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## VMware Horizon View Deployment

<https://campus.barracuda.com/doc/24674801/>

VMware Horizon View provides end users with access to their machines and applications through a unified workspace across multiple devices, locations, and connections. The Horizon View Connection Server authenticates and then directs incoming user requests to the appropriate View desktop.

The Barracuda Load Balancer ADC increases the performance, scalability, and reliability of VMware Horizon View. It distributes traffic among the Horizon View Connection Servers in your deployment for better load distribution and monitors the health of each server.

### Product Versions and Prerequisites

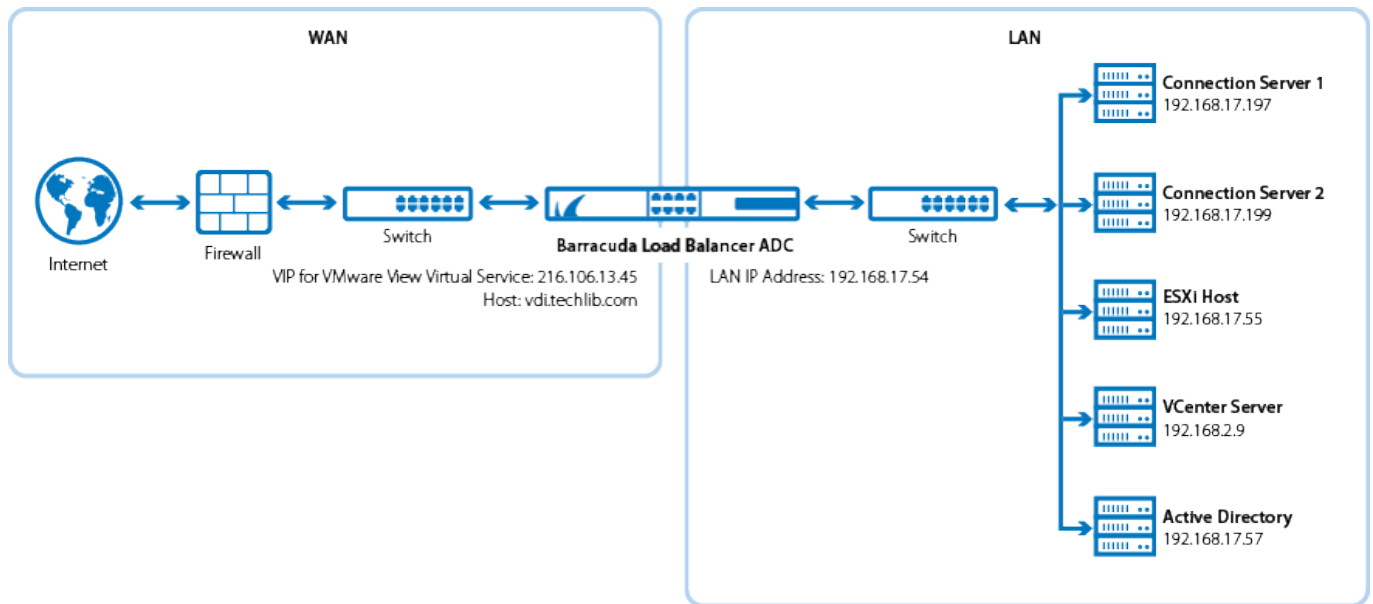
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You must have:

- Barracuda Load Balancer ADC version 5.4 and above.
- Personal Computer over Internet Protocol (PCoIP).
- VMware<sup>®</sup> Horizon View<sup>™</sup> version 7.x.
- Installed your Barracuda Load Balancer ADC(s), connected to the web interface, and activated your subscription(s).
- If you want VMware Horizon View Servers with high availability, deploy the Barracuda Load Balancer ADCs in a clustered environment. For more information, see [High Availability](#).
- A signed certificate to deploy the Barracuda Load Balancer ADC in a VMware Horizon View environment. Barracuda recommends that you have a signed certificate authority (CA) certificate. If you already have a signed CA certificate, you can continue with configuring the VMware Horizon View service on the Barracuda Load Balancer ADC. If you want to create a self-signed certificate, see [Create a Self-Signed Certificate](#) for instructions.

### Deployment Scenario

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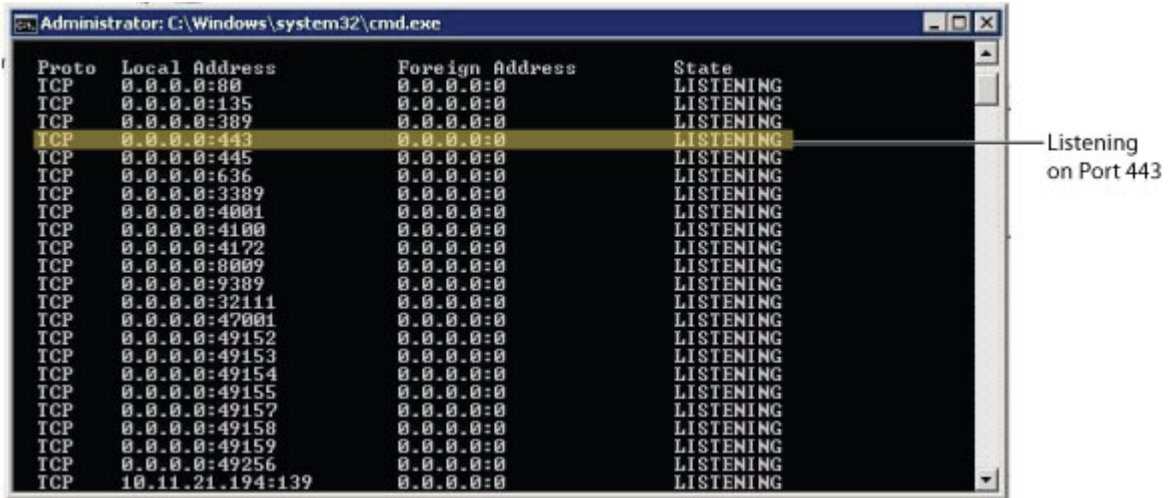


## Deploying VMware Horizon View Services on the Barracuda Load Balancer ADC

### Step 1. Import the Certificate to the Horizon View Connection Server

If you have not already installed the signed certificate on your Horizon View Connection servers, follow these steps to install the signed certificate on every server:

1. Install the certificate on the Horizon View Connection Server.
2. Set **Friendly Name** to **vdm** for the installed certificate.
3. On the Horizon View Connection server, right-click **My Computer** and select **Manage > Service and Applications > Services**.
4. Select **VMware Horizon View Connection Server** Service, and click **Restart** to restart the service. Wait a few minutes for the Horizon View Connection server to start listening.
5. On the Horizon View Connection Server, in the command window, type `netstat -anp TCP` and check the output to verify that the Horizon View Connection server is listening on port 443 for the Horizon View Connection service.



Reference:

<http://pubs.vmware.com/view-51/topic/com.vmware.view.installation.doc/GUID-80CC770D-327E-4A21-B382-786621B23C44.html> in the VMware View 5.1 Documentation Center.

**Step 2. Install the Certificate on the Barracuda Load Balancer ADC**

Install a copy of the signed certificate on the Barracuda Load Balancer ADC.

1. Create a copy of the signed certificate.
2. Log into the Barracuda Load Balancer ADC.
3. Go to the **BASIC > Certificates** page, and upload the certificate.

**Step 3. Configure the VMware Horizon View Services on the Barracuda Load Balancer ADC**

Configure the monitor group, the service group, and configure the services according to the type of traffic required by your VMware Horizon View servers.

1. Go to the **Traffic > Monitor Groups** page and configure a new monitor group:
  1. **Group Name:** Specify the service group name.
  2. **Monitor Name:** Specify the name for the service monitor group.
  3. **Testing Method:** Specify the testing methods (you can specify more than one testing method for the monitor group). See the online help for documentation on how to configure these testing methods. See also the [example](#) shown in this article.
2. Go to the **BASIC > Services** page, click **Add Service** and specify the group name in the **Group** field in the **Service Configuration** section.
3. For each service, enter the appropriate values in the corresponding fields of the **Service Configuration** section:

Services <sup>†</sup>	Type	IP Address	Port	Session Timeout	Certificates	Server Monitor
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VDI_HTTPS <sup>†</sup>	HTTPS	IP address of the FQDN that clients use to access the View server. For example: 216.106.13.45	443	1800	Select the certificate that you uploaded for the service.	<ul style="list-style-type: none"> <li>◦ <b>Testing Method:</b> Simple HTTPS</li> <li>◦ <b>HTTP Method:</b> HEAD</li> <li>◦ <b>Test Target:</b> /</li> <li>◦ <b>Additional Headers:</b> User-Agent: Barracuda Load Balancer ADC Server Monitor</li> <li>◦ <b>Status Code:</b> 200</li> <li>◦ <b>Test Delay:</b> 30 Seconds</li> </ul>
VDI_PCoIP (Optional, used for VDI over PCoIP <sup>†</sup> )	UDP Proxy	IP address of the FQDN that clients use to access the View server. For example: 216.106.13.45	4172	300	N/A	<ul style="list-style-type: none"> <li>◦ <b>Testing Method:</b> UDP Port Check</li> </ul>
VDI_PCoIP_TCPProxy (Optional, used for VDI over PCoIP <sup>†</sup> )	TCP Proxy	IP address of the FQDN that clients use to access the View server. For example: 216.106.13.45	4172	1800	N/A	<ul style="list-style-type: none"> <li>◦ <b>Testing Method:</b> TCP Port Check</li> </ul>
VDI_Blast (Optional)	Secure TCP Proxy	IP address of the FQDN that clients use to access the View server. For example: 216.106.13.45	8443	1800	Select the certificate that you uploaded for the service.	<ul style="list-style-type: none"> <li>◦ <b>Testing Method:</b> TCP Port Check</li> </ul>

<sup>†</sup> (For versions greater than 5.4) If you are configuring VDI over PCoIP, the HTTPS Service, TCP Proxy Service (on Port 4172), UDP Proxy Service (on Port 4172), and Blast Service (on port 8443) must all be under the same Service-Group. You must enable Source-IP Persistence at this Service-Group level.

4. Under the **Load Balancing** section for the above services, configure the following:
  - For **Persistence Type**, select **Source IP**.
  - For **Persistence Time**, enter 1200.
  - For **Persistence Netmask**, enter 255.255.255.255.
5. Service Group Persistence ensures that a client's connection to a server is maintained even if the client switches to a difference service, so long as that service is included in the Service Group and the same server is configured for both services. After the **Persistence Time** has expired, the client can be switched to a different server the next time it attempts to switch to a

different service.

1. To enable Source IP Persistence for the Service Group, go to the **BASIC > Services** page and select the Service Group in the left pane.
2. On the **Service Groups** page, set the **Persistence** drop down menu to **Source IP**. Specify a **Persistence Netmask** and a **Persistence Time** in seconds.  
 If you enable Service Group Persistence, the Persistence settings (on the **BASIC > Services** page) you configure for the services affected are ignored.
6. Go to the **BASIC > Services** page and scroll to the **Server Monitor** section. In the **Testing Method** drop down menu, scroll to the end of the list to view the **Monitor Groups**. Select the new monitor group from this list.
7. For VDI\_HTTPS service, under **Other** section, set the **Enable VDI** to **Yes**.
8. Click **Create**.
9. Click **Add Server** to add a back-end servers. In the server settings:
  1. Enter the **IP address** of the Horizon View Connection server. For example: 192.168.17.197
  2. Enter the corresponding **ports** for the servers, port 443 for VDI\_HTTPS, port 4172 for VDI\_PCoIP and VDI\_PCoIP\_TCPProxy and port 8443 for VDI\_Blast services.
  3. In the **SSL** section for VDI\_HTTPS and VDI\_Blast services, set **Server uses SSL** to **Yes**.
  4. If the certificate for the service is a self-signed or a test certificate, set **Validate Certificate** to **Off**. If the service is using a CA-signed certificate, select **On**.
10. Click **Create**.
11. (in firmware release 5.4 and earlier) Go to **Advanced > System Configuration** page, under **Advanced Settings** section, set **Show Advanced Settings** to Yes and then go to **Advanced** section, set **Enable Persistence for VDI** to **Yes**.

The following example illustrates how to enable service group monitoring to ensure source IP persistence for the service group. It includes four services configured on the ADC, sharing the same two servers.

1. Create a service group for the following services.

Service Name	Service Type	IP Address	Server Names	Server IP Addresses
S1	HTTPS	10.1.1.1:443	R1 R2	10.2.2.1:443 10.2.2.2:443
S2	TCP Proxy	10.1.1.2:4172	R1 R2	10.2.2.1:4172 10.2.2.2:4172
S3	UDP Proxy	10.1.1.3:4172	R1 R2	10.2.2.1:4172 10.2.2.2:4172
S4	Secure TCP Proxy	10.1.1.4:8443	R1 R2	10.2.2.1:8443 10.2.2.2:8443

2. Go to the **BASIC > Services** page for each service and specify the group name as GM\_Service in the **Group** field in the **Service Configuration** section.
3. Go to **Traffic > Monitor Groups** page and configure a new monitor group for the service group:

1. **Group Name:** Specify the service group name as GM\_Service.
2. **Monitor Name:** Specify the name for the service monitor group as GM\_Example.
3. **Testing Method:** Specify **Simple HTTPS**, **TCP Port Check**, and **UDP Port Check** as the testing methods as shown below:

Monitor Name	Testing Method	Port	Test Target	Test Match	Additional Headers	Status Code	Test Delay
M1	Simple HTTPS	443	/	VMware	User-Agent: Barracuda Load	200	30
M2	TCP Port Check	4172	-	-	-	-	10
M3	UDP Port Check	4172	-	-	-	-	10
M4	TCP Port Check	8443	-	-	-	-	10

4. Go to the **BASIC > Services** page and scroll to the **Server Monitor** section. In the **Testing Method** drop down menu, scroll to the end of the list to view the **Monitor Groups**. Select the **GM\_Example** monitor group.
5. To enable Source IP Service Group Persistence, go to the **BASIC > Services** page and select the GM\_Service service group in the left pane.
  1. Set the **Persistence** drop down menu to **Source IP**.
  2. Specify the **Persistence Netmask** as 255.255.255.255
  3. Specify the **Persistence Time** as 1200. Click **Save Changes**.

**Step 4. Configure the DNS**

Create an A record to point the VIP address that you set on the Barracuda Load Balancer ADC for the VMware Horizon View service.

For example, if you want to use the name *vip* and your domain is *localserver.com*, your A record would look something like this:

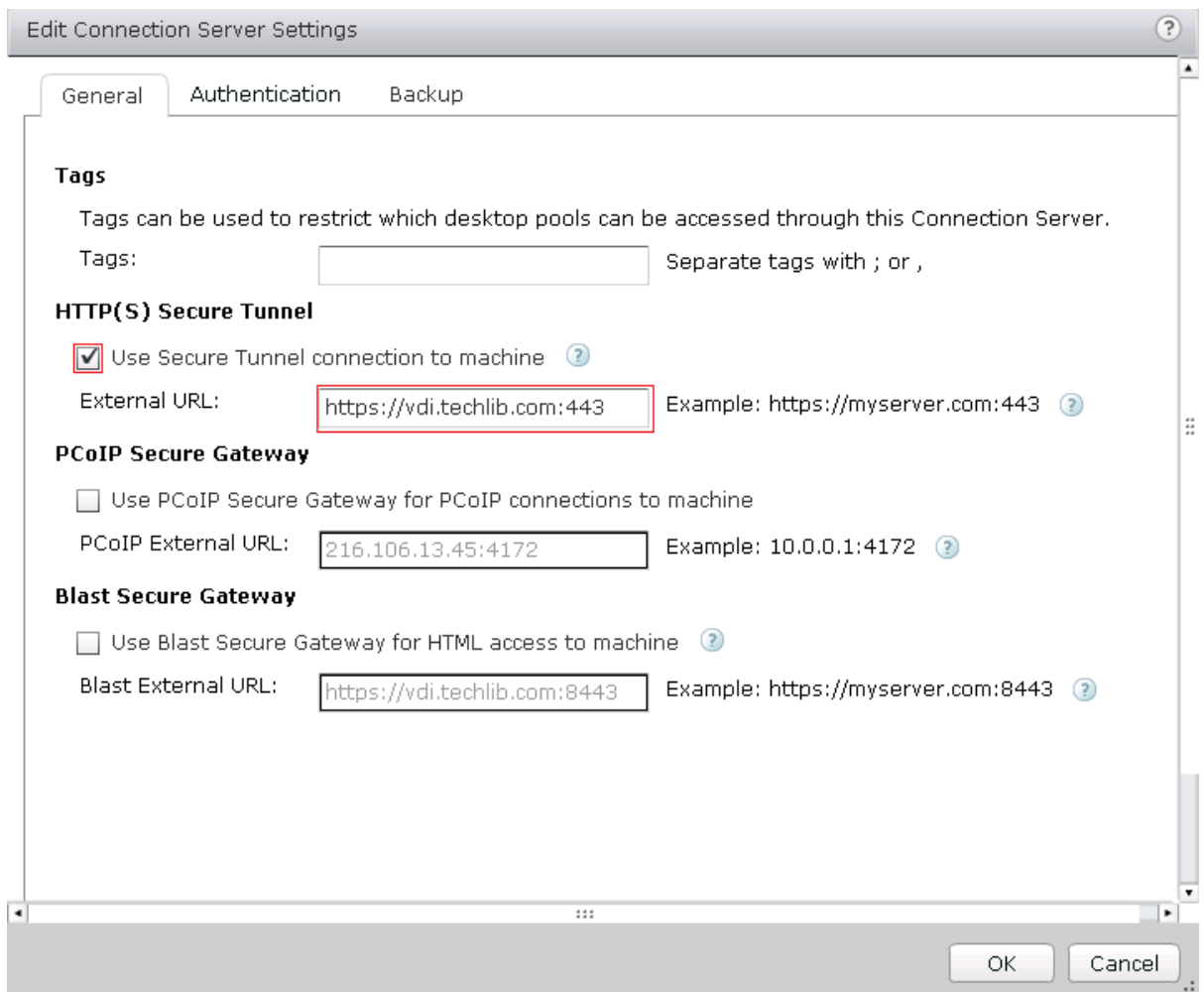
Name	IP Address
vip.localserver.com	216.106.13.45

If you have both internal and external clients accessing the VMware service through the Barracuda Load Balancer ADC, you can configure two different VIP addresses and two services—one service to direct the traffic to VMware Horizon View Security Servers, and another service to direct traffic to the VMware Horizon View Connection Servers.

**Step 5. Set up the Horizon View Connection Server (Not for SSL offloading)**

Configure the Horizon View Connection Server for HTTPS Secure Tunnel, PCoIP Secure Gateway and Blast Secure Gateway services:

1. Log into the View Administrator Console, expand **View Configuration**, and click **Servers**.
2. In the right pane, click the **Connection Servers** tab. All configured View Connection servers display in the table.
3. Configure HTTPS only for the VMware Horizon View Connection server:
  1. Select the server, and click **Edit**. The **Edit Connection Server Settings** window appears.
  2. In the **HTTP(S) Secure Tunnel** section, select the **Use Secure Tunnel connection to machine** check box.
  3. In the **External URL** field, enter the a URL with FQDN of the VDI service. For example: `https://<FQDN>:443`



**Edit Connection Server Settings**

General Authentication Backup

**Tags**

Tags can be used to restrict which desktop pools can be accessed through this Connection Server.

Tags:  Separate tags with ; or ,

**HTTP(S) Secure Tunnel**

Use Secure Tunnel connection to machine ?

External URL:  Example: https://myserver.com:443 ?

**PCoIP Secure Gateway**

Use PCoIP Secure Gateway for PCoIP connections to machine

PCoIP External URL:  Example: 10.0.0.1:4172 ?

**Blast Secure Gateway**

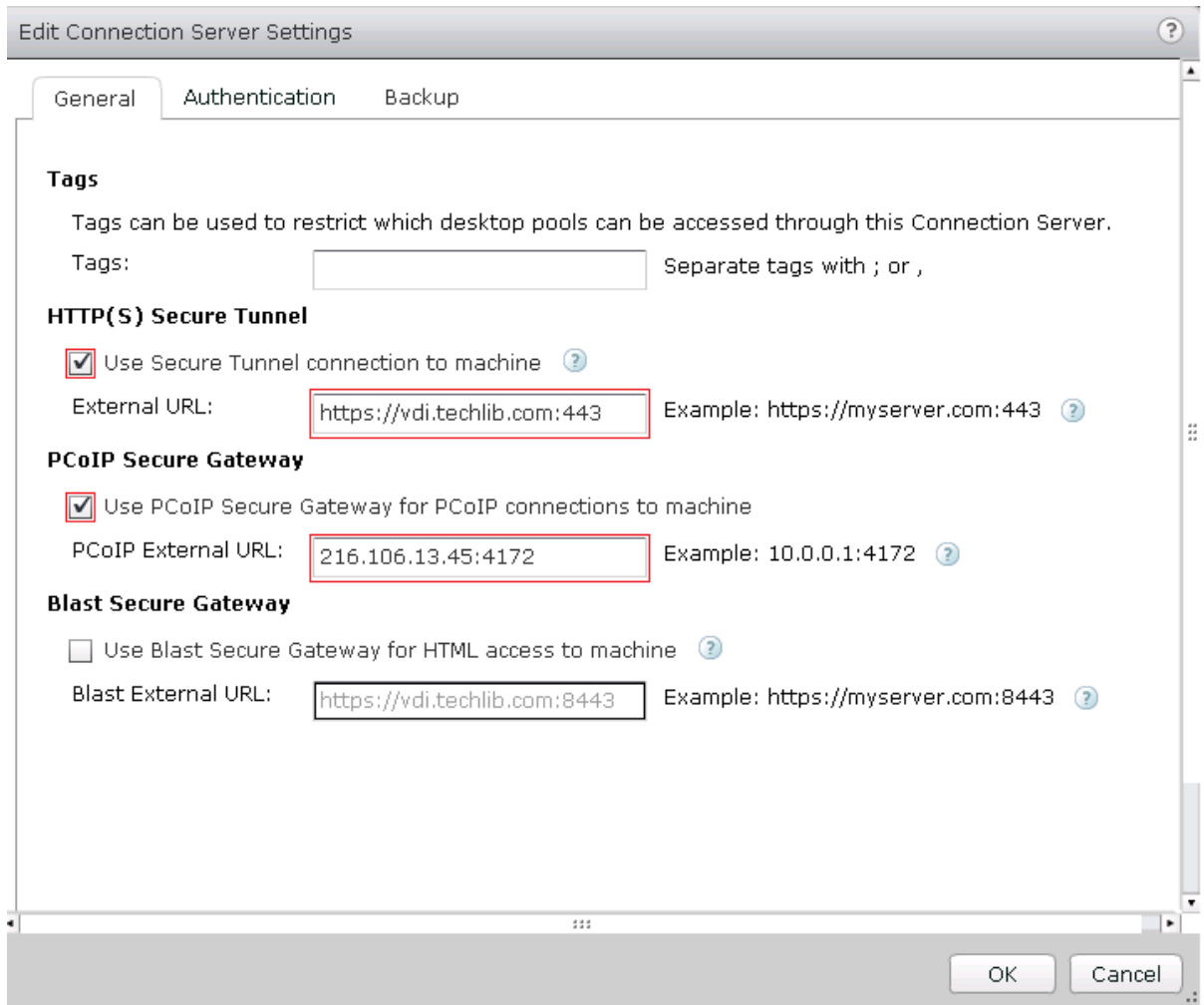
Use Blast Secure Gateway for HTML access to machine ?

Blast External URL:  Example: https://myserver.com:8443 ?

OK Cancel

4. (Optional) Configure HTTPS and PCoIP for the VMware Horizon View Connection server. As described earlier, be sure to have the following services within the same Service-Group: Select the server, and click **Edit**. The **Edit Connection Server Settings** window appears.
  1. In the **HTTP(S) Secure Tunnel** section, select the **Use Secure Tunnel connection to machine** check box.

2. In the **External URL** field, enter the a URL with FQDN of the VDI service. For example: `https://<FQDN>:443`
3. In the **PCoIP Secure Gateway** section, select the **Use PCoIP Secure Gateway for PCoIP connections to machine** check box.
4. In the **PCoIP External URL** field, enter the a PCoIP IP address and port 4172. For example: `216.106.13.45:4172`



5. (Optional) Configure HTTPS, PCoIP, and a Blast Secure Gateway for the VMware Horizon View Connection server.

As described earlier, you must have the following services in the same Service-Group, with Source-IP Persistence enabled at that group level: HTTPS Service, TCP Proxy Service (on Port 4172), UDP Proxy Service (on Port 4172).

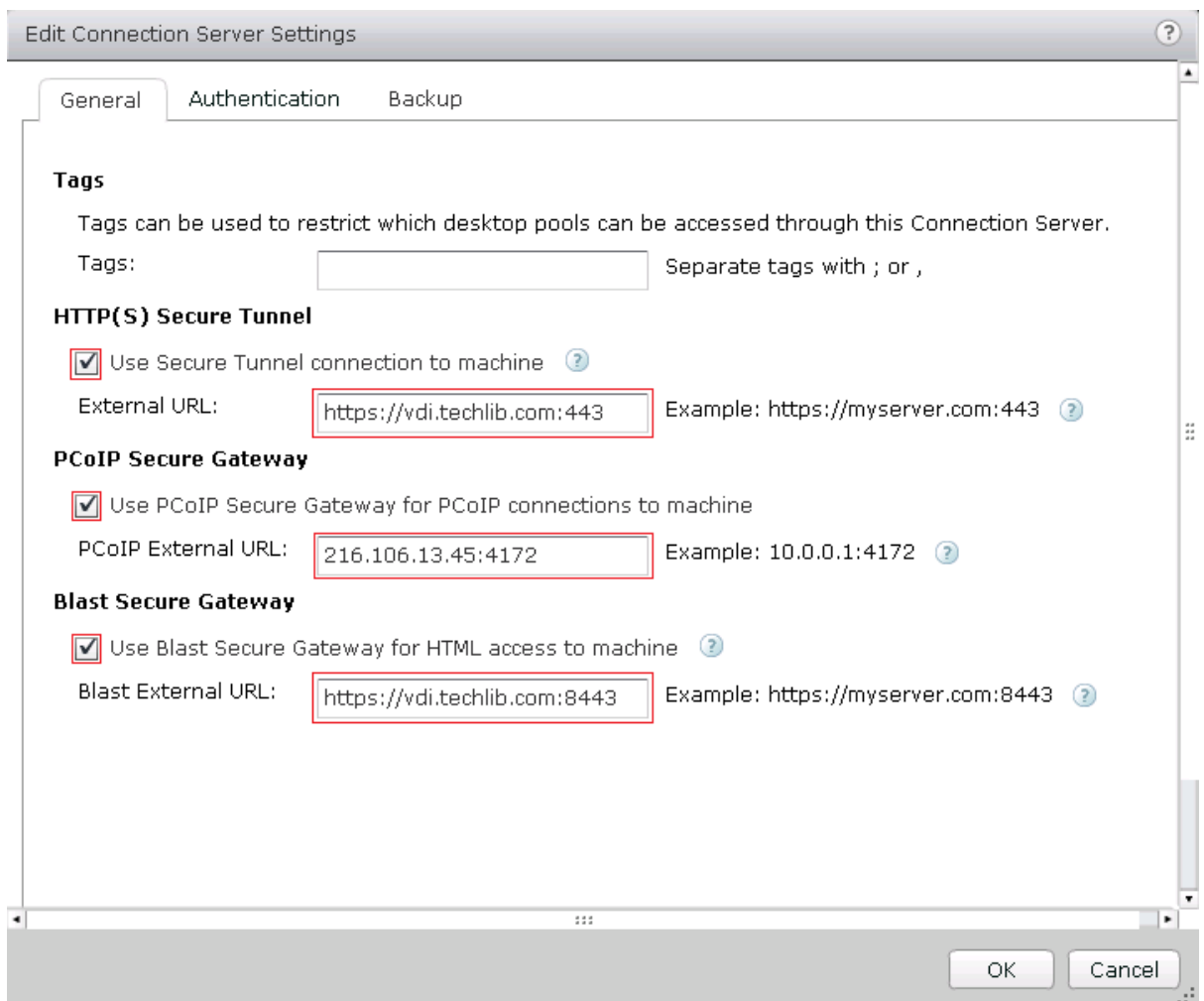
1. Select the server, and click **Edit**. The **Edit Connection Server Settings** window appears.
2. In the **HTTP(S) Secure Tunnel** section, select the **Use Secure Tunnel connection to machine** check box.
3. In the **External URL** field, enter the a URL with FQDN of the VDI service. For example: `https://vdi.tchlib.com:443`
4. In the **PCoIP Secure Gateway** section, select the **Use PCoIP Secure Gateway for**



**PCoIP connections to machine** check box.

5. In the **PCoIP External URL** field, enter the a PCoIP IP address and port 4172. For example: 216.106.13.45:4172
6. In the **Blast Secure Gateway** section, select the **Use Blast Secure Gateway for HTML access to machine** check box.
7. In the **Blast External URL** field, enter the a Blast external URL with port 8443. For example: <https://vdi.techlib.com:8443>

Note that clients coming from behind a NAT cannot use VDI Servers over PCoIP. These clients must use VDI Service over HTTPS.

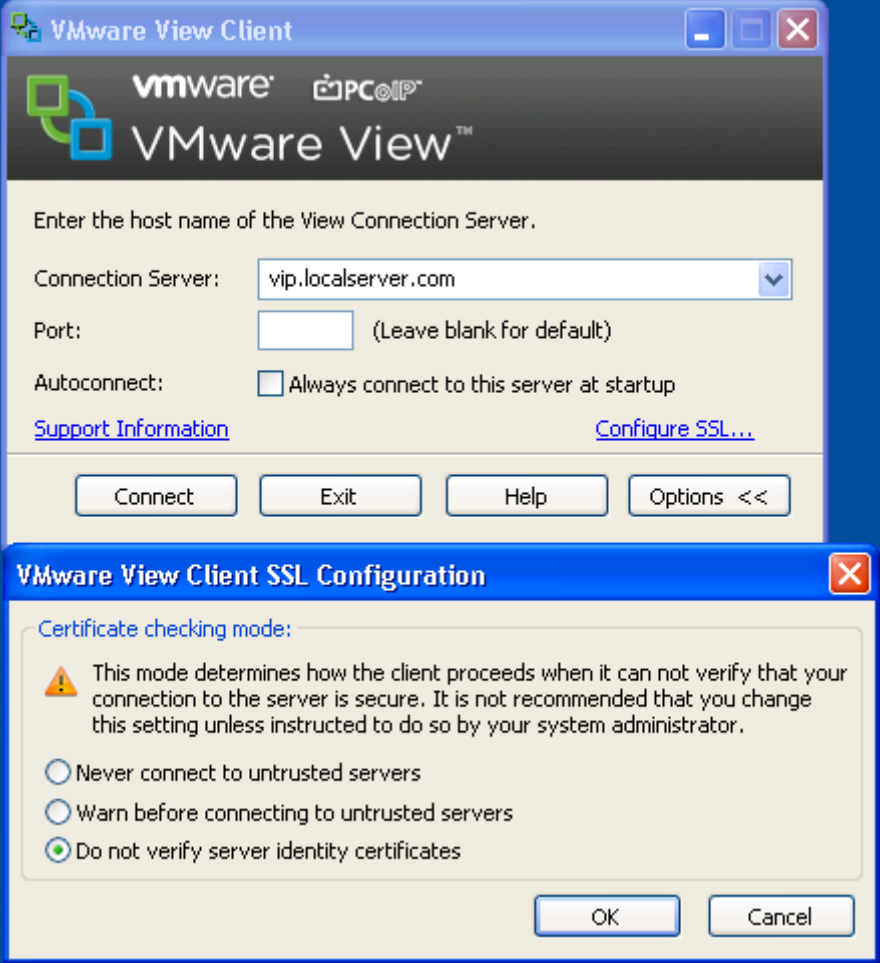


6. Click **OK** to save your changes.

**Step 6. Verify that the VMware Horizon View Connection Service is Reachable**

Verify that you can access the VMware Horizon View Connection service through the VIP address. If you cannot access the service through the VIP address, see [Troubleshooting](#).

**Troubleshooting**

Issue	Solution
<p>You received a server certificate warning.</p>	<p>The installed certificate is not from a Certification Authority. You can ignore the warning.</p>
<p>You received a warning or error message for server authentication and cannot launch the snapshot.</p>	<p>The certificate on the Barracuda Load Balancer ADC and the Horizon View Connection server do not match. A copy of the certificate from the View Horizon Connection server was not installed on the Barracuda Load Balancer ADC.</p> <p>As a workaround, on the VMware Horizon View Client:</p> <ol style="list-style-type: none"> <li>1. Go to <b>Options &gt; Configure SSL</b>.</li> <li>2. Select <b>Do not verify server identity certificates</b> and click <b>OK</b>.</li> </ol> 
<p>You received a server authentication failed error, even though the same certificate is installed on the Barracuda Load Balancer ADC and the Horizon View Connection servers.</p>	<p>Verify that the CN parameter of the installed certificate matches the FQDN of the service.</p>

You received an error message that states, "Invalid Certificate received from server."	The issuing authority for the certificate installed for the service is not present under Trusted Root Certification Authorities on the client device. Install the same certificate under <b>LOCAL Computer &gt; Trusted Root Certification Authorities</b> for the client device.
You received a message that the user is not authenticated even though the username and password are correct.	You did not enable persistence for the VMware Horizon View service on the Barracuda Load Balancer ADC.
You want to restart the VMware Horizon View Connection Server service.	<ol style="list-style-type: none"> <li>1. On the Horizon View Connection Server, right-click <b>My Computer</b> and go to <b>Manage &gt; Service and Applications &gt; Services</b>.</li> <li>2. Select <b>VMware Horizon View Connection Server Service</b>, and click <b>Start</b> to restart the service. Wait a few minutes for the Horizon View Connection Server to start listening.</li> </ol>

#### (Optional) Create a Self-Signed Certificate

If you do not have a signed certificate, you can use the following steps to create a self-signed certificate.

1. Log into the Barracuda Load Balancer ADC.
2. Go to the **BASIC > Certificates** page.
3. In the **Certificate Generation** section, click **Create Certificate**
4. Enter the **Certificate Name**. For example: VMware View
5. Enter the **Organization Info** details:
  1. In the **Common Name** field, enter the fully qualified domain name (FQDN) which resolves to the VIP address for the VMware Horizon View service. For example: viewvip.localserver.com
  2. Enter the **Country Code, State or Province, Locality, Organization (Company) Name, and Organization (Departmental) Unit** for your organization.
  3. From the **Key Size** list, select **2048**.
  4. In the **Expires In** field, enter the number of days that you want the generated certificate to be valid.
  5. Set **Allow Private Key Export** to **Yes**.
6. Click **Generate Certificate** at the top of the section. The certificate is added to the **Saved Certificates** table in the **Created Certificates** section.
7. In the **Download** column, click **Certificate**. The **Save Token** page appears.
8. Enter a password in the **Encryption Password** field.
9. Click **Save**. The certificate, including the private key, is exported as a PKCS12 token in a file named **<certificate name>.pfx**.
10. Click **Close Window** to return to the **Certificates** page.

## Figures

1. VDI\_deployment\_new.png
2. vdi\_port443.jpg
3. VDI\_onlyHTTPS.png
4. VDI\_PCoIP.png
5. VDI\_BlastClient.png
6. vdi.png

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