Intel AppUp[®] SMB Service

Built on the Intel[®] Hybrid Cloud Platform

Initial Setup Guide – 2X ApplicationServer XG*

Revised 1/11/2013

This guide is intended to identify the steps required to install this software on the Intel[®] Hybrid Cloud platform, and does not replace the manufacturer's instructions for third-party products. Before completing the instructions below, you will need to install the respective software on the server using the Store feature in the Intel[®] Hybrid Cloud Management Portal (<u>https://hybridcloud.intel.com</u>).

LICENSE ALERT: Purchased keys may not be used on this product.

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Product Version

2X ApplicationServer XG* Version 10.5 (Build 1322)

Dependencies / Requirements

- Windows Server* 2008 R2 64-bit is the main supported platform for 2X ApplicationServer XG.
- Terminal Server (i.e., Windows* RDS (Remote Desktop Server)). It is recommended to host the Windows RDS server on a separate appliance inside the Intel Hybrid Cloud server, not on the ASXG appliance. A pre-existing TS/RDS instance in the customer's LAN also can be used as part of the ASXG Farm.
- The appropriate 2X Client must be used to connect to the 2X server. Clients are available for Windows*-based, Linux, and mobile devices.
- When you install 2X ApplicationServer XG from the Intel AppUp SMB Service store, you must use the license provided by Intel (via <u>https://hybridcloud.intel.com</u>).
- If another version of 2X ApplicationServer XG (not from the Intel AppUp SMB Service catalog) is installed, you will need to uninstall it prior to installing the 2X ApplicationServer XG from the Intel AppUp SMB Service store.
- Installing a non-IHC version of 2X ApplicationServer XG on the IHC server Windows* VM is currently NOT supported.

Appliance Default Passwords

To download the current "Appliance Default Password List" (login required):

- 1. Use a Web browser to go to: <u>www.intelhybridcloud.com/</u>.
- 2. Click the **Login** link and enter your login information.
- 3. At the top of the page, select **Menu** and then click the **Support** link.
- 4. On the Support page, click the **Server Setup & Activation** section to expand it and then click the **Additional Setup Documents** link.
- 5. Click the Additional Setup Documents zip file version that you want to download and then select to save the zip file.
- 6. Extract the Appliance Default Password List from the zip file.
 - NOTE: The default, out-of-the-box experience allows you to specify the passwords for the Microsoft* Windows*-based appliances during configuration. For Linux* appliances, type "passwd" in the shell.

Pre-Installation Tasks

Before installing the application on your VMs, you will need to open the appropriate ports on the firewall in each VM. Below is an example of how to open port 80 on the ASXG server so that the clients can connect to it. After that is a list of other ports that need to be opened on each VM.

Open Port 80 Inbound

To configure port 80 for 2X Client connection to the ASXG server:

- 1. On the 2X ASXG server, in the server manager, go to **Configuration** > **Windows Firewall with Advanced Security** > **Inbound Rules**.
- 2. Click on New Rule.



3. Make sure **TCP** is selected, then select **Specific Local Ports** and enter "80" as the port number. Click **Next**.

🕷 New Inbound Rule Wizar	ď		×
Protocol and Ports Specify the protocols and ports	to which this rule applies.		
Specify the protocols and ports Steps: Protocol and Ports Action Profile Name	to which this rule apply to TCP or U TCP UDP Does this rule apply to all local p C All local ports Specific local ports: Learn more about protocol and p	DP? orts or specific local ports? [80 Example: 80, 443, 5000-5010	
		< Back Next >	Cancel

4. Make sure Allow the connection is selected and then click Next.



5. Leave "Domain, Private, and Public" checked. Click Next.

🖗 New Inbound Rule Wizaı	rd	>
Profile		
opecify the profiles for which thi	s rule applies.	
Steps: Rule Type	When does this rule apply?	
Protocol and Ports Action Profile	Domain Applies when a computer is connected to its corporate domain.	
Name	 Private Applies when a computer is connected to a private network location. Public Applies when a computer is connected to a public network location. 	
	Learn more about profiles	
	< Back Next > (Cancel

6. Type a name for the rule in the "Name" box and then click **Finish**.

🍿 New Inbound Rule Wizard		×
Name		
Specify the name and description	of this rule.	
Steps:		
Rule Type		
Protocol and Ports		
Action		
Profile	Name: 2X Client lebound	
Name		
	Description (optional):	
	< Back Finish Cance	8

You have now created an inbound rule for port 80 on your ASXG server:

📕 Server Manager					X
File Action View Help					
🗇 🤿 🖄 📷 📑 🔹 🖬					
Server Manager (WIN2K81)	Inbound Rules	-		Actions	
E Features	Name	Group	Prof -	Inbound Rules	(\uparrow)
Diagnostics	2X Client Inbound		All	New Rule	
Configuration	IntelAEPort1		All		-
🗄 🕑 Task Scheduler	IntelAEPort2		All	Y Hiter by Profile	
Windows Firewall with Advanced Security	IntelAEPort3		All	Filter by State	•
Inbound Rules	1 IntelVMLCPort		All	Filter by Group	
Cutbound Rules	BranchCache Content Retrieval (HTTP-In)	BranchCache - Content Retrie	All	a mace by Gloup	-
Connection Security Rules	BranchCache Hosted Cache Server (HTTP-In)	BranchCache - Hosted Cache	All	View	•
🗈 🌉 Monitoring	BranchCache Peer Discovery (WSD-In)	BranchCache - Peer Discovery		G Refresh	
Services	COM+ Network Access (DCOM-In)	COM+ Network Access	All		
WMI Control	COM+ Remote Administration (DCOM-In)	COM+ Remote Administration	All	Export List	
Eccal Users and Groups	Core Networking - Destination Unreachable (Core Networking	Dom	Help	
Groups	Core Networking - Destination Unreachable (Core Networking	All		_
E G Storage	Core Networking - Destination Unreachable	Core Networking	Dom	2X Client Inbound	
	Core Networking - Destination Unreachable	Core Networking	All	Disable Pule	
	Core Networking - Dynamic Host Configurati	Core Networking	Dom		
	Core Networking - Dynamic Host Configurati	Core Networking	All	🔏 Cut	
	Core Networking - Dynamic Host Configurati	Core Networking	All	Copy	
	Core Networking - Internet Group Managem	Core Networking	All		
	Core Networking - Internet Group Managem	Core Networking	Dom	X Delete	
	Core Networking - IPHTTPS (TCP-In)	Core Networking	All	Properties	
	Core Networking - IPv6 (IPv6-In)	Core Networking	Dom		
	Core Networking - IPv6 (IPv6-In)	Core Networking	All	Help	
	Core Networking - Multicast Listener Done (I	Core Networking	Dom		

- 7. You will need to create the following additional firewall rules:
 - On the ASXG server VM:

Ports 20002 TCP and 20003 TCP inbound

• On each RDS server VM:

Ports 30004 TCP and 30004 UDP inbound

Port 3389 TCP inbound

 Refer to link <u>http://www.2x.com/images/Port-Reference.jpg</u> for information about ports that need to be open on the ASXG system and Terminal Servers/Remote Desktop Servers.

Download and Install

- 1. After ensuring that the dependencies and requirements listed above are set up, go to the Intel AppUp[®] SMB Service store at: <u>https://store.intelhybridcloud.com</u>.
- 2. Log in using your MSP ID and password.
- 3. Search for and select **2X ApplicationServer XG**.
- 4. Select the Intel[®] Hybrid Cloud server.
- 5. Select the Windows-based appliance where you want to install 2X ApplicationServer XG.
- 6. Click **Add to Order**.
- 7. Complete the ordering process. The application will download within 24 hours.
- 8. After downloading and installing the 2X ApplicationServer XG, you will need to get the license key (see Licenses and Configuration section in this document) before logging in and connecting to the appliance.

Connect to the Appliance / Application

- 1. Log in to the Intel Hybrid Cloud server manager.
- 2. Click the **Appliances** button to open the Appliances page.
- 3. Select the appliance on which 2X ApplicationServer XG is installed.
- 4. If the appliance is Stopped, click the **Start** button.
- 5. Select the **Console** tab to open the Console page.
- 6. Click the **Launch** button (next to VNC Console) to open the VNC window.
- 7. Log in to the Windows-based appliance using the required credentials.
- 8. To launch the 2X Console, go to Start > All Programs > 2X > ApplicationServer > 2X ApplicationServer Console

Activate the License

- 1. Go to the Intel AppUp[®] SMB Service store at: <u>https://store.intelhybridcloud.com</u>.
- 2. Log in using your MSP ID and password.
- 3. Select the Intel Hybrid Cloud server and then select the appliance where 2X ApplicationServer XG is installed. Under that appliance you will see a link like the example shown below:



4. Click the **Send license via email** link to place a license request. The license key will be sent to the email address of the MSP. Save the license key received by email to activate ASXG.

- 5. To activate ASXG, do the following:
 - a. Open Port 443 on the Windows-based appliance where ASXG is installed and verify connectivity to erp.2x.com by pinging to this domain. Run command > ping erp.2x.com at the Windows command prompt. If the ping is successful, then the activation command in step b will be able to make the back-end connection to perform license activation.
 - b. Open the Windows command prompt and go to C:\Program Files (x86)\2X\ApplicationServer and run the applylicense.bat file using the license key you received via email as the argument. For example, if the license key you received is A234-B234-C234-D234, then run as >applylicense.bat A234-B234-C234-D234
- 6. To verify that the license has been activated properly, open the ASXG console and navigate to **View** > **Licensing**.
 - If the License info section displays the Company as "Intel Inc," the Contact Name as "Hybrid Cloud," and the License key text box displays the key you received and used to activate the product, then the license has been activated correctly.
 - If the License information section does not show these details and instead shows a 30day trial period, then the activation is not complete. Possible reasons include an Internet connection that is not working right, or the network uses a proxy environment to reach the Internet. Please verify that the Internet connection is working properly. If you are using a proxy server, then activate the license using the application interface: Click the **Activate** button next to the License key text box and follow the onscreen instructions. Use proxy details (IP, Username, and Password) to proceed.

Configure the Application

Before configuring ASXG, please note the following:

2X ASXG has three components:

- 2X ASXG Server
- An RDS Server
- 2X Client

2X ASXG Server and the RDS server are hosted on the Intel Hybrid Cloud appliance, each in separate Windows 2008 R2 VMs. Install the 2X Client on each desktop/laptop located outside of IHC server, i.e., on the customer's LAN.

Please Note: The 2X Client can't be hosted on either the TS/RDS server or the ASXG appliance.

Download the 2X Client

To download the 2X Client, please navigate via Web browser to <u>http://www.2x.com/rdp-client/</u> and download for required platform.

 Refer to the links below to configure ASXG Server: <u>http://www.2x.com/docs/en/manuals/html/applicationserver/2XApplicationServer.html</u> <u>http://www.2x.com/docs/en/manuals/pdf/2XApplicationServer.pdf</u>

Recommended Typical Setup



Install the 2X Agent on the RDS Server

After installing 2X, you will need to install the 2X agent on your RDS server so that 2X can stream the applications from that server.

1. Log in to the VM that contains the 2X application and start the 2X ApplicationServer XG Console.

2X 2X ApplicationServer File View Language H	r XG Console elp		
Wizard Application	Folder Desktop Predefined A	pplication Document) »
Client Manager	Information In this section you can manage of	all the hardware inside your farm like terminal servers, gateways, and backup servers.	2)
		OK Cancel Apply	Help

2. Click **Terminal Servers** in the center pane, then click **Add**.

EX 2X ApplicationServer File View Language He	XG Console		_O×
Wizard Application	Folder Desktop Predefined Appl		
Farm	Farm - WINZ(81 Ferminal Servers WIN Josts Wind Hosts Remote PCs Gateways Sackup Servers	Servers In Farm: Servers In Farm: Server Type Agent State Direct Address Des	Find Add Properties Delete Check Agent
Universal Scanning Connection	Information	Name Servers	Add Properties Delete
		OK Cancel	Apply Help

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3. Type the IP address of your RDS server in the dialog box and click Next.



4. The 2X server will attempt to contact a 2X agent on the RDS server. Since there is no agent installed yet, you will get a message that the agent did not reply. Click **Install**.

ent Information		?
Server:	192.168.77.35	Add
Agent:	Not Verified	Cancel
Version:	N/A	
Terminal Services:	N/A	
Citrix Services:	N/A	
OS Type:	N/A	
atus: <mark>Agent did n</mark>	ot reply, please install Agent.	stall 2 3

5. You will get an install dialog box. Click the **Install** button.

In	stalling 2X Te	erminal Serv	ver Agent				? ×
Γ	Server			 		_	Install
	Server:	192.168.77	.35				
	05:	Windows (x	32)	 		न	Cancel
	SSH Port:	22			Default		
[Credentials						
	Override	system crede	entials				
	Username;						
	Password;						
ĺ	Status Prog	ress					
	Server		Status	Туре		- 1	
	192.168.7	7.35	Queued	 Terminal Ser	ver		

6. When the installation has finished, click **Done**.

stalling 2X Te	rminal Serv	er Agent			?
Server					Install
Server:	192.168.77.	.35			
OS:	Windows (x3	32)		_	Done
SSH Port;	22			Default	
Credentials					
C Override	system crede	ntials			
Username:					
Password:					
Status Progr	ess	Status	Tupe		
192.168.77	.35	Complete	Terminal S	erver	

7. You will now get confirmation that the agent has been installed. Click **Add**.

Aç	jent Information		<u>?</u> ×
	Server: Agent: Version:	192.168.77.35 Agent Verified 10.5 (build 1322) Protocol Version 4	Add
	Terminal Services:	Enabled on port 3389.	
	Citrix Services:	Not enabled.	
	OS Type:	Microsoft Windows Server 2008 R2 Standard Edition (WOW 64)	
\$	5tatus: 2X Termina	I Server Agent installed. Uninstall	2X

You are returned to the 2X ApplicationServer XG console. You should see your RDS server under "Terminal Servers" with a green check mark next to it. You are now ready to publish applications.

2X 2X ApplicationServe	er XG Console Hein	_O×
Wizard Application	Folder Desktop Predefined Application Document Image: Second Se	
Farm Load Balancing	Image: Servers Servers in Farm: Image: Servers Servers in Farm: Image: Servers Server Type Agent State Direct Address Image: Servers Image: Servers Image: Servers Image: Servers Image: Servers Image: Servers	nd dd
Publishing Universal Printing	Check Terminal Server Groups:	elete : Agent
Universal Scanning Connection	Name Servers A Propi	dd erties elete
Client Manager	Information In this section you can manage Terminal Servers and also set up Delegation. OK Cancel Apply	2 ×

Publishing Your First Application

The following example shows how to publish an application, using Notepad as the example application. You can use this example as a guide for publishing any applications that are installed on your RDS server. These same steps can also be used for publishing a desktop, folder, or document.

1. In the 2X ApplicationServer XG console, click on **Publishing**.

EX 2X ApplicationServer XG Console	
Wizard Application Folder Desktop Predefined Application Document Farm - WIN2K81 Terminal Servers Delegation Servers in Farm: Servers in Farm:	
Farm Image: State PCs Server Type Agent State Direct Address Des Image: State PCs Image: StatePCs Image: StatePCs Ima	Find Add Properties Delete
Universal Scanning	Add Properties Delete
Client Manage Triffermation In this section you can manage Terminal Servers and also set up Delegation. OK Cancel Appl	2X

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2. Click the **Add** button.

2X 2X ApplicationServer XG Console	<u>_0×</u>
EX ApplicationServer XG Console File View Language Help Wizard Application Folder Desktop Published Resources Imformation Earner Farm Load Balancing Publishing Universal Frinting Universal Frinting Universal Stanning	
Connection	-
Clerk Manager Add O Delete 1 Move Up 4 Move Down O Disable 1 Sort 5 End	2)
OK Cancel Apply	Help

3. Select the type of item to publish. In the example below, "Application" is selected.

Select Item Type	<u>?</u> ×
What do you want to publish?	
• Application	
Publish an application.	
C Folder	F
Create a folder to collect multiple applications or desktops.	
C Desktop	
Publish a desktop.	-
C Document	
Publish a document such as a Word document or Excel spreadsheet.	
< Back Next > Cancel	Help

4. Next, select the type of server to publish from. For RDS, select Terminal Server.



5. Select the type of application to publish. In the example shown, **Single Application** is selected.

What type of application do you want to publish?	
• Single Application	
Publish a single standalone application.	
🔿 Installed Applications 🛛 🥳	
Publish installed applications.	
O Predefined applications	
Publish commonly used applications such as Windows Explorer.	
< Back Next > Cancel Help	

6. Type a name for your application. A description is optional. The RDS server will be listed next to Servers. Click the **ellipsis** button next to the "Target" field to select the location on your RDS server where the application is installed.

Application		<u>? ×</u>
Application		
Name:	Notepad	
Description:	Notepad	
Run:	Normal Window	•
	Change Icon Advanced Set	tings
Server Settings		
Server(s):	192.168.77.35	-
Target:	[
Start in:		
Parameters:		
	Use Default Settings	
	< Back Next > Cancel	Help

7. You will see a list of drives on the target RDS server. Navigate to the location where your application is installed. (In this case, <u>\\windows\system32\notepad.exe</u>.) Click **Open**.

Open File í	from 192.168.7	7.35			? ×
Look In:	\\192.168.77.3	5\C\$\Windows\System32\	.		
	Name		Size	Туре	
	📋 ndadmin.e×	e		Application	
	🗾 net.exe			Application	
	🗾 net1.exe			Application	
	netbtugc.e:	xe		Application	
	netdom.exe	9		Application	
	netiougc.ex	(e		Application	
	🛛 💐 Netplwiz.e×	e		Application	
	🗾 netsh.exe			Application	
	NETSTAT.E	XE		Application	
	📋 newdev.ex	e		Application	
	🗾 nltest.exe			Application	
	notepad.ex	e		Application	
	🛛 🧸 nslookup.e:	xe		Application	
	ntkrnlpa.ex	e		Application	
	ntoskrnl.ex	e		Application	•
	File name:	notepad.exe			Open
	Files of type:	Executable Files (*.exe)		•	Cancel

8. The application dialog will now be populated with the information needed to publish it. Click **Next**.

olication	?
·	
- Application	
Name:	notepad
Description:	Application
Run:	Normal Window
2	Change Icon Advanced Settings
Server Setting:	
Server(s):	192.168.77.35
Target:	%windir%\System32\notepad.exe
Start in:	%windir%\System32
Parameters:	
	Use Default Settings
	< Back Next > Cancel Help

9. For this example, no changes were made on the filtering page. Click **Finish**.

Filtering				? ×
¥ AX				
Select Filtering Type:	lser		-	
—				
Allow the following Use	ers:			
Default Object Type:	Users & Groups		<u>~</u>	
Use LDAP mode when	adding Users & Group	05		
User		Туре		Add
			F	Properties
				Delete
			-	00000
1				
	< Back	Finish	Cancel	Help

Notepad is now published.

ZX 2X ApplicationServer XG Console	
Wizard Application Folder Desktop Predefined Applica	Lion Document
Published Resources Farm Load Balancing Publishing Publishing Universal Printing Universal Scanning Universal Scanning Connection Cilent Manage Add Delete Move U	Information Publish From Application Filtering Application: #9: notepad Description: Application Target: %windir%\5ystem32\notepad.exe Start In: %windir%\5ystem32 Create Shortcut in Start Menu under '2X Remote Desktops & Applications\%Gro. Published from: All Servers in Farm Concurrent licenses: Unlimited Session Sharing: Enabled Move Down & Disable figson Find
	OK Cancel Apply Help

Connecting the 2X Client

After publishing an application, you can configure the 2X Client to run the application.

1. After installing the client, you will see a dialog box asking if you would like to configure a connection. Click **Yes**.



- 2. Type in the hostname or IP address of the 2X ApplicationServer XG.
- 3. Enter a username and password that will be used to log in to the application. Keep in mind that you must use a different user account for each client that will log in to the 2X ApplicationServer. Each of these user accounts must be a member of the Remote Desktop Users group on the RDS server. Leave the connection mode as Gateway and the port as 80.

Connection I	Properties - New 2X C	onnection
Connection	Display Local Resource	es Experience Network Authentica
Connect	ion Settings	
	Primary Connection:	192.168.77.249
•	Connection Mode:	Gateway Mode
	Port:	80
		Secondary Connections
	Alias:	
20gon	Auto Logon	
	🔽 Use system creden	tials (550)
	Username:	Administrator
	Password:	•••••
		Save Password
	Domain:	inteltestig.local
		OK Cancel Help

4. Click **OK**. The client will connect to the 2X ApplicationServer and display a list of published applications. To run the application, double-click it.

2X Client	_ 🗆 ×
File Applications Tools View Help	
🖅 🖻 🎓 📴 🞹 · 🐶 📪	
Open Refresh Up Folders View Options Connection Properties	
Search: 📃 🤐 🗙 Info	×
nstanad	
integed.	

5. Refer to the links below for more information about configuring the ASXG Server: <u>http://www.2x.com/docs/en/manuals/html/applicationserver/2XApplicationServer.html</u> <u>http://www.2x.com/docs/en/manuals/pdf/2XApplicationServer.pdf</u>

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Uninstall

- 1. Log in to the Intel Hybrid Cloud server manager.
- 2. Click the **Appliances** button to open the Appliances page.
- 3. Select the appliance where the **2X ApplicationServer XG** application is installed.
- 4. If the appliance is Stopped, click the **Start** button.
- 5. Select the **Application** tab.
- Click the **2X ApplicationServer** logo. Make sure that the 2X ApplicationServer Console is closed in the appliance before clicking the Uninstall button in the next step. If it is open, the uninstall will fail.
- 7. Click the **Uninstall** button.
- 8. Logs in the server manager console will confirm that the uninstall was successful.

Troubleshooting

Technical Support

- For questions pertaining to this guide, contact Intel Customer Support: <u>http://www.intel.com/support/progserv/appupsbs/hybrid/sb/CS-032313.htm</u>
- In the event that you (the Managed Service Provider) are unable to resolve a technical support issue by providing first level support for the Software, you may obtain second level support from the help desk of the Software manufacturer, pursuant to the terms and conditions accompanying the Software. Technical Support contact information is provided at the following location:

http://www.intel.com/support/progserv/appupsbs/hybrid/sb/CS-032313.htm#Software

2X Technical Support Contact Information:

Email ID – <u>support@2x.com</u>

Phone Number – 866-970-6262

Support Website - www.2x.com/support

- Intel[®] Hybrid Cloud Platform User Guide <u>http://www.intel.com/support/motherboards/server/hybrid/sb/CS-031729.htm</u>
- Appliance and Application Initial Setup Guides <u>http://www.intel.com/support/progserv/appupsbs/hybrid/sb/CS-032880.htm</u>