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

You must have:

- Barracuda Load Balancer ADC version 5.4 and above.
- Personal Computer over Internet Protocol (PCoIP).
- VMware® Horizon View™ version 5.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
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.
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.
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 that one testing method for the monitor group). See the online help for documentation on how to configure these testing methods. See also the examples 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:

<table>
<thead>
<tr>
<th>Services</th>
<th>Type</th>
<th>IP Address</th>
<th>Port</th>
<th>Session Timeout</th>
<th>Certificates</th>
<th>Server Monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Group</td>
<td>Service Type</td>
<td>IP address of the FQDN that clients use to access the View server. For example: 216.106.13.45</td>
<td>Port</td>
<td>Persistence Time</td>
<td>Additional Details</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>------</td>
<td>------------------</td>
<td>--------------------</td>
<td></td>
</tr>
<tr>
<td>VDI_HTTPS†</td>
<td>HTTPS</td>
<td>Select the certificate that you uploaded for the service.</td>
<td>443</td>
<td>1800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VDI_PCoIP</td>
<td>UDP Proxy</td>
<td>IP address of the FQDN that clients use to access the View server. For example: 216.106.13.45</td>
<td>4172</td>
<td>300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VDI_PCoIP_TCPProxy</td>
<td>TCP Proxy</td>
<td>IP address of the FQDN that clients use to access the View server. For example: 216.106.13.45</td>
<td>4172</td>
<td>1800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VDI_Blast</td>
<td>Secure TCP Proxy</td>
<td>IP address of the FQDN that clients use to access the View server. For example: 216.106.13.45</td>
<td>8443</td>
<td>1800</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

† (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 S SL** 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.

<table>
<thead>
<tr>
<th>Service Name</th>
<th>Service Type</th>
<th>IP Address</th>
<th>Server Names</th>
<th>Server IP Addresses</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>HTTPS</td>
<td>10.1.1.443</td>
<td>R1 R2</td>
<td>10.2.1.443 10.2.2.443</td>
</tr>
<tr>
<td>S2</td>
<td>TCP Proxy</td>
<td>10.1.1.2:4172</td>
<td>R1 R2</td>
<td>10.2.2.1:4172 10.2.2.2:4172</td>
</tr>
<tr>
<td>S3</td>
<td>UDP Proxy</td>
<td>10.1.1.3:4172</td>
<td>R1 R2</td>
<td>10.2.2.1:4172 10.2.2.2:4172</td>
</tr>
<tr>
<td>S4</td>
<td>Secure TCP Proxy</td>
<td>10.1.1.4:8443</td>
<td>R1 R2</td>
<td>10.2.2.1:8443 10.2.2.2:8443</td>
</tr>
</tbody>
</table>

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:

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

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:

<table>
<thead>
<tr>
<th>Name</th>
<th>IP Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>vip.localserver.com</td>
<td>216.106.13.45</td>
</tr>
</tbody>
</table>

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

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

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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

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**VMware Horizon View Deployment**
**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](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

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>You received a server certificate warning.</td>
<td>The installed certificate is not from a Certification Authority. You can ignore the warning.</td>
</tr>
<tr>
<td>You received a warning or error message for server authentication and cannot launch the snapshot.</td>
<td>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. As a workaround, on the VMware Horizon View Client: 1. Go to <strong>Options &gt; Configure SSL</strong>. 2. Select <strong>Do not verify server identity certificates</strong> and click <strong>OK</strong>.</td>
</tr>
<tr>
<td>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.</td>
<td>Verify that the CN parameter of the installed certificate matches the FQDN of the service.</td>
</tr>
<tr>
<td>You received an error message that states, &quot;Invalid Certificate received from server.&quot;</td>
<td>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 LOCAL Computer &gt; Trusted Root Certification Authorities for the client device.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>You received a message that the user is not authenticated even though the username and password are correct.</td>
<td>You did not enable persistence for the VMware Horizon View service on the Barracuda Load Balancer ADC.</td>
</tr>
<tr>
<td>You want to restart the VMware Horizon View Connection Server service.</td>
<td>1. On the Horizon View Connection Server, right-click My Computer and go to Manage &gt; Service and Applications &gt; Services. 2. Select VMware Horizon View Connection Server Service, and click Start to restart the service. Wait a few minutes for the Horizon View Connection Server to start listening.</td>
</tr>
</tbody>
</table>

**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