

Administrator's Guide

Citrix Device Services

Version 1.0

Citrix Systems, Inc.

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CHAPTER 1

Welcome



Introduction

This document is a guide for Citrix Device Services. It is written for system and network administrators responsible for installing Device Services on Windows NT Server, Terminal Server Edition.

Citrix Device Services adds Independent Computing Architecture (ICA) connectivity over TCP/IP to Windows Terminal Server. By using the ICA protocol to deliver Windows applications to your terminal devices, you gain the benefits of increased application performance and network efficiency associated with Citrix's industry leading presentation protocol. In addition to basic application presentation services, ICA adds support for terminal device printer and COM port mapping. Printer and COM port mapping let terminal users print to local printers and connect a variety of peripheral devices to terminal COM ports.

Finding More Information

Your Citrix Device Services package includes the following documentation:

- The *Citrix Device Services Administrator's Guide* (this document) describes how to install Device Services and how to install and activate Citrix Device Licenses.
- The *Citrix Licensing Help* gives procedural information on using the Citrix licensing utility. To view this Help, click **Start**, point to **Programs, Citrix Device Services Tools**, and then click **Citrix Licensing**. When Citrix Licensing appears, click **Help** and then click **Contents**.
- The *Citrix License Activation Wizard Help* describes how to use the Activation Wizard to obtain activation codes for Citrix Device Licenses. To view this Help, double-click **Activation Wizard** on your Windows Terminal Server desktop and then click **Help** in any screen of the wizard.

Important Please consult the Readme.txt file in the root directory of your Citrix Device Services CD-ROM for any last-minute updates and corrections to the documentation.

Year 2000 Readiness

For a detailed description of the Year 2000 Readiness of Citrix products, see our Web site at <http://www.citrix.com/misc/y2000.htm>.

Installing Citrix Device Services



Overview

This chapter describes how to install Citrix Device Services. Topics in this chapter include:

- Device Services requirements
- Running the Setup program
- Adding a Citrix Device License
- Activating a Citrix Device License

Requirements

To install and run Device Services, you must have the following:

- Windows NT Server, Terminal Server Edition
- Microsoft licenses installed on the server
- TCP/IP support installed on the server
- An Internet connection or modem to connect to the Citrix License Activation servers during license activation
- Terminal device(s)
- A terminal device manufacturer-provided serial number (Citrix Device License) for each type of device you want to connect to the server

Note Although Citrix Device Services is available as an English language product only, you can install it on English, Spanish, French, and German versions of Windows Terminal Server.

Running the Setup Program

▶ **To install Citrix Device Services**

1. Exit all applications on your Windows Terminal Server system.
2. Insert the CD-ROM into the CD-ROM drive.
3. The autorun installation dialog box appears. Click **Citrix Device Services Setup**.

You can also manually execute the Setup program. To do so, start a command prompt, change to your CD-ROM drive, change directory to the I386 directory, and then execute Setup.exe.

4. Read the introductory information in the **Welcome** screen and then click **Next**. In the **Setting Up Citrix Device Services** screen, click **Next** to begin copying Citrix Device Services files to your Windows Terminal Server system.
5. The **Citrix Device Services Licensing** screen appears.

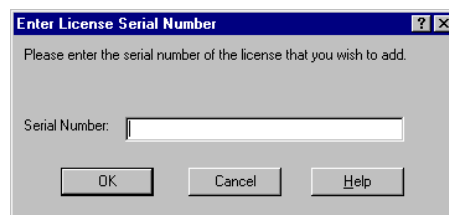
In order for your Device Services server to permit ICA connections by multiple users, it must have two licenses installed (in addition to Microsoft licenses):

- **Base License.** The base license enables ICA support. The Setup program automatically installs and activates the base license. The base license requires no additional configuration and allows unlimited device connections by default.
- **Citrix Device License.** A Citrix Device License enables any terminal devices from a single manufacturer to connect to the server. To use a terminal device, you must first install and activate a Citrix Device License provided by the terminal manufacturer. Once you install and activate this license, the server allows unlimited connections for all terminals from the manufacturer. To connect additional terminals from a different terminal manufacturer, you must install an additional Citrix Device License.

Click **Add Citrix Device Licenses** to add a Citrix Device License.

Click **Next** to proceed without installing a Citrix Device License. You can add licenses at any time. See “Adding a Citrix Device License” later in this chapter for more information. Skip to Step 8.

6. Citrix Licensing starts and displays the **Enter License Serial Number** dialog box:



Locate your terminal device manufacturer-provided Citrix Device License serial number. Enter the serial number exactly as it appears. Click **OK**.

In the confirmation dialog box that appears, read the information and click **OK**.

7. Citrix Licensing prompts you to add another license. If you will use more than one type of terminal device to connect to your Device Services server, you can add the additional Citrix Device License(s) now. Click **Yes** and enter the additional license in the dialog box.

If you will use only one terminal type, you do not have to add any additional licenses. Click **No**. The **Citrix Device Services Licensing** dialog box reappears. Click **Next**.

For example, if you will use five terminals provided by a single terminal manufacturer, you must install a single Citrix Device License. If you will use five terminals provided by one terminal manufacturer plus an additional five terminals provided by another manufacturer, you must install two Citrix Device Licenses.

Important After installation completes, you must activate each license you install. See “Activating a Citrix Device License” later in this chapter for instructions.

8. The **System Reboot** screen appears. Click **Finish** to reboot the system.

Performing an Unattended Installation

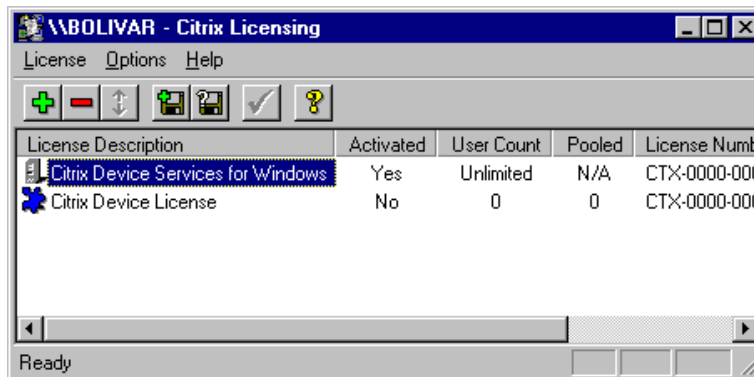
In addition to the manual installation procedure described above, Device Services also supports unattended installation. To perform an unattended installation, execute the Device Services Setup program (located in the I386 directory on the CD-ROM) with the unattended switch: **setup /u**.

The I386 directory also includes a file named Unattend.txt. This text file contains fields that let you supply answers for installation questions. For example, you can enter Citrix Device License numbers in the text file so that during installation, the Setup program automatically installs the licenses. After editing Unattend.txt, save the file as some file name. Then execute the following command line: **setup /u:filename**, where *filename* is the name you saved Unattend.txt as.

Unattended installations that do not use an answer file perform default installation actions: no Citrix Device Licenses are installed and the server automatically reboots after installation completes.

Adding a Citrix Device License

Use the Citrix Licensing utility to add, remove, and activate Citrix Device Licenses.



Citrix Device Services uses an activation code-based licensing system. Every licensed Citrix product has an associated serial number. When you install the software, you enter the product's serial number in Citrix Licensing and get a license number. You must then get an activation code to activate the license. The activation code is based on the product's license number and is used by the Citrix Licensing program to enable the product.

Note You must activate each Citrix Device License to complete the installation of your software. Some licenses have a grace period after installation, where they will work for a time with periodic reminder messages. If the license is not activated during the grace period, the license is automatically disabled at the end of the grace period. Please read "Activating a Citrix Device License" later in this chapter for instructions on how to activate your Device Services software.

As described above in "Running the Setup Program," Citrix Device Services requires two Citrix licenses: an auto-installed and auto-activated base license and an additional Citrix Device License for each type of terminal connecting to the server. The following procedures describe how to use Citrix Licensing to install Citrix Device Licenses. Perform these procedures if:

- You did not install a Citrix Device License for your terminal type during Citrix Device Services installation
- You want to add an additional terminal type

Adding a Citrix license involves three steps:

1. Use Citrix Licensing to add the supplied license serial number.
2. Obtain an activation code for the license.
3. Use Citrix Licensing to enter the activation code for the license.

For more information on activation codes, see “Activating a Citrix Device License” later in this chapter.

▶ **To start Citrix Licensing**

- Click the **Start** button. Point to **Programs**. Point to **Citrix Device Services Tools**. Click **Citrix Licensing**.

The Citrix Licensing utility displays all licenses currently installed on your Citrix server.

▶ **To add a license serial number**

1. In the **License** menu, click **Add**. The **Enter License Serial Number** dialog box appears.
2. Type the serial number **exactly** as it appears. Click **OK**. If you enter the serial number incorrectly, an error message appears.
3. A message box containing important information about your license appears, including the grace period before activation is required. Read the information in this box carefully and click **OK** when done.
4. The license number, which is the serial number with an 8-character code appended to make it unique to this server, now appears in the license list.

See “Activating a Citrix Device License” for instructions on activating the license.

Activating a Citrix Device License

You must activate each Citrix Device License you install on your Device Services server. The following instructions assume that you have a modem or Internet access configured on your server. If you do not, skip Steps 3 through 5 and see “URLs and Telephone Numbers to Use for Software Activation” for alternative ways to get an activation code.

► **To activate a license**

1. Log on as an administrator.
2. From the **Start** menu, point to **Programs, Citrix Device Services Tools**, and then click **Citrix Licensing**. Citrix Licensing displays the license numbers for the base server license and any additional Citrix Device Licenses.
3. From the **Start** menu, point to **Programs, Citrix Device Services Tools**, and then click **Activation Wizard**. The Citrix Activation Wizard window appears.
4. Select **Activate Over The Internet** or **Activate By Modem** and click **Next**.
5. Click **Finish** to connect to the Citrix Activation Server. When the Citrix Activation System window appears, follow the directions to register your licenses. Record your activation codes exactly as they appear and exit.

Depending on the licenses, you may be able to obtain activation codes for more than one license at a time.
6. Switch to Citrix Licensing by pressing ALT+TAB.
7. Select the license you are activating from the list of displayed licenses and then select **Activate License** from the **License** menu. The **Activate License** dialog box appears.
8. Enter your activation code from Step 5 above and click **OK**.
9. Repeat Steps 7 and 8 for other licenses, if necessary. Your Citrix software is now activated.

URLs and Telephone Numbers to Use for Software Activation

If you cannot use the Activation Wizard to acquire an activation code, you can use the following URLs and telephone numbers to get an activation code for your software:

- Internet Activation URL: <http://www.citrix.com/activate>
- Direct Dial-In Activation: (954) 267-3010
- Fax Activation: (954) 267-9342
- Telephone Activation: (800) 424-8749