

Getting Started Guide

Wyse WSM™ Appliance Release 2.3

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WYSE
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Getting Started with WSM

Introduction

Wyse WSM™ delivers software on demand to zero clients (zero clients are thin clients without an embedded operating system or local storage). Able to deliver full, rich operating systems (like Windows XP Professional) and applications, it delivers the power and flexibility of a PC to the user, while giving IT the manageability they want from a thin-computing infrastructure. By provisioning the entire operating system and applications, WSM makes it possible for zero clients to operate like a PC, but without requiring local storage. Providing the operating system and applications independent of each other makes it easier for IT to backup, update, manage, maintain, and support multitudes of desktops with minimal staff.

WSM main features include:

- Patented streaming operating system and application technology.
- Anti-piracy protection of operating system and application code.
- Usage metrics collection.
- Licensing policies to enforce all operating system and application usage.
- Scalability and built-in fail-over support.

WSM key components include:

- Windows server-based services that independently stream the operating system and applications.
- An easy-to-use image-creation tool to create and deploy operating system images.
- An application packager to create and deploy application images.

WSM services and applications are briefly introduced in the *Installation Guide: Wyse WSM™*, and the usage of WSM is detailed in the *Administrators Guide: Wyse WSM™* and *Users Guide: Wyse WSM™*.

Wyse recommends that you start evaluating WSM in a separated test environment. After you become familiar with setting up and configuring WSM and learn how streaming works, you will be ready to use WSM in your production network.



Note

If only one computer is available for testing, virtualization software such as VMware Workstation or Virtual Server can be used to create and host the virtual machines for the streaming server, the application packager, and a streamed workstation session.

About this Guide

This guide is intended for administrators of the WSM system. It provides a setup and configuration overview of the entire WSM system to help you get your WSM environment up and running quickly and easily.

Wyse Technical Support

To access Wyse technical resources, visit <http://www.wyse.com/support>. If you still have questions, you can submit your questions to the [Wyse Self-Service Center](#) or call Customer Support at 1-800-800-WYSE (toll free in U.S. and Canada). Hours of operation are from 6:00 A.M. to 5:00 P.M. Pacific Time, Monday through Friday.

To access international support, visit <http://www.wyse.com/global>.

Links to Related Documentation and Services

Installation Guide: Wyse WSM™ is intended for administrators of the WSM system. It describes the WSM installation process for Windows servers and clients. This guide provides the step-by-step instructions you need to install and configure a WSM environment. It also includes the requirements you must address before you begin the installation procedures.

Publisher Guide: Wyse WSM™ is intended for administrators of the WSM system. It describes how to use WSM Publisher to publish applications and to make them available for distribution.

Administrators Guide: Wyse WSM™ is intended for administrators of the WSM system. It provides information, and detailed system command and parameter configurations, to help administrators design and manage a WSM environment. It also explains how to use WSM, manage the availability of software applications for distribution to subscribers, manage application subscription licenses, install and configure published applications, provide subscriber profile and billing information for efficient application usage tracking, and control subscriber access to the WSM system.

Users Guide: Wyse WSM™ is intended for users of the WSM Client system. It provides detailed instructions on using the WSM Client to manage the applications available to users from a network server.

Wyse Thin Computing Software is available on the Wyse Web site at: <http://www.wyse.com/products/software>.

Overview - Start Here

This guide provides you with an easy-to-follow workflow to get your WSM environment up and running quickly and easily. Simply complete the steps in each phase and you will:

- Prepare for installation (Phase 1)
- Get your appliance and core services up and running (Phase 2)
- Add Users and User Groups to your WSM system (Phase 3)
- Install and capture a Windows OS Image for streaming (Phase 4)
- Add the Windows OS Image to your WSM system (Phase 5)
- Add drivers to your zero clients and install applications on your OS Image (Phase 6)
- Start using your WSM system with your zero clients (Phase 7)



Note

WSM can stream operating systems and applications to physical devices such as zero clients or PCs, as well as virtual machines. Any step in the following procedures that can be performed with a zero client can also be performed with a virtual machine.

Phase 1 - Pre-Installation Checklist

In this phase you must complete the requirements needed for a successful installation. Before you begin installing, make sure you have met the requirements on this checklist:

- Obtain an external USB CD-ROM player.
- Obtain your Windows XP Pro SP3 Volume License installation CD.
- Download the WSM license file from the official WSM product purchase e-mail to a folder you want.
- Complete the WSM registration process and download the WSM software and documentation (for instructions, refer to "Registering WSM and Downloading the WSM Software and Documentation").
- Download the product device drivers you need for your zero client device class (go to <http://www.wyse.com/serviceandsupport/support/downloads.asp>, select either **V00L / V00LE** or **R00L / R00LE** in the **Please choose your product (Active)** box, click **Search**, click the *File Name* link, and then use the **File Download** dialog box to save the files to the folder you want).

Registering WSM and Downloading the WSM Software and Documentation

To complete your WSM registration and download the WSM software and documentation:

1. Click the WSM registration link (<http://www.wyse.com/wsmregistration/>) in the official WSM product purchase e-mail sent to you from Wyse to open the *Customer Log In* page.
2. Complete one of the following:
 - If you do not have a Wyse account, you must click the *Create New Customer* link and follow the instructions to create a new Wyse account. After you create an account, continue with Step 3.
 - If you already have a Wyse account, enter your username and password and click **Login**. After login, click the **Your Account** link to open the *Your Account* page, click the **WSM Seat Registration and Software Download** link, and then continue with Step 3.
3. On the *WSM Registrations* page, click the **WSM Registration** link to open the *WSM License Key* page.
4. Enter the WSM License Key from your official WSM product purchase e-mail into the **WSM License Key** dialog box and click **Next** to open the *WSM Maintenance Key* page.
5. Enter the WSM Maintenance Key from your official WSM product purchase e-mail into the **WSM Maintenance Key** dialog box and click **Next** to open the *Confirm WSM Registration Details* page.
6. After confirming your information, click **Finish** to open the *WSM Registrations and Download* page.
7. Click the **WSM Software Download** link to open the *Terms and Conditions* page, click **I Agree** to agree to the EULA and open the *Download WSM Software* page.
8. Click the **Wyse WSM 2.3** link to open and use the **File Download** dialog box to save the software to the folder you want.
9. Click the **WSM Documentation 2.3 Download** link to open and use the **File Download** dialog box to save the documentation to the folder you want.

**Note**

To access WSM software and documentation in the future you can go to <http://commerce.wyse.com>, log in to your account, and click the **WSM Seat Registration and Software Download** link to open the *WSM Registrations and Download* page.

Phase 2 - Getting Out of the Box

Complete the following to get your appliance and core services up and running.

Step 1 - Powering Up and Logging In

Take your WSM appliance out of the box and power it up. This is similar to powering up a standard Microsoft Windows XP Embedded thin-client. Several auto-launch windows appear during the initial power-up, and then the appliance will reboot to the desktop. After reboot, press **CTRL+ALT+DEL** to open the login dialog box, and then log in using the default username (*Administrator*) and default password (*Administrator*).

Step 2 - Launching the WSM Administrators Console and Logging In

On the desktop, double-click the **WSM Console** icon to launch the console and open the login dialog box, and then log in using the default username (*admin*) and default password (*admin*).

Step 3 - Importing Your Server License

On your initial login the *Import Server License* page appears. Click **Browse** to find and select the `license.txt` file that was provided to you by Wyse, and then click **Import Server License** to import the license and view the licence details. Click **Next** to open the *Configure Active Directory* page. Depending on whether or not you want to enable Active Directory integration with WSM, select or clear the **Enable Active Directory** check box.

**Note**

For information to help you decide whether or not you want to integrate Active Directory with your WSM system, refer to the *Administrators Guide: Wyse WSM™*. If you need to configure or re-configure the Active Directory in the future, refer to the *Administrators Guide: Wyse WSM™*.

If you do not the Enable Active Directory check box, click **Finish** to view the *System Overview Congratulations* page. After completing the Configuration Wizard, you can view the *Core Server Details* page to see that the Core Server Services are successfully running by clicking the **Servers** link in the *Category* list on the *System Overview* page, and then clicking the *Name* link of your Core Server to view the *Server Details* page. After viewing that the services are successfully running, click the **DHCP Proxy Service** link in the *Services* area to open the *DHCP Proxy Service* page, and then select the **Enable Device Discovery** check box to enable the feature (be sure to click **Save Changes**).

**Note**

Now that the Core Server services are running and devices can be discovered, you can configure the rest of the WSM system according to your environment needs at a later time by following the appropriate procedures in the *Administrators Guide: Wyse WSM™*.

Phase 3 - Adding Users and User Groups to Your WSM System

Before streaming applications, you must add Users and User Groups to your WSM system. Once a User Group is added, you can then assign Users (and Application Licenses) who can subscribe, activate, and run the applications for that User Group. The instructions in this phase will allow you to quickly add Users and User Groups without Active Directory integration.

 **Note**

You will manage User Groups differently depending on whether or not WSM is integrated with your Active Directory. For example, if WSM is integrated with Active Directory, then User Groups are created in Active Directory rather than in WSM. If you require Active Directory integration, refer to the *Administrators Guide: Wyse WSM™* for detailed instructions on Active Directory integration and how to add Users and User Groups to your WSM system.

Complete the following:

1. Click the **Users** link from any functional area main page of the WSM Console to open the *Users* page, and then click the **Add Users** link to open the *Add User* page.
2. Enter the **User Name**, **Password**, and password confirmation (entering **First Name**, **Last Name**, and **Email** address of the User is optional), and then click **Finish**.
3. Click the **User Groups** link from any functional area main page to open the *User Groups* page, and then click the **Add User Group** link to open the *Add User Group* page.
4. Enter the **Name** of the User Group (use only letters, numbers, dashes, spaces, the @ character, and periods), and then click **Next** to open the *Assign Users* page.
5. Select the User you want to assign to the User Group in the *All Users* list, and then click **Add** to move the User to the *Assigned Users* list.

 **Note**

You can use **Add** (and **Remove**) to move as many Users as you want to (and from) the *Assigned Users* list.

6. Click **Next** to open the *Assign Application Licenses* page.
7. Select the Application License you want to assign to the User Group in the *All Application Licenses* list, and then click **Add** to move the Application Licenses to the *Assigned Application Licenses* list.

 **Note**

You can use **Add** (and **Remove**) to move as many Application Licenses as you want to (and from) the *Assigned Application Licenses* list.

8. Click **Finish** to return to the *User Group Details* page. The User Group is added to the list of available User Groups on the *User Groups* page, and the Users assigned to the group can now subscribe, activate, and run WSM operating systems and applications for that User Group.

Phase 4 - Capturing a Windows OS Image for Streaming

In this phase, you must capture a supported Windows OS Image (Windows XP SP3 or later) for streaming. You can either capture a Windows OS Image from a PC (where the operating system has already been installed) or install and capture a Windows OS Image using a device with the required local storage. You will then use the PC or the device as the “reference device” in subsequent steps.

The Client software adds the required drivers and functions for base OS streaming to the Client Operating System. It also enables application streaming and subscriptions for individual zero client users. An easy-to-use operating system image creation tool is included in the Client software, which is used to create a base OS Image that can be provisioned to zero client devices.

Complete the following to install and capture a Windows OS Image for streaming.

Step 1 - Installing a Windows OS Image on a Reference Device

You can skip this step if you are going to capture a Windows OS Image from a PC, where the operating system has already been installed.

If you are not capturing a Windows OS Image from a PC, then you must complete this step and install a supported Windows OS Image on a reference device that has local storage. For example, if you have purchased the WSM Pilot in a Box bundle from Wyse, you can use the R00L Zero Client with 2 GB of internal Flash Memory to install Windows XP Professional SP3 (requiring less than 1.5 GB of memory) from a Microsoft Installation CD.

 **Caution**

If you are installing and capturing a Windows OS Image using a device with the required local storage, be sure the instance of Windows XP SP3 or later is not an upgrade from a previous version. Upgrades of previous versions will not fit on the reference device.

 **Note**

If you are not capturing a Windows OS Image from a PC and you do not have a reference device with internal storage, please contact your Wyse sales representative to learn about options to purchase additional internal memory devices (Flash or IDE disk) or the WSM Pilot in a Box bundle.

Use the following guidelines:

- Obtain an external USB CD-ROM player that can be connected to the reference device.
- Insert the Microsoft Windows Installation CD into an external USB CD-ROM player and then connect it to the reference device.
- Make sure to boot the reference device from the CD-ROM.
- Follow the on-screen instructions to install the Windows operating system.
- Once the operating system is successfully installed, reboot the device (you can ensure that the OS installation was successful by booting the device from the internal storage).
- Update the Network Adapter Driver.

Step 2 - Installing the Client Software on the Reference Device

After you complete all pre-installation requirements for the installation environment you want (refer to the *Installation Guide: Wyse WSM™* for details), you can download the Client software and begin installation. To install the software on the reference device, double-click the **WSMClient.exe** file and follow the wizard using the default and recommended configurations.



Note

During installation, Windows logo testing messages may appear in front of or behind the wizard windows. If these messages appear, click **Continue Anyway** to continue the installation.

Use the following guidelines to complete the *WSM Client Config Wizard* when it appears:

- Enter the Authentication Server Info IP address to be used by the WSM OS Authentication Service (this address is the same as the Core Server). The default Port information is automatically entered.
- Enter the Imaging Server Info IP address to be used by the WSM OS Streaming Service (this address is the same as the Authentication Server Info IP Address). The default Port information is automatically entered.
- Enter the Web Server Info Port address, if necessary. This is the port on which the Web server runs. The default is entered automatically.
- Enter the IOS Streaming Max Packet Size. This is the maximum data size of OS streaming packets sent from the server to the client; the default value is 1420. If your network, to meet encryption or other types of requirements, requires a custom MTU (Maximum Transmission Unit) for IP packets, you can adjust this number to restrict the size of the packets. Set the value to 1370 to yield an MTU of 1398 (the maximum OS streaming data size [1370], plus the UDP header size [8], plus the IP header size [20]). Matching this value to the OS Streaming Max Packet Size setting on WSM servers is recommended.

After completing the installation, restart the system (escape out of the network boot by pressing **ESC**).

Step 3 - Capturing the Windows OS Image from the Reference Device

After installing the Client software, you now have the Windows OS Image that you want to use on the reference device.



Note

Be sure you comply with all Microsoft operating system licensing requirements before capturing and streaming your Windows OS.

You must now capture the OS Image to the WSM Core Server so that later it can be added to the WSM system and streamed to the zero clients in your environment.



Note

Be sure you have all peripherals you want to use (for example, keyboard, mouse, printers and so on) connected *before* you begin capturing the OS Image to the Core Server.

To capture the OS Image to the Core Server, locate the *OSMVDiskImage.exe* file (the default location is *C:\Program Files\Wyse\WSM\os*), double-click the

OSMVDiskImage.exe to open the WSM VDisk Image Creation Utility window and use the following guidelines:

- Enter the Virtual disk size in MB (if you are running in shared mode, the maximum virtual disk size is 32 GB).
- Enter a Disk name.
- (Optional) Enter a Description for the disk.
- Depending on whether or not you want to integrate WSM with Active Directory, select or clear the **Enable Active Directory Integration** check box.
- Click **OK** to build the virtual disk.

Phase 5 - Registering and Assigning the Windows OS Image

After capturing the OS image to the WSM Core Server, it must be “registered” or added to the WSM system using the WSM Administrator Console, and then assigned to WSM Servers and devices.

Complete the following.

Step 1 - Adding an OS Image

Complete the following:

1. On the desktop, double-click the **WSM Console** icon to launch the console and open the login dialog box, and then log in to the Administrator Console using the default username (*admin*) and default password (*admin*).
2. Click the **Operating Systems** link to open the *Operating Systems* page.
3. Click the **Add OS Image** link to open the *Add OS Image* page, and then use the following guidelines:
 - Enter the Name of the OS Image for client support (use only letters, numbers, dashes, spaces, the @ character, and periods).
 - Select the File Name of the OS Image you want to add (if no file exists for you to select, you must capture an OS Image and place the file into the OS Images folder located where you installed the WSM Core Server as described in the *Installation Guide: Wyse WSM™* - for example, D:\wyse\streamingdir\osimages).
 - (Optional) Enter a Description.
 - Enter the Version.
 - Select the OS Class.
 - Select the Device Class.
 - Select the **No Cache (Private Mode)** option.
 - Click **Next** to open the *Assign to a Server* page.

Step 2 - Assigning an OS Image to a Server Group

In the *All Server Groups* list, select the server group to which you want to add the image:

- **Default server group** - Select **Default**, click **Add**, and click **Next** to open the *Assign to a Server* window (see "Step 3 - Assigning an OS Image to a Server (Default Server Group Only)").
- **User-created server group** - Select the name of the server group (or groups), click **Add**, click **Next** to open the *Assign to a Server* window, and then click **Finish**.

Step 3 - Assigning an OS Image to a Server (Default Server Group Only)

In the *Servers of Default Group* list, select the servers that will be assigned the OS Image, click **Add**, and then click **Finish**. The OS Image is added to the list of available OS Images on the *Operating Systems* page and can now be streamed to any of the zero clients (including the reference device).

Phase 6 - Adding Device Drivers and Software Applications

In this phase, you will add the device drivers you need according to your zero client device class and install software applications on your OS Image.

Complete the following:

1. Boot your zero client devices and install the product device drivers you downloaded in "Phase 1 - Pre-Installation Checklist" (be sure to install the right drivers for your device class).
2. After installing the drivers shut down the zero client.
3. Go to the OS Images folder located where you installed the WSM Core Server as described in the *Installation Guide: Wyse WSM™* (for example, D:\wyse\streamingdir\osimages), and then create a backup copy of the OS Image (copy and paste the OS Image in the folder).
4. Install the applications you want to the original OS Image (not the backup). For example, you can boot a zero client from the OS Image and download and install applications from the Internet (such as Google Earth) or from an installation CD (such as Microsoft Office) using an external CD ROM player. After installing the applications you want, be sure all zero clients are shut down.



Note

Be sure you comply with all vendor application licensing requirements before streaming your applications.

5. Open the WSM Console and click the **Operating Systems** link to open the *Operating Systems* page.
6. Click the *Name* link for the Core Server OS Image to open the *OS Image Details* page, select either of the **Shared Mode** options, and then click **Save Changes**.



Note

Shared Mode options include **Persistent Cache (Shared Mode)** and **Volatile Cache (Shared Mode)**. In Persistent Cache (Shared Mode) the Write Cache is persistent across reboots (that is, any changes made on the OS Image are stored and are available to users when they reboot the device). To use this mode on the OS Image, select the **Persistent Cache (Shared Mode)** option. In Volatile Cache (Shared Mode) the Write Cache is discarded when the device reboots (that is, after the device reboots the device is always returned to the original base OS Image). To use this mode on the OS Image, select the **Volatile Cache (Shared Mode)** option.

Phase 7 - Using Your Zero Clients

After adding the software applications you want, you can boot and use the zero clients in your environment. WSM will discover the zero clients and allow users access to the operating system and applications installed on the system. After a zero client user “subscribes” to an application, the application becomes available to the user through streaming from the WSM servers.



Note

Before a user can use an application, they must subscribe to it (“install” it). To subscribe to an application, login to the WSM Client Applications Console on a zero client, select the application you want on the **Unsubscribed Applications** tab of the console, and then click **Subscribe**. After subscribing to an application you can open the application for use by clicking **Start | Programs** and then selecting the application from the menu.

What’s Next

After completing these instructions and becoming familiar with your system, you can refer to the related documentation for details on using and managing your WSM environment as described in “Links to Related Documentation and Services.”



Note

For example, you may want to create and provision (stream to your zero clients) your own applications independently from the OS Image. To do so, you would package an application set, “register” or add it to Core Server of the WSM system using the WSM Administrator Console, and then publish to zero client user groups as described in the *Publisher Guide: Wyse WSM™* and the *Administrators Guide: Wyse WSM™*.

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