

# VBrick Lync Streaming Gateway Lync 2013 Streaming Gateway v2.3 Software Installation Guide

May 2014		

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#### About VBrick Systems

Founded in 1997, VBrick Systems, an ISO 9001 certified vendor, is a privately held company that has enjoyed rapid growth by helping our customers successfully introduce mission critical video applications across their enterprise networks. Since our founding, VBrick has been setting the standard for quality, performance and innovation in the delivery of live and stored video over IP networks—LANs, WANs and the Internet. With thousands of video appliances installed world-wide, VBrick is the recognized leader in reliable, high-performance, easy-to-use networked video solutions.

VBrick is an active participant in the development of industry standards and continues to play an influential role in the Internet Streaming Media Alliance (ISMA), the MPEG Industry Forum, and Internet2. In 1998 VBrick invented and shipped the world's first MPEG Video Network Appliance designed to provide affordable DVD-quality video across the network. Since then, VBrick's video solutions have grown to include Video on Demand, Management, Security and Access Control, Scheduling, and Rich Media Integration. VBrick solutions are successfully supporting a broad variety of applications including distance learning and training, conferencing and remote office communications, security, process monitoring, traffic monitoring, business and news feeds to the desktop, webcasting, corporate communications, collaboration, command and control, and telemedicine. VBrick serves customers in education, government, healthcare, and financial services markets among others.

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# Lync 2013 Gateway v2.3 Software Installation Guide

# Purpose

This document provides instructions for installing the VBrick Lync Streaming Gateway software on hardware you did <u>not</u> purchase from VBrick. Table 1 shows required hardware and software components.

**Note** These instructions only apply if you purchased a software-only version of this product. If you purchased both hardware and software from VBrick, please contact VBrick Support Services (or your certified reseller) for help installing the Lync software and integrating the server into your environment.

#### **Required Hardware and Software**

Hardware/OS Component	Minimum Requirement		
СРИ	<ul> <li>64 bit, dual processor, quad-core 2.0 GHz+</li> <li>64 bit, 4-way processor, dual-core 2.0 GHz+</li> </ul>		
Operating System 64 bit – Windows Server 2012 Standar			
Memory	8 GB		
HDD	Local storage with at least 30 GB free disk space		
Network	2 x 1 Gbps network adapter		
Software Media	<ul> <li>64 bit – Microsoft Lync Server 2013 DVD †</li> <li>VBrick 2013 Streaming Gateway CD / Download</li> </ul>		

Table 1. Minimum Streaming Gateway Server Requirements

† for access to support software.

Server	Minimum Requirement	
Additional Servers	<ul> <li>Server – Microsoft Lync Server 2013</li> <li>Server – Microsoft Exchange 2013</li> <li>Server – VEMS 6.3.6 or later</li> </ul>	

#### Table 3. Desktop Requirements

Hardware/OS Component	Minimum Requirement		
Windows Client PCs	<ul> <li>Windows 2008 R2 / 7 / 8 / 8.1</li> <li>Microsoft Lync 2013 Client 32 bit †</li> <li>Microsoft Windows Media Player 9.0 or higher</li> <li>Microsoft Internet Explorer 8.0 or higher</li> <li>VBrick Video Buddy VEMS Client Add-On</li> </ul>		

† only 32 bit client currently supported.

#### **Pre-Installation Steps**

- Be sure you have the VBrick Product CD and the Microsoft Lync Server Product CD (see above).
- Be sure that all items in Chapter 2 of the *Lync Streaming Gateway Admin Guide* have been completed. This includes creating:
  - a service account.
  - the "VBrick Video" distribution group.
  - the administrative group for Video Blast.
- Configure the server on the domain. Assign a hostname for the server as desired, and configure the appropriate IP settings to join it to the customer's domain.
- Update the VBrick Lync Streaming Gateway Server. .NET 3.5 SP1, .NET 4.5 and Windows PowerShell v3 are required for the VBrick Lync Streaming Gateway software.

**Note** The following steps guarantee that all components get installed. However it may be faster to download the installer for .NET 3.5 SP1 or use some other method.

### 1. Install .NET 3.5

- 1. Verify that you can get to the Internet.
- 2. Install windows updates (repeat several times if necessary, i.e. until the server is completely up-to-date).
- Verify that .NET Framework 3.5 SP1 is installed (it will be listed as an installed program). If not installed, follow these steps: (Note: to open the Server Manager interface, right click on Start > Computer and select Manage.)
  - a. In the Server Manager interface, select **Add Features** to display a list of possible features.
  - b. In the Select Features interface, expand .NET Framework 3.5.1 Features.
  - c. Once you expand .NET Framework 3.5.1 Features you will see two check boxes: one for .NET Framework 3.5.1 and one for WCF Activation. Check the box next to .NET 3.5.1 Framework and click Next.

Note: If you do not expand .NET Framework 3.5.1 Features and check it, you will get a pop-up titled Add Features Wizard as shown below. If this happens, click Cancel, expand .NET Framework 3.5.1 Features and then check .NET Framework 3.5.1 box at the bottom. You cannot install .NET Framework 3.5.1 features unless the required role services and features are also installed.

Add role services and features red Features?	quired for .NET Framework 3.5.1
You cannot install .NET Framework 3.5.1 Features u installed. Role Services:	rless the required role services and features are also
Web Server (IIS)     Web Server     Application Development     Socutity     Windows Process Addivation Service     Process Model     NET Environment     Configuration APIs	<u>Web Server (IIS)</u> provides a reliable manageable, and scalable Web application infrastructure.
	Add Required Role Services Cancel

- 4. In the Confirm Installation Selections interface, review the selections and click Install.
- 5. Allow the installation process to complete and then click Close.

### 2. Install .NET 4.5

.NET 4.5 is required for the VBrick Lync 2013 Streaming Gateway software. It can be installed by downloading from the internet as follows:

- 1. Open a web browser.
- 2. Navigate to http://www.microsoft.com/en-us/download/details.aspx?id=30653
- 3. Download and run dotNetFx45\_Full\_setup.exe
- 4. Use the default settings.

# 3. Install "Desktop Experience" Feature

- 1. Open the Server Manager.
- 2. Select Add Features.
- 3. Check the box for "Desktop Experience."
- 4. Install using the default settings.

#### 4. Install PowerShell 3.0

- 1. Open a web browser.
- 2. Navigate to http://www.microsoft.com/en-us/download/details.aspx?id=34595
- 3. Download and run Windows6.1-KB2506143-x64.msu
- 4. Use the default settings.

# 5. Install Lync 2013 Administrator Tools

Install Lync 2013 Administrative Tools (from Lync 2013 Server DVD). The VBrick Lync Streaming Gateway software requires components from the Lync Administrative Tools. Make sure you have Lync Product CD on hand.

- 1. Insert Microsoft Lync Server 2013 DVD or install media.
- 2. Browse to the DVD.
- 3. Navigate to folder on the DVD 'Setup\amd64'
- 4. Run setup.exe
- 5. Click Next and accept the default settings.
- 6. If prompted to install the "Microsoft C++ 2012 Redistributable" select "Yes."

- 7. If prompted to select an installation location, use the default.
- 8. Accept the "Terms & Conditions."
- 9. Select "Install Administrator Tools," accept the license agreement and complete the install. When finished, exit the "Deployment Wizard."

# 6. Install UCMA 4.0

Install the UCMA 4.0 Redistributable. The VBrick Lync Streaming Gateway software requires components from the Microsoft Unified Communications Managed API SDK. These components are installed via the UCMA Redistributable.

- 1. Browse to the \software\Admin folder on the Product CD.
- 2. Double click on the file UcmaRuntimeSetup.exe and let it complete the configuration.
- 3. Accept the Terms & Conditions and use the default settings.

#### 7. Verify Powershell

Verify that Windows PowerShell v3 is installed as required.

- 1. Select Start > Administrative Tools > Windows PowerShell Modules to open PowerShell.
- 2. Wait for the prompt (may take several seconds).
- 3. Type "\$Host.Version"
- 4. Verify that the value return is "3 0 -1 -1"
- 5. Type "Exit."

#### 8. Obtain Security Certificates

Obtain Security Certificates. For proper communications between the VBrick Lync Streaming Gateway Server and the Active Directory, the necessary security certificates must be installed. Install Computer Certificate on Application server machine.

- 1. Start Certificates MMC snap-in by going to the Start Screen, type "mmc", then press the Enter key.
- 2. When the empty Console1 window opens, choose File > Add/Remove Snap-in.
- 3. When the Add Standalone Snap-in window opens choose Certificates and click the Add button.
- 4. When the Certificates snap-in window opens, check the Computer account radio-button, and then press the Next button:

Image: Second	_ = ×
Add or Remove Snap-ins  X  You can select snap-ins for this console from those available on your computer and configure the selected set of snap-ins. For extensible snap-ins, you can configure which extensions are enabled.	
You can select snap-ins for this console from those available on your computer and configure the selected set of snap-ins. For extensible snap-ins, you can configure which extensions are enabled.	<b>^</b>
Available snap-ins: Certificates snap-in X	
ActiveX Control Mic Authorization Manager Mic Component Services Mic Computer Managern Mic Computer Managern Mic Device Manager Mic Computer Managern Mic Computer Managern Mic Computer Manager Mic Computer Mic Folder Mic Folder Mic Folder Mic I p Security Monitor Mic I p Security Monitor Mic Description: The Certificates snap-in allows Cancel	

5. When the Select Computer window opens choose Local computer and press the Finish button.

File Action View Favorites Window Help Add or Remove Snap-ins You can select snap-ins for this console from those available on your computer and configure the selected set of snap-ins. For extensible snap-ins, you can configure which extensions are enabled. Available snap-ins; You can select snap-in which extensions are enabled. Available snap-ins; Snap-in Ver Active X Control Mic Select the computer you want this snap-in to manage. This snap-in will always manage: Output: (the computer this console is running on) Output: (the computer this console is running on) Output: (the computer this console is running on) Another computer: Device Manager Mic Another computer to be changed when launching from the command line. This only applies if you save the console.
Conso       You can select snap-ins for this console from those available on your computer and configure the selected set of snap-ins. For extensible snap-ins, you can configure which extensions are enabled.         Available snap-ins;       Select Computer       X         Snap-in       Ver       ActiveX Control       Mic         ActiveX Control       Mic       Select the computer you want this snap-in to manage.       This snap-in will always manage:         Component Services       Mic       Select the computer this console is running on       On other computer: (the computer this console is running on)         Device Manager       Mic       Another computer       Browse         Disk Management       Mic       Allow the selected computer to be changed when launching from the command line. This only applies if you save the console.
Snap-in       Ver         ActiveX Control       Mic         ActiveX Control       Mic         Certificates       Mic         Component Services       Mic         Computer Mnaager       Mic         Device Manager       Mic         Allow the selected computer to be changed when launching from the command line. This only applies if you save the console.         Discourse Viewer       Mic         Group Policy Object       Mic         Discourse Viewer Viewer       Mic         Group Policy Object       Mic
P Security Monitor Mic     P Security Monitor Mic     P Security Monitor Mic     P Security Monitor Mic     Description:     The Certificates snap-in allows     < <u>Back</u> Finish     Cancel

- 6. Then press Finish, Close, OK buttons as you return to the MMC interface.
- 7. On the MMC screen, expand "Certificates (local computer)" > "Trusted Root Certificate Authorities." Click on the "Certificates" sub category under "Trusted Root Certificate Authorities."
- 8. Verify that there is a certificate issued by the domain's Certificate Authority ("vblync-LDC-CA" in the example below).

🚟 Console1 - [Console Root\Certificate	s (Local Computer)\Trusted Root Ce	rtification Authorities\Certificates]		_ 8 ×
🚟 File Action View Favorites Wind	ow Help			_ 8 ×
♦ 2 1 4 4 × 3 8				
Console Root	Issued To 🔺	Issued By	Expirati	Actions
	Glass 3 Public Primary Certification Class 3 Public Primary Certification Copyright (c) 1997 Microsoft Corp. GTE CyberTrust Global Root	Class 3 Public Primary Certification A Class 3 Public Primary Certification A Copyright (c) 1997 Microsoft Corp. GTE CyberTrust Global Root	8/1/202 1/7/200 12/30/1 8/13/20	Certificates  More Actions Cosalpha-OCS
Entermediate Certification Authori     Trusted Publishers     Control of the second seco	Microsoft Authenticode (m) Root     Microsoft Root Authonity     Microsoft Root Authonity     Microsoft Root Lathonity     Microsoft Root Lathonity	Microsoft Authenticode(m) Root Au Microsoft Root Authority Microsoft Root Certificate Authority NO LLABILITY ACCEPTED, (c)97 Verl Occapita-05-05-CA Thawte Timestamping CA	12/31/1 12/31/2 5/9/202 1/7/200 7/19/20 12/31/2	More Actions >
Trusted Root Certification Authorities store con	tains 10 certificates.			

- 9. If there is no certificate issued by the domain's Certificate Authority (CA) then one must be obtained. Coordinate with the customer's IT personnel to obtain the trusted root certificate.
- 10. On the MMC screen, expand "Certificates (local computer)" > "Personal."
- 11. Right click on "Personal" and from the menu go to "All Tasks" > "Request New Certificate."

Note This next step is to obtain a Personal Certificate. This certificate <u>must</u> have both Server Authentication and Client Authentication.

12. From the "Before You Begin" screen click "Next."

Console1	[Console Root\Certificates (Local Computer)\Personal]	_	₽ ×
\overline File Acti	on View Favorites Window Help	_	a ×
🗢 🔿 🖄	📅 📋 🔉 🛃 📅		
Console Ro	Certificate Enrollment	15	
E Certific	Certificate Enrollment	nal	•
	Before You Begin The following steps will help you install certificates, which are digital credentials used to connect to wireless networks, protect content, establish identity, and do other security related tasks. Before requesting a certificate, verify the following: Your computer is connected to the network You are logged onto the domain for your organization	pre Action	ns ▶
x.	Learn more about <u>digital certificates</u>		

13. Select the default "Enrollment Policy" (Active Directory Enrollment Policy) and click Next.

	Certificate Enrollment	
/ 🚎	Certificate Enrollment	
i	Select Certificate Enrollment Policy	
	Certificate enrollment policy enables enrollment for certificates based on predefined ce enrollment policy may already be configured for you.	ertificate templates. Certificate
	Configured by your administrator	
	Active Directory Enrollment Policy	8
	Configured by you	Add New
	Learn more about <u>certificate enrollment policy</u>	
		Next Cancel

- 14. Select the checkbox next to "Computer" and click "Enroll."
- 15. Note: If the "Computer" template is not available, check the box named "Show all templates." A list of templates will then be displayed. If the "Web Server" template is available use this template. If neither template is available, coordinate with the customer's IT personnel to obtain a Personal Certificate which has both Server Authentication and Client Authentication.

🛜 Console1 - [Co	onsole Root\Certificates (Local Comp	uter)\Personal]		_ 8 ×
🚡 File Action	View Favorites Window Help			_ 8 ×
🗢 🔿 🙍 🗖	1 🗈   🗛   🛃 📻			-
Console Ro	Certificate Enrollment		<u>_0</u> ×	IS
E Certific	Certificate Enrollment			nal 🔺
E C Tru E C Ent E C Inte F C Tru	Request Certificates You can request the following types o	f certificates. Select the certificates you want to re	equest, and then dick Enroll.	ore Actions 🕨
Unt	[7] Computer	i) STATUS: Available	Details 🋞	
	□ Show all templates			
	Learn more about <u>certificate types</u>		Enroll Cancel	

16. Upon enrolling, the system should obtain a new "Personal Certificate" from the CA. If successful, click "Finish." Verify that the certificate is available by navigating through the certificate folder structure to Certificates (local computer) > Personal > Certificates.

👼 Console1 - [Console Root\Certificates (Local Computer)\Personal\Certificates]				x	
🗃 File Action View Favorites Wind	low Help			_ 8 :	×
🗢 🔿 🙋 🖬 🐇 😫 😫					
Console Root	Issued To 🔺	Issued By	Expirati	Actions	
Certificates (Local Computer)     Personal	wbrick-ocsgw.ocsalpha.vbrick.com	ocsalpha-OCS-DC-CA	9/7/201	Certificates	•
Certificates				More Actions	F
Certificates				vbrick-ocsgw	•
	1			More Actions	۲
🗉 🚞 Intermediate Certification Authori	1				
🕀 🚞 Trusted Publishers					
🕀 🚞 Untrusted Certificates					
🛨 🚞 Third-Party Root Certification Aut					
🕀 🚞 Trusted People	N 1				
🕀 🔛 Remote Desktop	4				
E Certificate Enrollment Requests					
E Smart Card Trusted Roots					
< •	•		F		
Personal store contains 1 certificate.					-

- 17. Issued By. Write down the "Issued By" value of the Personal Certificate. This information will be needed later.
- 18. Issued To. Write down the "Issued To" value of the Personal Certificate. This information will be needed later.

**Note** Please record this information on the Integration Worksheet provided in the Admin Guide.

- 19. Thumbprint
  - a. Double-click on the new Personal Certificate
  - b. Click on the "Details" tab
  - c. Select the "Thumbprint" field

Certificat	e				×
General	Details	Certification Path	d		
			·		- 1
Show:	<all></all>		•		
Field			Value		
🕕 Su	bject Key	Identifier	ed 30 89 e6 72 o	a 16 64 aa 92	
💽 Au	thority Ke	y Identifier	KeyID=50 44 09	a7 c4 6d 59 1	
CR CR	L Distribu	tion Points	[1]CRL Distributi	on Point: Distr	
🕕 Au	thority In	formation Access	[1]Authority Info	Access: Acc	
🔉 Su	bject Alte	rnative Name	DNS Name=STR	GW2008R2.vb	
Ke 🔣	y Usage		Digital Signature	, Key Encipher	
🛅 Th	umbprint a	algorithm	sha 1		
📑 Th	umbprint		f9 d2 e5 cf c6 b2	95 d5 6d 58	•
£9	d2_e5_	of of <u>b2</u> 95	5 d5 6d 58 1	7 2d 42 16	
<u>a4</u> 8	b d7 4	<u>1 1d a7</u>			
		E	dit Properties	Copy to File	.
Learn m	ore about	t certificate details			- 1
Leann		ceruncate details	1		
				0	ĸ

- d. Copy & paste the value displayed into Notepad and save the file (you will need this value later in the installation)
- e. Right click on the new certificate and select "All Tasks" > "Manage Private Keys."
- f. Click the "Add" button on the permissions window that appears.
- 20. In the Select Users, Computers, or Groups window in the field titled "Enter the object names to select", enter domain/username where this is the domain and username of the service account created in step #2 of the Admin Guide. In the example below, this is "vblync\lyncvbservice." Click "Check Names." The result should look like the image below:

📔 Permissions for vblyncgw.vblync.com private keys 📃 🔰	د .
Select Users, Computers, or Groups	<u>? ×</u>
Select this object type:	
Users, Groups, or Built-in security principals	Object Types
From this location:	
vblync.com	Locations
Enter the object names to select ( <u>examples</u> ):	
Lync VB Service (lyncvbservice@vblync.com)	Check Names
Advanced OK	Cancel
Special permissions	
For special permissions or advanced settings, Advanced	
Learn about access control and permissions	
OK Cancel Apply	i

21. Click "OK" to return to the previous window. It should now look like the image below:

Permissions for vblyncgw.vb	lync.com priva	te keys 🛛 🗶
Security		
Group or user names:		
SYSTEM		
Lync VB Service (lyncvbserv	ice@vblync.com)	
Administrators (VBLYNCGW)	Administrators)	
	Add	Remove
Permissions for Lync VB Service	Allow	Deny
Full control	$\checkmark$	
Full control Read	N	
Full control Read Special permissions		
Full control Read Special permissions		
Full control Read Special permissions		
Full control Read Special permissions For special permissions or advanc click Advanced.	ed settings,	Advanced
Full control Read Special permissions For special permissions or advanc click Advanced.	ed settings,	Advanced
Full control Read Special permissions For special permissions or advance click Advanced. Leam about access control and p	ed settings,	Advanced

- 22. Click "OK" to close the window.
- 23. Close the console window. If prompted to save, say "No."

# 9. Create a New Trusted Application Pool and Application

The purpose of this section is to create a Trusted Application pool and a Trusted Application associated to that pool. In Lync all these are created/provisioned using PowerShell. PowerShell 3.0 is a required component. When you install the UCMA 4.0 Redistributable it would have installed the necessary modules for PowerShell to interact with Lync modules.

- On the Lync server, open the Lync Server Management Shell (Start > All Programs > Microsoft Lync Server 2013 > Lync Server Management Shell).
- 2. Run the command: get-CsSite. This command will provide information about the Lync site.

🐺 Administrator: Lync Server Management Shell 📃 🔍				
PS C:\Users\Adm:	inistrator.UBLYNC> get-CsSite	-		
Identity SiteId Services Pools FederationRoute Description DisplayName SiteType ParentSite	<pre>: Site:UBRICK : 1 : {UserServer:pool.vblync.com, Registrar:pool.vblync.com, atabase:ldb.vblync.com, FileStore:ldb.vblync.com} : {pool.vblync.com, ldb.vblync.com, GW.vblync.com} : : UBrick Systems : UBRICK : CentralSite :</pre>	UserD		
PS C:\Users\Adm:	inistrator.UBLYNC>	<b>-</b>		

- 3. Make a note of SiteId, Pools and Registrar. The pool and registrar could normally be the same (usually the name of the pool itself). In the case of a Lync Standard Edition, it could be the FQDN of the Front End server itself.
- 4. Run the Command: New-CsTrustedApplicationPool -Identity <myFQDN> -Registrar cpoolFQDN > -Site <siteID>
  - <myFQDN> FQDN of Gateway server, i.e. STRGW2008R2.vblync.com
  - <poolFQDN> FQDN of pool, i.e. pool.vblync.com
  - <siteID> Site ID from get-CsSite command

🐼 Administrator: Lync Server Management Shell 💦 💦 📃 🗙			
PS C:\Users\Administr w.vblync.com -Registr WARNING: The followin	ator.UBLYNC> New-CsTrustedApplicationFool -Identity of ar pool.ublync.com -Site 1 gr changes must be made in order for the operation to	blyncg	
complete.	t still be way for all observes to take offect		
Enable-Cslopology Mas	t still be run for all changes to take effect.		
Identitu	: 1-FyteppalSepuep-2		
Registrar	: Registrar:pool.vblync.com		
FileStore	:		
ThrottleAsServer	: True		
TreatAsAuthenticated	: True		
OutboundOnly	: False		
RequiresReplication	- Irue		
AudioPortCount	- A		
AppSharingPortStart			
AppSharingPortCount	: 0		
VîdeoPortŠtart			
VideoPortCount	: 0		
Applications	: ()		
DependentServiceList	: {} - 1 Futana 10		
Serviceia	- 1-ExternalServer-2		
PoolEado	· alte.vonich		
Version	: 5		
Role	: TrustedApplicationPool		
PS C:\Users\Administr	ator.UBLYNC>		

5. Run the command: New-CsTrustedApplication -ApplicationId lyncvideobuddy -TrustedApplicationPoolFqdn <myFQDN> -Port 6050

<myFQDN> - FQDN of server, i.e. vblyncgw.vblync.com

🖉 Administrator: Lync Server Manag	ement Shell	
PS C:\Users\Administrator.U deobuddy -TrustedApplicatic WARNING: The following char complete. Enable-CsTopology must stil	BLYNC> New-CsTrustedApplication -ApplicationID lyr nPoolFQDN vblyncgw.vblync.com -Port 6050 ges must be made in order for the operation to be l be run for all changes to take effect.	▲ ncvi
Identity ComputerGruus ServiceGruu Protocol ApplicationId TrustedApplicationPoolFqdn Port LegacyApplicationName	<pre>: vblyncgw.vblync.com/urn:application:lyncvideobud : vblyncgw.vblync.com sip:vblyncgw.vblync.com@lyn com;gruu;opaque=srvr:lyncvideobuddy:UyKvlYB_w1-2 slIT5ilAAA) : sip:vblyncgw.vblync.com@lync.com;gruu;opaque=srv lyncvideobuddy:UyKvlYB_w1-ZknsLlT5ilAAA : urn:application:lyncvideobuddy : vblyncgw.vblync.com : 6050 : lyncvideobuddy</pre>	ldy ic. ikn ir:
PS C:\Users\Administrator.U	BLYNC>	-

6. Run the command: **Enable-CsTopology** 

🐼 Administrator: Lync Server Management Shell		
PS C:\Users\Administrator.UBLYNC> Enable-CsIopology PS C:\Users\Administrator.UBLYNC> _		
	<b>_</b>	

7. Run the command: Get-CsTrustedApplication and review the displayed information for accuracy.

🐺 Administrator: Lync Server Management Shell 📃 🔲 🗶				
Fort LegacyApplicationName	: 6050 : lyncvideobuddy	-		
FS C:\Users\administrator.U PS C:\Users\administrator.U	BLYNC> Enable-CcTopology BLYNC> Get-CcTrustedApplication			
Identity	: vblyncgw.vblync.com/urn:application:lyncvideobu			
ComputerGruus	aay : vblyncgw.vblync.com sip:STRGW2008R2.vblync.com Clync.com;gruu;opaque=srvr:lyncvideobuddy:sO1JUvFr gFnytn1af.HdHu9A>			
ServiceGruu	: sip: vblyncgw .ublync.com@lync.con;gruu;opaque=sr ur:lyncvideobuddy:s01JUvFrgFgYto1afJHdHwAA			
Protocol	: Mtls			
ApplicationId	: urn:application:lyncvideobuddy			
IrustedApplicationPoolFqdn	: vblyncgw.ublync.com			
fort	: 6050			
LegacyHpplicationName	: lyncvlaeobuaay			
PS C:\Users\administrator.UBLYNC>				

8. Run the command: Get-CsTrustedApplicationPool and review the displayed information for accuracy.

🐺 Administrator: Lync Server Management Shell 📃 🔲 🗙				
PS C:\Users\Administ	rator.UBLYNC> Get-CsTrustedApplicationPool	<b>_</b>		
Identity	: TrustedApplicationPool:vblyncgw.vblync.com			
Registrar	: Registrar:pool.vblync.com			
FileStore				
ThrottleAsServer	: True			
TreatAsAuthenticated	: True			
OutboundOnly	: False			
RequiresReplication	: True			
AudioPortStart				
AudioPortCount	: 0			
AppSharingPortStart				
AppSharingPortCount	: 0			
VideoPortStart				
VideoPortCount	= Ø			
Applications	: {urn:application:lyncvideobuddy}			
DependentServiceList	: {}			
ServiceId	: 1-ExternalServer-2			
SiteId	: Site:UBRICK			
Poo 1Fqdn	: vblyncgw.vblync.com			
Version	: 5			
Role	: TrustedApplicationPool			
PS C:\Users\Administrator.UBLYNC>				
		<b>_</b>		

9. Type "Exit."

### 10. Install the Services

- 1. Navigate to VBLync2013StreamingGW folder on the Product CD.
- 2. Run setup.exe. Select the default values on the installation screens.
- 3. During the service installation you will twice be requested to enter the credentials of the service account. Enter the username and password of the "lyncvbservice@domain" account created in step #2 of the Admin Guide.
- 4. Once installation is complete, navigate to the Windows Service Manager (Start > Administrative Tools > Services).
- Find the "VBrick OCS Video Buddy BOT Service," right-click on it, and select "Properties." Click on the "Recovery" tab. Update the Recovery parameters as shown below.
- 6. Repeat Step 5 above for the "VBrick OCS Video Buddy VEMS Interface Service".

VBrick OCS Video Buddy BOT	Service Properties (Local Computer) 🛛 🗙			
General Log On Recovery	Dependencies			
Select the computer's respons actions	se if this service fails. <mark>Help me set up recovers</mark>			
<u>F</u> irst failure:	Restart the Service			
Second failure:	Restart the Service			
S <u>u</u> bsequent failures:	Restart the Service			
Reset fail c <u>o</u> unt after:	0 days			
Restart ser <u>v</u> ice after:	5 minutes			
Enable actions for stops w	with errors. <u>R</u> estart Computer Options			
- Run program				
Program:				
	Browse			
Command line parameters:				
Append fail count to en	id of command line (/fail=%1%)			
	OK Cancel Apply			

# 11. Installing VB Alert Admin Tool

- 1. Navigate to the \VBAlertAdminSetup folder on the Product CD.
- 2. Run VBAlertAdmin.msi. Select the default values on the installation screens.

# 12. Installing VB Configuration Administration Tool

- 1. Navigate to the \VBConfigTool folder on the Product CD.
- 2. Run VBConfigToolSetup.msi. Select the default values on the installation screens.

# 13. Configure the VB VEMS Interface Service

- 1. Open the VBrick Video Buddy Configuration Tool.
- 2. Select Start > VBrick Video Buddy Configuration Tool.



- 3. Click "Browse."
- 4. Navigate to C:\Program Files\VBrick\Lync2013StreamingGW\VBVEMSInterfaceService.
- 5. Double-click on VBVEMSInterfaceService.exe.config
- 6. Modify the configuration settings as follows:
  - a. OcsAdminUserName Set to the username of the VEMS account being used by the server to access VEMS content. The recommended/default settings is "lyncadmin."
  - b. OcsAdminUserPassword Set to the password of the VEMS account being used by the server to access VEMS content, i.e. the password for the username specified by OcsAdminUserName.
  - c. VemsIpAddress Set to the IP address of the VEMS server.
  - d. MystroServiceUrl Modify the hostname specified in the URL to reference the hostname of the VEMS server, i.e. change "maduro" to the VEMS hostname.
  - e. SIPDomainForVBContacts Modify to specify the desired SIP domain on which the Video Buddies will be created.
  - f. MystroAutomatonCustomFieldName Specifies the name of the custom field in VEMS Mystro which is used to determine if a Video Buddy is an automaton or not. The value of the custom field should be "yes" to indicate it is an automaton and "no" to indicate it is not.
- 7. Save your changes.

# 14. Configure the VB BOT Service

- 1. Select "Browse" from the VBrick Video Buddy Configuration Tool.
- 2. Navigate to C:\Program Files\VBrick\Lync2013StreamingGW\VBBOTService.
- 3. Double-click on VBBOTService.exe.config.
- 4. Modify the configuration settings as follows:
  - a. VB\_MYSTRO\_PLAYER\_PAGE Modify the hostname specified in the URL to reference the hostname of the VEMS server, i.e. change "maduro" to the VEMS hostname.
  - b. SIPDomainForVBContacts Modify to specify the desired SIP domain on which the Video Buddies will be created.
- 5. Save your changes.

#### **Configuring Video Buddies**

When configuring the VB Bot Service and the VB VEMS Interface Service you will need to specify where your Video Buddies are defined using the VideoBuddySource parameter. If your Video Buddies are sourced from a VEMS server, you simply need to enter VEMS5.x or VEMS6.0 as appropriate. You can also define your Video Buddies in an .xml file. If using an .xml file, you can create the file manually (see example below) or you can use the template which is located in: C:\Program Files\VBrick\templates\template.xml. When done, the XMLLocation will point to the location where this file is saved.

#### Creating a Video Buddy .xml File

- ▼ To create and use an .xml file for Video Buddy definitions:
- 1. Create a text file in Notepad or a similar editor or simply copy/edit the template. See sample file below.
- 2. Create a separate entry for each Video Buddy and save the file in a known location that can be reached by the server—either local or remote.
- 3. Specify the complete path to this location in the XMLLocation key in the VB VEMS Interface Service (see <u>13. Configure the VB VEMS Interface Service</u> on page 14).

#### Sample .XML File

```
<VideoBuddies>

<VideoBuddy>

<Number>36</Number>

<Name>RemoteXML</Name>

<Program>Remote XML Test</Program>

<Active>YES</Active>

<Status>UP</Status>

<Automation>NO</Automation>

<URL>http://vbosstv.com/wpa/ocs.html</URL>

</VideoBuddy>

</VideoBuddies>
```

Parameter	Description
Number	Unique channel number.
Name	Name of Video Buddy.
Program	Current program, e.g. "Larry King Live."
Active	Yes = Video Buddy exists. No = Video Buddy does not exist.
Status	Up = video stream is up. Down = video stream is down.
Automation	Yes = Video Buddy presence will not change. No = Video Buddy presence will change when changed in XML file.
URL	Fully qualified URL to a web page with a video player.

#### **Configuring Presence Options**

In a standard Lync Streaming Gateway installation, Video Buddy presence icons are used to indicate the availability of a stream. *However due to certain constraints in the Microsoft Lync Server, you may need to change this default behavior if more than 600 concurrent users are likely to have the same Video Buddy on their desktop.* There are three configurable behaviors (see Table 4) associated with Video Buddy presence icons: in the standard (default) scenario, the presence icons change color according to the status of the stream (available or offline) and each stream will have a unique title; in the modified scenario, the presence icons are always green and each stream will always have the same title.

**Note** In the standard (default) scenario, the presence icons change color according to the stream status (available or offline) and each stream has a unique title. If you wish to change this behavior you should do so in advance, before rolling out the Video Buddy functionality for users.

What's happening today?	
Mary Jones Available Set Your Location	
🕹 🖳	☆ •
Find someone	Q
GROUPS STATUS RELATIONSHIPS NEW	20
✓ Video Buddies (2/2)	
DEMO-Advert - Available	
VBrick Video - Available	
<ul> <li>Human Resources (1/1)</li> </ul>	
Susan Anderson - Available	
▲ Sales (0/1)	
Robert Smith - Offline 5 days	
Developers (0/2)	
▷ Other Contacts (0/0)	
<ul> <li>Favorites</li> </ul>	
쎫 -	<b>-</b> .

Figure 1. Video Buddy Presence Icon

Table 4. Presence Icon Behavior

Option	Description
Dynamic Presence	Default behavior (less than 600 users). The presence icons change color depending on the availability of the stream. The stream title is different for each stream and is configured in VEMS. See "Adding Gateway Streams.
	<ul> <li>(green) – Available (or current program title)</li> <li>(orange) – Offline</li> </ul>

Option	Description
Static Presence	Modified Behavior (more than 600 users). The presence icons are always green. The stream title is the same for all streams and is configured in the Lync Gateway server. See <u>14. Configure the VB BOT Service</u> on page 15. • (green) – Available
Mixed Presence	A configuration setting is used to determine on a per-stream basis whether or not the presence behavior is "static" or "dynamic." In this scenario, the "IsVBContactAutomaton" must be set to "no." For each stream, the value of the custom field in VEMS Mystro (as specified in the VEMS Mystro Interface Service) is checked. If the custom field is "yes," then the stream will exhibit static behavior. If the custom field is not "yes," the stream will exhibit dynamic behavior. If no custom field is defined, all streams will exhibit dynamic behavior. Note that if XML is used instead of VEMS Mystro, the XML attribute "Automaton" is used to specify the per-stream behavior.

As noted, the default behavior shown in Table 4 is configured by default. If you expect to have less than 600 concurrent users with the same Video Buddy on their desktop, no further action is required and you are good to go. If however you expect to have more than 600 users with the same Video Buddy you will need to modify two parameters in the VB Bot Service as explained below.

Table 5.         VBBOTService.exe.config	5
--	---

Logging Level	Determine the amount of debugging information to include in the log files. The range of values are as follows:
	1. Errors
	2. Add Warnings
	3. Add Informational Messages
	4. Add Debug Messages
	5. Add Full Tracing
LogFile	Name of the file where logging information is stored.
LogDirectory	Folder where the log file is written to.
MaxLogFileSize	The maximum size (in MB) of each log file (after which a new log file will be created). Max = $25$ MB.
MaxLogFiles	The maximum number of log files that will be created by the service
ProcessChannelInterval InMinutes	Frequency (in minutes) with which the Video Buddy server updates it's list of channels (Video Buddies).
NewEndPointEstDelayInM inutes	Number of minutes required for a new Video Buddy to be synchronized.
UCReestablishDelayInMi nutes	Frequency in which the server attempts to recover from detected failures, such as the Lync Server being down.
VB_VIDEO_PLAY_MESSAGE	This field indicates the text which a user must enter to initiate video streaming with a Video Buddy. This text string must be entered at the beginning of a chat window. Entering this text is only required if the client add-on has not been installed on the client desktop.
VB5.x_PLAYER_PAGE	Deprecated.

VB_MYSTRO_PLAYER_PAGE	This field specifies the URL that the Lync client will use to load the VBrick player for the specified Video Buddy and user. The identifying information for the Video Buddy and use are dynamically inserted into this URL.
EncodeSpecialCharacter s	Determines how special characters are encoded. Should not be modified.
VideoBuddySource	Depending on where the Video Buddy definitions are retrieved from, set this parameter to: VEMS 5.X, MYSTRO, or XML.
SIPDomainForVBContacts	The customer's SIP domain. For example, if the end user logs in as harry.potter@lync.com, the SIP domain is "lync.com."
XMLLocation	For XML, modify this parameter to reference the location of the .xml definition file.
IsVBContactAutomaton	Default = False. This field indicates if Video Buddies should be created as automatons. When Video Buddies are created as automatons, the presence color is always green and the status description is always the same (see VBAutomatonContactStatusMessage below).
VBAutomatonContactStat usMessage	Default = Video. Indicates the text which should be displayed for a Video Buddy which has been created as an automaton. This text will always be displayed for all Video Buddies which have been created as an automaton.
VBApplicationGUID	Unique identifying ID of the client-side application. It should not be necessary to change this value.

# 15. Configure the Certificate Settings (VB BOT Service)

- 1. Open the Notepad file containing the Thumbprint value saved previously
- Edit the file C:\Program Files\VBrick\Lync2013StreamingGW\VBBOTService\VBBOTService.exe.config in Notepad.
- 3. Under <applicationSettings> modify the settings as follows:
  - a. Set CertificateIssuer to the "Issued By" value of the Personal Certificate (vblync-LDC-CA in the example below).
  - b. Set CertificateIssuedTo to the "Issued To" value of the Personal Certificate (lyncgw.vblync.com in the example below).
  - c. Open the file containing the Certificate Thumbprint saved earlier. Copy and paste the value into the CertThumbprint value (00000000... in the example below).

```
<applicationSettings>
```

4. Save and exit Notepad.

# 16. Configure the Certificate Settings (VB VEMS Interface Service)

- 1. Open the Notepad file containing the Thumbprint value saved previously
- Edit the file C:\Program Files\VBrick\Lync2013StreamingGW\VBVEMSInterfaceService\VBVEMSInterfaceSe rvice.exe.config in Notepad.
- 3. Under <applicationSettings> modify the settings as follows:
  - a. Set CertificateIssuer to the "Issued By" value of the Personal Certificate (vblync-LDC-CA in the example below).
  - b. Set CertificateIssuedTo to the "Issued To" value of the Personal Certificate (vblyncgw.vblync.com in the example below).

#### <applicationSettings>

```
<VBrick.OCSVideoBuddy.VBVEMSInterface.Properties.Settings>
      <setting name="ApplicationName" serializeAs="String">
       <value>LyncVideoBuddy</value>
      </setting>
      <setting name="CertificateIssuer" serializeAs="String">
       <value>vblync-LDC-CA</value>
      </setting>
      <setting name="CertificateIssuedTo" serializeAs="String">
       <value>vblyncgw.vblync.com</value>
      </setting>
      <setting name="VEMSService_VemsSdk_MCSWebSDK" serializeAs="String">
       <value>http://vems.vblync.com/MCSWebSDK/MCSWebSDK.asmx</value>
      </setting>
   </VBrick.OCSVideoBuddy.VBVEMSInterface.Properties.Settings>
 </applicationSettings>
</configuration>
```

# 17. Give Port Permissions to the Services

By Default, Windows 2008 Server will not allow access to the http ports needed by the VBrick Lync Streaming Gateway services. The follow commands allows access to the necessary port.

- 1. From the "Start" menu, launch a command prompt window.
- From the command prompt, enter the following command with the user specified being the domain/username of the service account specified in step #2 of the Admin Guide. In the example below, the domain/username is "vblync.com/lyncvbservice."

netsh http add urlacl url=http://+:8000/ user=vblync.com\lyncvbservice

3. If successful, you should see the response "URL reservation successfully added".

# 18. Open Required Ports in the Firewall

By default, Windows 2008R2 Server firewall blocks necessary VBrick Lync Streaming Gateway Server ports. We must open one.

- 1. Select Start > Control Panel.
- 2. Click "Check Firewall Status" (or "Windows Firewall").
- 3. Click on "Advanced Settings."
- 4. Click on "Inbound Rules."
- 5. Click on "New Rule."
- 6. Select "Port" then "Next" to open the "New Inbound Rule Wizard."

👹 New Inbound Rule Wizar	d	×
Rule Type Select the type of firewall rule to	create.	
Steps: Rule Type Protocol and Ports Action Profile Name	What type of rule would you like to create?  Program Rule that controls connections for a program.  Proteined: BranchCache - Content Retrieval (Uses HTTP) Rule that controls connections for a Windows experience.  Custom Custom rule.  Leam more about rule types  < Back Next >	Tancel

7. Select "TCP" and "Specific local ports", then enter "6050." Click "Next."

🍻 New Inbound Rule Wizard			×
Protocol and Ports Specify the protocols and ports to	which this rule applies.		
Steps: Protocol and Ports Action Profile Name	Does this rule apply to TCP or UDP? • TCP • UDP Does this rule apply to all local ports or • All local ports • Specific local ports: • E	• specific local ports? 050  5xample: 80, 443, 5000-5010	
	Leam more about protocol and ports	< Back Next >	Cancel

8. Check "Allow the connection" and hit "Next."

🍻 New Inbound Rule Wizaı	rd 🗙
Action	
Specify the action to be taken v	when a connection matches the conditions specified in the rule.
Steps:	
Rule Type	What action should be taken when a connection matches the specified conditions?
Protocol and Ports	Allow the connection
Action     Brafile	This includes connections that are protected with IPsec as well as those are not.
Name	C Allow the connection if it is secure
	Connections that have been authenticated by Using Irsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.     Customize     Customize
	Learn more about actions          < Back

9. Check "Domain." Uncheck "Private" and "Public." Click "Next."

🎡 New Inbound Rule Wizar	
Profile Specify the profiles for which this	: rule applies.
Steps:	
Rule Type     Protocol and Ports     Action     Profile	When does this rule apply?           Image: Domain Applies when a computer is connected to its corporate domain.
<ul> <li>Name</li> </ul>	<ul> <li>Private         Applies when a computer is connected to a private network location.</li> <li>Public         Applies when a computer is connected to a public network location.</li> </ul>
	Learn more about profiles       < Back

10. Type in "Lync Video Buddy"

💣 New Inbound Rule Wizard		X
Name		
Specify the name and description of	r this rule.	
Steps:		
Rule Type     Protocol and Ports     Action     Profile	Name:	
Name	Lync Video Buddy	
Hund	Description (optional):	
	Lync Video Buddy	
	< Back Finish Cance	1

- 11. Click "Finish."
- 12. Verify that the new rule is listed.

# 19. Configure the Software Version Number and Serial Number

- ▼ To configure the software version:
- 1. Navigate to the \admin folder on the Product CD.
- 2. Double-click on "SetVersion.bat"
- ▼ To enter the serial number:
- 1. Navigate to the \admin folder on the Product CD.
- 2. Double-click on vbOCSSerialNumberUpdate.exe
- 3. Enter the "software-only" serial number (with hyphens) from the "Welcome to VBrick" customer letter that was shipped with your order.
- 4. Click Save and Close.

# 20. Restart the VBrick Lync Streaming Gateway Server

From the "Start" menu, reboot the server. Installation and configuration are complete.

# 21. Troubleshoot

#### The "Request new certificate" option is not available.

- Possible Solution: Verify that the Streaming Gateway Server is on the domain.
- Possible Solution: Verify that you are logged into the Streaming Gateway Server as a domain admin (it is easy to log in as the local admin by accident).

#### When requesting the Personal Certificate I don't see a checkbox.

- Possible Solution: Verify that the Streaming Gateway Server is on the domain.
- Possible Solution: Verify that the Streaming Gateway Server has the Trusted RootCertificate from the Certificate Authority for the domain.

#### Application Provisioner tool crashes or will not create an Application Pool.

- Possible Solution: Verify that you are logged in as the LyncVBService user when attempting to use the Application Provisioner tool.
- Possible Solution: Verify that the LyncVBService user is part of the groups "RTCUniversalServerAdmins" and "RTCUniversalUserAdmins"

#### The VB Bot Service fails to start.

If the service fails to start, it is always helpful to increase the logging level for that service.

- ▼ To increase the logging level:
- 1. Open the configuration file using the "VBrick Video Buddy Configuration Tool" and set the "Logging Level" to 5. This will enable very robust logging. Remember to turn it back to 3 when done to reduce log file size.
- 2. Once the logging level is set to 5, delete or backup and remove the old log files for the VB Bot service. By default, log files are located in "C:/ProgramData/VBrick" which is a hidden folder.
- 3. Attempt to start the service.
- 4. If it fails again or has problems of any sort, review the log files which should have just been created.
- 5. The errors should be displayed. Verify that there are no typos in the configuration, and that all FQDNs are accurate. Common errors for the VB Bot service are typically errors in the configuration file relating to the "Issued To" and "Issued By" sections (see Step 4 on page 23).

#### The VB VEMS Interface Service fails to start.

If the service fails to start, it is always helpful to increase the logging level for that service.

- ▼ To increase the logging level:
- 1. Open the configuration file using the "VBrick Video Buddy Configuration Tool" and set the "Logging Level" to 5. This will enable very robust logging. Remember to turn it back to 3 when done to reduce log file size.
- 2. Once the logging level is set to 5, delete or backup and remove the old log files for the VB Bot service. By default, log files are located in "C:/ProgramData/VBrick" which is a hidden folder.
- 3. Attempt to start the service.
- 4. If it fails again or has problems of any sort, review the log files which should have just been created.
- 5. The errors should be displayed. Verify that there are no typos in the configuration, and that all FQDNs are accurate. Common errors for the VB Bot service are typically errors in the configuration file relating to the "Issued To" and "Issued By" sections.

#### New Video Buddies can't be found when searching for them on the Lync client.

- Possible Solution: Verify VB Bot Service and VB VEMS Interface Service are running
- Possible Solution: Check the log files for the VB Bot Service and the VB VEMS Interface services to see if they are experiencing problems
- Possible Solution: The timer settings in the VB Bot Service and VB VEMS Interface Service configuration files introduce delay in creating new buddies. The default configuration settings may introduce up to a 30 minute delay in creating a new Video Buddy. The reason for this is to keep unnecessary load to a minimum on both the VBrick VEMS server and the Lync system. While VBrick suggests using the default delay settings, you may modify the delay settings for both services as needed.

#### I can't find the "VBrickVideo" distribution group to add to my Lync client.

• Possible Solution: If you have just recently created the VBrickVideo distribution group it may take up to 24 hours for Lync to make that group available to Lync Clients.

#### My "VBrick Video" distribution group is not populating with new Video Buddies.

• Possible Solution: It may take up to 24 hours for the Lync system to update the distribution group on the client. This is an Lync behavior and is not related to the VBrick VEMS Lync Streaming Gateway Server.

	2	VBrick Systems, Inc. 121 Cooperative Way, Suite 100 Herndon, Virginia 20171