iSeries Access for Windows Troubleshooting Tools
iSeries News
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When you are using one operating system and connecting to a different operating system via a network, often problems can arise when attempting to get the two systems to communicate with each other. This article will cover some first step things to take when connecting to the iSeries and troubleshooting tools available to you if you are using either the iSeries Access for Windows product.

iSeries Access for Windows

Access for Windows (product number 5722-XE1) runs on Microsoft Windows operating systems, such as 95, 98, ME, NT, 2000, XP, and 2003. Although its code all its code installs on the desktop, the product also includes OS/400 Host Server code with which it communicates. In the purest sense, Access for Windows and its corresponding Host Server code are client/server applications. Therefore, if you encounter problems, the first step is to insure is that you have the correct Host Server code running for the Access for Windows functions you're trying to use. Figure 1 is a chart showing the Host Servers used by Access for Windows (and iSeries Navigator which is included in Access for Windows).

OS/400 Host Servers	OS/400 Service Name*	iSeries Access for Windows functions	Description
Port Mapper	as-svrmap	All use this	Port mapper returns the port number for the requested server
Sign-on	as-signon	All use this	Sign-on server is used for every iSeries Access connection to authenticate users and to change passwords
Central	as-central	PC5250, Data Transfer, ODBC	Central server is used when an iSeries Access license is required, and also for downloading translation tables
Data Queue	as-dtag	OLE DB, All Operations Navigator functions	Data Queue server allows access to the OS/400 data queues, used for passing data between applications
Database	as-database	Data Transfer, ODBC, OLE DB, All Operations Navigator functions	Database server is used for accessing the OS/400 database
Remote Command	as-rmtcmd	OLE DB, Base iSeries Navigator	Remote command server is used to send commands from a PC to an iSeries and for program calls
File	as-file	All Operations Navigator functions	File Server is used for accessing any part of the OS/400 file system
Print	as-netprt	AFP Viewer, Fax support, All Operations Navigator functions	Print Server is used to access printers known to the iSeries
Web Admin	as-admin-http	All Operations Navigator functions	Used to access web applications served by the iSeries
DDM	drda	OLE DB	DDM server is used to access data via DRDA and for record level access
Telnet	telnet	PC5250	Telnet server is used to access 5250 emulation

Netserver	netbios-ns	iSeries Access Install, All Operations Navigator functions	iSeries Netserver allows access to iSeries integrated file system from Windows PCs
LDAP	ldap	All Operations Navigator functions	Provides a network directory service
Mgmt Central	as-mtgctrlj and as-mtgctrl	All Operations Navigator functions	Management Central server is used to manage multiple iSeries in a network

You should run the NETSTAT *CNN on the iSeries system to verify it is in a *Listen status. If a server you need is not listed, then run the STRHOSTSVR (Start Host Server) command.

PING

The next step is to find out if your PC can connect to your iSeries server. Bring up a DOS prompt and run the PING program using both the host names and IP addresses of your iSeries (if you know them). PING can help you determine if there are problems with:

· the server to which you want to connect
· the DNS server (if one is configured)
· the primary gateway (if one is configured)
· some other computer on the network.

If your PC cannot ping to your iSeries, you have either a PC problem or a network problem, but not an Access for Windows problem. If everyone else can successfully ping the iSeries but you cannot, you need to insure your IP configuration is set up correctly, Also use the Windows Hardware Conflict Troubleshooter to make sure that your network adapter is operating correctly. If the PING command does not work on other PCs either, then your Network Administrator needs to help you look at the network environment.

CWBPING

Some firewall configurations will not allow the PING to flow through the firewall. If this happens to you, Access for Windows provides a command called 'CWBPING' that runs on from a DOS prompt. This command can help you determine if you can actually make a successful connection to a server, or help determine the cause of a connection failure. You can see detailed messages by using the (/v) verbose option. To see how this works, let's say you want to check the status of the host servers on the machine names System 1 with address 9.12.103.14. You'd enter either "cwbping SYSTEM1" or "cwbping 9.12.103.14" at the prompt. You can actually use CWBPING even if you have not yet used the iSeries Navigator 'Add Connection' option for configuring a connection to the server.

iSeries Navigator 'Verify' Function

If you have never connected to your iSeries server using Access for Windows, another way to check your connection is to start iSeries Navigator, and then click on 'Connections' from the panel. This starts the 'Add Connection' wizard. Once you have provided your iSeries name or TCP/IP address, you can click the 'Verify' button to have iSeries Navigator attempt to make the connection. If it can make the connection, it also displays all Host Servers currently running. If you already have connections identified to your iSeries, then simply right click on the iSeries name or address. A pulldown appears from which you can select the 'Verify' function. The messages displayed via 'Verify' are the same as those CWBPING would display, but they appear in a window that lets you simply double-click on a message to see its help text. The 'Verify' function window also contains a progress bar to show you how far Verify has progressed. For

these reasons, consider using the 'Verify' function instead of CWBPING.   See Figures 1 and 2 show how to use the 'Verify' function.
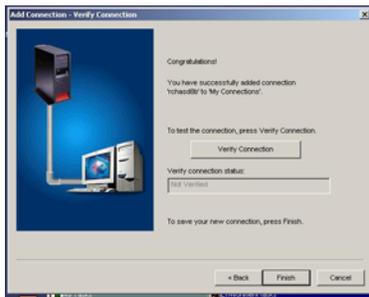

Figure 1. iSeries Navigator Connection Wizard
            Use 'Verify' function

Figure 2. Results of 'Verify' function

CWBCOSSL

CWBCOSSL is a new Access for Windows PC command that can help you plan use of a Secure Sockets Layer (SSL) connection to your iSeries server.   (Note: "CWB" is an iSeries standard prefix, "CO" stands for communications, "SSL" is for Secured Sockets Layer.) CWBCOSSL was made available in the first service pack for V5R1 Client Access Express and is included in the V5R2 Access for Windows product. You install it in the main iSeries Access install directory (which defaults to c:\program files\ibm\client access). Its consists of It consists of two pieces. CWBCOSSL.EXE is the program and CWBCOSSL.TXT is a help text file. This tool downloads digital certificates into the iSeries Access for Windows key databases. If you obtain digital certificates from well-know Certificate Authority (CA) signers, such as Verisign, Thawte, etc, there is no need to use this tool because the digital certificates are already installed on your computer.

CWBCOSSL includes a 'Start CA Download' button (Figure 3) that uses the non-SSL side of iSeries Access Host Servers (for example, Signon, RmtCmd, ByteStream, and possibly Server Mapper). The other iSeries Host Servers (such as, HTTP, Telnet) are not used during the download. The Start CA Download button performs the following steps:

- Ensures installation of the optional SSL component of iSeries Access (5722-CE3, Client Encryption program)
- Connects to the selected iSeries (requires valid user ID/password)
- Checks to see if the Digital Certificate Manager (DCM) is installed on the iSeries
- Downloads the Certificate Authority in binary format

- Opens the currently configured PC Key Database for iSeries Access for Windows
- Prompts for the PC Key Database password
- Stores the CA in the PC Key Database
- Closes the PC Key Database
- Additionally adds the CA to the Java Key Database if the iSeries Java ToolBox is installed on the PC

You can also check the box called "Just place in a pc file" to additionally store the iSeries CA as a PC file in the iSeries Access Service Trace Files directory. Then you'll be able to use this file directly with the IBM Key Management utility as well as with browser access to the iSeries. Simply double-click on file within your Windows Explorer browser to start the Microsoft Certificate Manager Import Wizard to place the CA into MS Internet Explorer's key database.

Figure 3. CWBCOSSL.EXE Program

If you're having problems making an SSL connection to the iSeries server, here are some remedies for the most common reasons:

- In order for the iSeries Telnet server to pick up changes made in the DCM, you must stop and restart it. Be sure you have the latest PTF CUM package installed otherwise the restart will cancel all Telnet sessions to that iSeries.
- If your iSeries Access Host Servers are already running, they will automatically pick up changes made in DCM. However, if they are not running, then run the iSeries command STRHOSTSVR *ALL (Start Host Server) to start them.
- Make sure that your HTTP Admin Host server is running.

Diagnostic Tools Utility

The Diagnostic Tool Utility (see Figure 4) provides a unified interface for starting, stopping, displaying, and working with the properties of the History log, Detail trace, and Entry point trace. From the Diagnostic Tools system tray icon, you can:

- Start and stop History log and traces
- Display the History log
- Display trace output
- Work with History log and trace properties

If you do need to contact IBM Service, it is likely that they will ask you to run this utility. It is located in the Access for Windows 'Properties' panel:
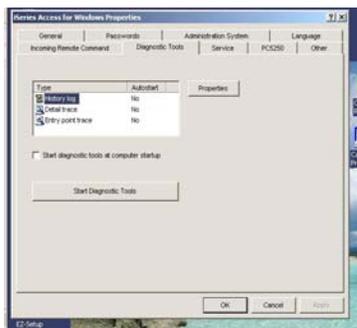
Figure 4. Diagnostic Tools Utility

Summary

Since iSeries Access for Windows uses the TCP/IP protocol, there really isn't any configuration that needs to be done on the desktop other having a network adapter and setting up your network connection in your desktop operating system. Then it's simply a matter of insuring you can connect to your iSeries server. And for those very difficult network situations, both products provide tracing information to aid in tracking down the problem.

Sidebar

Both iSeries Access for Windows is part of the iSeries Access Family, Product 5722-XW1.   It is supported for connectivity to both OS/400 V5R1 and V5R2. If you currently are running on OS/400 V5R1, you can order Feature 2645 of 5722-XW1 to receive the V5R2 versions of this product – which can be used to connect to your OS/400 V5R1 system.

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