



## SkillCheck Professional LAN/WAN Requirements

### Architectural Overview

#### Client/Server Model

The network version of SkillCheck Professional is configured as a fat-client/thin-server application. In a standard LAN-based network installation, virtually all application data processing takes place on the client, while the server acts as a simple file storage location and data repository. SkillCheck Professional can also be deployed over a WAN, either in this mode, via a thin-client/fat-server model, or via a distributed-files/centralized-database model (see below for details).

#### Database Configuration

Data transfer and storage are accomplished via ODBC/Microsoft Jet in conjunction with the Access 97 database driver and files (MDB). System state information and score records are stored in two server side databases. SkillCheck Professional does not currently support other database types.

#### General Installation Procedure

A standard network installation consists of one administrator's workstation, one or more testing workstations, and a file server on which the SkillCheck system is stored that is accessible from all workstations. Installation is performed by first installing SkillCheck onto the server from the workstation that will be used to administer the SkillCheck system (the Administrator's PC). After initial installation, a network connection/configuration application on the file

server (NetSetup.exe) is run from the desktop of each workstation that will be used for testing. NetSetup performs the following tasks: ODCB driver installation/update, desktop icon creation, and registry initialization. If necessary, NetSetup's tasks can be automated by a network administrator for batch installation. For more information, refer to the document titled "Network Installation of SkillCheck Professional". This document is included as part of the SkillCheck Online Manual and is also available for download from <http://www.fadvassessments.com>.

This installation procedure must be adapted somewhat to fit the needs of thin-client platforms such as Windows 2003 Server and/or Citrix Presentation Server, but the same basic installation tasks identified above must be performed.

## LAN Support

The network version of SkillCheck Professional is designed to run on a traditional client-server LAN-based network.

### Client Platforms

Fully tested and supported client platforms include:

- Windows 2000
- Windows XP
- Windows Vista

### Server Platforms

Fully tested and supported server platforms include:

- Novell 3.x or higher
- Windows **2000 Server**
- Windows 2003 Server

## Protocols

Fully tested and supported network protocols include:

- TCP/IP
- IPX/SPX/NetBIOS

## **Recommended Hardware**

We recommend the following minimum and optimal hardware configurations:

Minimum requirements for SkillCheck Version 5.1.3 and later are a Pentium II/400 MHz PC running Windows 2000 Service Pack 2 or newer with at least 64 MB of RAM, a DVD drive (for installation and using audio-based testing), and a VGA monitor and display adaptor set to 1024x768 or better resolution with 256 or more colors.

A sound card is also needed for tests that utilize audio, including SkillCheck's Audio Transcription and Shorthand, Audio Data Entry and Call Center tests.

## **WAN Support**

As noted above, SkillCheck Professional can be deployed in three modes:

1) Standard LAN-based mode, or "client side", where data processing occurs on the client desktop and the server is used for file and data storage only. A client side-deployed WAN has higher bandwidth requirements for both client and server but will function acceptably with longer latency periods.

2) Thin-client mode, or "server side", where server performs all processing and serves screen refreshes to the client. An optimized server side-deployed WAN has a considerably lower bandwidth

requirement for the client but also requires a much lower latency period for acceptable user interaction.

3) Distributed files/centralized database, or "mixed mode", where all files except the system databases are copied to each client desktop and accessed locally. This mode allows for the flexibility of a WAN installation but does not require high bandwidth and low latency for acceptable performance. This mode's main complication is that because files are actually copied to each client's desktop, all custom testing and system options must be configured prior to network deployment. (Any changes made on the server after rollout must be redeployed to each client desktop.)

While there are too many variables involved to fully test or guarantee functionality on every conceivable WAN-based network architecture, SkillCheck offers conditional support for WANs that meet the basic criteria on the following page:

## WAN Support Requirements – Connectivity

Network Model	Maximum Latency	Minimum Bandwidth	Optimal Bandwidth
Client side  Example: Windows 2003/XP based network via VPN	500 ms	512 kbps (via T1, DSL, Cable, Satellite)	1.44 mbps or higher (T1 or better)
Server side (non-optimized)  Example: Windows 2003 Terminal Services	125 ms	512 kbps (via T1, DSL, Cable)	1.44 mbps or higher (T1 or better)
Server side (optimized)  Example: Windows2003 Terminal Services and Citrix MetaFrame XP Presentation Server	125 ms	Client side: 28.8 kbps  Server side: 28.8 kbps x max # of concurrent clients	Client side: 56kbps or higher  Server side: 56kbps x max # of concurrent clients or higher
Distributed Mixed Mode  Example: Windows 2007 Server, Windows XP Professional	1s	Client side: 28.8 kbps  Server side: 28.8 kbps x max # of concurrent clients	Client side: 56 kbps or higher  Server side: 56kbps x max # of concurrent clients or higher

## WAN Support Requirements – Platform Support

Network Model	Server Platforms	Client Platforms	Comments
Client side	Must be listed as supported for standard LAN deployment	Must be listed as supported for standard LAN deployment	<ul style="list-style-type: none"> <li>Standard network installation instructions should be carefully followed.</li> </ul>
Server side (non-optimized)	Windows 2000/2003 Terminal Services	Must be supported for connectivity via the server platform	<ul style="list-style-type: none"> <li>MDAC 2.7 or later must be installed on the server prior to SkillCheck installation. Microsoft Jet must also be installed separately.</li> <li>All users must access SkillCheck through the user account from which it was originally installed, or NetSetup must be run on each user account that will access SkillCheck</li> </ul>
Server side (optimized)	Windows 2000/2003 Terminal Services/Citrix Presentation Server	Must be deployable by Citrix. Acceptable permutations include Nfuse, ICA Program Manager and embedded applets.	<ul style="list-style-type: none"> <li>MDAC 2.7 or later must be installed on the server prior to SkillCheck installation. Microsoft Jet must also be installed separately.</li> <li>The ICA Protocol must be configured so that all users access SkillCheck through the account from which it was originally installed, or NetSetup must be run on each user account that will access SkillCheck.</li> <li>Anonymous ICA connection is not supported.</li> <li>Audio content delivery is not supported.</li> </ul>

Distributed Mixed- Mode	Must be listed as supported for standard LAN deployment	Must be listed as supported for standard LAN deployment	<ul style="list-style-type: none"><li>• Standard network installation instructions should be carefully followed plus additional configuration for centralized database location. Additional configuration after installation must be completed prior to network deployment.</li></ul>
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