

## **IP Office Technical Tip**

Tip no: 113

Release Date: 4 November 2005

Region: GLOBAL

## Windows 2003 SP1 Security Modifications for Avaya IP Office Voicemail Pro and Avaya IP Office Manager

This document outlines changes to the configuration of Windows 2003 Server SP1 that are required to run IP Office Manager and IP Office VoiceMail Pro. Microsoft has introduced a set of security technologies in Server 2003 Service Pack 1 that improves the ability of computers running Windows Server 2003 to withstand attacks from viruses and worms. Changes have been made to DCOM, Windows Firewall and various integrated components. Microsoft has also introduced a new tool to help manage security policy called the Security Configuration Wizard (SCW).

Microsoft has published a white paper that reviews Server 2003 SP1 functionality changes. Addition information on this subject can be found using the following link:

http://www.microsoft.com/downloads/details.aspx?FamilyId=C3C26254-8CE3-46E2-B1B6-3659B92B2CDE&displaylang=en

The security policy enforced by Service Pack 1 requires modifications in order for IP Office applications to work properly and maintain functionality. The following procedure documents the modifications needed for IP Office Voicemail Pro and IP Office Manager to function correctly.

## Security Configuration Wizard Installation

Click Settings/Control panel/Add or remove programs, then select add/remove windows components.

Scroll down the list to select and install the "Security Configuration Wizard".

Once installed, to launch the SCW, click Start, then Run, and type scw (scw.exe) or select Control Panel/Administrative tools/Security Configuration Wizard.



At the welcome screen, click 'Next' to start the Security Configuration Wizard.

urity	Configuration Wizard
Y	iguration Action /ou can create a new security policy; edit or apply an existing security policy; or rollback the ast applied security policy.
s	Select the action you want to perform:
6	Create a new security policy
	C Edit an existing security policy
0	C Apply an existing security policy
- (	C <u>R</u> ollback the last applied security policy
E	Existing security policy file: Browse Browse
L	earn more about <u>configuration actions</u> .
	< <u>B</u> ack <u>N</u> ext > Cancel

Select "Create a new security policy" then click 'Next' to proceed.

Security Configuration Wizard	×
Select Server The configuration of the server you select will be used as a baseline for this security	policy.
Select a server to use as a baseline for this security policy. You can apply this policy server or to any other server with a similar configuration. Server (use DNS name, NetBIOS name, or IP address):	to the selected
IZCCCITESTOI	Browse
<ul> <li>You must have administrator privileges on the selected local server. If your curr does not have administrator privileges on the selected local server, click Cancel, wizard using Run As, and specify another account.</li> <li>The IIS 6.0 common files are required on the local machine when remotely scanr server.</li> </ul>	, rerun the
Learn more about <u>selecting and configuring groups of servers</u> .	
< <u>B</u> ack <u>N</u> ext >	Cancel

Leave the hostname if it is populated correctly, then click Next (there will be a short pause), when complete click Next. If the hostname is incorrect, click 'Browse' to search for the correct Server.

Security Configuration Wizard	×
Select Server Roles These server roles are used to enable services and open ports. A server can perform multiple roles.	I)
View: Installed roles	
<ul> <li>Application server</li> <li>DFS server</li> <li>File server</li> <li>Middle-tier application server (COM+/DTC)</li> <li>Print server</li> <li>Remote access/VPN server</li> <li>SQL Server 2000</li> <li>Telnet server</li> <li>Web server</li> </ul>	
Learn more about <u>server roles</u> .	
< <u>B</u> ack <u>N</u> ext > Ca	ancel

The Select Server Roles defaults should be correct, these should be reviewed and corrected if necessary before selecting 'Next' to proceed. In the example above, SQL

Server 2000 has been installed in order to run Compact Contact Center.

Security Configuration Wizard	x
Select Client Features Servers also act as clients. These client features are used to enable services. A server can support multiple client features.	C)
View: Installed features	
<ul> <li>✓ ▷ DHCP client</li> <li>✓ ▷ DNS client</li> <li>✓ ▷ DNS registration client</li> <li>○ Domain member</li> <li>○ ▷ FTP client (normal mode)</li> <li>○ ▷ Group Policy administrative client</li> <li>✓ ▷ Microsoft networking client</li> <li>○ ▷ Remote access client</li> <li>○ ▷ SQL client</li> <li>○ ▷ WebDAV client</li> <li>✓ ▷ WINS client</li> </ul>	
Learn more about <u>client features</u> . 	Cancel

The default 'Installed Features' should be correct for the 'Select Client Features' page, but should be reviewed and amended if necessary before selecting 'Next' to proceed.

Security Configuration Wizard	X
Select Administration and Other Options These administration and other options are used to enable services and open ports.	ED.
⊻iew:       Installed options         Select the options used to administrate the selected server:	
<ul> <li>Alerter</li> <li>Application Experience Lookup Service</li> <li>Audio</li> <li>Background Intelligent Transfer Service (BITS)</li> <li>Backup (NT or 3rd party)</li> <li>Backup to local hardware</li> <li>Browse master</li> <li>Browser</li> <li>Content indexing</li> <li>Content indexing</li> <li>EMS command prompt channels</li> </ul>	
Learn more about <u>administration options</u> .	Cancel

The default 'Installed options' should be accepted by selecting 'Next'.

Security Configuration Wizard	×
Select Additional Services There are services installed on the selected server that were found while processing the security configur from database.	Ì
Select the additional services that the selected server requires:	
CCC Delta Server	
CCC Reporting	
🔽 🕨 Key Server	
🔽 🕨 Machine Debug Manager	
🔽 🕨 McAfee Framework Service	
🔽 🕨 Network Associates McShield	
🔽 🕨 Network Associates Task Manager	
V Office Source Engine	
🔽 🕨 Upload Manager	
VMProDBService	
Voicemail Pro Service	
, Learn more about <u>additional services</u> .	
< Back Next >	Cancel

IMPORTANT – Confirm that all IP Office Applications have been checked before selecting 'Next' to continue.

Security Configuration Wizard		x
Handling Unspecified Services Unspecified services are services that are not installe the security configuration database.	d on the selected server and not listed in	Ĵ
This security policy might be applied to servers with se unspecified service is found, perform the following act		an
Do not change the startup mode of the service		
C Disable the service		
Learn more about <u>unspecified services</u> .		
	< Back Next >	Cancel

IMPORTANT – 'Do not change the startup mode of the service' MUST be selected before clicking 'Next' to proceed.

If applied to the <u>s</u> elected server,			-
Service	Current Startup Mode	Policy Startup Mode	Used By 4
Application Layer Gateway S	Manual	Disabled	Internet Connection Sh
Application Management	Manual	Disabled	Application installation [
Background Intelligent Transf		Automatic	SMS Management Point
Computer Browser	Automatic	Disabled	SMS Logon Point, Brow
Distributed File System	Manual	Disabled	DFS server, Domain col
File Replication	Manual	Disabled	Domain controller (Activ
IPSec Services	Automatic	Disabled	IPsec Services
MSSQLServerADHelper	Manual	Nisabled	SQL Server Active Dire
Net Logon	Manual	Disabled	Domain controller (Activ
•			•

Review the changes made in the steps above, going back if necessary to correct the changes, before selecting 'Next' to proceed.



Do not select 'Skip this section', then click 'Next' to proceed.

Security Configuration Wizard
Open Ports and Approve Applications The inbound ports listed below are used by the roles and administration options that you selected. Selected ports are opened, unselected ports are blocked.
View: All ports
Select the ports to open: <ul> <li>Ports used by DCOM (dlihost.exe)</li> <li>Ports used by McAfee Framework Service (FrameworkService.exe)</li> <li>Ports used by Key Server (KeyServe.exe)</li> <li>Ports used by Network Associates McShield (mcshield.exe)</li> <li>Ports used by SCW Engine (scshost.exe)</li> <li>Ports used by System RPC applications</li> <li>Ports used by VMProDBService (vmpdbsvc.exe)</li> <li>Ports used by Voicemail Pro Service (vmprov5svc.exe)</li> <li>Ports used by Network Associates Task Manager (vstskmgr.exe)</li> </ul>
Add     Edit     Remove     Advanced       Learn more about opening ports and approving applications.     Advanced     Advanced
< <u>Back</u> <u>N</u> ext > Cancel

Review the list provided, and confirm that all IP Office applications installed are selected, before clicking 'Next' to continue.

Notice ports used by IP Office Applications:-

VoiceMail Pro Database Service -



VoiceMail Pro Service -



NOTE – the IP Office Manager application will be added to firewall exclusion list in a later step.

applied to the <u>s</u> elected server, this sec	urity policy	would use t	he following inbound p	ort configuration:
Port	Protocol	Status	Security Options	Restrictions
80 (HTTP)	TCP	Open		
123 (NTP)	UDP	Open		
135 (RPC endpoint mapper/DCOM)	TCP	Open		
137 (NetBIOS name service)	UDP	Open		N
137 (NetBIOS name service)	TCP	Open		k
139 (NetBIOS session service)	TCP	Open		
443 (HTTPS)	TCP	Open		
445 (SMB)	TCP	Open		
1433 (SQL over TCP)	TCP	Open		
1434 (SQL Server Resolution Service)	UDP	Blocked		
3389 (Remote Desktop Protocol)	TCP	Open		•
•				
To change any of the above setting: selections. earn more about <u>confirming port configu</u>		o the previo	us pages and change	the appropriate

Take time to review the selected ports, then select 'Next' to continue.

Security Configuration Wizar	d	×
Q	Registry Settings	
•	Use this section to configure protocols used to communicate with other computers. When configured to communicate with computers running earlier versions of Windows, these protocols are vulnerable to exploits such as password cracking and man-in-the-middle attacks.	
	Answering these questions incorrectly might prevent computers running earlier versions of Windows from communicating with the selected server. If you do not know the characteristics of the computers that are communicating with the selected server, you should skip this section.	
	Skip this section If you skip this section, this security policy will not configure registry settings.	
	Learn more about registry settings.	
	< Back Next Cancel	

Do not select 'Skip this section', then click 'Next' to proceed.

Security Configuration Wizard
Require SMB Security Signatures The following information determines whether Server Message Block (SMB) security signatures are enabled or required.
The selected server has the following attributes:
All computers that connect to it satisfy the following minimum operating system requirements:
<ul> <li>Windows NT 4.0 Service Pack 6a or later</li> <li>Windows 95 with the Directory Services Client Pack installed</li> <li>Windows 98 or Windows Millennium Edition</li> <li>Windows CE .NET 4.2 (for example Windows Mobile 2003 Second Edition) or later</li> <li>It has gurplus processor capacity that can be used to sign file and print traffic</li> <li>This option digitally signs all file and print traffic. This signing is processor intensive, so it is recommended only if the server does not normally exceed 70% processor utilization.</li> </ul>
These settings affect the RequireSecuritySignature value in HKLM\System\CurrentControlSet\Services\LanManServer\Parameters. Learn more about <u>SMB security signatures</u> .
< <u>B</u> ack <u>N</u> ext > Cancel

Leave the selections as default to ensure multiple Operating System compatibility then select 'Next' to continue.

Security Configuration Wizard	×
Outbound Authentication Methods The following information is used to determine the LAN Manager authentication level used when making outbound connections.	E)
Select the methods the selected server uses to authenticate with remote computers:	
Domain Accounts	
Local Accounts on the remote computers	
File sharing passwords on Windows 95, Windows 98, or Windows Millennium Edition	
These settings affect the Imcompatibilitylevel value in HKLM\System\CurrentControlSet\Control\LSA.	
Learn more about outbound authentication methods.	
< <u>B</u> ack <u>N</u> ext > Ca	ancel

Check all authentication methods for maximum compatibility, then select 'Next' to continue.

If ap	oplied to the selected server,	, this security policy w	ould use the following	registry settings:	
	tting	Registry Value	Current Data	Policy Data	Registry
	tivate Named Pipe Firewall	pipefirewallactive	Not Defined	Disabled	HKEY_LC
	N Manager authentication	Imcompatibilitylevel Idapserverintegrity	Send NTLMv1 re Not Defined	Send LM & NTLM Not Defined	HKEY_LC HKEY_LC
	quire CDAP Signing quire SMB Security Signat		Disabled	Enabled	HKEY_LC
ha					

Review the changes you have made, then select 'Next' to continue.



Do not select 'Skip this section', then click 'Next' to proceed.

Security Configuration Wizard
System Audit Policy Determine an audit policy based on your auditing objectives.
Select your auditing objective:
<ul> <li>Do not audit This option does not perform any auditing.</li> <li>Audit successful activities This option audits successful changes to system and configuration files, allowing you to reconstruct events after the fact to determine who changed system or configuration files. It will degrade system performance slightly.</li> <li>Audit successful and unsuccessful activities This option audits both successful changes and failed attempts to system and configuration files, allowing you to determine who changed system or configuration files, as well as detect attempts to make unauthorized changes. It will degrade system performance more than auditing just successful activities.</li> </ul>
Learn more about <u>auditing policy</u> .
< <u>B</u> ack <u>Maxt</u> > Cancel

Select an audit policy according to organizational preferences, then select 'Next' to continue.

	security policy would use the following	
Audit Event Type Account Logon Events	Current Setting	Policy Setting Success, failure
Account Management	Success Not audited	Success, failure
Directory Service Access	Not audited	Success, failure
Logon Events	Success	Success, failure
Object Access	Not audited	Success, failure
Policy Change	Not audited	Success, failure
Privilege Use	Not audited	Not audited
Process Tracking	Not audited	Success, failure
System Events	Not audited	Success, failure
in order to audit access of the file :	SACLs cannot be removed using the S	

Review and confirm the selected audit policy by selecting 'Next'.



Do not select 'Skip this section', then click 'Next' to proceed.

ecurity Configuration Wizard	×
Select Web Service Extensions for Dynamic Content By default, IIS serves only static content. To serve dynamic content, you must enable the Web service extensions that your content requires.	
Select the Web service extensions that the selected server requires:	
🔽 🕨 Active Server Pages	
🔽 👂 Internet Data Connector	
Server Side Includes	
🗖 🕑 WebDAV	
Prohibit all other Web service extensions not listed above	
Learn more about Web service extensions.	
Eddin niero aboli. <u>Trob bei nieb oktensiona</u> n	
< <u>B</u> ack <u>N</u> ext >	Cancel

Select the options for supported Web service extensions based on current and future needs, then select 'Next' to continue

Select the Virtual Directories to Retain
The following legacy virtual directories pose a potential security risk and should be removed if unneeded.
Select the virtual directories to retain on the selected server:
□ V IISAdmin
D IISSamples
□ ▷ MSADC
Cripts
$\sim$
Learn more about <u>retaining virtual directories</u> .
< <u>B</u> ack <u>N</u> ext > Cancel

None of these directories are required by IP Office applications and can be left unselected unless otherwise required by alternate applications. Select 'Next' to continue.

uri	ity Configuration Wizard
Pro	event Anonymous Users from Accessing Content Files Increase the security of your Web site content by setting additional restrictions for anonymous users.
	You can improve the security of your Web site content by preventing anonymous users. In addition to preventing access via IIS authentication settings, you can deny write access to anonymous users with file system access control lists (ACLs).
	Deny anonymous users write access to content files
	$\underline{\textcircled{M}}$ This setting is effective only when IIS is using an NTFS file system volume.
	Learn more about preventing file access by anonymous users.
	< Back Next > Cancel

This can be left un-checked to allow anonymous access if desired, or selected to increase security (recommended) if the web server is to be made available for external

access. Select 'Next' to continue.

Setting Item Scripts	Current Data Unknown	Policy Data	Metabase Key
Scripts	OUNIOWU		
	Not installed	Removed	/LM/W3SVC/1/ROOT/SCRIP
MSADC	Not installed	Removed	/LM/W35VC/1/ROOT/MSAD
	Not installed	Removed	/LM/W35VC/1/ROOT/IISSAM
IISHelp	Not installed	Removed	/LM/W3SVC/1/ROOT/IISHEL
IISAdmin	Not installed	Removed	/LM/W3SVC/1/ROOT/IISADI
*.exe	Prohibited	Prohibited	/LM/W3SVC
*.dll	Prohibited	Prohibited	LM/W3SVC
WEBDAV	Prohibited	Prohibited	/LM/W3SVC
SSINC	Prohibited	Allowed	/LM/W3SVC
HTTPODBC	Prohibited	Allowed	/LM/W3SVC
	IISAdmin *.exe *.dll WEBDAV 55INC	IISHelp Not installed IISAdmin Not installed *.exe Prohibited *.dl Prohibited WEBDAV Prohibited 5SINC Prohibited	IISHelp Not installed Removed IISAdmin Not installed Removed *.exe Prohibited Prohibited *.dll Prohibited Prohibited WEBDAV Prohibited Prohibited 5SINC Prohibited Allowed

Review and verify the IIS settings then select 'Next' to continue.



Select 'Next' to save the security policy that has been created by the Wizard.

Security Configuration Wizard	x
Security Policy File Name The security policy file will be saved with the ame and description that you provide.	Ð
Security policy file name (a '.xml' file extension will be appended if not provided):	
C:\WINDOWS\security\msscw\Policies\hostname	Browse
Description (optional):	
	×
View Security Policy         Include Security Templates	
Learn more about <u>saving security policies</u> .	
< <u>B</u> ack <u>N</u> ext >	Cancel

Enter a filename (the PCs hostname) to replace 'hostname', then select 'Next' to continue.



Select 'OK' to continue at the Security Configuration Wizard warning message.

Security Configuration Wizard	×
Apply Security Policy You can apply the security policy to the selected server now or later.	Ð
Apply later     Run this wizard again to apply this security policy at a later time.     Apply new     When your gick Next, the wizard applies this security policy to the selected server.	
Learn more about applying security policies.	
< <u>B</u> ack <u>N</u> ext >	Cancel

Select 'Apply now', then 'Next' to make the policy active.

pplying Security Policy The Security Configuration W	'izard is applyir	ng the securit	y policy to the	e selecte	d server.	
Applying security policy						
		X				
		2				

The Wizard will now apply policy. This may take a few minutes. Select 'Next' when complete.



Select 'Finish' to exit the Security Configuration Wizard. A reboot is not prompted for at this point, but is required for some aspects of the security policy to be implemented. If the policy needs reviewing or amending, the Security Configuration Wizard can be run again, and the option to edit a previously saved policy selected.

After rebooting the server, run the IP Office manager application.

This warning will display:

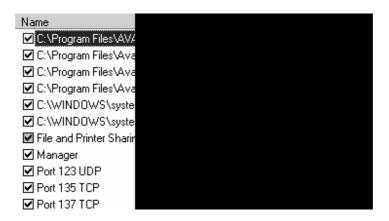


Select Unblock to allow the IP Office Manager application to function correctly, then Login as normal:

🕅 Enter Operator Name and Password	×
Please enter operator name	
Administrator	
Please enter password	
I	
OK <u>C</u> ancel	

The windows firewall has now been updated with an "exception" for the IP Office Manager application.

To confirm this, open 'My Network Places', select the 'Local Area Connection', then right click on this connection to display the properties dialog. Select the advanced tab, then 'Settings' to display the Windows Firewall settings:



Notice that the IP Office applications are present in the list –"manager" is the IP Office Manager application.

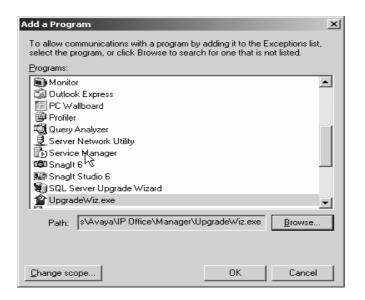
An exception is also required for the IP Office Upgrade Wizard.

To add this, select the 'Exceptions' tab, then 'Add Program'.

Browse to C:\Program Files\Avaya\IP Office\Manager\

Then select UpgradeWiz.exe

Select 'OK' to confirm the selection.



Select 'OK' to add the exception, then verify that the exception has been added by scrolling down to locate UpgradeWiz.exe.

💱 Windows Firewall	×
General Exceptions Advanced	
Windows Firewall is blocking incoming network connections, except for the programs and services selected below. Adding exceptions allows some programs to work better but might increase your security risk.	
Programs and Services:	
Manager Port 123 UDP Port 135 TCP Port 137 TCP Port 1433 TCP Port 443 TCP Port 80 TCP Remote Desktop UpgradeWiz.exe UPnP Framework	
Add Port       Edit       Delete         ✓       Display a notification when Windows Firewall blocks a program	
OK Cancel	

Select 'OK' then 'OK' again to exit the network configuration applet.

Windows 2003 has now been set up allow IP Office Applications to work.

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