Running FileMaker® Pro 5.0v3 on Windows 2000 Terminal Services

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About Windows 2000 Terminal Services

Terminal Services is a Windows 2000 component that lets you remotely access applications installed on a Windows 2000 server from a wide range of machines over most types of network connections.

Terminal Services has three components: the server, the client, and the protocol by which the server communicates with the client.

Terminal Services server

When you are running Terminal Services in application server mode, all applications are run on the server. The Terminal Services server sends only screen information to the client and receives input only from the mouse and keyboard.

Terminal Services client

The Terminal Services client uses thin-client technology to provide the Windows 2000 Desktop to users. The client only needs to make a connection with the server and display the visual information that the server sends.

Remote Desktop Protocol (RDP)

The Remote Desktop Protocol (RDP) is automatically installed when you install Terminal Services. RDP is the only connection you need to configure in order for clients to connect to the Terminal Services server. You can configure only one RDP connection per network adapter.

Benefits of using Windows 2000 Terminal Services

- Organizations can deploy Windows 2000 on older systems that may not have hardware supported by Windows 2000.

- Users can continue to use their current operating system and applications.

- Organizations can deliver Windows-based applications to a variety of desktop environments and over LANs and WANs.

- Administrators only need to install and update one copy of an application on a server machine instead of on all the computers in their network.

- Networked applications will perform better over slow network connections.

System requirements

The hardware requirements for Windows 2000 Terminal Services depend mainly on how many clients will be connecting at a time and the usage requirements of the clients.

Terminal Services server minimum requirements

- 133 MHz or higher Pentium processor
- 128 MB RAM; 256 MB RAM recommended
- 2 GB hard disk with a minimum of 1 GB free space
- Additional 10 to 20 MB RAM per client connection

Terminal Services client minimum requirements

- Windows-based terminal devices (embedded)
- Intel and Alpha-based computers running Windows for Workgroups 3.11, Windows 95, Windows 98, Windows 3.51, Windows NT 4, and Windows 2000

Windows 2000 Terminal Services shares executable resources among users, so memory requirements for additional users running the same application are less than the requirements for the first user to load the application.

For improved performance use:

- High-performance bus architecture such as EISA, MCA, or PCI. The ISA (AT) bus cannot move enough data to support the kind of traffic that is generated by a typical Terminal Services installation.
- A SCSI disk drive, preferably one that is compatible with Fast SCSI or SCSI-2. To increase disk-access time, use a SCSI disk drive with RAID.
- A high-performance network adapter. Consider having two network adapters in the server machine and designate one for RDP traffic only.

Enabling Windows 2000 Terminal Services

Windows 2000 Terminal Services should be set to run in application server mode. For a step-by-step procedure to enable Terminal Services, see:

- http://windows.microsoft.com/windows2000/en/server/help/ts_set_h_020.htm

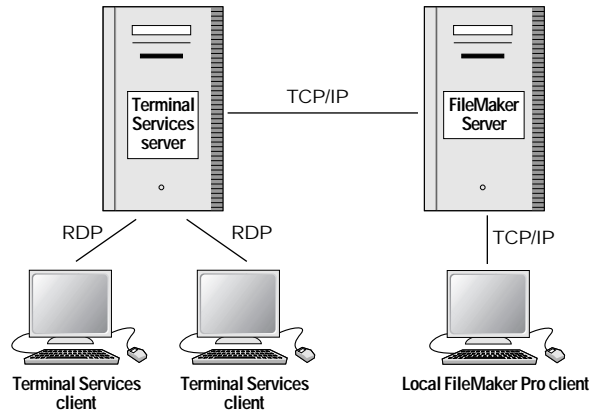## *Installing Windows 2000 Terminal Services client software*

Windows 2000 Terminal Services client software should be installed on every machine that needs to use Terminal Services. There are two versions of the client:16-bit for older machines and 32-bit for newer machines. For more information about installing the client software, see:

- http://windows.microsoft.com/windows2000/en/server/help/ts_cli_h_010.htm

Chapter 2
Using FileMaker Pro 5.0v3 with Windows 2000 Terminal Services

Installing FileMaker Pro 5.0v3 on a Terminal Services server

Note This installation requires FileMaker Pro 5.0v3 Worldwide English.

To install FileMaker Pro 5.0v3 on a Windows 2000 Terminal Services server:

1. Make sure Terminal Services has already been installed and configured on your Windows 2000 Server machine and you are logged on as administrator.

2. In the Control Panel, double-click Add/Remove Programs.

Note Do not directly access the Setup icon on your FileMaker Pro Volume License or Box Set CD.

3. Click Add New Programs.

4. Click CD or Floppy, then click Next.

5. Click Next.

6. Click Yes if you accept the terms of the license agreement.

7. Click Next.

8. Choose Typical.

If you want to install FileMaker Pro in another directory or drive on the Terminal Services server, click the Browse button and select the desired directory.

9. Click Next.

10. Choose TCP/IP and click Next.

11. In the Personalization dialog box, enter your name, company information, and installation code.

A Volume License Agreement or Box Set license installation code is required.

12. Click Next.

13. Click Yes if the registration information is correct.

14. Click Finish.

15. If prompted to restart, click No, then Finish.

16. Click Next.

17. Click Finish when Add/Remove Programs has finished the installation.

18. Restart the Terminal Services server.

Deployment recommendations

▪ Terminal Services requires a minimum of 128 MB RAM (256 MB RAM recommended by Microsoft). An additional 10-20 MB RAM is required for each subsequent Terminal Services client running FileMaker Pro.

▪ Estimate more RAM per client if your solution is memory-intensive or if you are serving multiple applications in addition to FileMaker Pro.

▪ Use a fast Pentium processor, preferably a Pentium II or Pentium III.

▪ The recommended number of users per CPU is 10-15.

▪ To improve overall performance, add processors to the Terminal Services machine (up to four are supported by Windows 2000 Server).

FileMaker, Inc. supports deployment of FileMaker Pro solutions running on Windows 2000 Terminal Services. Although it is possible to develop solutions running on Windows 2000 Terminal Services, we do not provide support for this.

Connecting to FileMaker Server 5

FileMaker Server 5.0v2 Worldwide English should be used to host files to the Terminal Services server. The Terminal Services server deploying FileMaker Pro will access FileMaker Server to host FileMaker Pro files to Terminal Services clients as well as local FileMaker Pro clients. When a client opens FileMaker Pro running on Terminal Services, accessing FileMaker Pro files hosted by FileMaker Server is done in the same way as accessing the FileMaker Server under normal networking conditions.

To review how to open files as a guest, see "Opening files as a guest" on page 13-5 in the *FileMaker Pro User's Guide*.

FileMaker Server 5.0v2 and Windows 2000 Terminal Services should not be installed on the same machine. We suggest FileMaker Server 5.0v2 be installed on a Windows 2000, Windows NT, or Mac OS 8.6 or 9.x machine.

FileMaker Pro 5.0v3 feature issues

Features not supported for Terminal Services clients

- Peer-to-peer hosting
- Web hosting
- JDBC drivers
- Remote Data Access Companion (RDAC)

TechInfo database articles

Check the TechInfo database for articles regarding running FileMaker Pro 5.0v3 on Windows 2000 Terminal Services. You can access the TechInfo database in the support area of the FileMaker, Inc. web site (http://www.filemaker.com/support).

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Appendix A
License requirements

FileMaker, Inc. license requirements

In order to use FileMaker Pro via Windows 2000 Terminal Services, you must purchase a Volume License Agreement (VLA) or a Box Set license. Retail packages of FileMaker Pro cannot be used with Terminal Services.

Volume License Agreement (VLA)

The FileMaker VLA is a transactional agreement that grants you the right to install the software on as many computers as are listed on your custom license certificate. The first VLA discount tier starts with 10 units and currently offers a 25% savings off retail package prices of FileMaker Pro. To download a PDF file containing information about the VLA see:

- http://www.filemaker.com/products/choose_license.html
then scroll to mid-page and click VLA Datasheet.

Box Set license

The Box Set license allows for any combination of FileMaker Pro 5, FileMaker Server 5, and FileMaker Pro 5 Unlimited to be installed anywhere in your organization of 50 or more employees or computers. To download a PDF file containing information about the box set license see:

- http://www.filemaker.com/products/choose_license.html
then scroll to the end of the page and click Box Set Data Sheet.

For more information on licenses, please call 1-800-725-2747 (FileMaker, Inc. holidays excluded).

Windows 2000 Server license requirements

Each client computer, regardless of the operating system running on that computer, must have a Windows 2000 Server Client Access License (CAL) if the client accesses the server for file, print and other network services, regardless of whether they are using Terminal Services.

For more information see:

- http://www.microsoft.com/windows2000/guide/server/pricing/model.asp
- http://www.microsoft.com/windows2000/guide/server/pricing/faq.asp

Terminal Services license requirements

In addition to the Windows 2000 Server CAL, you must have a Windows 2000 Terminal Services CAL to run Windows-based desktop and applications from a Windows 2000 Server, regardless of the protocol or software used to interact with applications running on the server.

For more information see:

- http://www.microsoft.com/windows2000/guide/server/pricing/terminal.asp