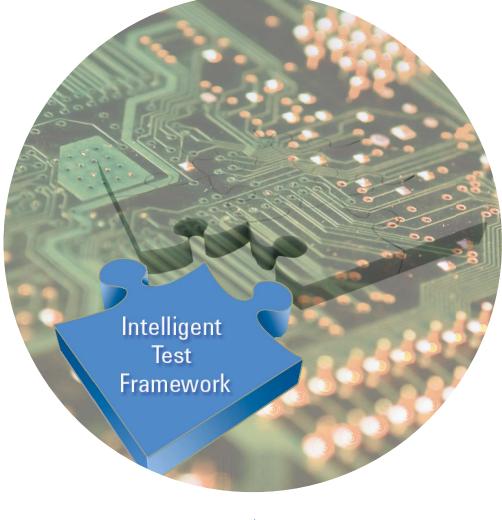


Agilent Troubleshooting Medalist Intelligent Test Framework (ITF) Port Problems (Network Communication Issues)

**Technical Overview** 





**Agilent Technologies** 

## Introduction

Network communication problems happening at the ITF server or the tester agent can be quite frequent and is normally a complicated issue to work on. This document serves as a guide / reference to do preliminary analysis and troubleshooting when network / communication problems do occur.

## Signs that tell you a communication problem might be present

- Transfer of board test result files fail and all result files are stuck at Input folder
- · Failing to enter the ITF admin client page
- Log files show traces of "connection refused", "error occurred while attempting to connect a socket"

Although these points above may show potential communication problems, they do not guarantee that network or port communication errors are definite root causes. These are just suggested paths for troubleshooting.

## Troubleshooting paths

There are 3 paths a user could take. All are possible paths and are not listed in a priority order since this is situation dependent.

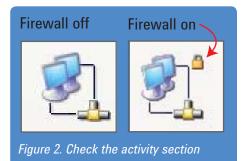


Check firewall settings

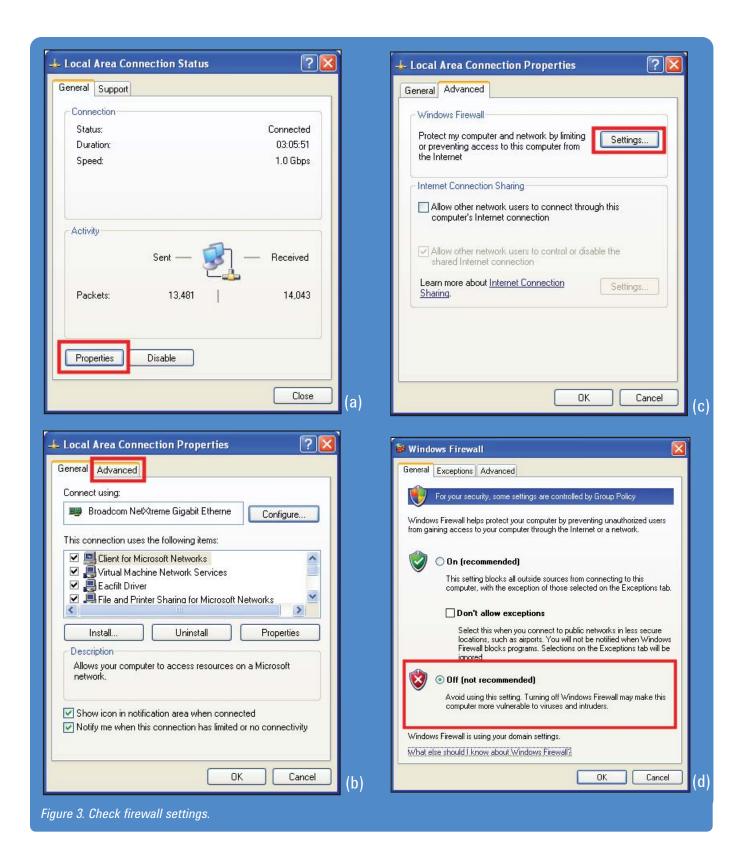
Check TCP/IP setting for SQL 2000 / 2005

Use tcpview application to monitor the ITF critical ports (downloadable from http://technet.microsoft.com/en-us/ sysinternals/bb897437.aspx)





If firewall is on, it might cause problems to certain port communications, to turn it off, at the local area connection screen, click Properties > click on Advanced Tab > click on Settings at Windows Firewall section > click and check the Off radial button, as shown in Figure 3.





 Click on Start > All Programs > Microsoft SQL Server 2005 > Configuration Tools > SQL Server Configuration Manager, as shown in Figure 4.

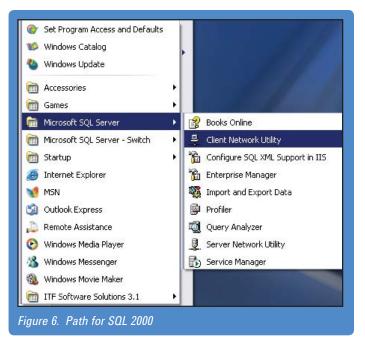


 At the SQL Server Configuration Manager window, expand the SQL Server 2005 Network Configuration, click on Protocols for MSSQLSERVER and make sure TCP/IP is set to Enabled, as shown in Figure 5.

F SQL Server Configuration Manager				_ 🗆 🗙
Ele Action View Help				
⇔ ⇒ 🖻 🛱 🕞 😫				
SQL Server Configuration Manager (Local)     □     SQL Server 2005 Services	Protocol Name Shared Memory	Status		
B-U SQL Server 2005 Network Configuration	<ul> <li>Shared Memory</li> <li>Named Pipes</li> </ul>	Disabled	_	
- Protocols for MSSOLSERVER	TCP/IP	Enabled		
图 曼 SQL Native Client Configuration	3 VIA	Disabled	-	
Figure 5. Enable protocols				

#### For SQL 2000

1. Click on Start > All Programs > Microsoft SQL Server > Client Network Utility, show in Figure 6.



 At the SQL Server Client Network Utility window, look under "Enabled protocols by order" section and make sure TCP/IP falls under that section. If it is at the other section, click to select the TCP/IP and click on the Enable >> button, click on OK when done, as shown in Figure 7.

eneral Alias DB-Library Options	Network Libraries	1		
Disabled protocols: Multiprotocol Nw/Link IPX/SPX	Enable >> << Disable	Enabled pro	tocols by order: es	
<ul> <li>Force protocol encryption</li> <li>✓ Enable shared memory protocol</li> </ul>		<u>↑</u> ↓	Properties	
	ОК	Cancel	Apply	Help



# Use tcpview application to monitor the ITF critical ports

- 1. Run the tcpview.exe application. (The user can download this over the Internet as it is a freeware or it can be obtained from Agilent MTSS Support Web Site. Download and unzip it to any location within the ITF server.)
- 2. At the tcpview window, a list of all processes running and the ports they are using will be shown. Figure 8 is an example of a typically normal port activity screen at an ITF server. The highlighted section are ITF related processes, there may be other processes that are also ITF related other then tomcat processes, as shown in Figure 6. Some ports that should be paid attention to are port number 8080 and 7331.

Imgrd exe: 1456         TCP         agilent-mtss: 27000         agilent-mtss: 0         LISTE           Isass exe: 596         UDP         agilent-mtss: 6400         ***           Isass exe: 596         UDP         agilent-mtss: 6400         ***           Isass exe: 596         UDP         agilent-mtss: 1037         ***           Isass exe: 596         UDP         agilent-mtss: 1037         ***           Isass exe: 596         UDP         agilent-mtss: 1037         ***           Isassex: 596         UDP         agilent-mtss: 1037         ***           Isassex: 596         UDP         agilent-mtss: 1037         ***           Isassex: 596         UDP         agilent-mtss: 1037         ***           Isagleerv: exe: 1 TCP         agilent-mtss: 1036         agilent-mtss: 0         LISTE           Isagleerv: exe: 1 UDP         agilent-mtss: 1030         **         **           Isvchost: exe: 3 UDP         agilent-mtss: 1030         **         **           Isvchost: exe: 3 UDP         agilent-mtss: 1020         **         **           Isvchost: exe: 3 UDP         agilent-mtss: 1025         **         **           Isvchost: exe: 3 UDP         agilent-mtss: 1025         **         **	e Options Process View Help				
Imgrd exe:1456 TCP         agilent-mtss:27000         agilent-mtss:0         LISTE           Isass: exe:556         UDP         agilent-mtss:isakmp         ***           Isass: exe:556         UDP         agilent-mtss:1000         ***           Isass: exe:556         UDP         agilent-mtss:1037         ***           Isass: exe:556         UDP         agilent-mtss:1037         ***           Isass: exe:556         UDP         agilent-mtss:1037         ***           Isaliser: exe:1         TCP         agilent-mtss:1037         ***           Isdiser: exe:1         TCP         agilent-mtss:109*         agilent-mtss:0         LISTE           solser: exe:1         UDP         agilent-mtss:ms-sql+s         agilent-mtss:0         LISTE           solser: exe:1         UDP         agilent-mtss:ms-sql+s         localhost:1249         ESTA           solser: exe:1         UDP         agilent-mtss:1000         **         **           svchost exe:8         UDP         agilent-mtss:1000         **         **           svchost exe:8         UDP         agilent-mtss:1020         **         **           svchost exe:8         UDP         agilent-mtss:1025         **         **           svchost	a - C				
Isass exe:595     UDP     agilent-miss:isakinp     ***       Isass: exe:596     UDP     agilent-miss:4500     ***       Isass: exe:596     UDP     agilent-miss:1037     ***       "minegisty: exe     TCP     agilent-miss:1037     ***       sqleerv: exe:1     TCP     agilent-miss:1037     agilent-miss:0     LISTI       sqleerv: exe:1     TCP     agilent-miss:1037     ***       sqleerv: exe:1     TCP     agilent-miss:0     LISTI       sqleerv: exe:1     TCP     agilent-miss:nesqls     agilent-miss:0     LISTI       sqleerv: exe:1     TCP     agilent-miss:nesqls     boalhost:1249     ESTA       sqleerv: exe:1     UDP     agilent-miss:sqlm     **       svchost exe:1     UDP     agilent-miss:1900     **       svchost exe:8     UDP     agilent-miss:1020     **       svchost exe:8     UDP     agilent-miss:1025     **       svchost exe:8     UDP     agilent-miss:netbios-sgn     agilent-miss:0     LISTI       svstem:4     TCP     agilent-miss:netbios-sgn     agilent-miss:0     LISTI       System:4     UDP     agilent-miss:1025     **       system:4     UDP     agilent-miss:10304     agilent-miss:0       system:	Proc / Protocol	Local Address	Remote Address	State	
Image: sqleervr.exet	Isass.exe:596 UDP Isass.exe:596 UDP	agilent-mtss:isakmp agilent-mtss:4500	*.*	LISTENING	
svchost.exe1 UDP         agilent.mtss:1900         **           svchost.exe1 UDP         agilent.mtss:1900         **           svchost.exe2 TCP         agilent.mtss:1900         **           svchost.exe2 TCP         agilent.mtss:1900         **           svchost.exe2 TCP         agilent.mtss:1900         **           svchost.exe2 TCP         agilent.mtss:ntp         **           svchost.exe3 UDP         agilent.mtss:1025         **           svchost.exe3 UDP         agilent.mtss:1025         **           svstem4         TCP         agilent.mtss:netbios-sm         agilent.mtss:0         LISTE           System4         UDP         agilent.mtss:netbios-sm         agilent.mtss:0         LISTE           System4         UDP         agilent.mtss:netbios-sm         agilent.mtss:0         LISTE           System4         UDP         agilent.mtss:netbios-dgm         **           tomcafs.exe         TCP         agilent.mtss:1304         agilent.mtss:0         LISTE           subserved         UDP         agilent.mtss:1304         agilent.mtss:0         LISTE           subserved         TCP         agilent.mtss:7331         agilent.mtss:0         LISTE           tomcafs.exe         TCP	1 miregistry.exe TCP 1 sqlservr.exe1 TCP 1 sqlservr.exe1 TCP 1 sqlservr.exe1 TCP 1 sqlservr.exe1 TCP	agilent-mtss:1099 agilent-mtss:ms-sql-s 141.183.190.197:ms-sql-s agilent-mtss:ms-sql-s	agilent-mtss:0 agilent-mtss:0 localhost:1249	LISTENING LISTENING LISTENING ESTABLISHED	
svchost.exe:9UDP     agilent.mtss:1026     ***       svchost.exe:9UDP     agilent.mtss:1025     ***       svchost.exe:9UDP     agilent.mtss:1025     ***       svstem:4     TCP     agilent.mtss:1025     agilent.mtss:0       System:4     TCP     agilent.mtss:microsoft.ds     agilent.mtss:0     LISTE       System:4     UDP     agilent.mtss:microsoft.ds     **       System:4     UDP     agilent.mtss:nebios.sdgm     **       Sustem:4     UDP     agilent.mtss:nebios.sdgm     **       sustem:4     UDP     agilent.mtss:104     agilent.mtss:0     LISTE       tomcaf5.exe:     TCP     agilent.mtss:731     agilent.mtss:0     LISTE       tomcaf5.exe:     TCP     agilent.mtss:731     agilent.mtss:0     LISTE	svchost.exe:1 UDP svchost.exe:1 UDP svchost.exe:8 TCP svchost.exe:8 UDP	agilent-mtss: 1900 agilent-mtss: 1900 agilent-mtss: epmap agilent-mtss: ntp	*:* agilent-mtss:0 *:*	LISTENING	
System:4         UDP         agilent-mtss:netbios-dgm         ***           Sustem:4         UDP         adilent-mtss:netbios-ne	svchost.exe:9UDP svchost.exe:9UDP System:4 TCP System:4 TCP	agilent-mtss:1026 agilent-mtss:1025 agilent-mtss:microsoft-ds agilent-mtss:netbios-ssn	agilent-mtss:0 agilent-mtss:0	LISTENING LISTENING	
Na tom cat5.exe: TCP agilent-mitss:1304 agilent-mitss:0 LIST Na tom cat5.exe: TCP agilent-mitss:7331 agilent-mitss:0 LISTI Na tom cat5.exe: TCP agilent-mitss:8009 agilent-mitss:0 LISTI	System:4 UDP	agilent-mtss:netbios-dgm			
	tomcat5.exe: TCP tomcat5.exe: TCP tomcat5.exe: TCP tomcat5.exe: TCP tomcat5.exe: TCP tomcat5.exe: TCP	agilent-mtss:1304 agilent-mtss:7331 agilent-mtss:8009 agilent-mtss:8080 agilent-mtss:8005	agilent-mtss:0 agilent-mtss:0 agilent-mtss:0 agilent-mtss:0	LISTENING LISTENING LISTENING LISTENING LISTENING ESTABLISHED	

3. If the user is unsure if a certain process is related to ITF operations and needs to find out the source of the process these steps may help. Right click on a process, and select "Process Properties...", as shown in Figure 9.

File Options Process View I	Help			
🖬 A 🛶 🗊				
Proc / Protocol	Local Address	Remote Address	State	^
🗂 agIntitf.exe:18 TCP	agilent-mtss:1058	agilent-mtss:0	LISTENING	
🗂 agIntitf.exe:18 UDP	agilent-mtss:1060	x.x		
🗂 alg.exe:340 🛛 TCP	agilent-mtss:1143	agilent-mtss:0	LISTENING	
ftp.exe:3844 TCP	141.183.190.197:1540	agilent-mtss:0	LISTENING	
T ftp.exe:3844 UDP	agilent-mtss:1538	×,×		
Imgrd.exe:1456 TCP	agilent-mtss:27000		LICTORNE	
🗂 Isass.exe:596 UDP	agilent-mtss:isakmp	Process Properties	in in the second se	
🗂 Isass.exe:596 UDP	agilent-mtss: 4500	End Process		
🗂 Isass.exe:596 UDP	agilent-mtss:1037			
🗂 rmiregistry.exe TCP	agilent-mtss:1099	Close Connection		
🗂 sqlservr.exe:1 TCP	agilent-mtss:ms-sql-s	Whois	Ctrl+W	
🗂 sqlservr.exe:1 TCP	141.183.190.197:ms-sql-	Copy	Ctrl+C	
🗂 sqlservr.exe:1 TCP	agilent-mtss:ms-sql-s	10Call1030.1240	COTROCIONED	s
🗂 sqlservr.exe:1 UDP	agilent-mtss:ms-sql-m	×.×		
🗂 svchost.exe:1 UDP	agilent-mtss:1900	×. ×		
🗂 svchost.exe:1 UDP	agilent-mtss:1900	ж. ж		
🗂 svchost.exe:8 TCP	agilent-mtss:epmap	agilent-mtss:0	LISTENING	
🗂 svchost.exe:8 UDP	agilent-mtss:ntp	×.×		
🗂 svchost.exe:8 UDP	agilent-mtss:ntp	ж. н		- 11
🗂 svchost.exe:9 UDP	agilent-mtss:1026	x.x		
🗂 svchost.exe:9 UDP	agilent-mtss:1025	×.×		
System:4 TCP	agilent-mtss:microsoft-ds	agilent-mtss:0	LISTENING	
System:4 TCP	agilent-mtss:netbios-ssn	agilent-mtss:0	LISTENING	
System:4 UDP	agilent-mtss:microsoft-ds	ж. ж		
System:4 UDP	agilent-mtss:netbios-dgm	×.×		
System:4 UDP	agilent-mtss:netbios-ns	×.×		
b tomcat5.exe: TCP	agilent-mtss:1304	agilent-mtss:0	LISTENING	~
e)				5

4. At the Process Properties window, it shows the path and the command line of the process that was selected which gives the user an idea of what the process actually is. In the example in Figure 10, it is the Imgrd.exe process that uses port number 27000 which actually is an ITF process (judging on the path it came from).

Properties for Imgrd.exe:1456	D
Macrovision Corporation Version: 9.00.0000.0000 Path:	
C:\Agilent\ITFSS3.1\ITF\flexIm\Imgrd.exe	
Command line:	
C:\Agilent\ITFSS3.1\ITF\flexIm\Imgrd	
	End Process OK

5. An example of an ITF server having a critical port occupied is shown in Figure 11. Here the process "svchost.exe" is occupying the port 8080, which is also used by the process "tomcat5. exe" (Port 8080 is used by the ITF Admin Client) therefore this resulted in the ITF Admin Client page not able to be loaded.

Ble Options E	Process View	Help			
🖬 A 🚽 🕄					
Proce 4	Protocol	Local Address	Remote Add	State	
hpsmhd.e 1	TCP	mtss-itf:2301	mtss-itf:0	LISTENING	
hpsmhd.e 1		mtss-itf:2381	mtss-itf:0	LISTENING	
hpsmhd.e 1		mtss-itf.aqilent	mtss-itf:0	LISTENING	
hpsmhd.e 1	TCP	mtss-itf.agilent	mtss-itf:0	LISTENING	
Imgrd.exe: 1	TCP	mtss-itf:27000	mtss-itf:0	LISTENING	
Isass.exe: 7		mtss-itf:1055	mtss-itf:0	LISTENING	
Isass.exe: U	JDP	mtss-itf:isakmp	**		
🗂 Isass.exe: U	JDP	mtss-itf:ipsec	**		
🗂 Isass.exe: U	JDP	mtss-itf:1027	**		
Isass.exe: 7	FCP	mtss-itf.aqilent	pen-my-dc2.e	ESTABLISHED	
Isass.exe: 7	FCP		pen-my-dc2.a		
msmdsrv 1	TCP	mtss-itf:ms-ola		LISTENING	
miregistry 1		mtss-itf:1099	mtss-itf:0	LISTENING	
spoolsv.e U	JDP	mtss-itf:1952			
🗂 sqlbrowse U	JDP	mtss-itf:ms-sql	**		
sqlservr.e 1	TCP	mtss-itf:ms-sql-s		LISTENING	
sqlservr.e 1	TCP	mtss-itf:ms-sql	mtss-itf:0	LISTENING	
sqlservr.e 7	TCP	mtss-itf:ms-sql-s	localhost1069	ESTABLISHED	
sqlservr.e 7	FCP	mtss-itf.aqilent	mtss-itf.agilent	ESTABLISHED	
sqlservr.e 7	FCP		mtss-itf.aqilent		
svchost.e 1	FCP	mtss-itt:epmap	mtss-itf:0	LISTENING	
🗂 svchost.e L	JDP	mtss-itf:1026	**		
🗂 svchost.e L	JDP	mtss-itf:1025	**		
🗂 svchost.e L	JDP	mtss-itf:ntp			
🗂 svchost.e L		mtss-itf.agilent	**		
svchost.e 1	TCP .	mtss-itf:ms-wot	mtss-itf:0	LISTENING	
svchost.e 1	FCP	mtss-itf.agilent	agmekkuan01	ESTABLISHED	
suchaste 7		mtss-itf:http	mtss-itff)	LISTENING	
🗂 svchost.e 1		mtss-itf:8080	mtss-itf:0	LISTENING	
svchost.e		mtss-itt:17012	mtss-itt:0	LISTENING	
	FCP	mtss-itf:micros		LISTENING	
	TCP	mtss-itf.agilent		LISTENING	
	FCP		pngbldg82fmd		
	FCP		agmleonglf01		
	FCP		agmleisleow	ESTABLISHED	
	JDP	mtss-itf:micros	**		
	JDP	mtss-itf.agilent			
	JDP	mtss-itf.agilent			
tomcat5.e 1		mtss-itf:1087	mtss-itf:0	LISTENING	
tomcat5.e 1		mtss-itf:7331	mtss-itf:0	LISTENING	
tomcat5 e T		mtss-itf:8009	mtss-itf 0	USTENING	-
tomcat5.e 1		mtss-itf:8080	mtss-itf:0	LISTENING	
tomcat5.e 1		mtss-itf:8005	mtss-itf:0	LISTENING	
tomcat5.e 1		mtss-itf:1069	localhostms-s	ESTABLISHED	
winlogon U		mtss-itf:1073	*.*		
🗋 winlogon U		mtss-itf:1945	**	10730200370-0	
winvnc.ex 7		mtss-itf:5800	mtss-itf:0	LISTENING	
uimine av T	TOP.	mteevitf-5900	mtee-itf-0	LISTENING	

- 6. A user can end a selected process by Right Clicking on a selected process and select "End Process..." If the process cannot be manually ended, please consult your IT Department to terminate the process.
- 7. If in any case, there are some processes that customer insist to have running and cannot be terminated, the user should consult with their IT expert on which port they are not using and change it to that port number. Please contact Agilent support if details on how to do this are needed:

#### www.agilent.com/find/contactus.

## Some critical ITF ports to monitor

Process	Port
tomcat5.exe (ITF Admin Client)	8080
tomcat5.exe (tester file transfer / repair tool to ITF)	7331
rmiregistry.exe (AQT to ITF)	1099

If the user needs other parties to perform more investigations on the port listing, please capture one or two screenshots (print screen) to cover all port listings and send the images to appropriate parties.

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Singapore	1 800 375 8100			
Taiwan	0800 047 866			
Thailand	1 800 226 008			
Europe & Middle East				
Austria	0820 87 44 11			
Belgium	32 (0) 2 404 93 40			
Denmark	45 70 13 15 15			
Finland	358 (0) 10 855 2100			
France	0825 010 700*			
_	*0.125 €/minute			
Germany	01805 24 6333**			
	**0.14 €/minute			
Ireland	1890 924 204			
Israel	972-3-9288-504/544			
Italy	39 02 92 60 8484			
Netherlands	31 (0) 20 547 2111			
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