyse Management Suite server.
14. Go to the Device page and ensure that the Merlin and WDA versions are updated.
15. Click the registered device, and go to **More Actions** > **Pull OS Image**.
    The **Pull OS Image** window is displayed.
16. Enter the name of the image.
17. From the File repository drop-down list, select the file repository.
18. Select the type of pull operation that you want to perform.
    - **Default**—Select the **OS+Recovery** check box and pull the image (Compressed/UnCompressed).
    - **Advanced**—Select the template `Compress_OS_Recovery_Commandsxml/uncompress_OS_Recovery_CommandsXml` and pull the image.

Results

NOTE:

- **If you are using Wyse Management Suite 1.3 remote repository, then the xml file is not available in the repository. You must upgrade Wyse Management Suite to 1.4 or later versions to access the file.**
- **Recovery Pull operation does not preserve the user settings.**

Upgrade ThinLinux 1.x to 2.x

Steps

1. Go to www.dell.com/support.
2. Click **Product Support**, enter the **Service Tag** of your thin client, and then press **Enter**.

   NOTE: If you do not have Service Tag, manually browse for your thin client model.

3. Click **Drivers and downloads**.
4. From the **Operating system** drop-down list, select **ThinLinux**.
5. Scroll down the page, and do the following:
   - Download the `Platform_util-1.0.26-0.3.x86_64.rpm`, `wda-2.1.23-00.01.x86_64.rpm`, and `merlin-nonpxe_3.7.7-00.05_amd64.deb` add-ons.
   - Download the latest ThinLinux version 2.x image file (`2.1.0.01_3040_16GB_merlin.exe` or `2.2.0.00_3040_merlin_16GB.exe`).
6. On the thin client, go to **Settings** > **Management** > **Wyse Device Agent**.
7. Register the device to the Wyse Management Suite server.
8. Log in to the Wyse Management Suite console.
9. Create and deploy app policy for `Platform_util-1.0.26-0.3.x86_64.rpm`, `wda-2.1.23-00.01.x86_64.rpm`, and `merlin-nonpxe_3.7.7-00.05_amd64.deb` add-ons.
10. Reboot the thin client.
11. Log in to the Wyse Management Suite server.
12. Copy the downloaded image (`2.2.0.00_3040_merlin_16GB.exe` file) to `<drive C>/wms/localrepo/repository/osimages/zipped/`.

    NOTE: The image in the zipped folder gets extracted to a valid folder. The extraction process may take 10-15 minutes.

13. Log in to the Wyse Management Suite console.
14. Go to **Apps & Data** > **OS Image repository** > **WES/ThinLinux**, and verify that the ThinLinux image is available.
15. Go to **Apps & Data** > **OS Image policies (WES/ThinLinux)**, and click **Add Policy**.
16. In the Add Policy window, configure the following options:
    - **OS Type**—ThinLinux
    - **OS Sub filter**—ThinLinux(ThinLinux)
    - **Rule**—Upgrade Only/Force this version

    NOTE: Select the pulled image/fresh image that is copied to the repository while creating the policy.

17. Update the other required fields as required, and click **Save**.
18. Schedule the job.
19. Click **Update now** on the client to update the image.

Upgrading ThinOS 8.x to 9.0

You must use Wyse Management Suite version 2.0 and later versions to upgrade your ThinOS firmware to 9.0.

The following table lists the ThinOS firmware images:

Table 6. Firmware images

Platform	ThinOS firmware image
Wyse 3040 Thin Client	A10Q_wnos
Wyse 5070 Thin Client—Celeron processor	X10_wnos
Wyse 5070 Thin Client—Pentium processor	X10_wnos
Wyse 5070 Extended Thin Client—Pentium processor	X10_wnos
Wyse 5470 Thin Client	X10_wnos
Wyse 5470 All-in-One Thin Client	X10_wnos

Add ThinOS firmware to the repository

Steps

1. Log in to Wyse Management Suite using your tenant credentials.
2. In the **Apps & Data** tab, under **OS Image Repository**, click **ThinOS**.
3. Click **Add Firmware file**.
   The **Add File** screen is displayed.
4. To select a file, click **Browse** and go to the location where your file is located.
5. Enter the description for your file.
6. Select the check box if you want to override an existing file.
7. Click **Upload**.

NOTE:

- **The uploaded firmware can be used only to upgrade ThinOS 8.6 to ThinOS 9.0.**
- **The file is added to the repository when you select the check box but it is not assigned to any of the groups or devices. To deploy firmware to a device or a group of devices, go to the respective device or group configuration page.**

Upgrade ThinOS 8.6 to ThinOS 9.x

Prerequisites

- The ThinOS conversion image must be added to the ThinOS firmware repository. For more information, see Add ThinOS firmware to repository.
- Create a group in Wyse Management Suite with a group token. Use this group token to register the ThinOS 8.6 devices.
- The thin client must be registered to Wyse Management Suite.
- Do not configure any wallpaper settings on Wyse Management Suite.

Steps

1. Go to the **Groups & Configs** page, and select a group.
2. From the **Edit Policies** drop-down menu, click **ThinOS**.
   The **Select ThinOS Configuration Mode** window is displayed.
3. Select **Advanced Configuration Mode**.
4. Go to **Firmware Upgrade**, and click **Configure this item**.
5. Clear the **Disable Live Upgrade** and **Verify Signature** options.
6. From the **Platform Type** drop-down list, select the platform.
7. From the **Firmware to auto-deploy** drop-down list, select the firmware added to the repository.
8. Click **Save & Publish**.
   The firmware is deployed to the thin client. The conversion process takes 15-20 s, and the thin client restarts automatically.

NOTE: After you upgrade the firmware, the device is automatically registered to Wyse Management Suite. The configurations of 8.6 build are not inherited after you upgrade the firmware.

Upgrade ThinOS 9.x to later versions using Wyse Management Suite

Prerequisites

- Ensure that you have installed the ThinOS v9.0.1136 image on the thin client.
- Ensure that you have created a group in Wyse Management Suite with a group token. Use this group token to register the ThinOS 9.x devices.
- Ensure that the thin client is registered to Wyse Management Suite.
- Ensure that you have not configured any wallpaper settings on Wyse Management Suite. This is applicable when you are running ThinOS 9.0.1136 build and want to upgrade to 9.0.2081 build. If the wallpaper is configured simultaneously with the ThinOS 9.0.2081 image, the wallpaper fails to download and an error message is displayed. However, this does not affect the upgrade process. Dell recommends that you disable the Wallpaper settings first, upgrade to 9.0.2081, and then configure the wallpaper again.

Steps

1. Go to the **Groups & Configs** page, and select a group.
2. From the **Edit Policies** drop-down menu, click **ThinOS 9.x**.
   The **Configuration Control | ThinOS** window is displayed.
3. Click **Advanced**.
4. In the **Firmware** field, select **OS Firmware Updates**.
5. Click **Browse** to browse and upload the firmware.
6. From the **Select the ThinOS Firmware to deploy** drop-down menu, select the uploaded firmware.
7. Click **Save & Publish**.
   The thin client downloads the firmware and restarts. The firmware version is upgraded.

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Remote repository

Wyse Management Suite allows you to have local and remote repositories for applications, operating system images and so on. If the user accounts are distributed across geographies, it would be efficient to have a separate local repository for each of the distributed user account so the devices can download images from its local repository. This flexibility is provided with `WMS_Repo.exe` software. The `WMS_Repo.exe` is a Wyse Management Suite file repository software that helps to create distributed remote repositories which can be registered with Wyse Management Suite. The `WMS_Repo.exe` is available only for **Pro** license subscribers only.

Prerequisites

The server requirements to install Wyse Management Suite repository software are:

- Windows 2012 R2 or Windows 2016 Server
- 4 CPU
- 8 GB RAM
- 40 GB storage space

About this task

Do the following to install **WMS-Repo** software:

Steps

1. Download `WMS_Repo.exe` file from Dell Digital Locker.
2. Log in as **Administrator**, and install `WMS_Repo.exe` on the repository server.
3. Click **Next** and follow the instructions on the screen to complete the installation.
4. Click **Launch** to launch the **WMS Repository registration** screen on the web browser.

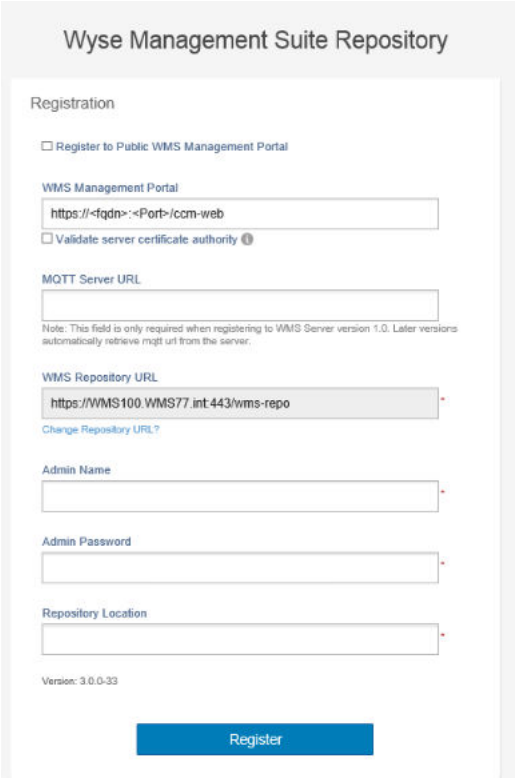


Figure 12. Registration details

5. Click **Register** to start the registration. Select the **Register to public WMS Management Portal** if you are registering on the public cloud.

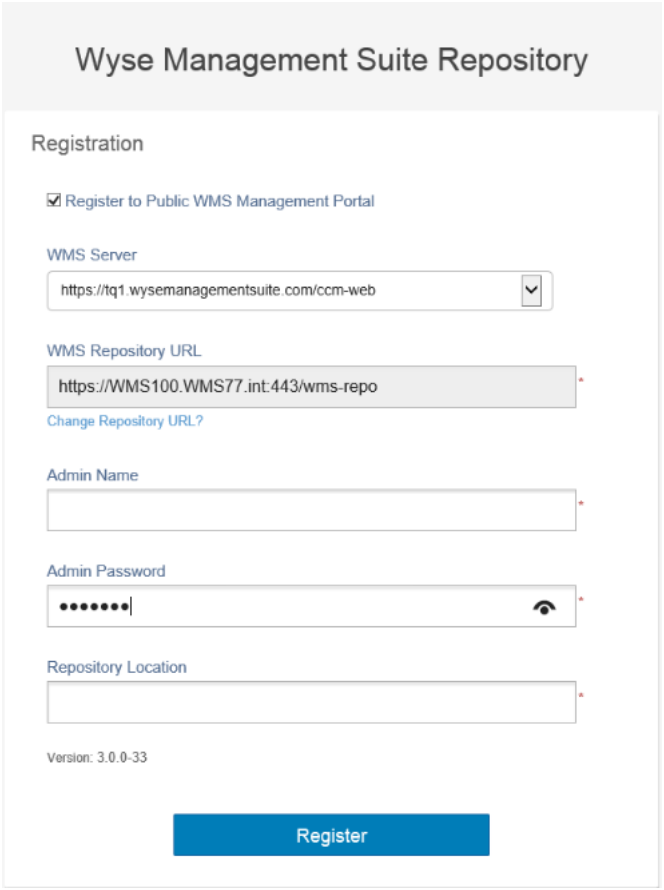


Figure 13. Register on a public cloud

6. Enter the following details, and click **Register**:
   a. Wyse Management Suite server URL

      NOTE: Unless you register with Wyse Management Suite v1.0, you cannot use MQTT Server URL.

   b.
   c. WMS Repository URL (update the URL with the domain name)
   d. Wyse Management Suite administrator login username information
   e. Wyse Management Suite administrator login password information
   f. Repository path information
7. If the registration is successful, the **Registration** window is displayed:

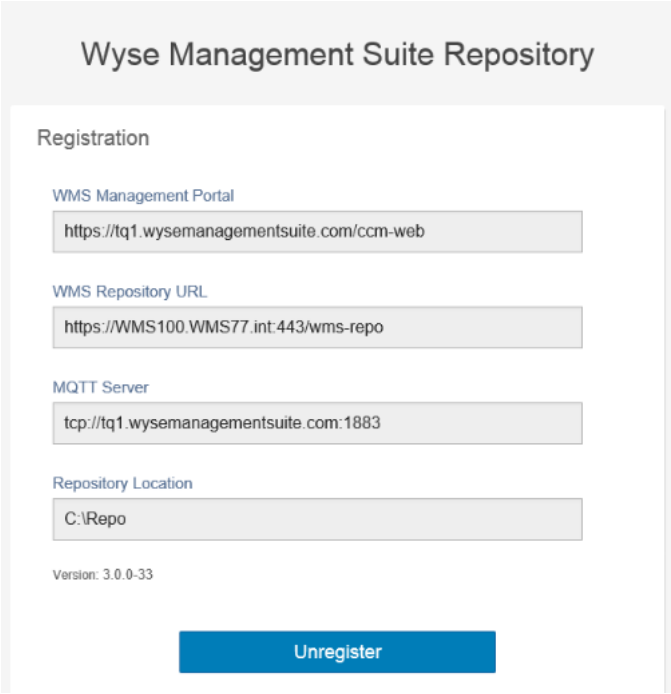


Figure 14. Registration successful

8. The following screen on the Wyse Management Suite portal confirms the successful registration of the remote repository:

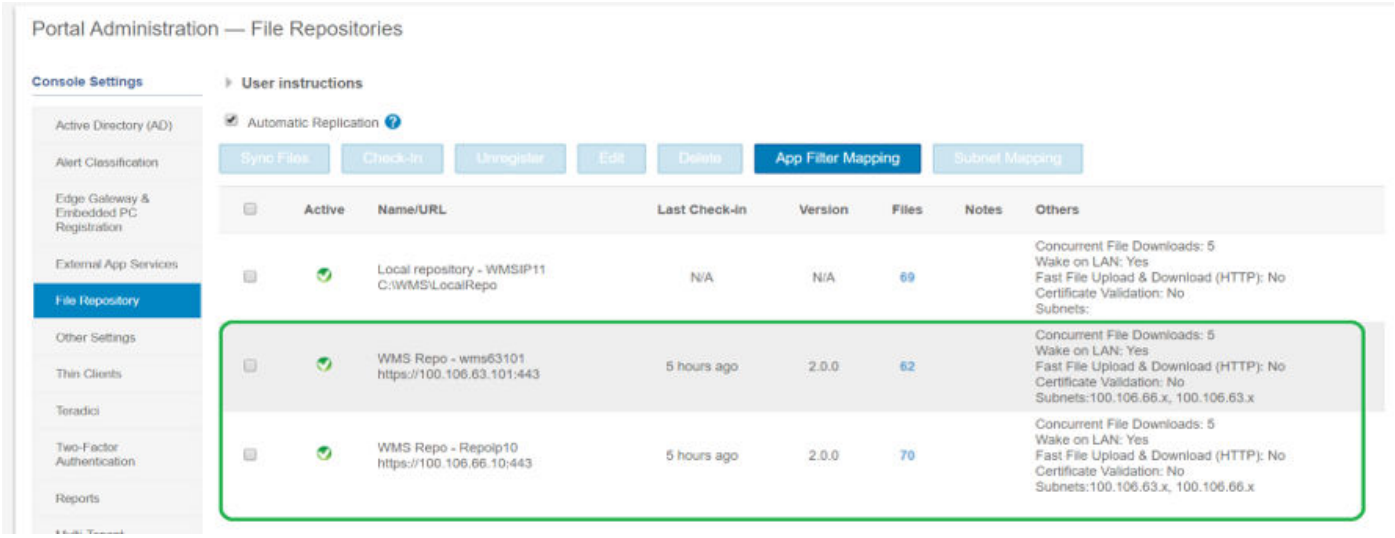


Figure 15. Registration successful on the portal

9. HTTPS is by default enabled with `WMS_Repo.exe`, and is installed with the self-signed certificate. To install your own domain-specific certificate, scroll down the registration page to upload the SSL certificates.

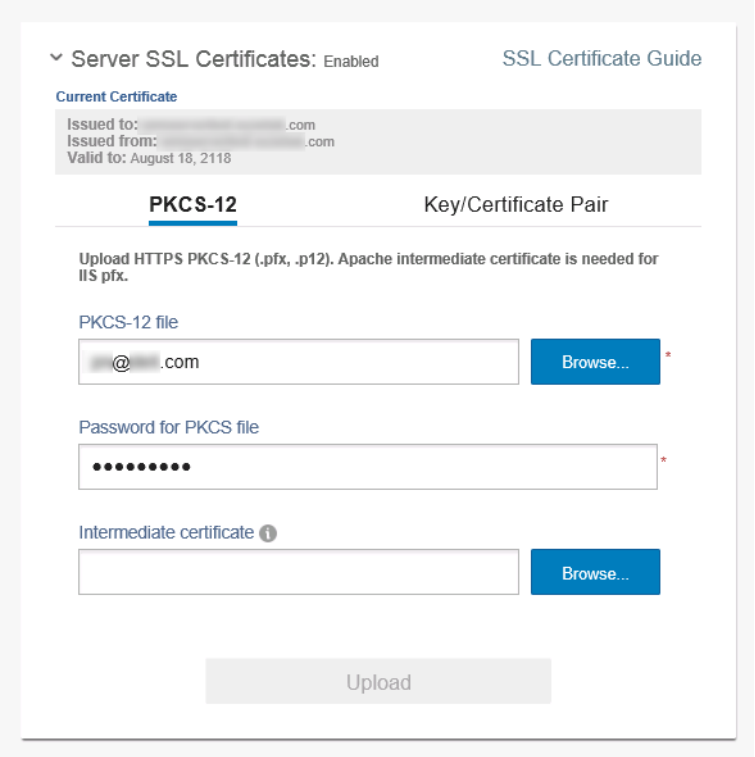


Figure 16. Certificate upload

10. The server restarts, and the uploaded certificate is displayed.

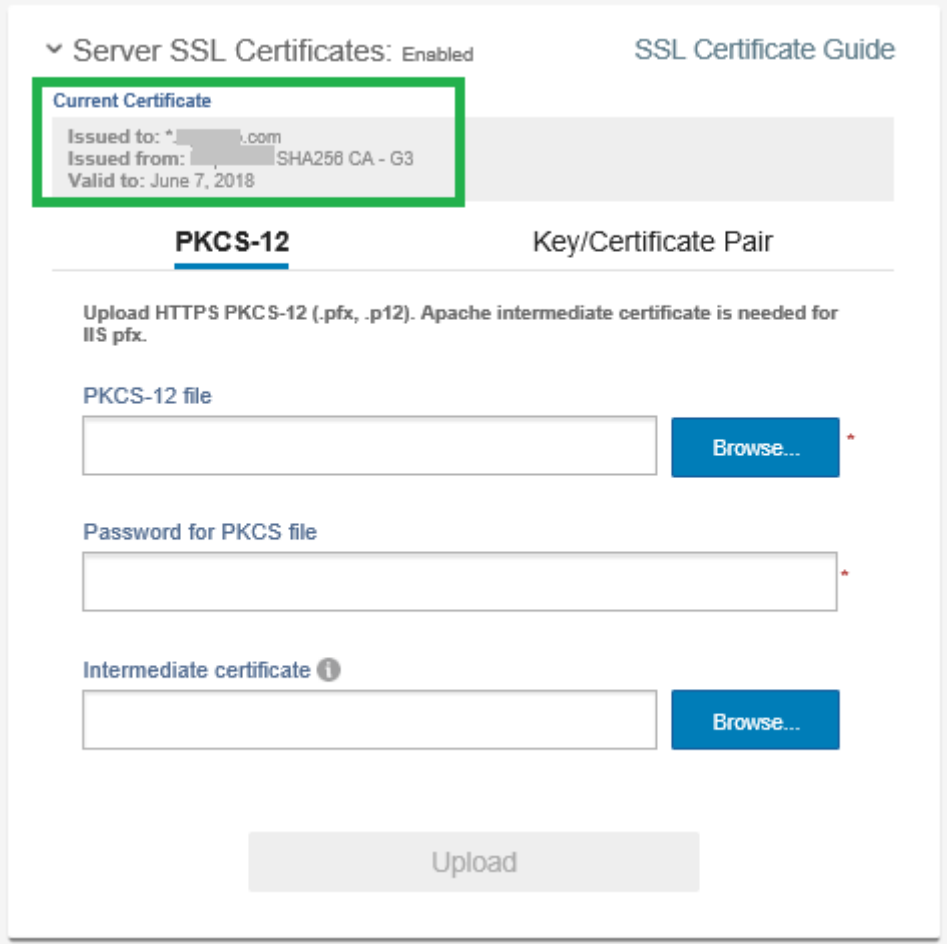


Figure 17. SSL certificate enabled

11. If the Wyse Management Suite is enabled with self-signed or a private domain certificate, you can upload the certificate on the Wyse Management Suite repository server to validate the Wyse Management Suite CA credentials.

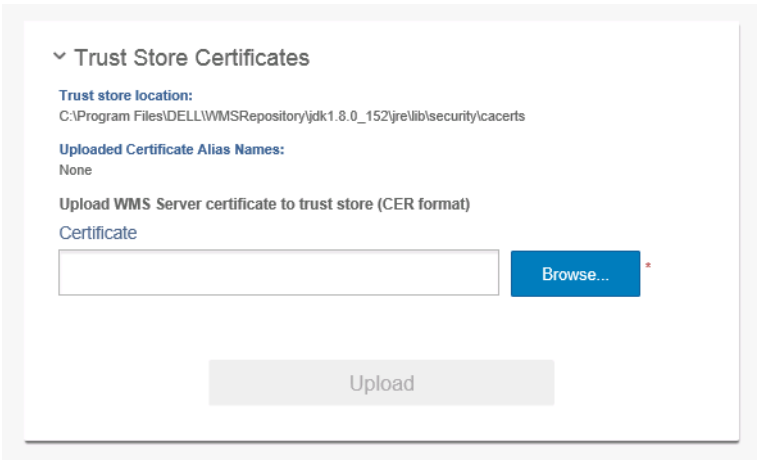


Figure 18. Trust store certificates

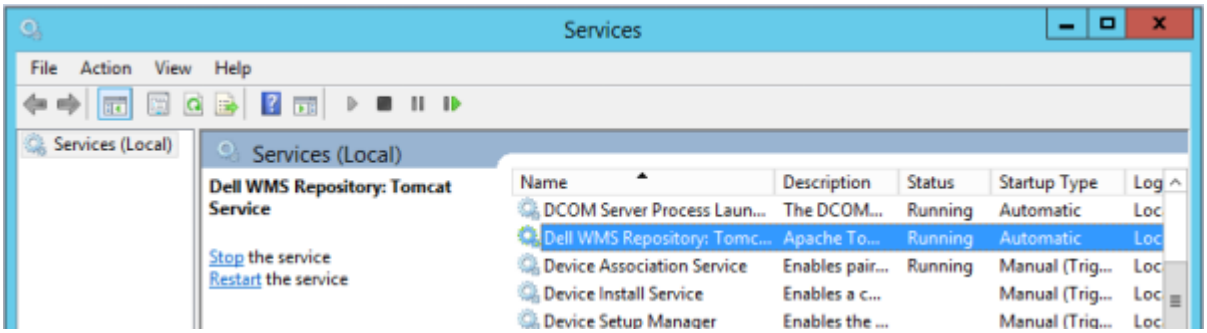
12. Navigate to the `C:\wmsrepo` location that you entered during registration, and you can view the folders where all the repository files are saved and managed.

Topics:

- Manage Wyse Management Suite repository service

Manage Wyse Management Suite repository service

Wyse Management Suite repository is displayed as **Dell WMS Repository: Tomcat Service** in the Windows Local Services window and is configured to start automatically when the server restarts as shown:



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Troubleshooting your device

You can view and manage the troubleshooting information using the **Devices** page.

Steps

1. On the **Device Details** page, click **Troubleshooting** tab.
2. Click **Request Screen Shot**.
   You can capture the screenshot of the thin client with or without the client permission. If you select the **Require User Acceptance** check box, then a message is displayed on the client. This option is applicable only for Windows Embedded Standard, Linux, and ThinLinux devices.
3. Click **Request Processes List**, to view the list of the processes running on the thin client.
4. Click **Request Services List**, to view the list of the services running on the thin client.
5. Click **Start Monitoring**, to access the performance metric console.
   On the **Performance metric** console, the following details are displayed:
   - Average CPU last minute
   - Average memory usage last minute

Topics:

Request a log file using Wyse Management Suite

Prerequisites

The device must be enabled to pull the log file.

Steps

1. Go to the **Devices** page, and click a particular device.
   The device details are displayed.
2. Click the **Device Log** tab.
3. Click **Request Log File**.
4. After the log files are uploaded to the Wyse Management Suite server, click the **Click here** link, and download the logs.

   NOTE: The ThinOS device uploads the system logs.

View audit logs using Wyse Management Suite

Steps

1. Go to **Events** > **Audit**.
2. From the **Configuration Groups** drop-down list, select a group for which you want to view the audit log.
3. From the **Timeframe** drop-down list, select the time period to view the events that occurred during that time period.
   The **Audit** window arranges the information into a typical audit log-view. You can view the timestamp, event type, source, and description of each event in the order of time.

Device fails to register to Wyse Management Suite when WinHTTP proxy is configured

WDA is a WinHTTP Client and fetches WinHTTP proxy information from the local system.

If you have configured WinHTTP Proxy and the device fails to contact the Wyse Management Suite server, do the following to enable the Proxy Information available at the system level:

- **Case 1**—When the device is added to a domain, enable IE-Proxy Configurations for each user using the Group Policy from the domain. You must configure the Group Policy from domain controller to enable IE-Proxy configurations for each client, and not for each user.

  Go to `Computer Configuration\Administrative Templates\Windows Components\Internet Explorer\Make proxy settings per-machine`, and select **Enable**. Also, go to `IE Settings > Internet Options > Connections > LAN Settings` in the Internet Explorer, and enable **Automatically detect settings**.
- **Case 2**—When the device is not added to a domain, go to `HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\CurrentVersion\Internet Settings` and create a **32-bit DWORD** called **ProxySettingsPerUser**, and set it to 0. Also, go to `IE Settings > Internet Options > Connections > LAN Settings` in the Internet Explorer, and enable **Automatically detect settings**.

RemoteFX USB redirection Policy does not get applied for USB mass storage devices

Steps

1. Log in to the device as an administrator.
2. Disable the Write Filter.
3. Go to **Run** command and type **`Regedit`**.
4. Go to `HKLM\Software\Policies\Microsoft\Windows NT\Terminal Services\Client\UsbSelectDeviceByInterfaces`.
5. Add string registry key as **`100`** and set the value as for Mass Storage Device as `{53F56307-B6BF-11D0-94F2-00A0C91EFB8B}` for CD ROM : `{53F56308-B6BF-11D0-94F2-00A0C91EFB8B}`.

   NOTE: Flower brackets are mandatory.

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Frequently asked questions

Topics:

What takes precedence between Wyse Management Suite and ThinOS UI when conflicting settings are enforced?

Any settings that are configured using Wyse Management Suite take precedence over the settings that were configured locally on the ThinOS client or published using the Admin Policy Tool.

The following order defines the priority set for ThinOS configurations:

Wyse Management Suite Policies > **Admin Policy Tool** > **Local ThinOS UI**

How do I use Wyse Management Suite file repository?

Steps

1. Download the Wyse Management Suite repository from the public cloud console.
2. After the installation process, start the application.
3. On the Wyse Management Suite Repository page, enter the credentials to register the Wyse Management Suite repository to the Wyse Management Suite server.
4. To register the repository to the Wyse Management Suite public cloud, enable the **Register to Public WMS Management Portal** option.
5. Click the **Sync Files** option to send the sync file command.
6. Click **Check In** and then click **Send Command** to send the device information command to the device.
7. Click the **Unregister** option to unregister the on-premises service.
8. Click **Edit** to edit the files.
   a. From the drop-down list of **Concurrent File Downloads** option, select the number of files.
   b. Enable or disable **Wake on LAN** option.
   c. Enable or disable **Fast File Upload and Download (HTTP)** option.
      - When HTTP is enabled, the file upload and download occurs over HTTP.
      - When HTTP is not enabled, the file upload and download occurs over HTTPS.
   d. Select the **Certificate Validation** check box to enable the CA validation for a public cloud.

      NOTE:

- **When CA Validation from the Wyse Management Suite server is enabled, the certificate should be present in the client. All the operations, such as, Apps and Data, Image Pull/Push is successful. If the certificate is not present in the client, the Wyse Management Suite server provides one generic audit event message Failed to Validate Certificate Authority under Events page. All the operations, such as, Apps and Data, Image Pull/Push is not successful.**
- **When CA Validation from Wyse Management Suite server is disabled, then the communication from server and client happens in a secure channel without Certificate Signature validation.**

e. Add a note in the provided box.
f. Click **Save Settings** .

How do I import users from a .csv file?

Steps

1. Click **Users**.
   The **Users** page is displayed.
2. Select the **Unassigned Admins** option.
3. Click **Bulk Import**.
   The **Bulk Import** window is displayed.
4. Click **Browse** and select the .csv file.
5. Click **Import**.

How do I check the version of Wyse Management Suite

Steps

1. Log in to Wyse Management Suite.
2. Go to **Portal Administration** > **Subscription**.
   The Wyse Management Suite version is displayed in the **Server Information** field.

How to create and configure DHCP option tags

Steps

1. Open the Server Manager.
2. Go to **Tools**, and click **DHCP option**.
3. Go to **FQDN** > **IPv4**, and right-click **IPv4**.
4. Click **Set Predefined Options**.
   The **Predefined Options and Values** window is displayed.
5. From the **Option class** drop-down list, select the **DHCP Standard Option** value.
6. Click **Add**.
   The **Option Type** window is displayed.
7. Configure the required DHCP option tags.
   - To create the 165 Wyse Management Suite server URL option tag, do the following:
     a. Enter the following values, and click **OK**.
        - Name—WMS
        - Data type—String
        - Code—165
        - Description—WMS_Server

     b. Enter the following value, and then click **OK**.

        String—`WMS FQDN`

For example, **WMSServerName.YourDomain.Com:443**

- To create the 166 MQTT server URL option tag, do the following:
  a. Enter the following values, and click **OK**.
     - Name—MQTT
     - Data type—String
     - Code—166
     - Description—MQTT Server
  b. Enter the following value, and click **OK**.

     String—`MQTT FQDN`

     For example, **WMSServerName.YourDomain.Com:1883**
- To create the 167 Wyse Management Suite CA Validation server URL option tag, do the following:
  a. Enter the following values, and click **OK**.
     - Name—CA Validation
     - Data type—String
     - Code—167
     - Description—CA Validation
  b. Enter the following values, and click **OK**.

     String—TRUE or FALSE
- To create the 199 Wyse Management Suite Group Token server URL option tag, do the following:
  a. Enter the following values, and click **OK**.
     - Name—Group Token
     - Data type—String
     - Code—199
     - Description—Group Token
  b. Enter the following values, and click **OK**.

     String—defa-quarantine

NOTE: The options must be either added to the server options of the DHCP server or scope options of the DHCP scope.

How to create and configure DNS SRV records

Steps

1. Open the Server Manager.
2. Go to **Tools**, and click **DNS**.
3. Go to **DNS** > **DNS Server Host Name** > **Forward Lookup Zones** > **Domain** > **_tcp**, and right-click the **_tcp** option.
4. Click **Other New Records**.
   The **Resource Record Type** window is displayed.
5. Select the **Service Location (SRV)**, click **Create Record**, and do the following:
   a. To create Wyse Management Suite server record, enter the following details and click **OK**.
      - Service—_WMS_MGMT
      - Protocol—_tcp
      - Port number—443
      - Host offering this service—FQDN of WMS server
   b. To create MQTT server record, enter the following values, and then click **ÓK**.
      - Service—_WMS_MQTT
      - Protocol—_tcp
      - Port number—1883
      - Host offering this service—FQDN of MQTT server
6. Go to **DNS** > **DNS Server Host Name** > **Forward Lookup Zones** > **Domain** , and right-click the domain.

7. Click **Other New Records**.
8. Select **Text (TXT)**, click **Create Record**, and do the following:
   a. To create Wyse Management Suite Group Token record, enter the following values, and click **OK**.
      - Record name—_WMS_GROUPTOKEN
      - Text—WMS Group token
   b. To create Wyse Management Suite CA validation record, enter the following values, and then click **OK**.
      - Record name—_WMS_CAVALIDATION
      - Text—TRUE/FALSE

How to change the hostname to IP address

About this task

You must change the hostname to IP address when the hostname resolution fails.

Steps

1. Open the DOS prompt in elevated Admin mode.
2. Change the directory to **`C:\Program Files\DELL\WMS\MongoDB\bin`**.
3. Enter the command, **`mongo localhost -username stratus -p --authenticationDatabase admin`**
   Output—MongoDB shell version v3.4.10
4. Enter the password.
   Output—
   - connecting to: mongodb://127.0.0.1:27017/localhost
   - MongoDB server version: 3.4.10
5. Enter : use stratus
   Output—switched to db stratus
6. Enter the command, **`> db.bootstrapProperties.updateOne( {'name': 'stratusapp.server.url'}, {$set : {'value' : "https://IP:443/ccm-web"}} )`**
   Output—{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
7. Enter the command, **`> db.getCollection('bootstrapProperties').find({'name': 'stratusapp.server.url'})`**
   Output—{ "_id" : ObjectId("5b97905e48b7b7e99ad22aa6"), "name" : "stratusapp.server.url", "value" : "https://IP:443/ccm-web", "isActive" : true, "committed" : true }

How do I image the device using self-signed remote repository

You can perform imaging of Windows Embedded Standard and ThinLinux devices from the local repository of private cloud or from the remote repository of public cloud.

Prerequisites

If the image is deployed from the local repository of private cloud or from the remote repository of public cloud with a self-signed Certificate, the administrator must push the self-signed certificate to the thin clients to perform imaging when the CA Validation is enabled.

Steps

1. Export the self-signed certificate from Internet Explorer or MMC.
2. Upload the certificate to Wyse Management Suite—see Image Policy.
3. Push the certificate to the target clients or groups of clients using the security policy.
   Wait for the **Configuration Policy Job** to complete.
4. Enable CA Validation from local repository of private cloud or from the remote repository of public cloud.
5. Create an image policy and schedule it to the group.