

# Chip PC IM-PC Zero Client Desktop Solution Quick Deployment Guide for Users

This document introduces how to use Chip PC IM-PC Zero Client Solution and Windows MultiPoint Server 2012.

If you need to learn more about windows MultiPoint Server 2012 or expect to get more information after reading this document, you may visit the product homepage of Microsoft Windows MultiPoint Server at:

<http://www.microsoft.com/windows/multipoint/default.aspx> (English)

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# Preparations of Chip PC IM-PC Zero Client Desktop Solution

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## Prepare the Appropriate Version of Windows MultiPoint

### Server 2012

Windows MultiPoint Server 2012 is available in multiple languages, including English, Simplified Chinese, Traditional Chinese, Korean, Japanese, German, French, Spanish, etc. Firstly, you need to select and download the corresponding ISO file and burn it to DVD for later installation.

Windows MultiPoint Server 2012 Evaluation Version will need you to enter a product key during the installation. You may get a product key from Microsoft at:

<http://www.microsoft.com/en-us/download/details.aspx?id=35821>

#### Install

Start the computer on which you are installing MultiPoint Server using the DVD, and then install WMS 2012 as you would install Windows Server 2012, selecting the appropriate partition on which to install and answering typical installation questions. When you are prompted for a product key, type the following:

[YNPVP-2H2HY-HP227-C2KRB-VQTCJ](#)




## Make Sure the Hardware Configurations of Host Computer

### Meet the Requirements of Windows MultiPoint Server

If you are installing Windows MultiPoint Server 2012 only for evaluating Chip PC IM-PC Zero Client solution (1-2 users), the host computer is only required to have a dual-core CPU and 2G RAM.

The following hardware configurations are recommended for deploying Windows MultiPoint Server 2012:

Application Scenario	Up to 4 stations	5-6 stations	7-10 stations	11-14 stations	15-20 stations
<b>Productivity</b> Office, web browsing or LOB applications	CPU: 2C RAM: 2 GB	CPU: 2C RAM: 4 GB	CPU: 4C RAM: 6 GB	CPU: 4C RAM: 8 GB	CPU: 4C+MT or 6C RAM: 8 GB

Application Scenario	Up to 4 stations	5-6 stations	7-10 stations	11-14 stations	15-20 stations
<b>Mixed</b> Office, web browsing, LOB applications and occasional video applications by certain users	CPU: 2C RAM: 2 GB	CPU: 2C RAM: 4 GB	CPU: 4C RAM: 6 GB	CPU: 4C+MT or 6C RAM: 8 GB	CPU: 4C+MT or 6C RAM: 8 GB
<b>Video intensive</b> Office, web browsing, LOB applications and frequent video applications by all users  <b>Note</b> Video testing was performed using 360p H.264 video at native resolution.	CPU: 2C RAM: 2 GB	CPU: 4C RAM: 4 GB	CPU: 4C+MT or 6C RAM: 6 GB	CPU: 4C+MT or 6C RAM: 8 GB	CPU: 4C+MT or 6C RAM: 8 GB  Thin client: RemoteFX  USB video applications are not recommended

#### Important

Other than performance requirements, your host computer and installation environment must meet the following important hardware requirements:

- Windows MultiPoint Server 2012 installation DVD;
- DVD drive on the host computer (or USB DVD drive);
- The video card of the host computer must have the compatible driver for Windows MultiPoint Server 2012 (namely WIN8 X64 based driver);
- Other hardware components (such as network adapter) of the host computer must have the compatible drivers for Windows MultiPoint Server 2012 (namely WIN8 X64 based driver);
- The video card of a majority of rack-mount servers may fail to meet the post-deployment operating requirements of Windows MultiPoint Server 2012. You will need to install a supported external video card.
- The host computer must be provided with PS/2 mouse and PS/2 keyboard instead of USB+PS/2 mouse/keyboard or USB+USB mouse/keyboard.

To use USB mouse/keyboard normally, you will need to connect one USB-HUB to a USB2.0 port of the host computer.

- The host computer must be connected to a monitor or VGA dummy plug, with the resolution of monitor reaching 1024\*768 or above.
- Failing to detect a monitor (boot without monitor) during and after start-up will compromise the normal application of Zero Client solution based on Windows MultiPoint Server 2012.

## Understand Varied Stations Defined by Windows MultiPoint

### Server

Windows MultiPoint Server 2012 can support the connection of varied devices, each providing the user with an independent Windows desktop. All these devices are called stations, including direct-video-connected stations, USB-zero-client-connected stations, network-zero-client-connected stations, and thin-client or cloud-client-connected stations.

#### **Direct-video-connected stations:**

The host computer may have multiple physical video cards and multiple USB keyboards and mice, which are then allocated to different users. This mode may have critical limitations, such as the power supply for video cards, heat emission, length of VGA cable, etc.

#### **USB-zero-client-connected stations:**

USB zero client consists of USB video chip, USB sound chip and USB-HUB control chip. Windows MultiPoint Server 2012 can recognize and manage one USB-zero-client-connected station.

This biggest problem with this mode is that each USB zero client is connected to the host computer through a USB cable. Given the limitation in cable length, it's difficult for mass deployment.

#### **Network-zero-client-connected stations:**

Network-zero-client-connected stations are a variation of USB-zero-client-connected stations. A special chip is added into the traditional USB zero client for processing IP-USB signals. By installing the special management software, Windows MultiPoint Server 2012 can then manage the network-zero-client-connected stations.

This mode has no apparent defect, and is advantageous in costs. Chip PC IM-PC falls into this category of station.

#### **Thin-client or cloud-client-connected stations:**

Windows MultiPoint Server 2012 is capable of providing RDP service.

Traditional thin clients or could clients can connect to Windows MultiPoint Server 2012 through Remote Desktop Protocol (RDP) and use the remote desktop.

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The main problem with this mode is that thin clients or cloud clients are more expensive than network zero clients or USB zero clients.

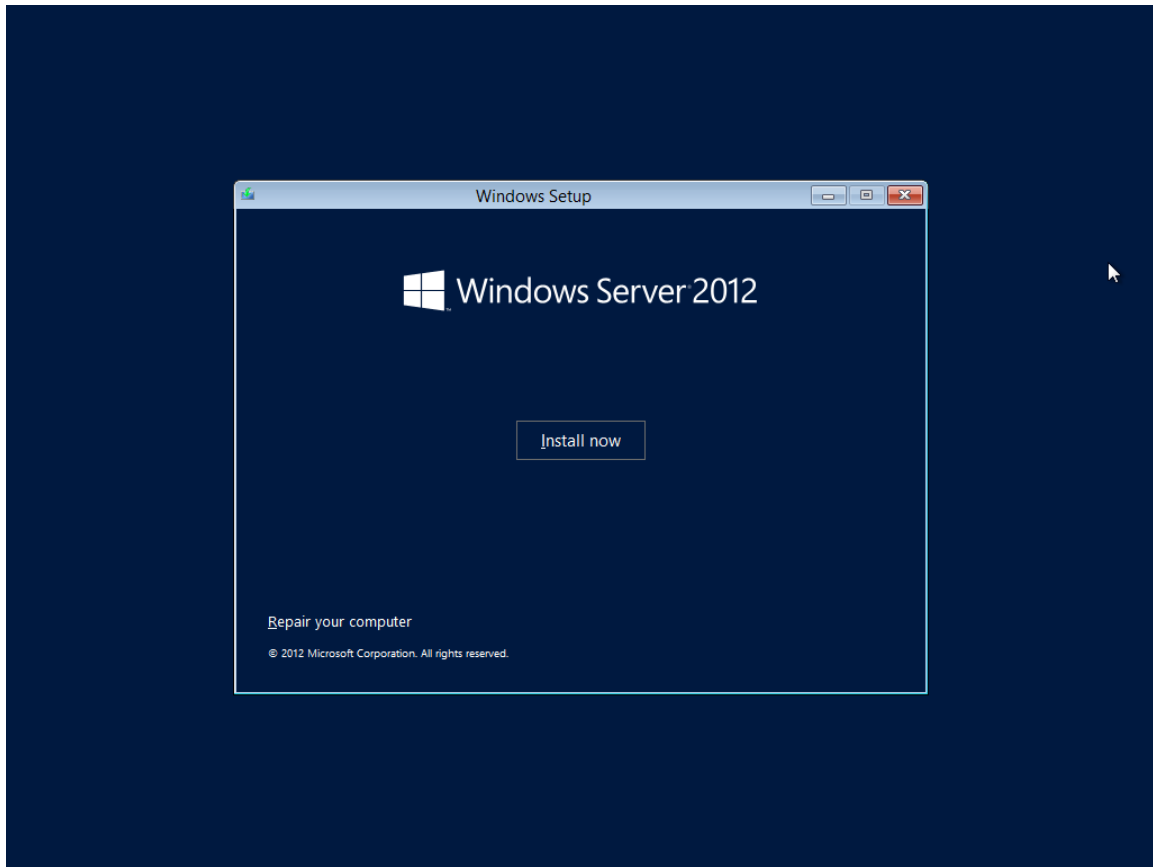
# Install Windows MultiPoint Server 2012

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## Installation Details

You may install the system through DVD drive or external USB DVD drive. If you expect to learn more information about installation, you may search for relevant documents on Internet or Microsoft website.

- This document introduces how to install the system with the installation DVD



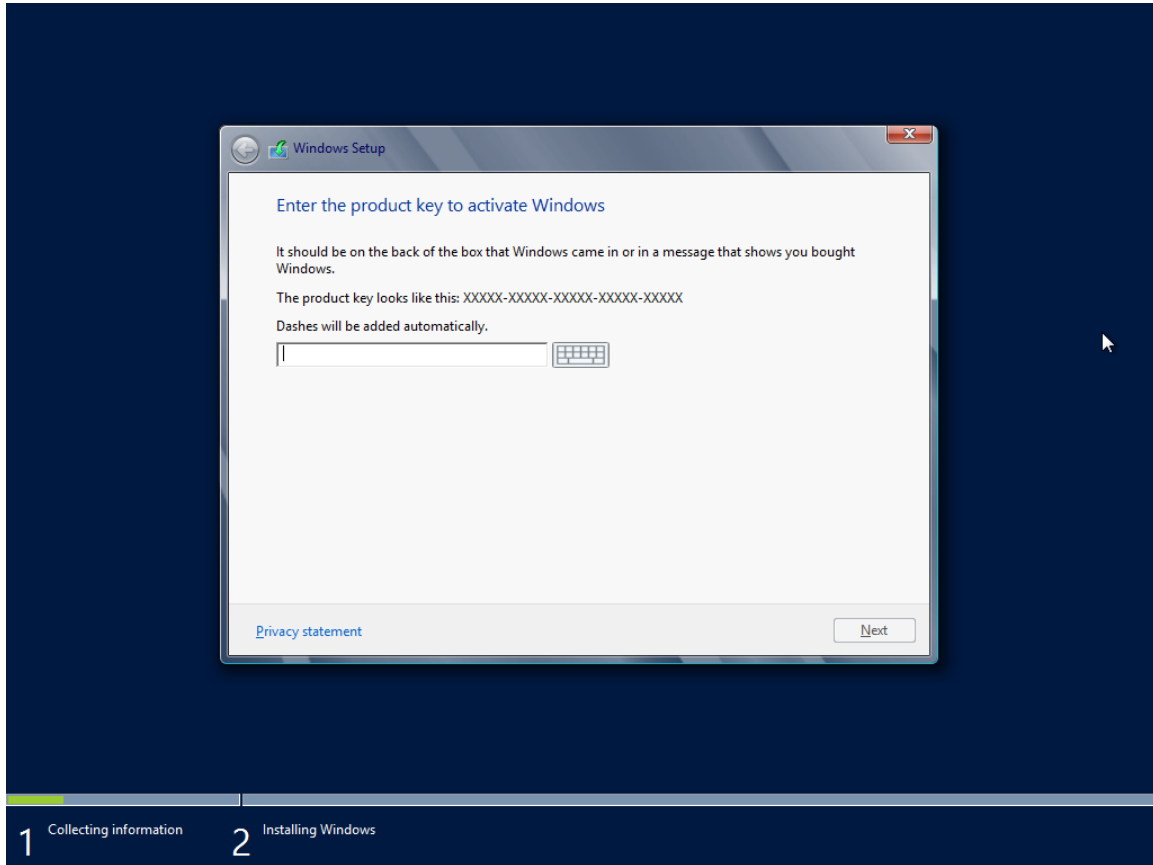
### Important

- Windows MultiPoint Server 2012 is a release branch of Windows Server 2012, and thus shares the installation mode of Windows Server 2012.

## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

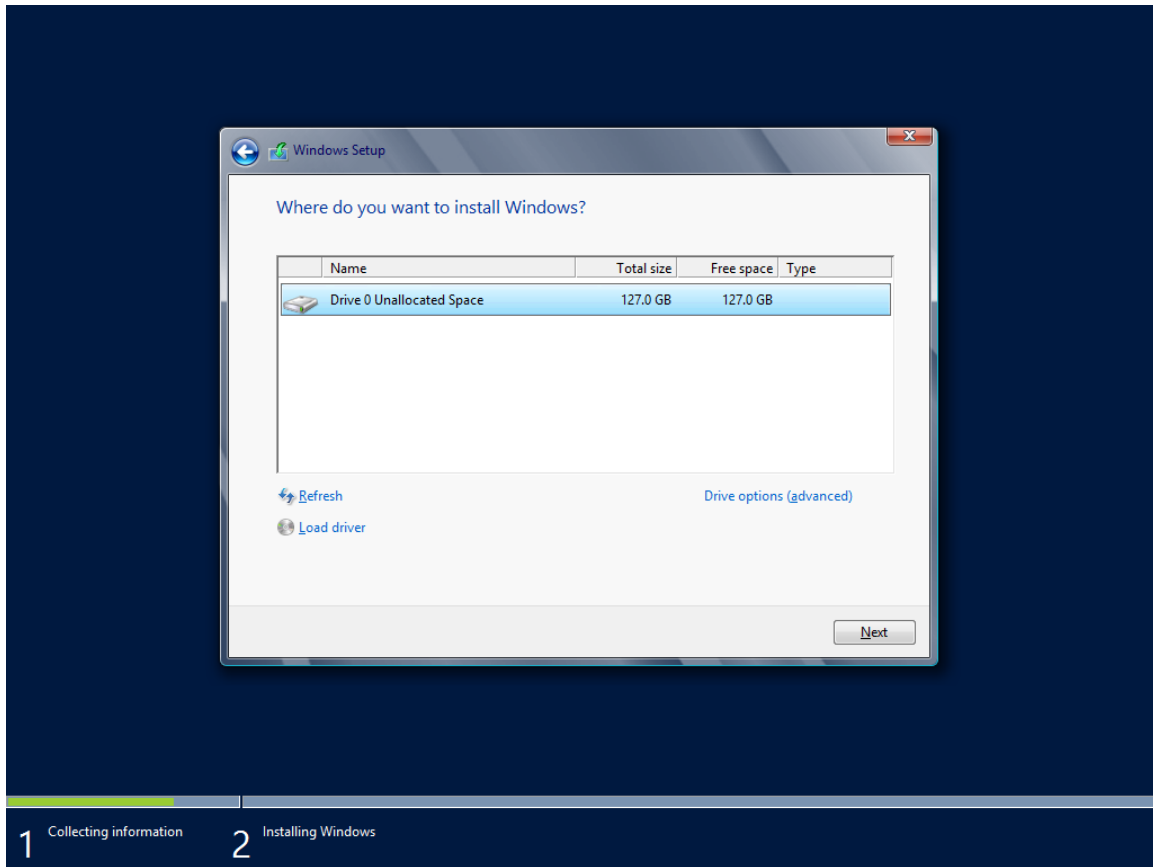
Enter the genuine product key. If there is no genuine product key, enter the trial key provided by Microsoft.

[YNPVP-2H2HY-HP227-C2KRB-VQTCJ](#)

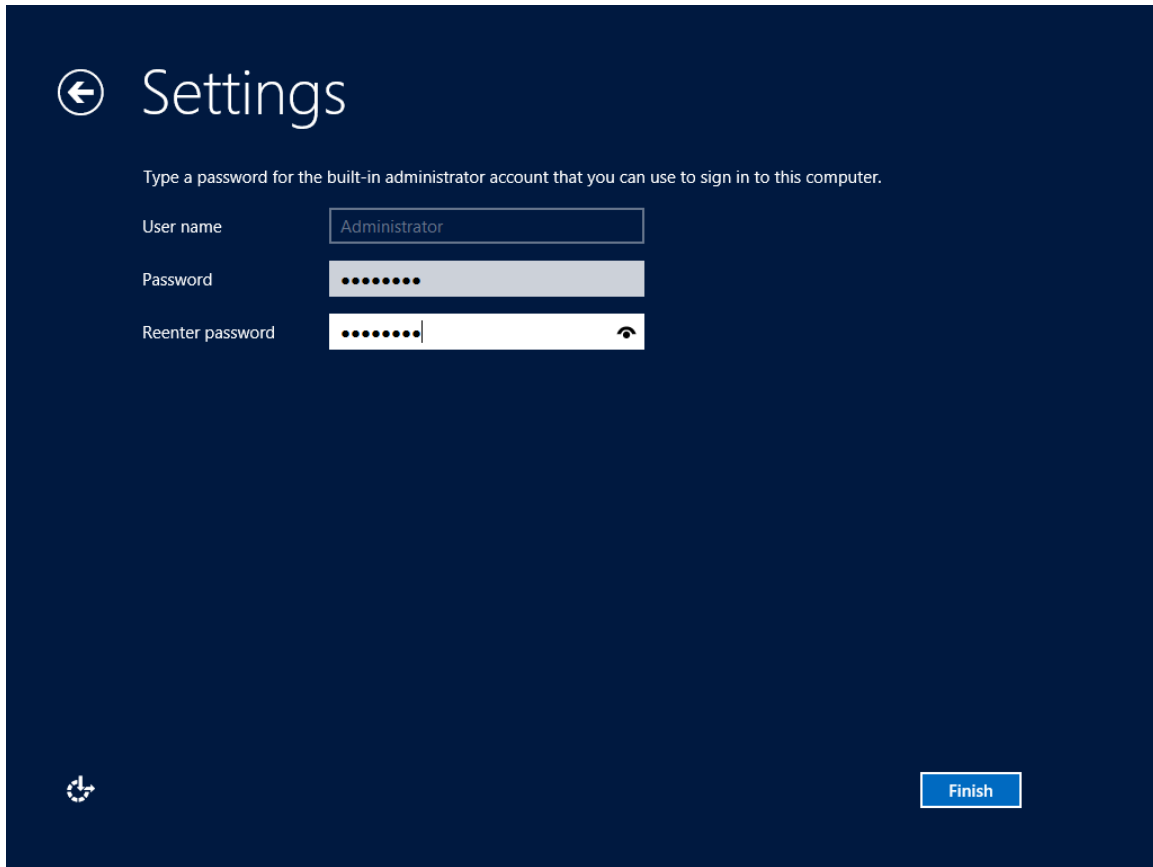




Select the target physical hard disk for installing Windows MultiPoint Server 2012.



After installation, you will need to configure Windows Settings.



The screenshot shows the Windows Settings application with a dark blue background. At the top left is a back arrow icon and the word "Settings". Below this, a message reads: "Type a password for the built-in administrator account that you can use to sign in to this computer." There are three input fields: "User name" with the text "Administrator", "Password" with seven dots, and "Reenter password" with seven dots and a small eye icon to its right. At the bottom left is a small icon of a person with a plus sign. At the bottom right is a blue button labeled "Finish".

## Install Hardware Drivers for the Host Computer

Hardware drivers are provided by the hardware manufacturer in the disc enclosed with the product. If the hardware device was manufactured earlier and doesn't provide a compatible driver for Windows MultiPoint Server 2012 (namely the driver for Windows 8 X64), you will need to consult the host computer manufacturer for the corresponding drivers.



### Important

- While installing drivers, please install the mainboard driver, network adapter driver and soundcard driver first before installing the video card driver.

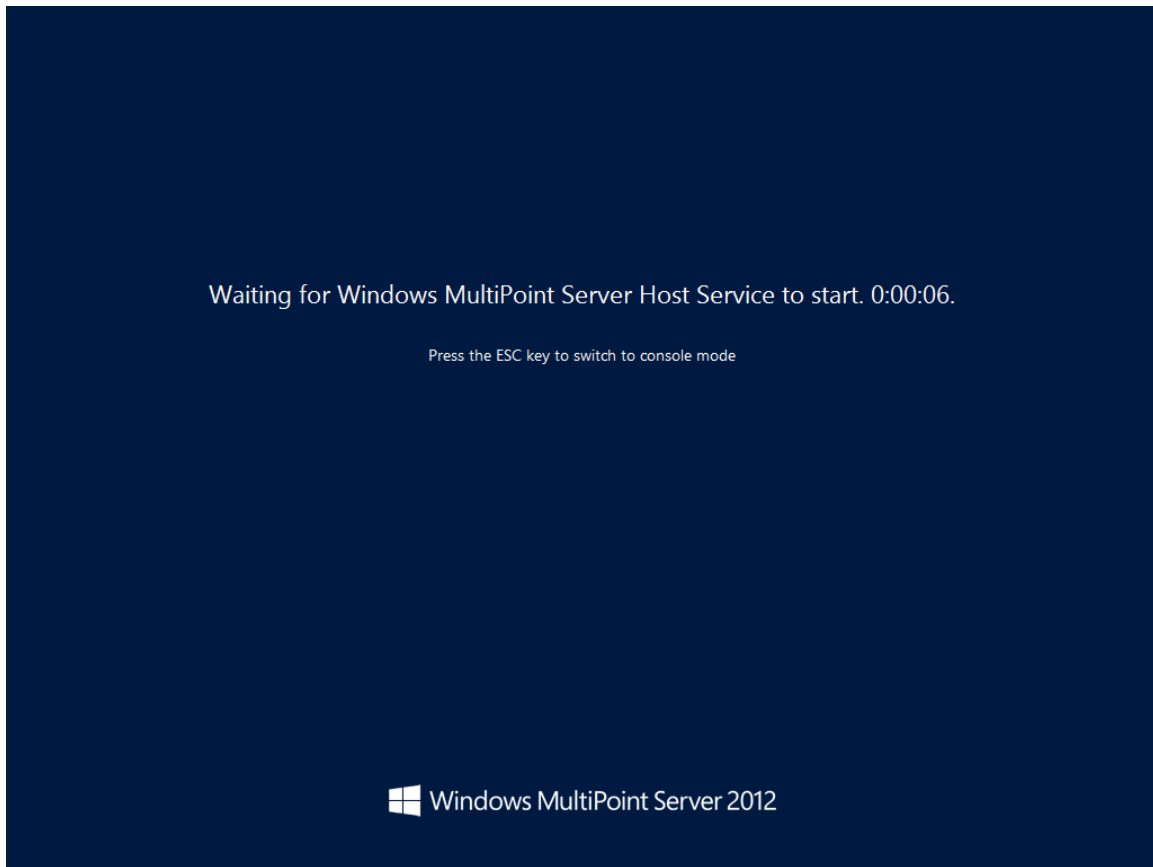
## First Boot after Installing Hardware Drivers

After installing all hardware drivers, reboot to enter the operating mode of Windows MultiPoint Server 2012 station (primary station mode). Press letter "B" on the keyboard to enter the station operating mode.

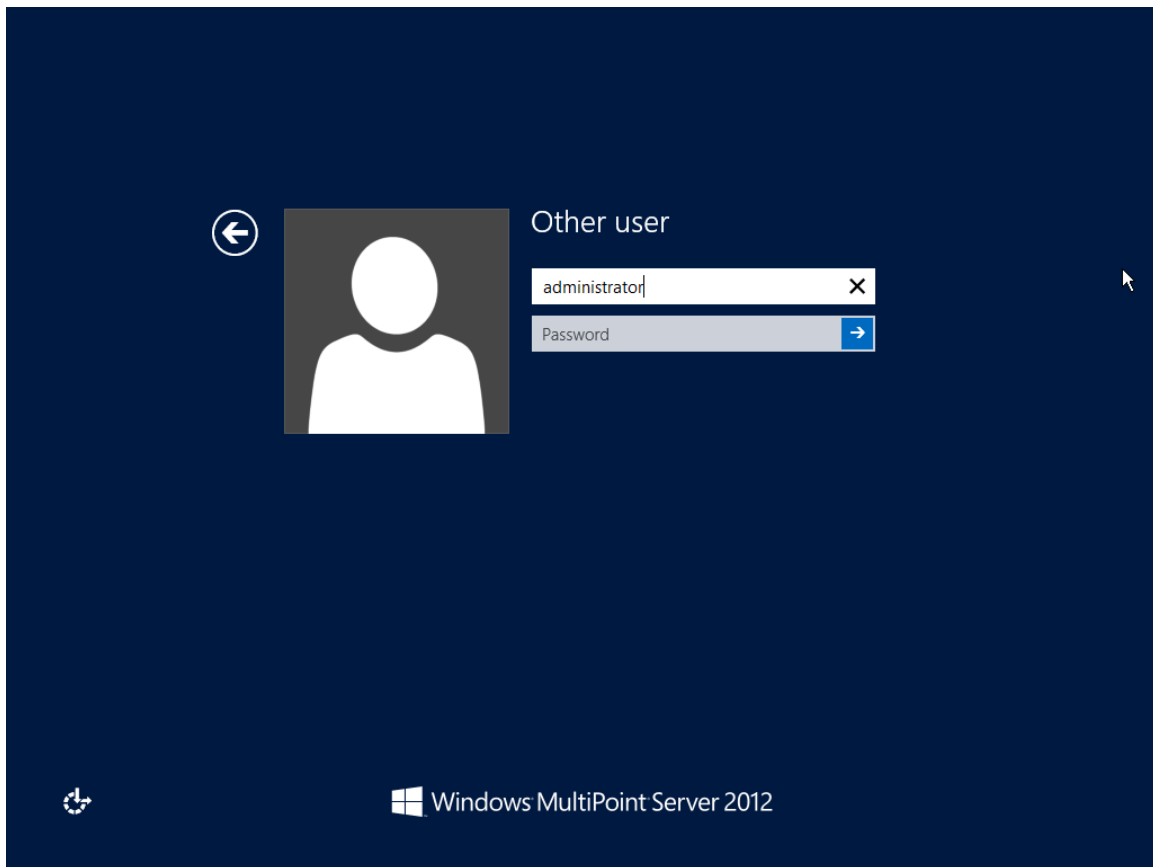


## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

If the host computer is poor in hardware performance, or if the following prompt (Waiting for Windows MultiPoint Server Host Service to Start) pops up, DO NOT press ESC key or any other key.



After starting Windows MultiPoint Server Host Service, the system will enter Windows logon interface. Enter the administrator account and password to enter the desktop of Windows MultiPoint Server 2012 station mode.



**Important**

- The station mode is different from the traditional desktop mode. If the host computer is not running in station mode (namely Windows MultiPoint Server Host Service is not running), then zero clients cannot operate normally.

## Use Chip PC IM-PC Zero Client Desktop Solution

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Chip PC provides the tool disc for IM-PC Zero Client Desktop Solution, including:

- Key patches for Windows MultiPoint Server 2012
- Chip PC IM-PC Zero Client drivers
- Chip PC IM-PC Zero Client management software
- Adobe PDF Reader
- "User Quick Guide" for Chip PC IM-PC Zero Client Desktop Solution
- "Administrator Manual" for Chip PC IM-PC Zero Client Desktop Solution
- URL of Chip PC Website

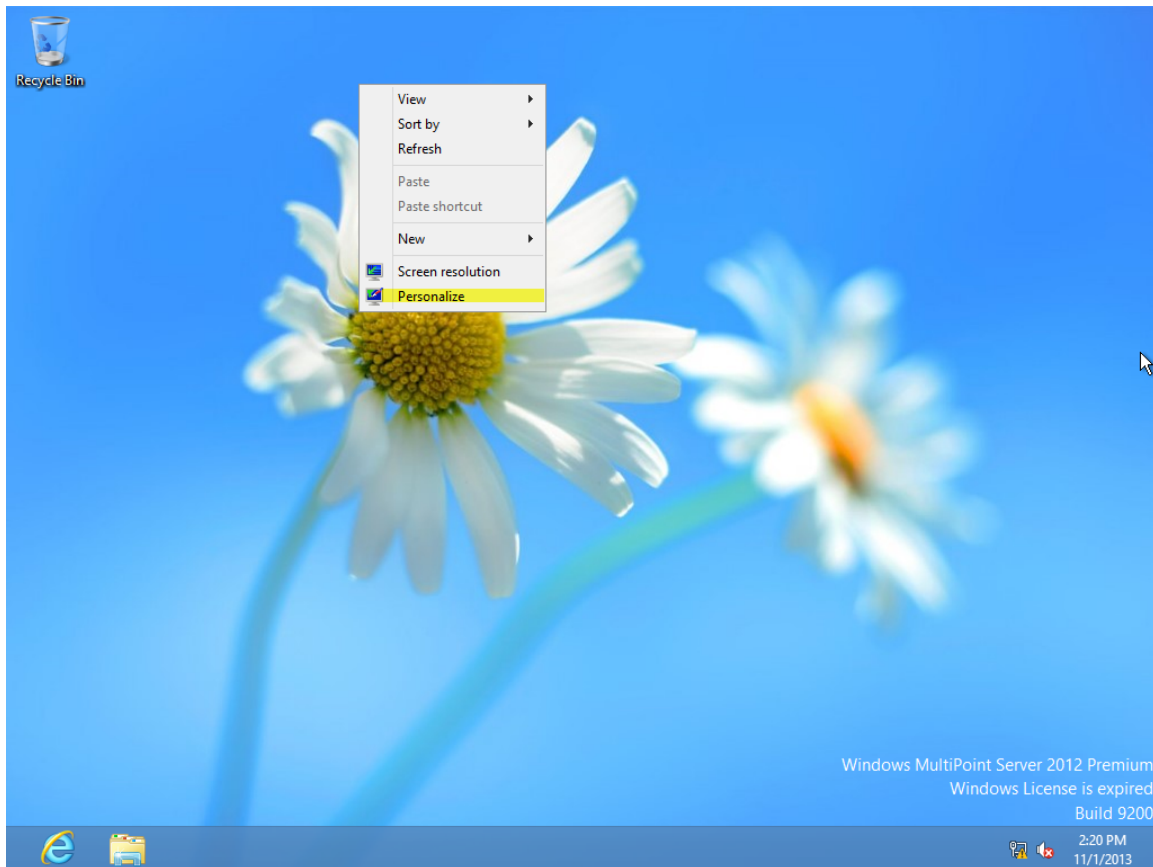
## Configure the IP Address of Host Computer and the DHCP

### Address Pool for Chip PC Network Zero Clients

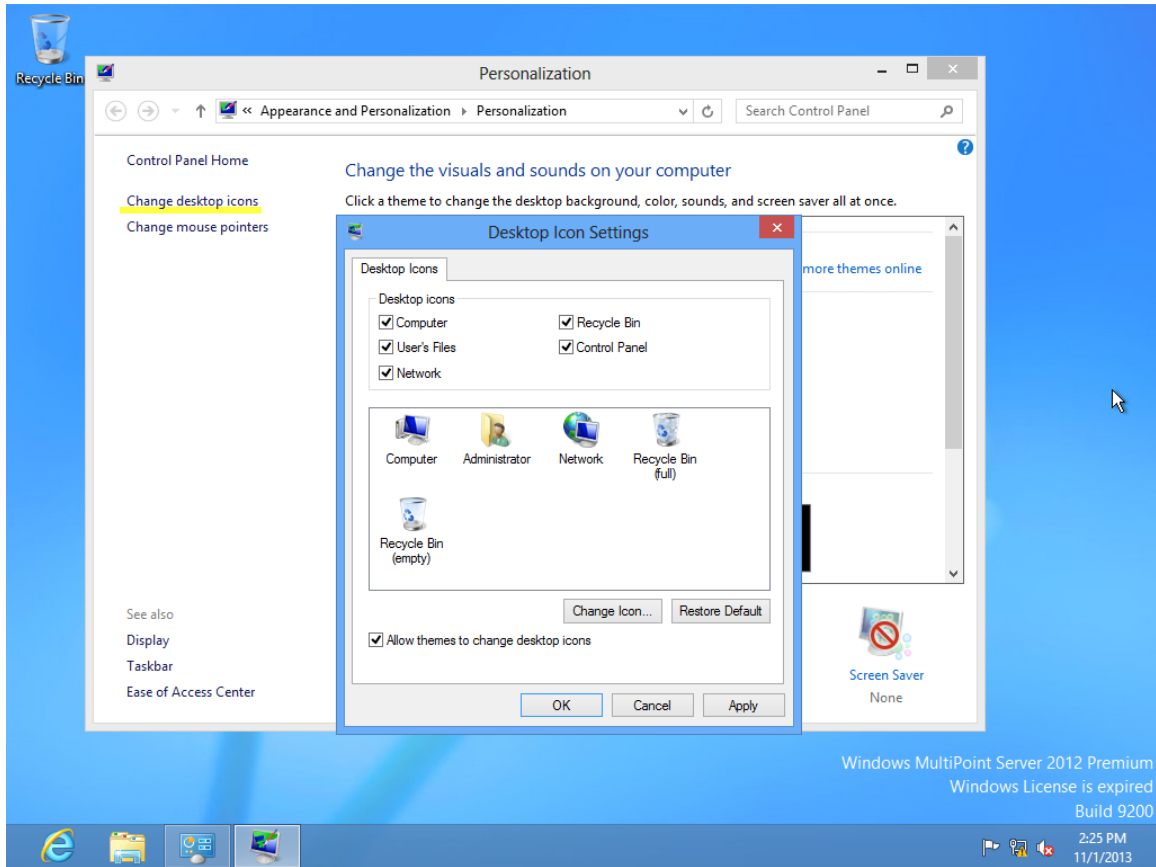
Windows MultiPoint Server 2012 host computer and Chip PC network zero clients can only be used after being configured with the correct IP address. It's recommended to configure a static IP address for the host computer and deploy Chip PC zero clients in DHCP mode, yet you may configure static IP addresses for zero clients under certain circumstances.

- Create Windows desktop icon

Right-click on the desktop and select "Personalize" from the context menu. Click "Change desktop icon" to select the desired desktop icons.



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

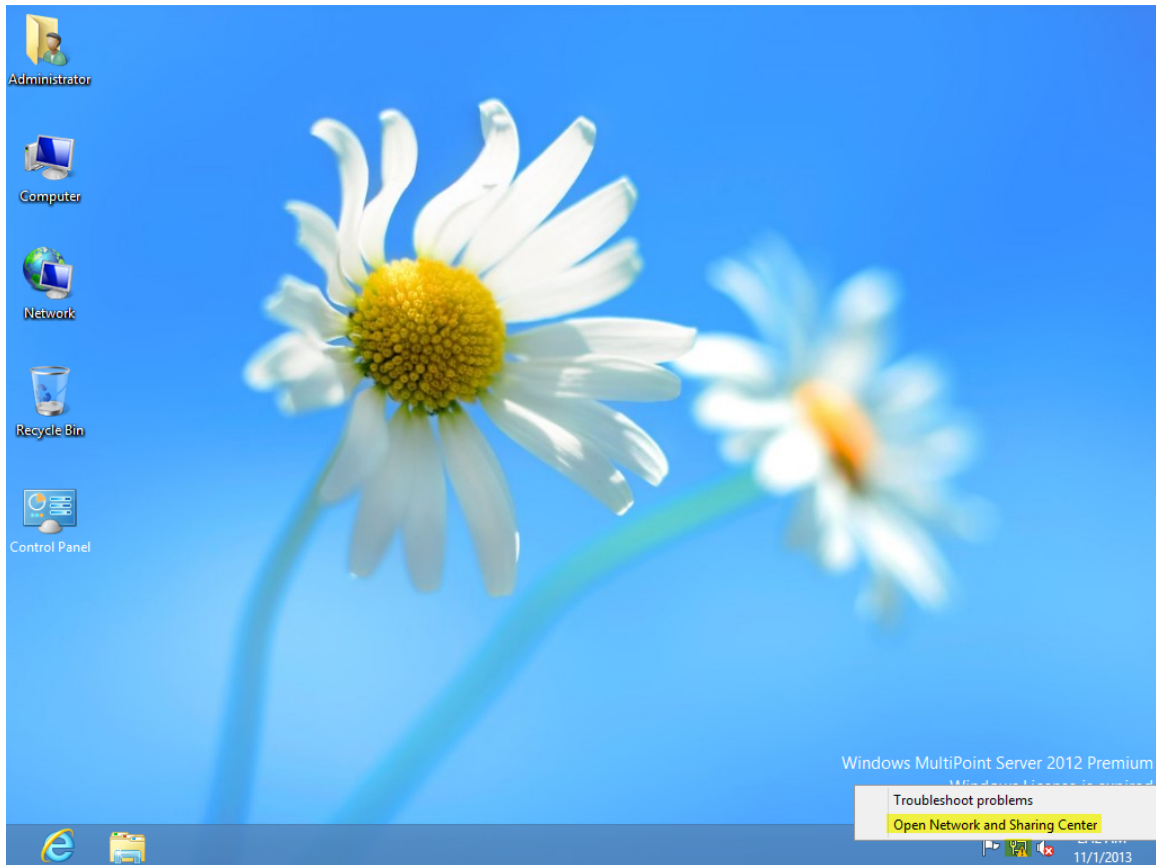




## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

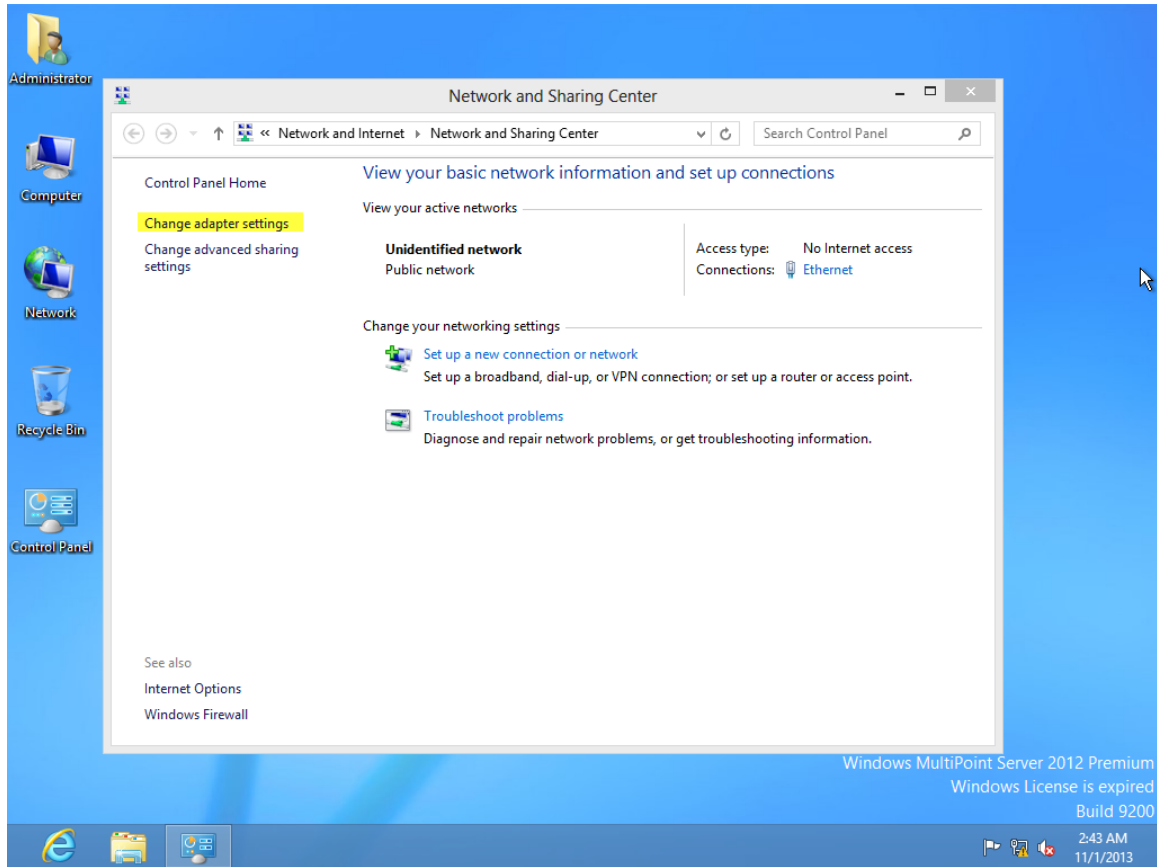
- Configure a static IP address for Windows MultiPoint Server 2012 host computer

Right-click the network icon in the system tray and select "Open Network and Sharing Center".



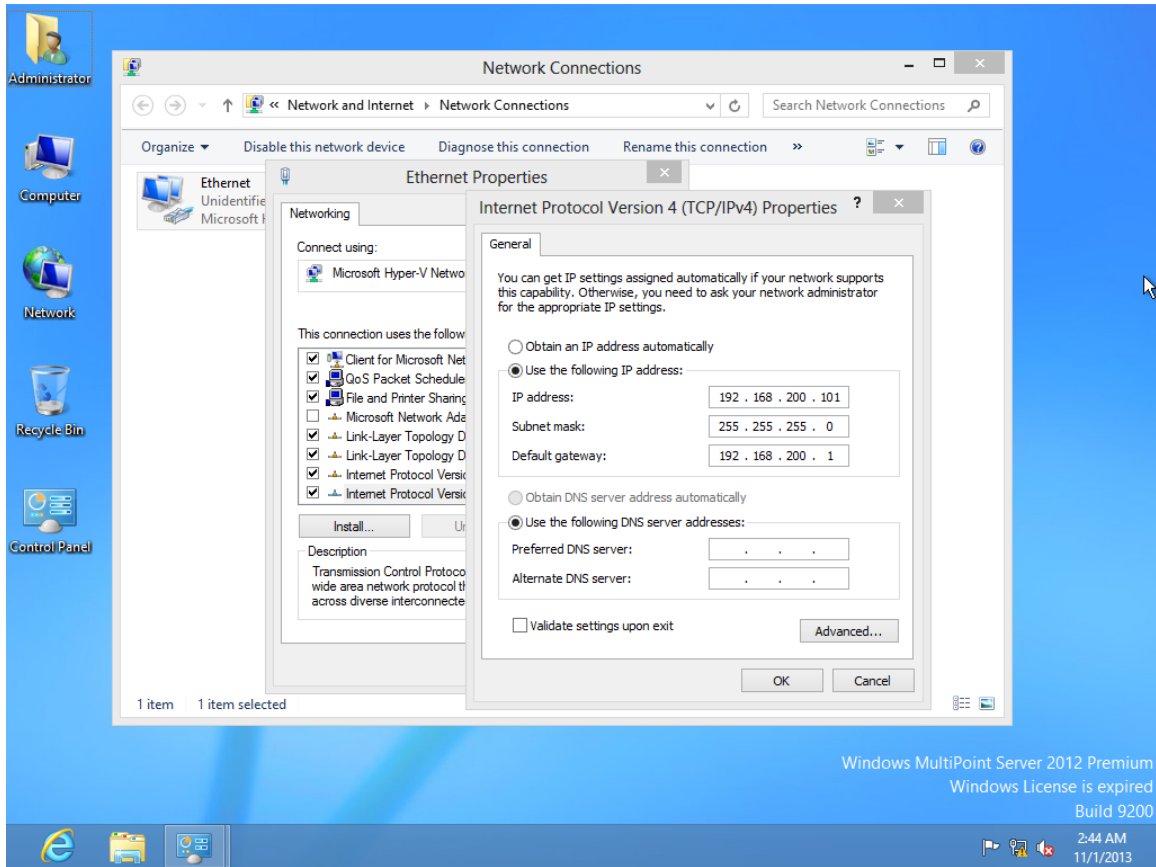
## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

Click “Change adapter settings”.



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

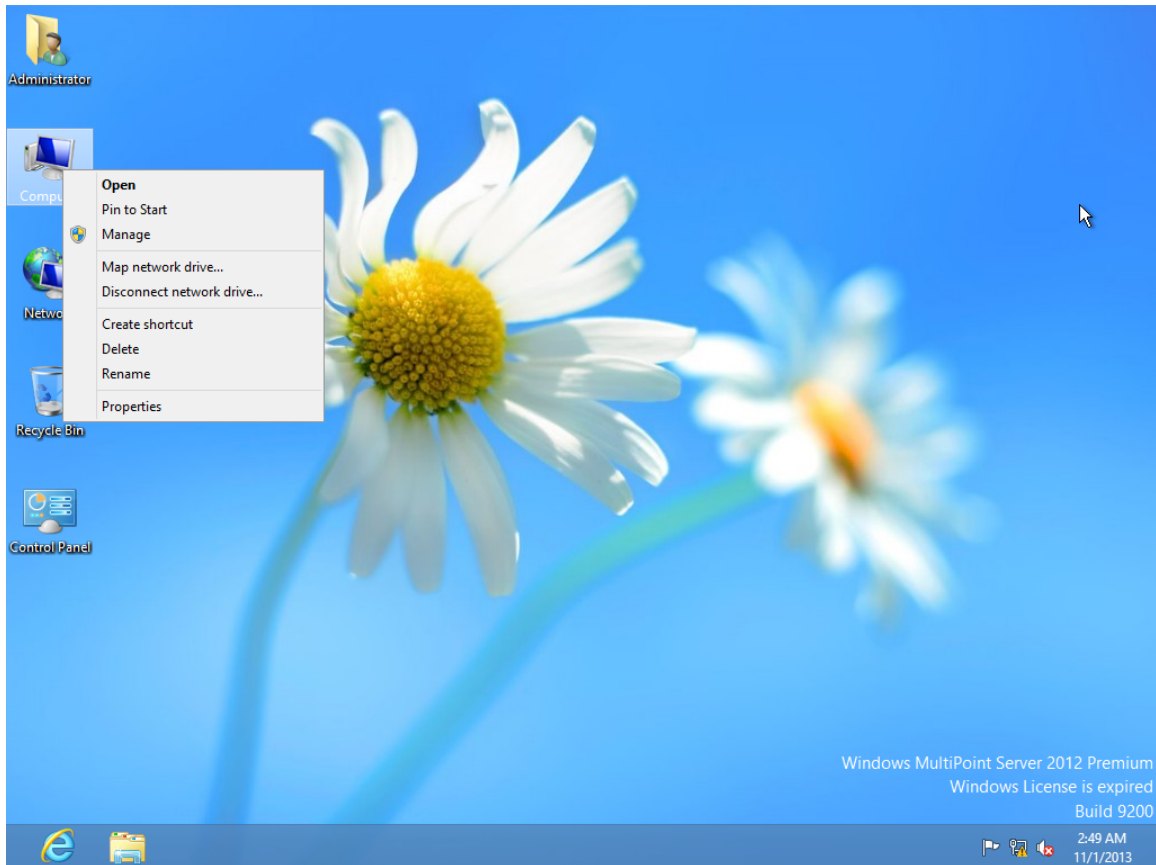
Configure a static IP address for Windows MultiPoint Server 2012 host computer.



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

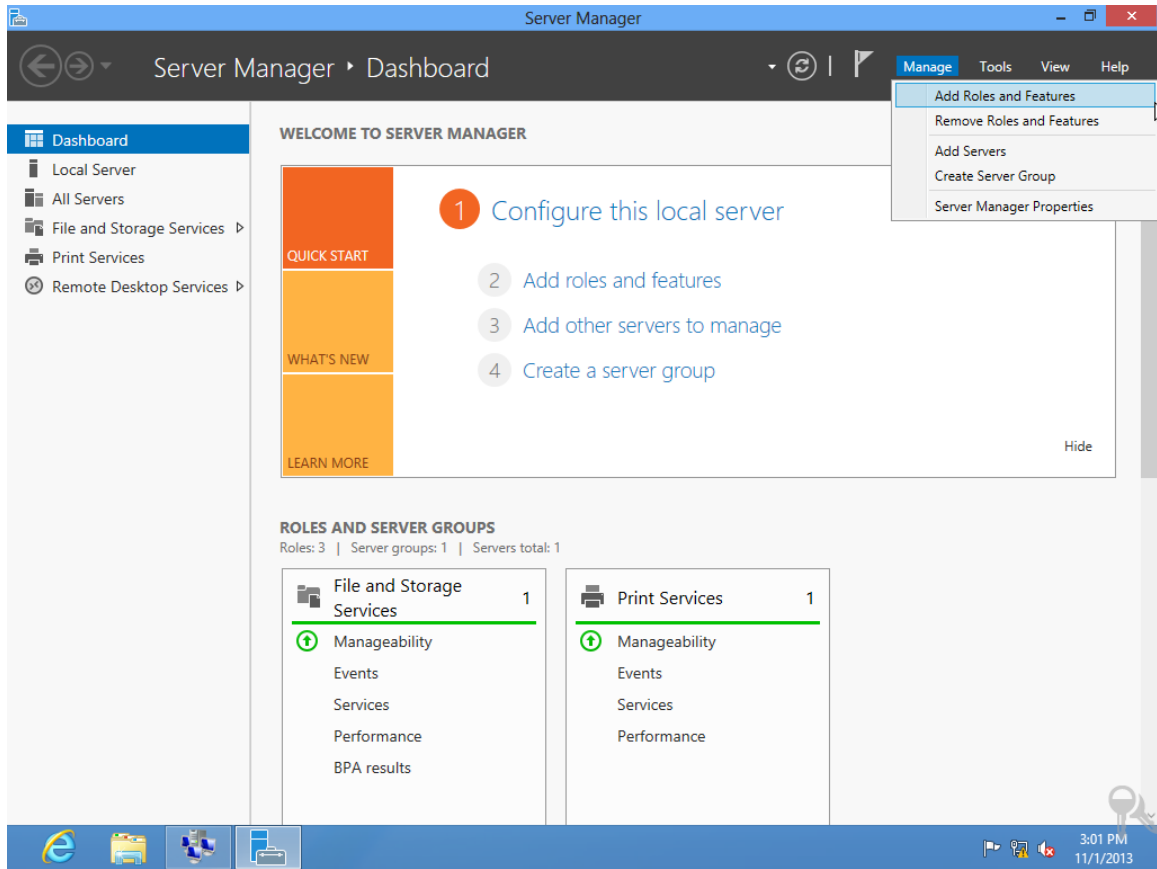
- Windows MultiPoint Server 2012 Host DHCP Services role configuration

Right-click the "Computer" icon on the desktop and then select "Manage" from the context menu.



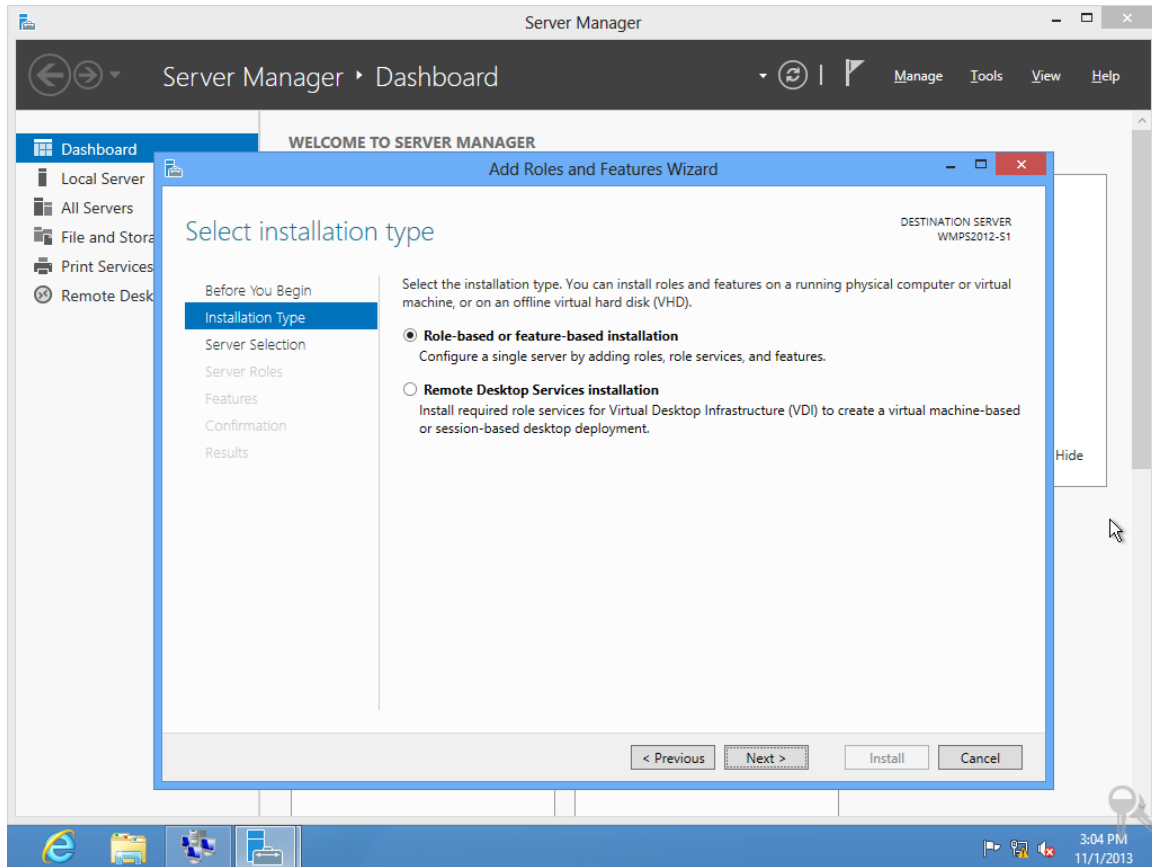
## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

Click “Add Roles and Features”.



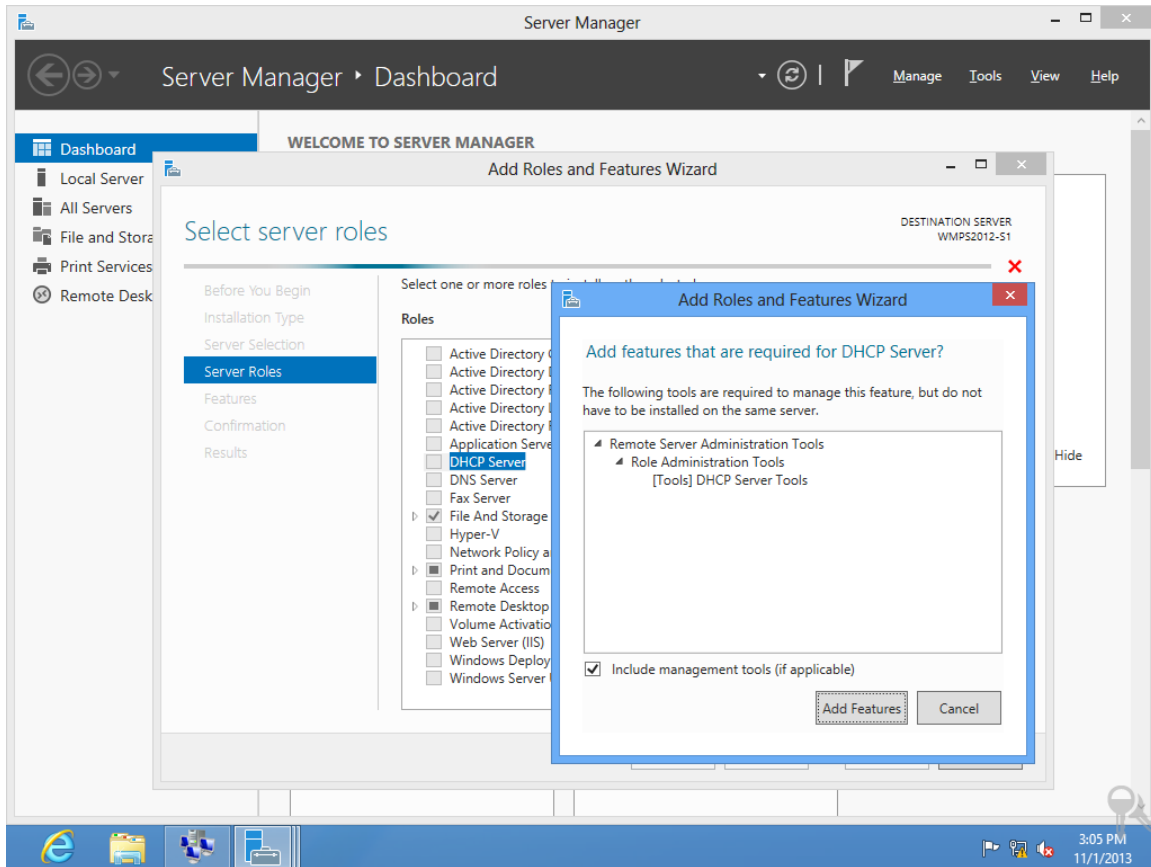
## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

Follow the instructions.



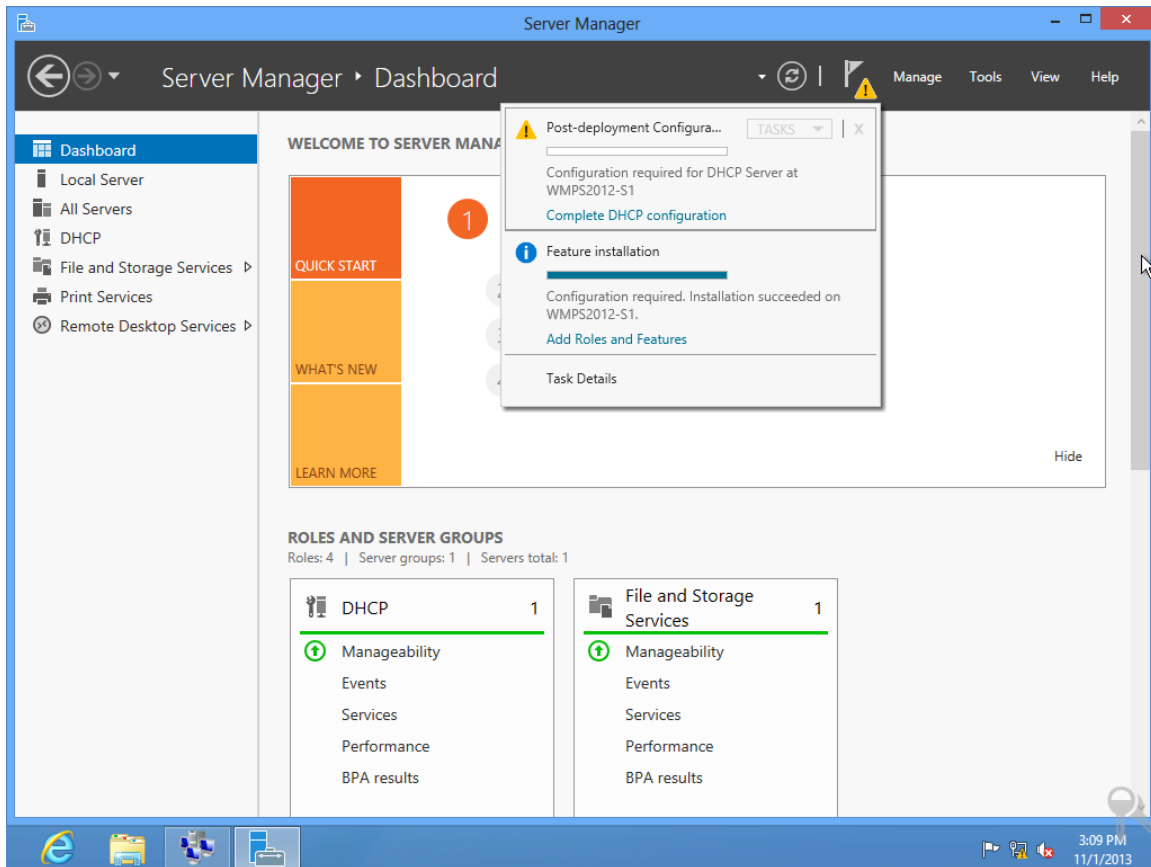
## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

Select “DHCP Server”.



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

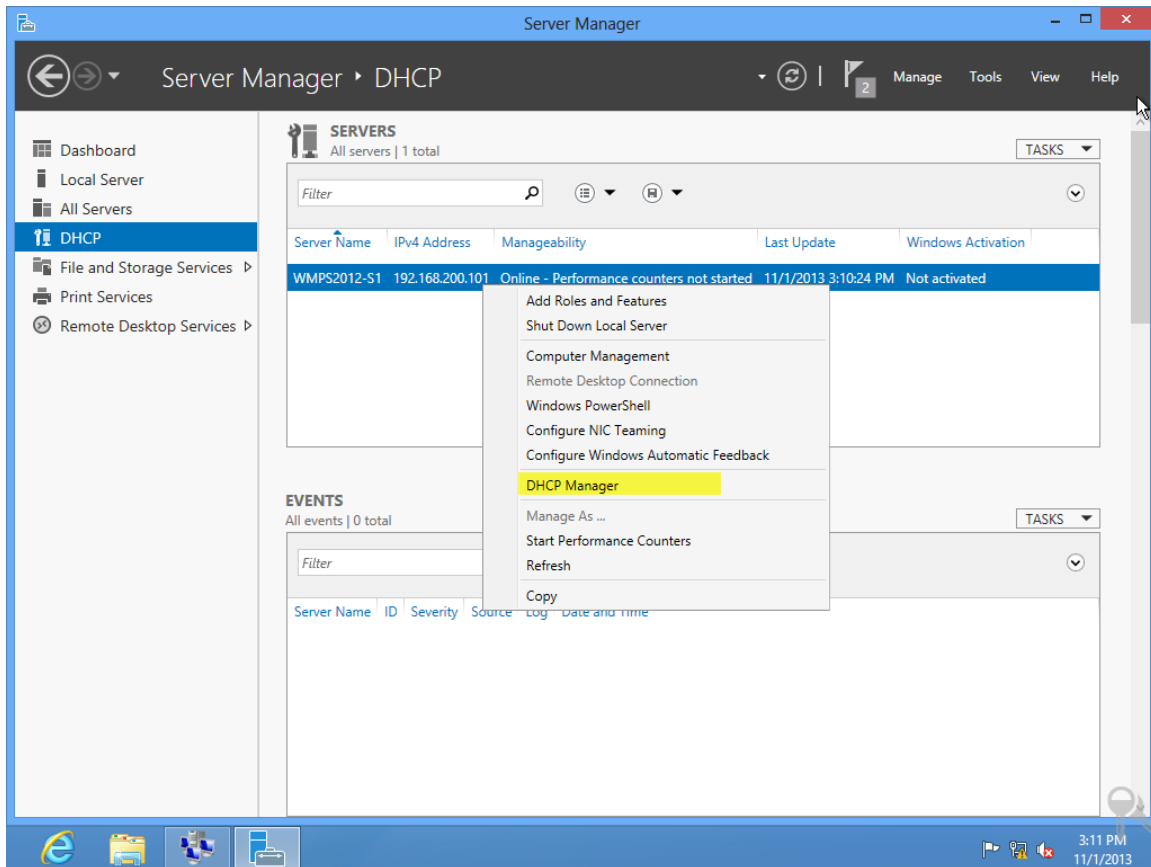
After installation, a yellow "!" icon will appear at the top-left corner. Click "Complete DHCP configuration".



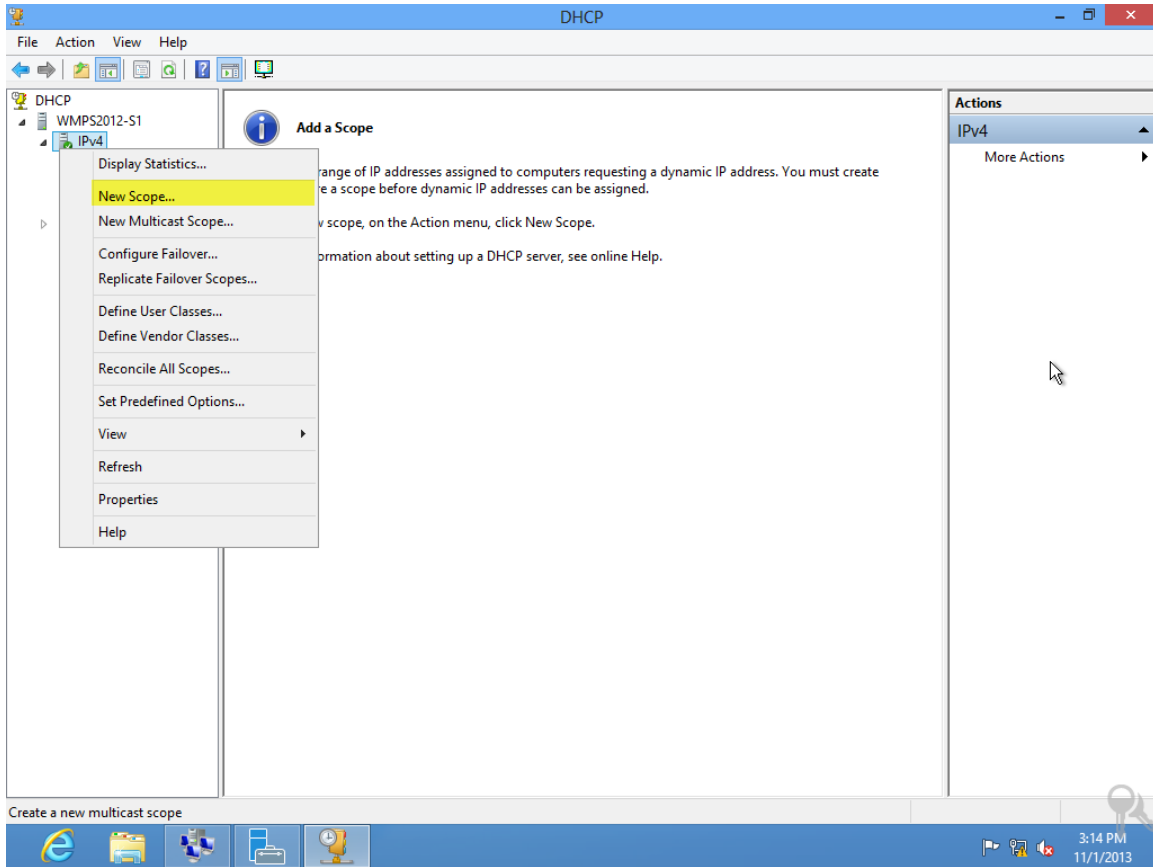


## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

Select "DHCP" and then click "DHCP Manager" from the context menu to proceed with specific DHCP configurations.



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

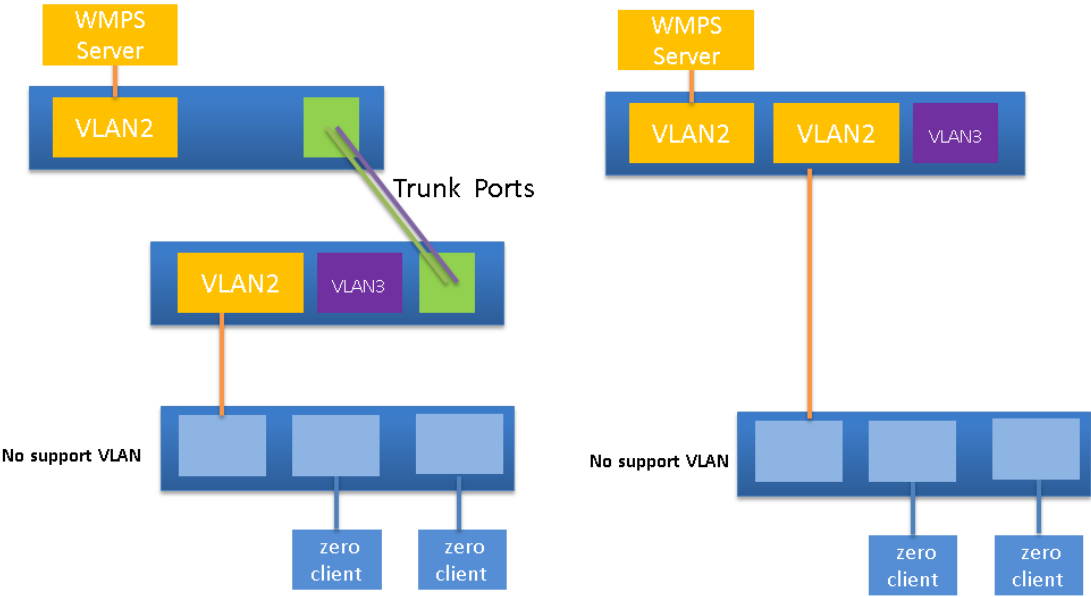


### Important

The IP addresses of Windows MultiPoint Server 2012 host computer and Chip PC zero clients must belong to the same network segment (the same subnet may be on different switches).

- Multiple DHCP services on the same network segment may compromise the use of IP addresses. In such a case, you will need to configure VLANs on the switch to avoid the impacts caused by multiple DHCP services.
- Chip PC zero clients and Windows MultiPoint Server 2012 host computer must be on the same subnet (namely the same broadcast domain), and this very subnet is independently on one VLAN.
- If Windows MultiPoint Server 2012 host computer must be deployed in the data center and connected to a switch different from that used by Chip PC zero clients, you will need to configure a cross-switch VLAN to ensure that the host computer and Chip PC zero clients are on the same VLAN, and the trunks between switches must be set up.
- Configuring the same VLAN over multiple switches requires the support of switches. It's recommended to use switches supplied by the same manufacturer.

Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users



## Introduction to the Management Functions of Windows

### MultiPoint Server 2012

The management programs of Windows MultiPoint Server 2012 do not have desktop shortcuts. To allow convenient use, you will need to create shortcuts for these programs.

Windows MultiPoint Server 2012 has two management programs:

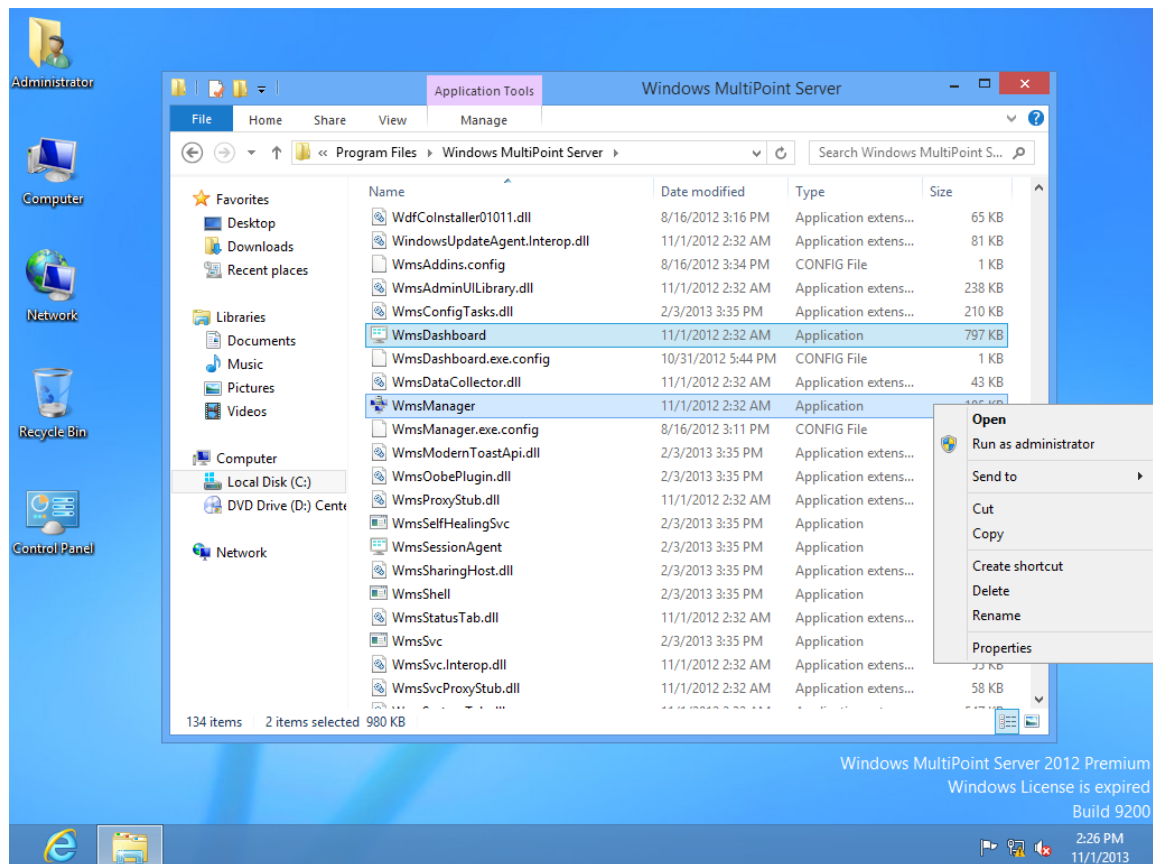
- WmsManager.exe
- WmsDashboard.exe

Both are located at “C:\Program Files\Windows MultiPoint Server\”.

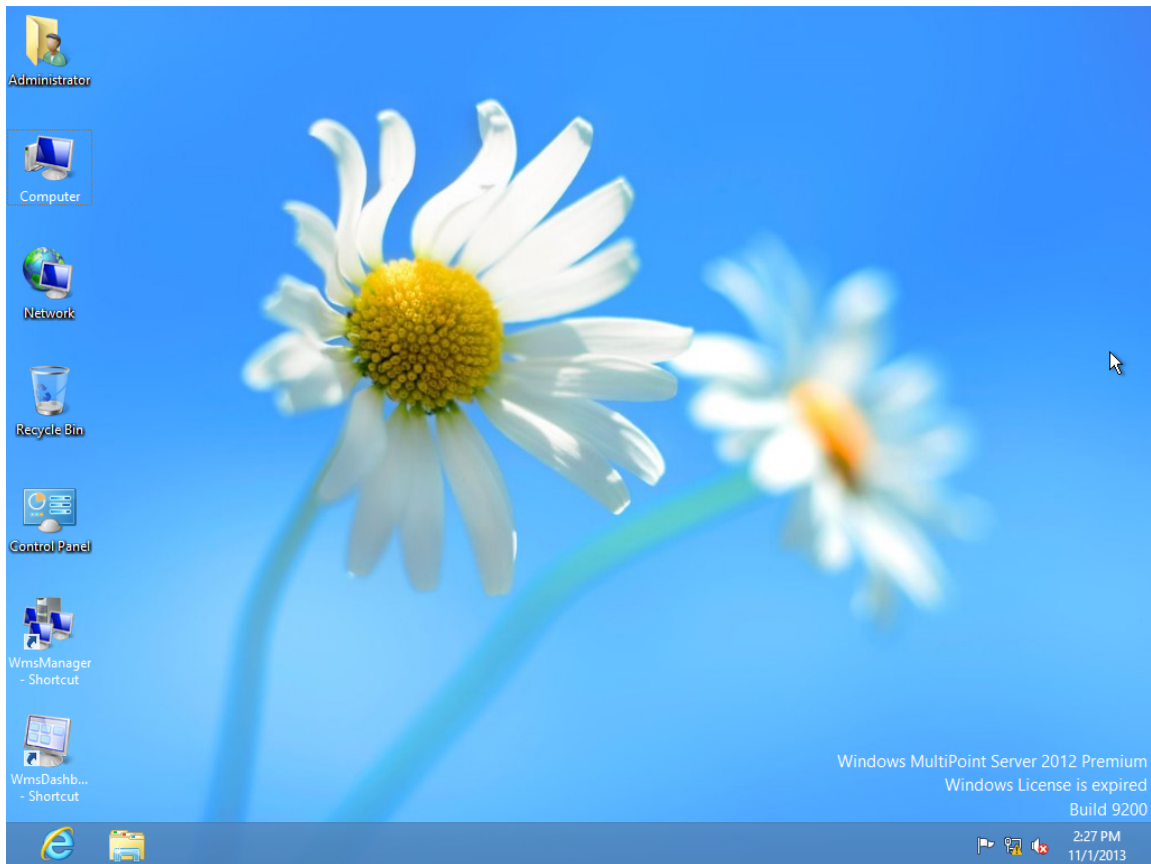
WmsManager.exe allows the management of zero client application environment, while

WmsDashboard.exe allows the management of specific zero client desktop.

Select WmsDashboard.exe and WmsManager.exe, right-click and then select "Send to -> Desktop (create shortcut)" from the context menu. ◦



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users



## Use the Management Functions of MultiPoint Manager

Double-click the shortcut of WmsManager to run MultiPoint Manager. "Home", "Stations", "Users" and "Virtual Desktops" are system embedded modules, while "Network Stations" is a functional module for managing Chip PC IM-PC Zero Clients.

Computer	Status	Product	Stations	Licenses	Disk Protection	Mode
Local						
wmps2012-s1	Connected	Windows MultiPoint Server 2012 Premium	1	0	Disabled	Station

**Computer information**

Licenses: You do not have a client access license for all stations on this computer. Use the "Add client access licenses" tasks to resolve this issue, or remove the extra connection(s).

Disk Protection: Disk protection is disabled.

**Tasks**

- Edit server settings
- Restart the computer
- Shut down the computer
- Switch to console mode
- Enable disk protection
- Add client access licenses**
- Remap all stations
- Save connection settings to file

**Home Tasks**

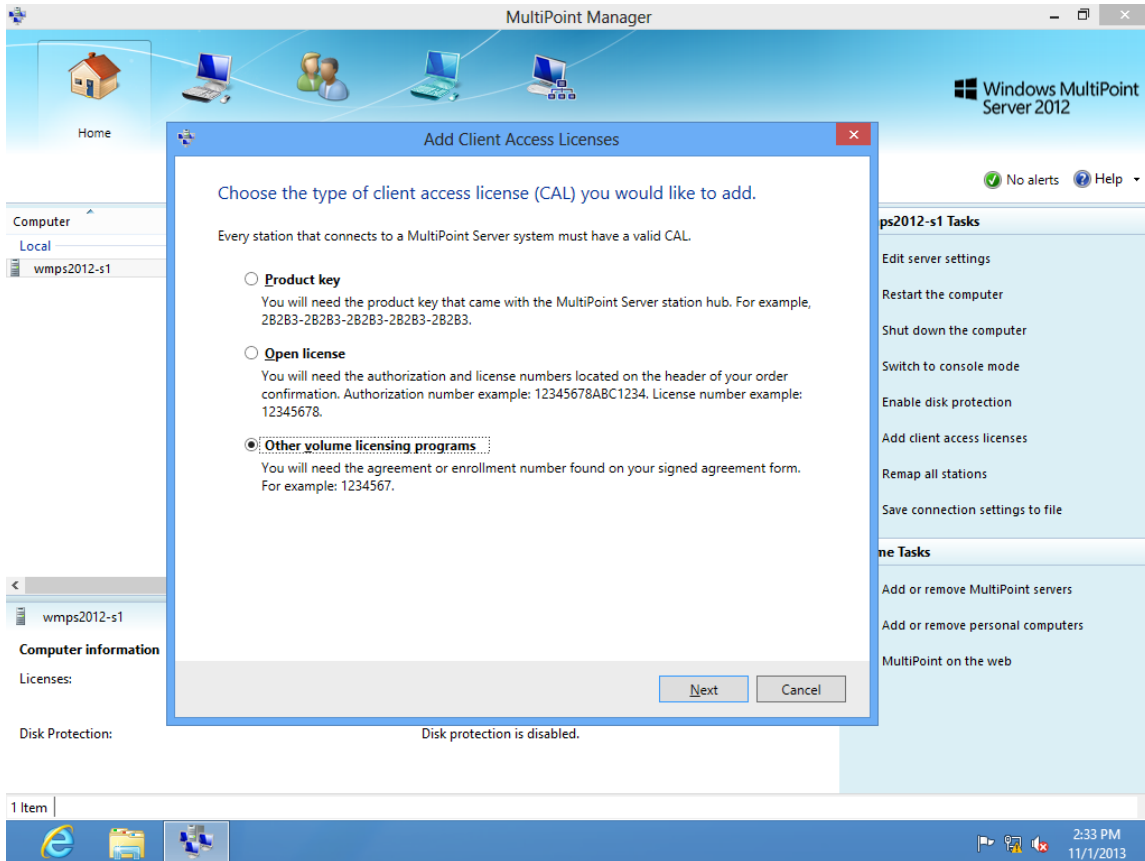
- Add or remove MultiPoint servers
- Add or remove personal computers
- MultiPoint on the web

Activate Windows  
Go to Action Center to activate Windows.

- Add zero client access licenses

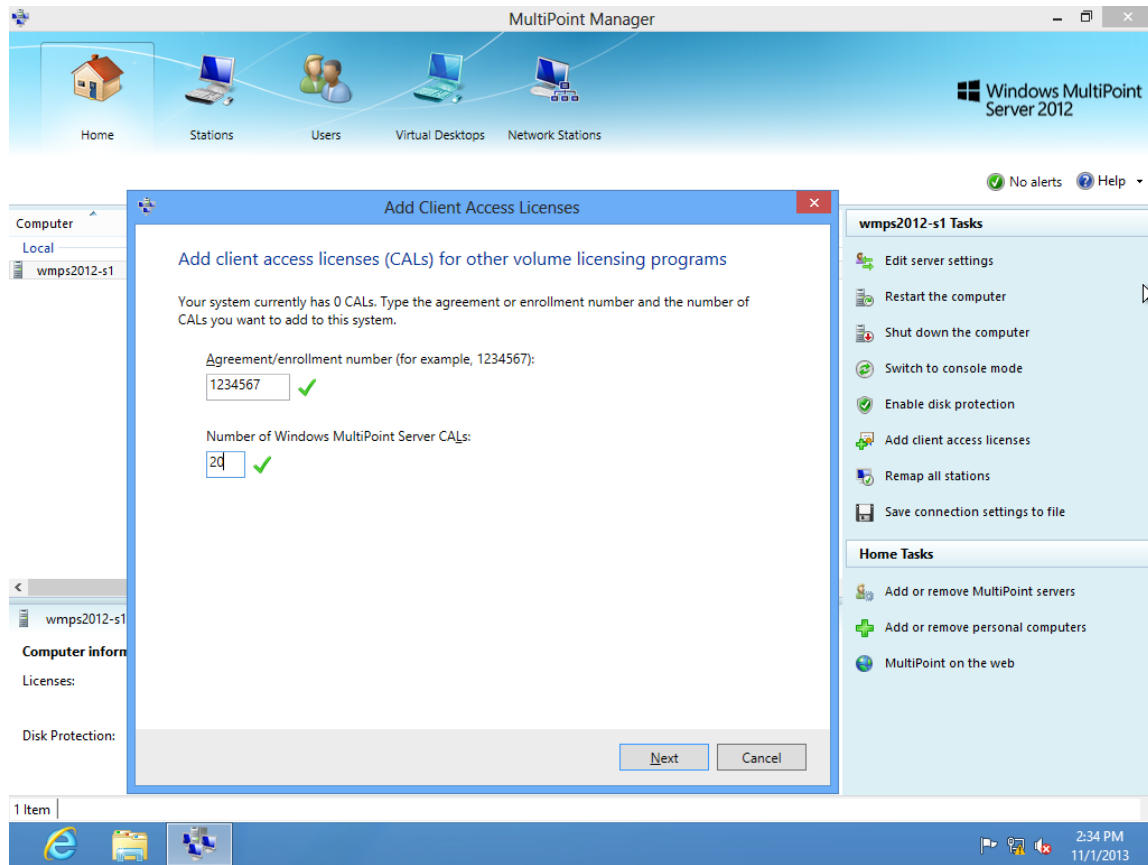
Firstly, select the server and then click "Add client access license" on the right side. According to your licensing mode, enter the correct license number to activate your zero client access license.

In this document, we use the trial mode and thus choose "Other volume licensing programs".



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

Enter "1234567" and "20" in sequence to get trial access license.



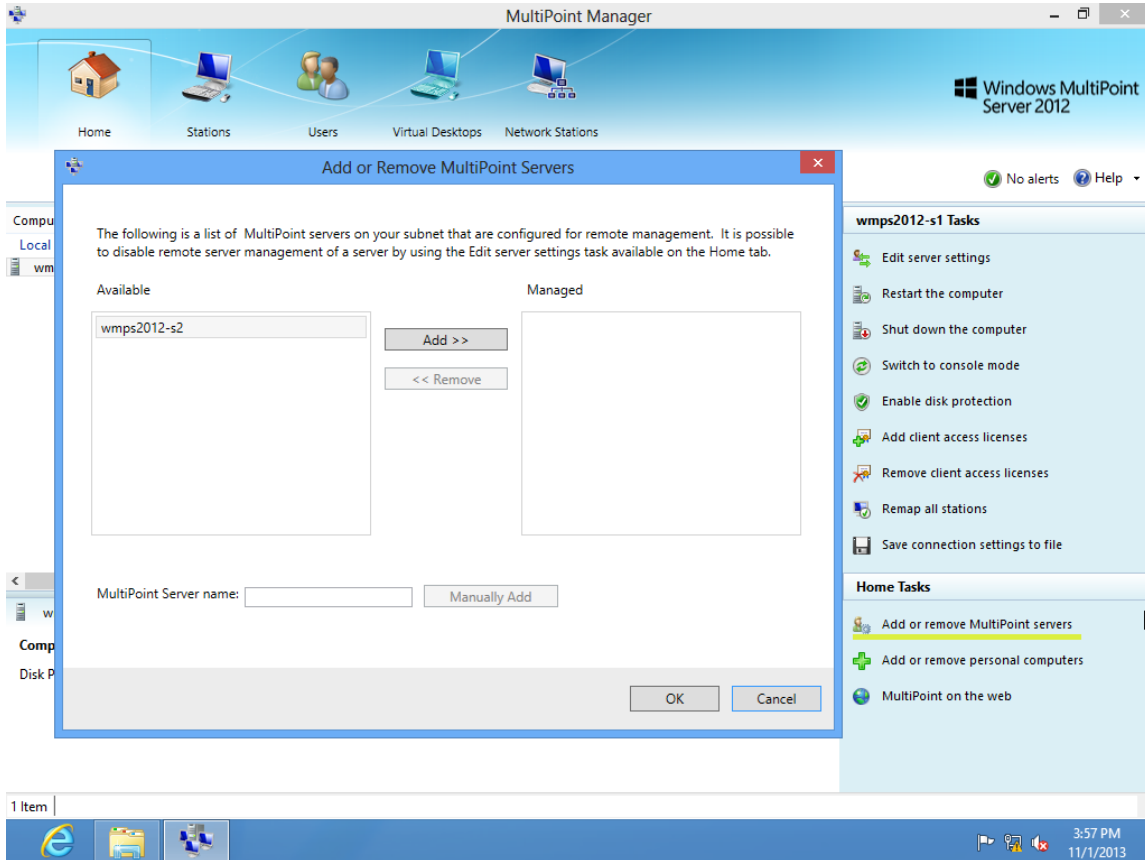
### Important

- Windows MultiPoint Server 2012 can support up to 24 zero client access licenses instead of 20.
- If you need to use Windows MultiPoint Server 2012 permanently, please purchase genuine product key for Windows MultiPoint Server 2012 and zero client access licenses from Microsoft or its distributors.

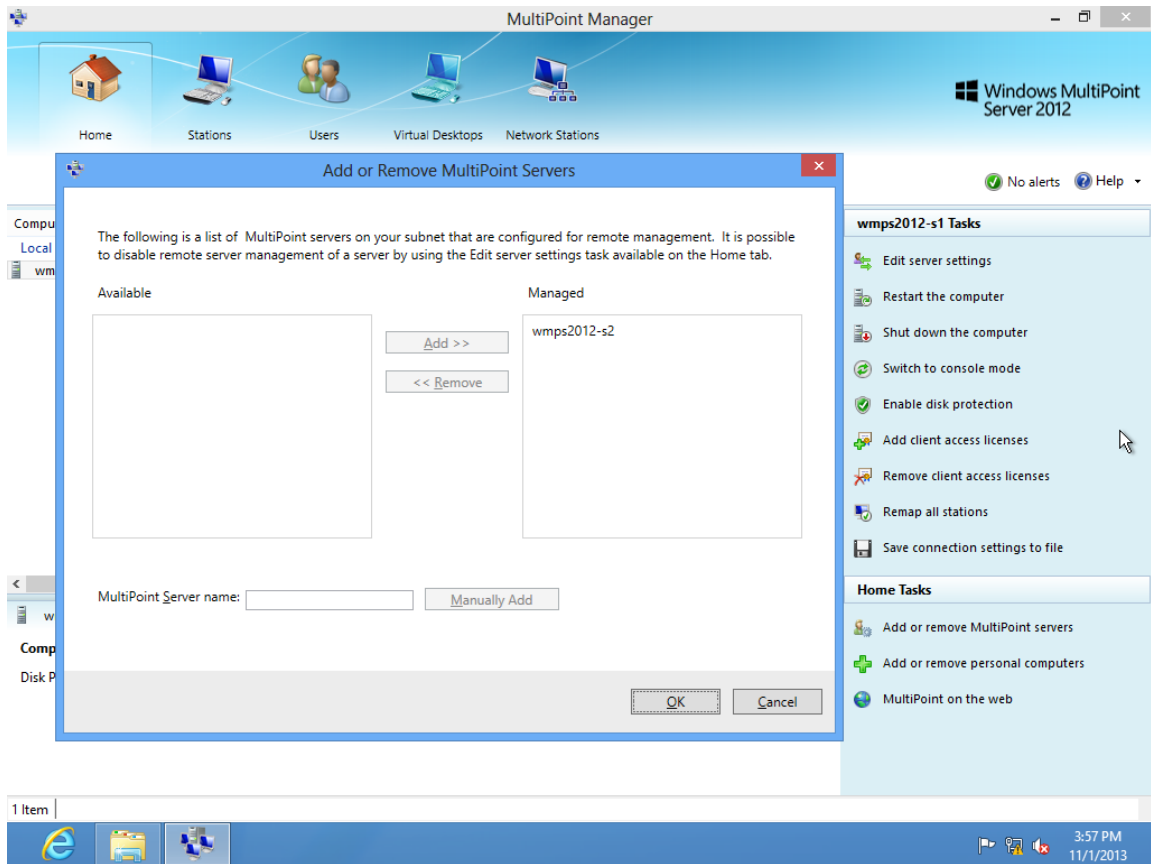


- Enable centralized management of multiple MultiPoint servers

In the Home functional module, click "Add or remove MultiPoint servers" to discover other MultiPoint Server 2012 host computers on the same subnet.

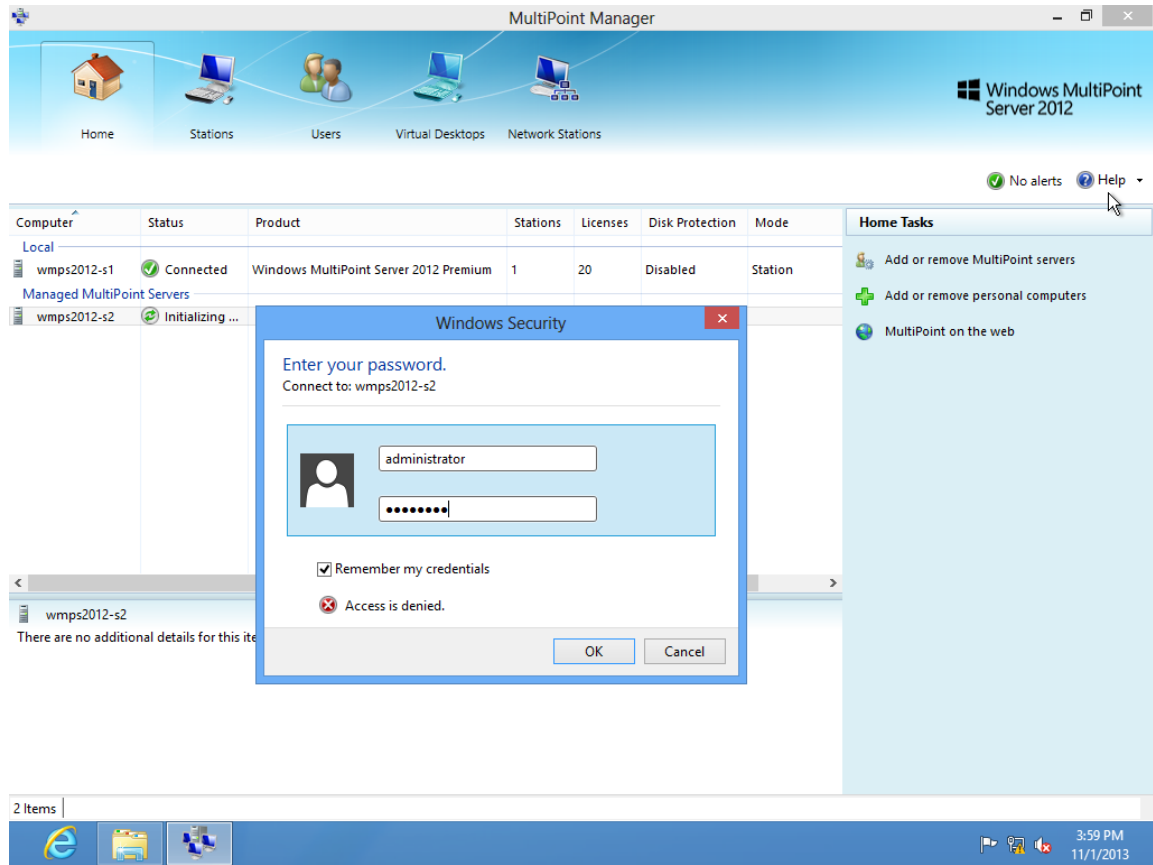


## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

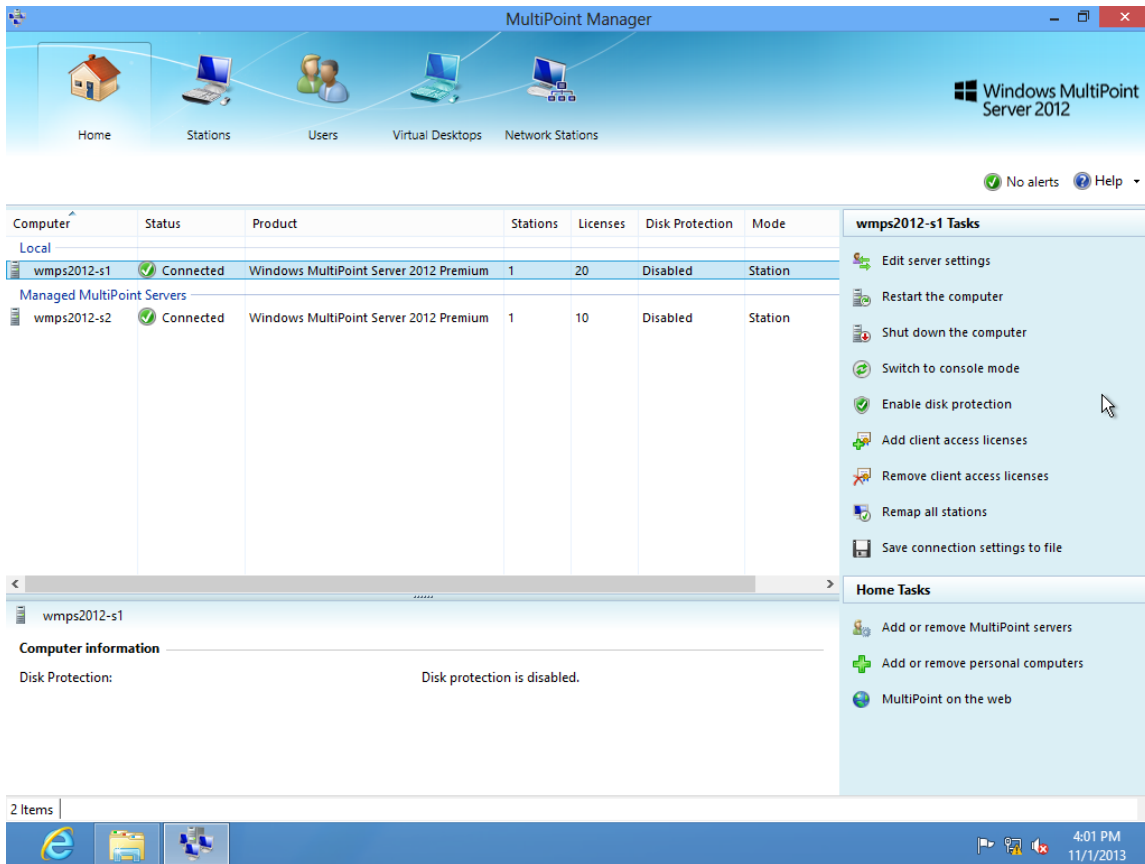


## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

Enter the administrator password of second MultiPoint server.



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users



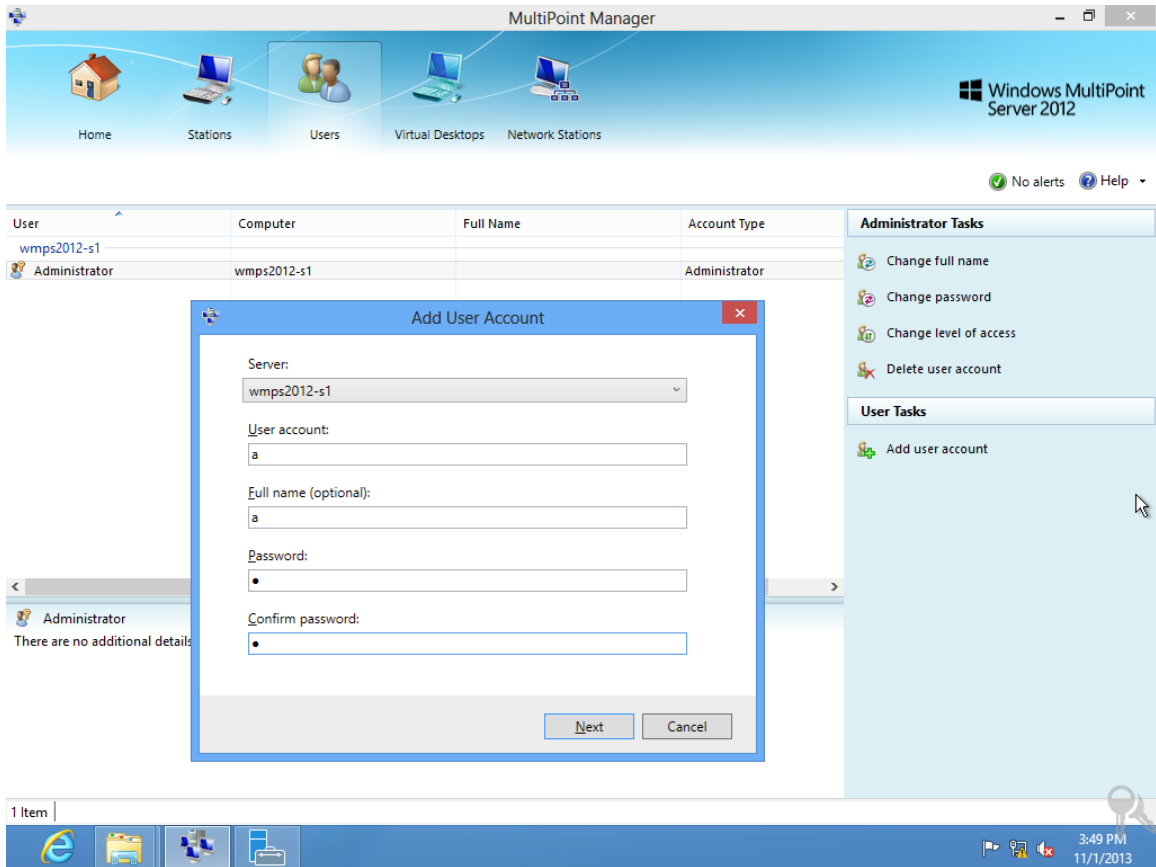
### Important

- To allow centralized management, each host computer must be installed with the same version of Chip PC Zero Client IM-PC Manager software (namely the program version of Network Stations functional module).
- If MultiPoint servers have all joined the domain, and you have logged on the first server with domain administrator account, then you can directly add other MultiPoint servers without the need for entering the administrator account and password.
- Windows MultiPoint Server 2012 (all versions) doesn't support domain role. If you need a domain environment, you will need to have one additional host computer running standard Windows Server 2012 or other Windows Servers to provide the domain role.

## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

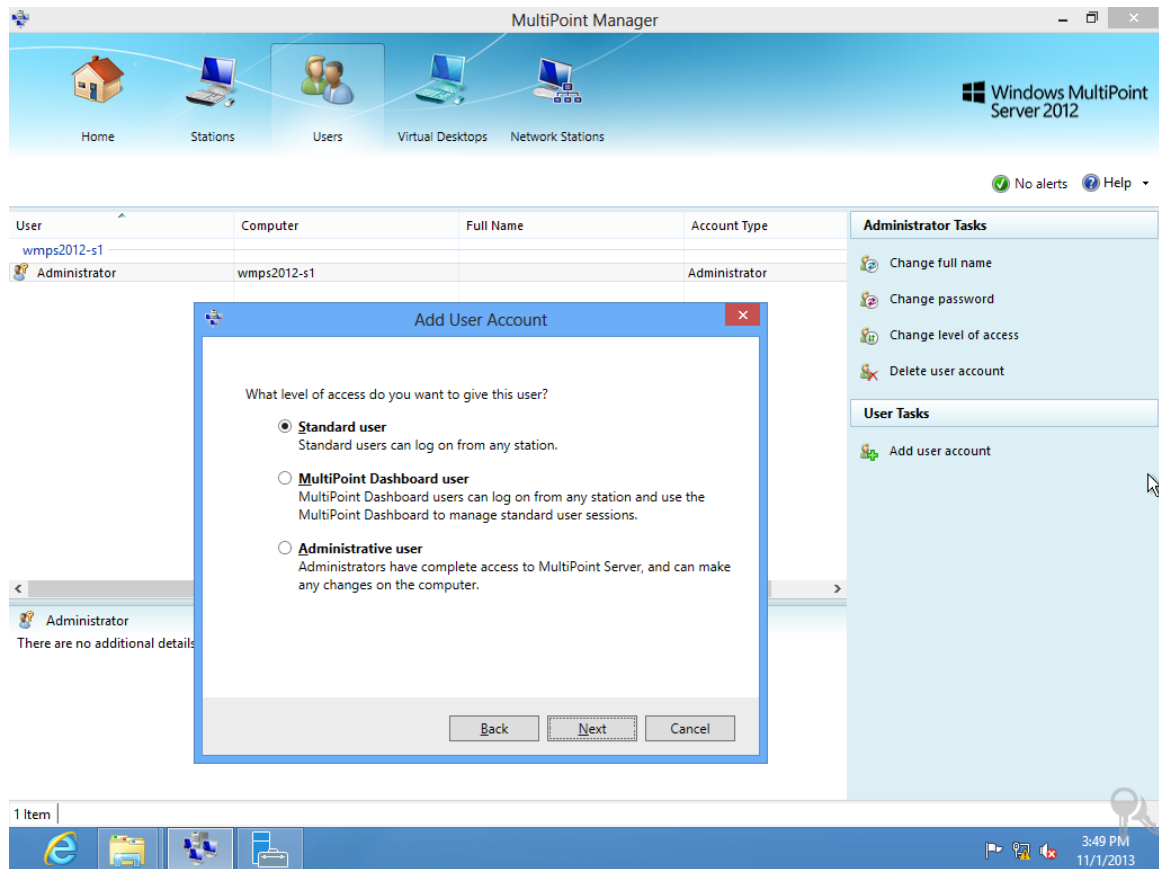
- Create user account for accessing zero client desktop

Select the Users module and click "Add user account" on the right side. Select to create a user on the host computer of "wmps2012-s1". Enter the user account and password.



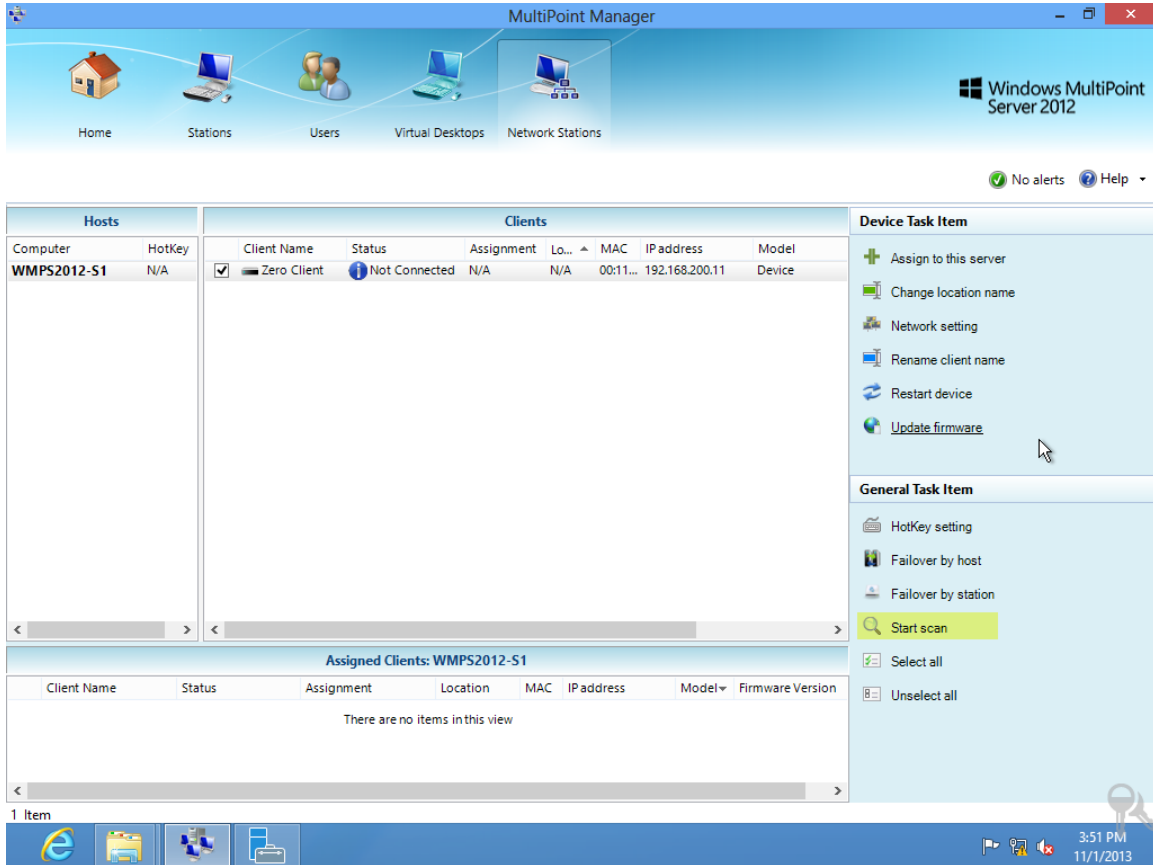
## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

There are three types of users: Standard user, MultiPoint Dashboard user and Administrative user. MultiPoint Dashboard user has the permission to run WmsDashboard.exe.



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

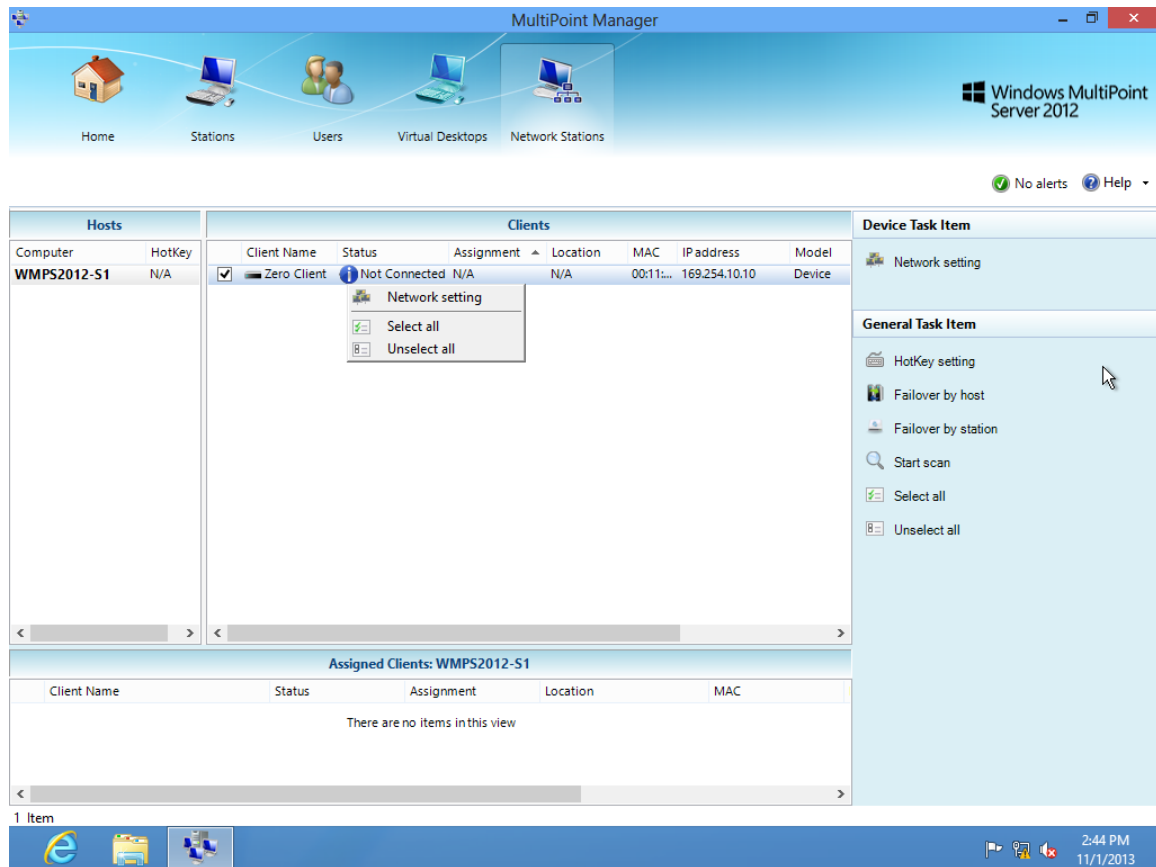
- Discover network zero client and confirm whether or not its IP address is properly configured.  
Turn on Chip PC Zero Client IM-PC and connect to the network. Click the Network Stations module in MultiPoint Manager and then click "Star scan" to search for zero clients on the network.



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

If there is no DHCP server on the network, the zero client will use the temporary subnet of "169" after waiting for 90 seconds. In such a case, you will need to check the DHCP server or manually configure a correct static IP address for the zero client.

Select the zero client list and select "Network setting" from the context menu to configure the static IP address for the zero client.

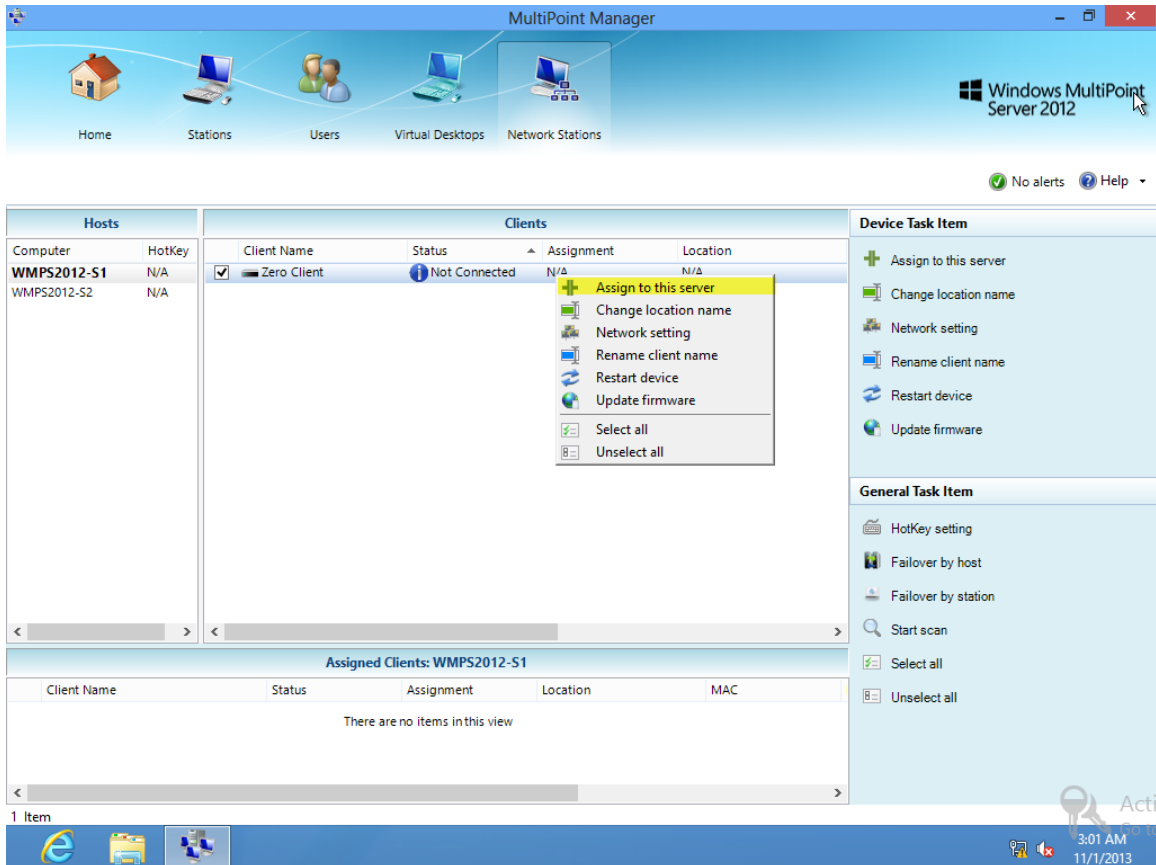




## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

- Assign the network zero client to the MultiPoint server, make sure the WIN desktop of zero client shows the list of selected network zero client, and then click "Assign to this Server".

If there are multiple Windows MultiPoint Server 2012 host computers under centralized management, you will need to select the host computer in the "Host" pane and then click "Assign to this Server".



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

Wait until the "Status" indicates "Connected" and Windows login interface will appear on the desktop of this zero client.

The screenshot displays the MultiPoint Manager console interface. At the top, there is a navigation bar with icons for Home, Stations, Users, Virtual Desktops, and Network Stations. The title bar reads "MultiPoint Manager" and the server name is "Windows MultiPoint Server 2012". Below the navigation bar, there is a status bar with "No alerts" and a "Help" link.

The main area is divided into three panes:

- Hosts:** A table with two columns: "Computer" and "HotKey". It lists "WMPS2012-S1" with "N/A" and "WMPS2012-S2" with "N/A".
- Clients:** A table with columns: "Client Name", "Status", "Assignment", and "Location". It shows "There are no items in this view".
- General Task Item:** A list of tasks including "HotKey setting", "Failover by host", "Failover by station", "Start scan", "Select all", and "Unselect all".

Below the main panes, there is a section titled "Assigned Clients: WMPS2012-S1" which contains a table with the following data:

Client Name	Status	Assignment	Location	MAC	IP address	Model
<input type="checkbox"/> Zero Client	Connected	WMPS2012-S1	N/A	00:1...	192.168.200.11	Device

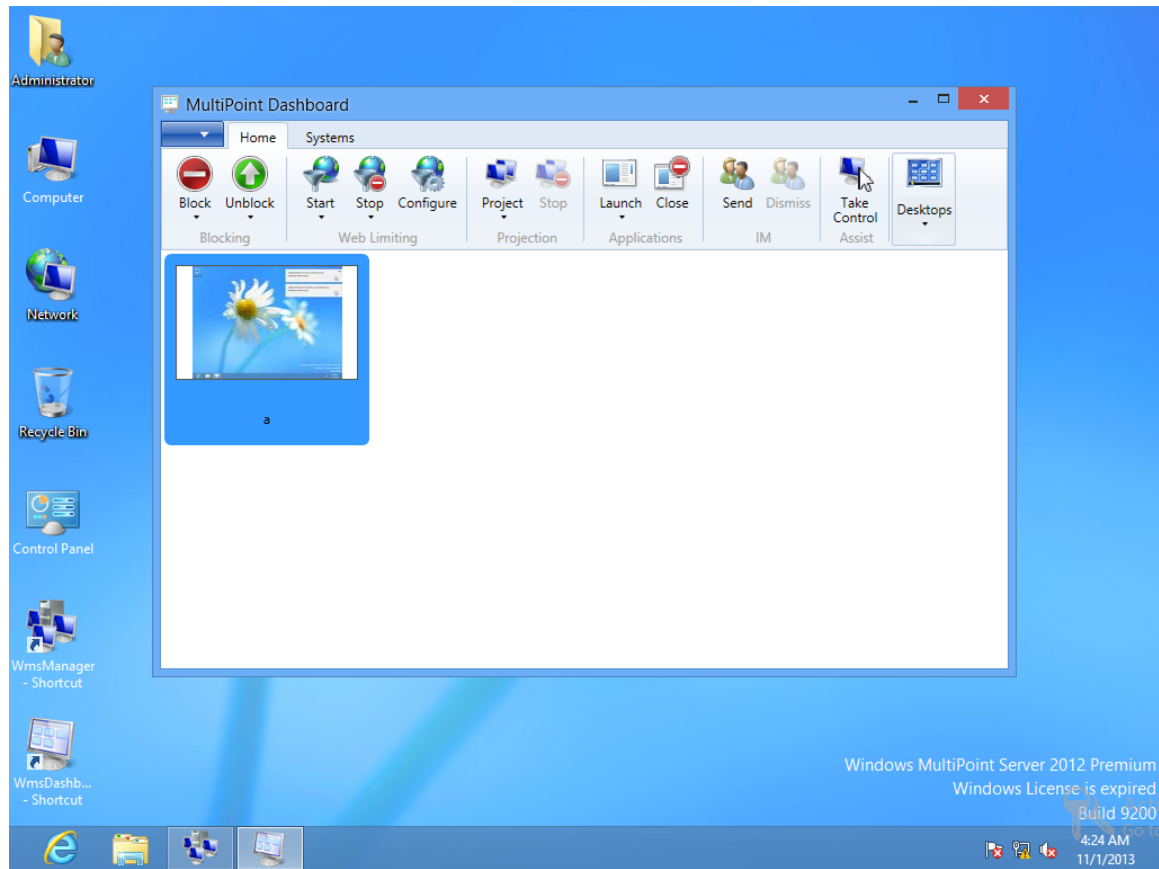
At the bottom, there is a status bar showing "1 Item" and a taskbar with the Windows logo, Start button, and system tray icons. The system clock shows "3:02 AM 11/1/2013".

## Use the Management Functions of MultiPoint

### Dashboard

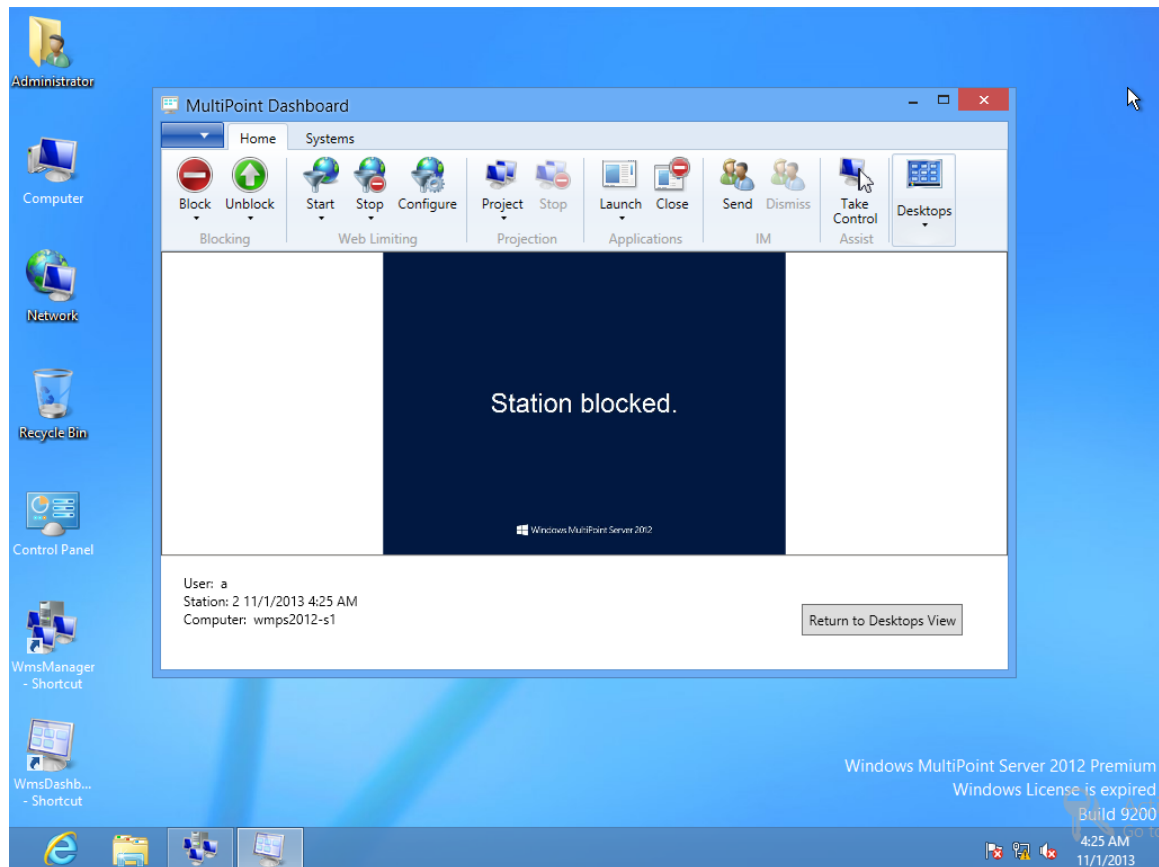
WmsDashboard is used to manage the desktop of zero clients, and can be applied in e-classroom management.

Double-click the shortcut of WmsDashboard program to discover zero client desktops being used.



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

You may use MultiPoint Dashboard to carry out comprehensive management of the desktop environment of zero client. The following example shows how to block or take control of the desktop environment of a zero client.



## Chip PC IM-PC Zero Client Desktop Solution – Quick Deployment Guide for Users

