# 1. VMware NSX AVI Loadbalancer Integration with VMware Horizon

To deploy AVI LoadBalancer, there are two main components involved:

#### **AVI Controller:**

The Avi Controller is a centralized brain that spans data centers and clouds. The Avi Controller has full visibility across the environments and automates the deployment and management of the load balancing endpoints, which we call Service Engines.

We need one AVI Controller to manage the Service Engine across the site if all the network configurations are in-place. In Our Lab, Avi Controller is pre-deployed in Site-2 which will manage both the Service Engines

#### Service Engine:

Service Engine is a Load Balancer Component which runs on each datacenter. Service Engine(SE) is managed by AVI Controller. In the lab we will see how SEs are configured as a Load Balancer to full-fill the request from Applications.

In Our case Applications are UAGs across both Site-1 and Site-2

**1** Configure Backend server groups

### Part 1 - AVI Integration with UAG Servers Site-1

#### Section 1 - AVI Integration with UAG Servers in Site1

| FQDN                               | Entity Description                | Real IP       |
|------------------------------------|-----------------------------------|---------------|
| uag-hzn-avi01.euc-<br>livefire.com | FQDN of Avi LB VIP Site-1         | 172.16.20.100 |
| uag-hzn-01a.euc-livefire.com       | FQDN of UAG server 1 on site<br>1 | 172.16.20.10  |
| uag-hzn-01b.euc-livefire.com       | FQDN of uag server 2 on site<br>1 | 172.16.20.11  |

| A Not secure         | https://avicontroller.euc-livefi | re.com/#!/login          |                           |                       | _                   | _             |
|----------------------|----------------------------------|--------------------------|---------------------------|-----------------------|---------------------|---------------|
| livefire.lab/ip 🧮 Ho | orizon®Site 1 🔤 NSX manager      | 🍁 App Volumes Site 1     | UWG-HZN-01a               | UAG-HZN-01b           | 😵 vCent r 🚺 Avi Var | tage Control. |
|                      |                                  |                          |                           |                       |                     |               |
|                      |                                  |                          |                           |                       |                     |               |
|                      |                                  |                          |                           |                       |                     |               |
|                      |                                  |                          |                           |                       |                     |               |
|                      | Your connection                  | is not private           |                           |                       |                     |               |
|                      | Attackers might be to in         | to steel your informatio | on from autoentrel        | ller oue livefire com | Hor example         |               |
|                      | passwords, messages, or          | credit cards). Learn mor | 2                         | ner.euc-invenire.com  | (for example,       |               |
|                      | NET::ERR_CERT_AUTHORITY_I        | NVALID                   |                           |                       |                     |               |
|                      |                                  |                          |                           |                       |                     |               |
|                      | Q To get Chrome'                 | highest level of securi  | ty turn on enhand         | ced protection        |                     |               |
|                      | e roget en one.                  | inglicat revel of accur  | iy, <u>tarr or critar</u> | Card provide them     |                     |               |
|                      |                                  |                          |                           |                       |                     |               |
|                      |                                  |                          |                           |                       |                     |               |
|                      |                                  |                          |                           |                       |                     |               |
|                      |                                  |                          |                           |                       |                     |               |
|                      | Advanced                         |                          |                           |                       | Back to safety      |               |

- 1. On your ControlCenter Server
  - Open your Chrome Browser for Site-1
    - In the Address bar, Enter and browse to avicontroller.euc-livefire.com
      - In the Your Connection is not private window
        - Select Advanced
        - Select Proceed to avicontroller.euc-livefire.com



2. In the VMware NSX ALB (Avi) page

• Under Username, enter admin and VMware1!VMware1! as the password

| 🚻 Apps 🕤 my-ip.live | fire.lab/ip | Horizon®Site    | 1 NSX NSX manag | er 🛉 Ap |
|---------------------|-------------|-----------------|-----------------|---------|
| vmw NSX-ALB         |             |                 |                 |         |
| Applications Op     | erations    | Templates       | Infrastructure  | Adminis |
|                     | ~           | Q               |                 |         |
| Profiles            | >           |                 | Name 🔺          |         |
| Policies            | >           |                 | Internal        |         |
| Groups              | ~           |                 | Internal        |         |
| IP Groups           |             |                 |                 |         |
| String Groups       |             |                 |                 |         |
| t                   |             |                 |                 |         |
| vmw NSX-ALB         |             |                 |                 |         |
| Applications Operat | ions Tem    | plates infrastr | ucture Administ | ration  |
|                     | ~           |                 |                 |         |
| - Profiles          |             | P Groups        | S               |         |
| Policies            |             | CREATE          | 1               |         |
| E Groups            | ~           | Name            |                 |         |
| IP Groups           |             |                 |                 |         |
| String Groups       |             |                 |                 |         |
| Security            | >           | UAG Serve       | rs-Site-2       |         |
|                     | >           |                 |                 |         |
| Scripts             |             |                 |                 |         |

- 3. From the NSX-ALB console,
  - Navigate to **Templates** > **Groups**.
    - Select IP Groups
  - In the IP Groups area
    - Select **CREATE**

| vmw NSX-ALB        |  |
|--------------------|--|
| UAG Servers-Site-1 |  |
|                    | UAG Servers-Site-1<br>General                |
|                    | General                                      |
|                    | Name <sup>*</sup> ①<br>UAG Servers-Site-1    |
|                    | Type<br>IP Address                           |
|                    | Import IP Address From File<br>Select a file |
|                    | IP Addresses (0)                             |
|                    | ADD  |
|                    | IP Address                                   |

- 4. In the **NEW IP Group:** window
  - In the **General** area
    - Under Name\*
      - Type UAG Servers-Site-1
  - Under IP Addresses area
    - Select ADD



- 5. In the IP Addresses (1) area
  - Under IP Address
    - In the Enter IP Address area
      - Type 172.16.20.10

| IP Addresses (1)             |
|------------------------------|
| ADD                          |
| IP Address                   |
| Accepts Single, Comma Separa |
|                              |
|                              |

- 6. In the IP Addresses (1) area
  - Select ADD

| IP | Addresses (2)  |
|----|--|
|    | ADD  |
|    | IP Address   |
| (  | Accepts Single, Comma Separated and Ranges                     |
| (  | Enter IP Address<br>Accepts Single, Comma Separated and Ranges |
| (  | 1  |
|    |  |

- 7. In the IP Addresses (2) area
  - Under IP Address
    - In the Enter IP Address area
      - Type 172.16.20.11

| IP Address              |                      |                |      |
|-------------------------|----------------------|----------------|------|
| Accepts Single, Comma S | Separated and Ranges |                | 8    |
| Accepts Single, Comma 5 | Separated and Ranges |                | 8    |
|                         |                      | items per page | 10 ~ |
|                         |                      |                |      |

#### 8. In the IP Addresses (2) area

- In the bottom right hand corner
  - Select Save

Verify Custom Health Monitor Profile

### Part 2: Verify Custom Health Monitor Profile

The next step is to validate the custom Health Monitor Profile. Note:- This is pre-created

|                             | ot sec  | ure   https://avicontroller | .euc-livefire.com/ | #I/admin/templa | ite/profile/healthi | monitor          |                   | Q. (c) 🎝      |   | •   | 1 |
|-----------------------------|---------|-----------------------------|--------------------|-----------------|---------------------|------------------|-------------------|---------------|---|-----|---|
| 🕤 my-ip.livefire.lab/ip 🔤 H | lorizon | ©Site 1 🚾 UAG-HZN-01a       | uag-HZN-01         | lb 📉 Avi Vantag | je Control 📴 v      | center-01a 🔘 UEM | Carbon Black Cle  | oud 🐥 Lookout |   |     |   |
| vmw NSX-ALB                 |         |                             |                    |                 |                     |                  |                   | admin         |   |     |   |
| Applications Operations Te  | emplat  | es Infrastructure Administ  | tration            |                 |                     |                  |                   |               |   |     |   |
| ~                           |         |                             |                    |                 |                     |                  |                   |               |   |     | - |
| 🗇 Profiles 🗸 🗍              | не      | alth Monitors               |                    |                 |                     |                  |                   |               |   |     |   |
| Application                 | GRI     | EATE                        |                    |                 |                     |                  |                   |               |   | 9   | 1 |
| TCP/UDP                     |         | Name                        | Туре               | Federated       | Send interval       | Receive Timeout  | Successful Checks | Failed Checks |   | _   |   |
| Persistence                 |         | Horizon-HTTPS               | HTTPS              | No              | 30 Seconds          | 10 Seconds       | 2                 | 2             | 0 |     |   |
| Health Monitors             | 0       | System-DNS                  | DNS                | No              | 6 Seconds           | 4 Seconds        | 2                 | 2             | 0 | -   |   |
| Analytics                   |         | System-HTTP                 | HITTP              | No              | 10 Seconds          | 4 Seconds        | 3                 | 3             | 0 | -   |   |
| invertige and a promises    |         |                             |                    |                 |                     |                  | -                 | -             | 6 | -23 |   |
|                             |         |                             |                    |                 |                     |                  |                   |               |   |     |   |

- 1. From the NSX-ALB console,
  - Navigate to Templates > Profiles
    - Under **Profiles** 
      - Select Health Monitors > Horizon-HTTPS

• Click on the **pencil** icon to the right of **Horizon-HTTPS** 

| Name* 😡            | Туре 😡              |
|--------------------|---------------------|
| Horizon-HTTPS      | HTTPS               |
| Description        | Successful Checks 🛞 |
|                    | 2                   |
|                    | Failed Checks 😡     |
|                    | 2                   |
| Send Interval 😡    |                     |
| 30                 | sec Is Federated 😡  |
| Receive Timeout () |                     |
| 10                 | 5,00°               |

- 2. On the New Health Monitor page,
  - Validate the following configuration
  - Name: Horizon-HTTPS
  - Type : HTTPS
  - Send Interval 30
  - Receive Timeout 10

| Edit Health Monitor: Horizon-HTTPS |         |             |
|------------------------------------|---------|-------------|
|                                    | . HTTPS | Settings .  |
|                                    | -1111-3 | occurigs -  |
| Health Monitor Port 🔞              |         |             |
| Use Server Port                    |         |             |
| Authentication                     |         |             |
| Authentication Type 🐵              |         |             |
| Authentication Type                | ~       |             |
| Client Request Header 🐵            |         |             |
| USER INPUT                         |         | CONVERTED   |
| GET /favicon.ico HTTP/1.0          |         | GET /favico |

- 3. On the Edit Health Monitor: Horizon-HTTPS page,
  - Scroll down to the **HTTPS Settings** section
  - Under Client Request Header: GET /favicon.ico HTTP/1.0

| 2XX 🗙                                     | ~   |
|---|-----|
| SSL Attributes 🖗                          |     |
| TLS SNI Server Name 🔞                     |     |
| Host Header                               |     |
|   |     |
| SSL Profile* 🔞                            |     |
| SSL Profile*                              | ~ 🥒 |
| SSL Profile*  System-Standard PKI Profile | ~ 🥖 |

- 4. On the New Health Monitor: Horizon-HTTPS page,
  - Scroll down until you locate Response Code\*
    - Response Code\* : 2XX
    - Next to SSL Attributes: Checkbox is selected
    - SSL Profile\*: System-Standard.

| New Health Monitor: Horizon-HTTPS |
|-----------------------------------|
| SSL Key and Certificate 💿         |
| Select SSL Key and Certificate    |
|                                   |
|                                   |
|                                   |
| Maintenance Response Code 🚱       |
| 503                               |
|                                   |
| ·                                 |
|                                   |
|                                   |
|                                   |
| ADD                               |
|                                   |
|                                   |
|                                   |
|                                   |
| Items per page 10 V               |
|                                   |
| ·                                 |
| Save                              |
|                                   |

- 5. On the **New Health Monitor: Horizon-HTTPS** page,
  - Scroll down until you locate Maintenance Response Code\*

- Maintenance Response Code :503
- Close the Edit Health Monitor: Horizon-HTTPS
- Do Not make any changes

We will now create L7 Pools for Site-1

### Part 3: Creating Layer 7 Pools For Site-1



- 1. From the NSX-ALB console
  - Navigate to **Applications** > **Pools**.

|           |            | CREATE POOL |
|-----------|------------|-------------|
| pen Conns | Throughput | \$          |
|           |            |             |
|           |            |             |

#### 2. In the **Pools** area

- To the right of the pane
  - Select CREATE POOL

| vmw NSX-ALB                    |  |  |  |
|--------------------------------|--|--|--|
| POOL<br>Horizon-L7-Pool-Site-1 | CREATE POOL                                  |  |  |
|                                | Horizon-L7-Pool-Site-1                       |  |  |
|                                | General Servers Health Monitor P             |  |  |
|                                | Default-Cloud                                |  |  |
|                                | VRF Context ()<br>global                     |  |  |
|                                | Default Server Port (1)<br>80                |  |  |
|                                | Load Balance Algorithm ()<br>Consistent Hash |  |  |
|                                | Type ()<br>Source IP Address                 |  |  |
|                                | Enable Request Queuing                       |  |  |

3. In the CREATE POOL: Horizon-L7-Pool-Site-1 window,

#### • Step 1: Settings

- Enter the required information:
  - Under Name\*:
    - Type Horizon-L7-Pool-Site-1
  - Under **Default Server Port** 
    - Type **443**

- Under Load Balance Algorithm:
  - From the drop down
    - Select Consistent Hash
      - with **Source IP Address** as the hash key.

| vmw NSX-ALB             |  |               |                |
|-------------------------|--|---------------|----------------|
| Horizon-L7-Pool-Site-1  | CREATE POOL  |               |                |
|                         | Horizon-L7-Pool Site 1                                   |               |                |
|                         | General Servers Health Monitor                           |               |                |
|                         | Health Monitors (0)                                      |               |                |
| 2                       |  |               |                |
|                         | Name   |               |                |
|                         | We   |               |                |
|                         |  |               |                |
| (1                      | Enable Passive Health Monitor ()                         |               |                |
|                         | Health Monitors to be considered "Up" ()<br>Enter Number |               |                |
| Health Monitors (1)     |  |               |                |
| 400                     |  |               |                |
| A00                     |  |               |                |
| Name                    |  |               |                |
| Horizon-HTTPS           |  |               |                |
|                         |  | items per pag | e 10 v 1 Total |
| Fnable Passive Health M | opitor ()  |               |                |

- 4. In the CREATE POOL: Horizon-L7-Pool-Site-1 window,
  - In the Health Monitor tab
    - 1. Make sure the **checkbox** next to:
      - Enable Passive Health Monitor is checked
    - 2. Select ADD.
      - Above + Add Active Monitor.
        - From the dropdown,
          - select is Horizon-HTTPS
          - This is the health monitor that you validated earlier

| Graceful Deactivate Timeout ()<br>1                              |    |
|--|----|
| Minutes  |    |
| Enable HTTP2 ()  |    |
| Lookup Server by Name ()   |    |
| Rewrite Host Header to Server Name ()                            |    |
| Append Port To Host Name ()<br>Never Always Non Default (80, 44) | 3) |
| Deactivate Port Translation ()                                   | _  |
| Lise Service SSL Mode ()   |    |

- 5. In the CREATE POOL: Horizon-L7-Pool-Site-1 window,
  - To the right of the Health Monitors area
    - Scroll Down
      - below Append Port To Host Name
        - next to Never
          - select the radio button

| CREATE POOL  |                   |     |             |  |
|--|-------------------|-----|-------------|--|
| Horizon-L7-Pool-Site-1                                     |                   |     |             |  |
| General Servers Health Monitor                             | Profiles/Policies | SSL | Fail Action |  |
|  |                   |     |             |  |
| SSL  |                   |     |             |  |
|  |                   |     |             |  |
| SSL Profile (1)  |                   |     |             |  |
| System-Standard  |                   |     |             |  |
| Server SSL Certificate Validation PKI Profile              |                   |     |             |  |
| Select Profile   |                   |     |             |  |
|  |                   |     |             |  |
| Service Engine Client Certificate ()<br>Select Certificate |                   |     |             |  |
|  |                   |     |             |  |
|  |                   |     |             |  |
| Enable Common Name Check (1)                               |                   |     |             |  |
|  |                   |     |             |  |
| Enable TLS SNI (1)   |                   |     |             |  |
|  |                   |     |             |  |
| Enter Server Name  |                   |     |             |  |
| Host header will be used by default                        | _                 |     |             |  |
|  |                   |     |             |  |
| Rewrite Host Header to SNI Name (                          |                   |     |             |  |
|  |                   |     |             |  |
|  |                   |     |             |  |
|  |                   |     |             |  |
|  |                   |     |             |  |
|  |                   |     |             |  |
| -  |                   |     |             |  |
|  |                   |     |             |  |
| SAVE   |                   |     |             |  |
|  |                   |     |             |  |

- 6. In the CREATE POOL: Horizon-L7-Pool-Site-1 window,
  - Scroll down
    - below the SSL section
      - under SSL Profile
        - select System-Standard.

- next to the Enable TLS SNI
  - ensure this box is **Checked**
  - · Leave all the remaining settings as defaults

| EDIT POO            | L                      |                           |                   |
|---------------------|------------------------|---------------------------|-------------------|
| Horizon-<br>General | L7-Pool<br>Servers     | -Site-1<br>Health Monitor | Profiles/Policies |
| Servers             |                        |                           |                   |
| Select Server       | rs By<br>s. Range or D | NS Name 💿 IP Group        |                   |

- 8. In the CREATE POOL: Horizon-L7-Pool-Site-1 window,
  - In the top of the interface
    - select the **Servers** tab
      - under Servers
        - next to IP Group
          - ensure the **radio button** is select

| EDIT POOL   |          |
|---|----------|
| Horizon-L7-Pool-Site-1  |          |
| General Servers Health Monitor Profiles/Policies SSL Fail Action RBAC |          |
| Servers   |          |
| Select Servers By O IP Address, Range or DNS Name O IP Group          | $\frown$ |
| UAG Servers-Site-1  | (⊗ ~ ; ) |
| Servers (2)   | $\cup$   |

- 9. In the CREATE POOL: Horizon-L7-Pool-Site-1 window,
  - Servers tab
    - IP Group area
      - From the dropdown,
        - select UAG Servers-Site-1
          - You created this earlier
    - Leave all the other settings as default



- 11. In the CREATE POOL: Horizon-L7-Pool-Site-1 window,
  - In the bottom right corner
  - select SAVE

Creating the UAG L4 Pool For Site-1

### Part 4: Creating Layer 4 Pools For Site-1



- 1. In the NSX-ALB admin console
  - In the **Applications** > **Pools** area
    - Select CREATE POOL

| vmw NSX-ALB                    |  |
|--------------------------------|--|
| POOL<br>Horizon-L4-Pool-Site-1 | CREATE POOL                                    |
|                                | Horizon-L4-Pool-Site-1                         |
|                                | General Servers Health Monitor                 |
|                                | General  |
|                                | C Enable Pool ()                               |
|                                | Name <sup>*</sup> ()<br>Horizon-L4-Pool-Site-1 |
|                                | Description ()                                 |
|                                | Description                                    |
|                                | Type <sup>®</sup> ()<br>Generic Application    |
|                                | Cloud<br>Default-Cloud                         |
|                                | VRF Context ()<br>global                       |
|                                | Default Server Port ()<br>443                  |
|                                | Load Balance Algorithm ()<br>Consistent Hash   |
|                                | Type ()<br>Source IP Address                   |
|                                |  |

- 2. In the **CREATE POOL:** window
  - General tab
    - Enter the following under:-
      - Under Name\*
        - type: Horizon-L4-Pool-Site-1
      - Under Default Server Port
        - Type: 443
      - Under Load Balance Algorithm:
        - Select Consistent Hash
          - with Source IP Address as the Type
    - select the Health Monitor tab

| Health Monitor  |
|---|
| Health Monitors (0)                                     |
| ADD   |
| Name  |
|   |
|   |
| Enable Passive Health Monitor (1)                       |
| Health Monitors to be considered "Up" 🚯<br>Enter Number |

- 3. In the **CREATE POOL:** window
  - Health Monitor tab
    - enable the following under:-
      - ensure Enable Passive Health Monitor is checked
  - under **Health Monitors** 
    - select ADD

| Health Monitor      |                               |
|---------------------|-------------------------------|
| Health Monitors (1) |                               |
| ADD                 |                               |
| Name                |                               |
| Horizon-HTTPS       | ⊗ ~ :                         |
|                     | tems per page 10 $ 	imes $ 11 |
|                     |                               |

- 4. In the **CREATE POOL:** window
  - General tab
    - under Health Monitors
    - from the dropdown.
      - select Horizon-HTTPS

| 🗌 Rewrite Host Header to Server Name 🕦 |  |  |  |
|--|--|--|--|
| Append Port To Host Name ①<br>Never    |  |  |  |
| Deactivate Port Translation ()         |  |  |  |
| Use Service SSL Mode 🕡                 |  |  |  |
| 🗌 Ignore Server Port 🕦                 |  |  |  |
| HTTF Server Reselect ①                 |  |  |  |
|  |  |  |  |
| Health Monitor                         |  |  |  |
| Health Monitors (1)                    |  |  |  |

- 5. In the **CREATE POOL:** window
  - Health Monitor tab
    - Just *above* the Health Monitor section
      - below Append Port To Host Name:
        - next to Never
          - select the Radio button

| CREATE POOL   |      |
|---|------|
| Horizon-L4-Pool-Site-1  |      |
| General Servers Health Monitor Profiles/Policies SSL                                  | Fail |
| Servers   |      |
| Select Servers By <ul> <li>IP Address, Range or DNS Name</li> <li>IP Group</li> </ul> |      |
| Select IP Group   |      |
| Servers (0)   |      |
|   |      |
| Enabled Server Name   | IP A |

- 6. In the **CREATE POOL:** window
  - select the Servers tab

#### • under Select Servers By

• select the IP Group radio button

| CREATE F      | POOL                            |                    |                   |     |             |        |
|---------------|---------------------------------|--------------------|-------------------|-----|-------------|--------|
| Horizon-      | L4-Pool-                        | -Site-1            |                   |     |             |        |
| General       | Servers                         | Health Monitor     | Profiles/Policies | SSL | Fail Action | RBAC   |
| Servers       |                                 |                    |                   |     |             |        |
| Select Server | r <b>s By</b><br>is, Range or D | NS Name 💿 IP Group |                   |     |             |        |
| UAG Server    | rs-Site-1                       |                    |                   |     |             |        |
| Servers (2)   |                                 |                    |                   |     |             |        |
| Enab          | led                             |                    |                   |     |             | IP Add |
|               |                                 |                    |                   |     |             | 172.16 |

- 7. In the **CREATE POOL:** window
  - Servers tab
    - below Select Servers By
      - from the **dropdown** 
        - select UAG Servers-Site-1
    - · leave all the rest of the settings default



- 8. In the **CREATE POOL:** window
  - bottom right corner
    - Select **SAVE**

Validate the SSL certificate Required for L7 VIP is pre-configured

### Part 5: Verify SSL Certificate required for Layer 7 VIP is present.



#### 1. From the **NSX-ALB** Admin console

Navigate to Templates > Security > SSL/TLS Certificates

| SSL/TLS Certificates |        |                    |                            |   |
|----------------------|--------|--------------------|----------------------------|---|
| Q                    |        |                    |                            |   |
| □∨ Name ▲            | Status | Common Name        | Issuer Name                |   |
| HZNcert2023          | ٠      | *.euc-livefire.com | Sectigo RSA Domain Validat | 1 |

#### 2. In the SSL/TLS Certificate Window

Verify the HZNCert2023 shows status green

• Validating that Connection Multiplexing is disabled

# Part 6: Validating that Connection Multiplexing is disabled

| ← → C ☆ ▲ N            | lot secure  <br>ab/ip 🔤 Ha | https://avicontroller.euc-livefire.com/#1/admin/template/p<br>Iorizon®Site 1 🔤 NSX manager 🔹 App Volumes Site 1 🐂 |
|------------------------|----------------------------|---|
| vmw NSX-ALB            |                            |   |
| Applications Opera     | tions Ter                  | mplates Infrastructure Administration   |
|                        | ~                          | Q   |
| Profiles               | × Î                        | Name A  |
| Application            |                            | System-DNS  |
| TCP/UDP<br>Persistence |                            | System-HTTP   |
| Health Monitors        |                            | System-HTTP-Horizon-UAG   |
| Analytics              |                            | System-L4-Application   |
| IPAM/DNS Profiles      |                            | System-L4-Horizon-Blast   |
| Custom IPAM/DNS        |                            |   |
| Traffic Clone          |                            | System-L4-Horizon-PCoIP   |
| ICAP Profile           |                            | System-Secure-HTTP  |
| Policies               | >                          | System-Secure-HTTP-VDI  |
| le Groups              | >                          | System-SSL-Application  |
| Security               | >                          | нттр  |
| System-Secure-HTTP-VDI |                            | нттр 📿  |
|                        | _                          | L4 SSL/TLS  |

- 1. In the **NSX-ALB** console
  - Navigate to Templates > Profiles> Application
    - In the **Application** area
      - select System-Secure-HTTP-VDI.
      - To the right of System-Secure-HTTP-VDI
        - Select the **edit** icon.

| vmw NSX-ALB                                   |   |
|---|---|
| APPLICATION PROFILE<br>System-Secure-HTTP-VDI |   |
|   | System-Secure-HTTP-VDI<br>General HTTP Security Compression |
|   | General   |
|   | Name <sup>*</sup> ()<br>System-Secure-HTTP-VDI              |
|   | Description   |
|   | Enter Description   |
|   | Type ①<br>HTTP  |
|   | HTTP  |
|   | Connection Multiplex ()                                     |
|   | Preserve Client IP Address 🕡                                |

- 2. In Edit Application Profile: System-Secure-HTTP-VDI window
  - Ensure the **checkbox** next to **Connection Multiplexing** is **NOT selected**
  - Select Cancel
    - to close the Edit Application Profile: System-Secure-HTTP-VDI window

Creating the L7 Virtual Service for Site-1

Part 7: Creating the Layer 7 Virtual Service for Site-1



#### 1. In the **NSX-ALB** Console

Navigate to Applications > Virtual Services



- 2. In the Virtual Services area
  - To the top right, select CREATE VIRTUAL SERVICE
    - Select Advanced Setup.

| Step 1: Settings      | Step 2: Policies | $\rangle$ |
|-----------------------|------------------|-----------|
| Name* ©               |                  | Enabled 💿 |
| Horizon-UAG-L7-Site-1 |                  |           |
|                       | • VIP Address •  |           |
| VS VIP* @             |                  |           |
| Select VS VIP         |                  | (`)[      |
|                       |                  | A         |

- 3. In the New Virtual Service wizard
  - Step 1: Settings area
    - enter the following under:
      - Name\*
        - type Horizon-UAG-L7-Site-1
      - VS VIP \*
        - select the **dropdown**,
          - notice a Create VS VIP Green box appears

|               | Create VS VIP    |        |
|---------------|------------------|--------|
|               | no valid entries |        |
| Search        |                  | Q      |
| Select VS VIP |                  | $\sim$ |
| VS VIP* 🖗     |                  |        |
|               | • VIP Address •  |        |

- 4. In the New Virtual Service wizard
  - Step 1: Settings area
    - In the **VIP Address** area
      - select Create VS VIP

| Create VS VIP: VIP-H                          |
|---|
| General RBAC                                  |
| General                                       |
| Name <sup>*</sup> ()<br>VIP-Horizon-UAG-Site1 |
| Cloud<br>Default-Cloud                        |
| VRF Context ()<br>global                      |
| VIPs (0) <sup>*</sup> ④                       |
| ADD   |
|   |

- 5. In the **Create VS VIP:** page
  - In the **General** tab,
    - under Name
      - type: VIP-Horizon-UAG-Site1
    - Select ADD



- 6. In the **Edit VIP: 1** page
  - Under IPv4 Address\*
    - type 172.16.20.100
    - Select **SAVE**

| Create VS V  | VIP: VIP-Ho                            | orizon-UAG-S            | ite1             | (×)      |
|--|--|-------------------------|------------------|----------|
| General RBAC   |  |                         |                  |          |
| Enabled  | VIP ID                                 | IP Address              | IPv6 Address     | , i      |
| ☑ ⊘  | 1                                      | 172.16.20.100           | -                |          |
|  |  |                         | items per page 1 | <u> </u> |
| Select BGP Peer Lab<br>Role-Based A<br>Role-Based Access C | els<br>ccess Contro<br>ontrol (RBAC) @ | (RBAC)                  |                  |          |
| - Key  |  | Value(s)                |                  |          |
|  | We                                     | ouldn't find any object | s!               |          |
| CANCEL   |  |                         |                  | SAVE     |

- 7. In the Create VS VIP: VIP-Horizon-UAG-Site1 window
  - Select **SAVE**



- 8. In the **New Virtual Service** wizard
  - Step 1: Settings area
    - Scroll down to the Service Port area
      - under Services
        - Enable the checkbox next to SSL

|           | Profiles •                                       |       |
|-----------|--|-------|
| ~ /       | TCP/UDP Profile <sup>*</sup><br>System-TCP-Proxy | ~ /   |
| Γ         | Application Profile* ②<br>System-Secure-HTTP-VDI | ~ /   |
|           | WAF Policy @<br>Select WAF Policy                | ~     |
|           | Bot Detection Policy 💬 💿                         |       |
|           | Select Bot Detection Policy                      | ~     |
|           | ICAP Profile Select ICAP Profile                 | ~     |
| $\square$ | Error Page Profile<br>Custom-Error-Page-Profile  | × ~ / |

- 9. In the New Virtual Service wizard
  - Step 1: Settings area
    - In the Profiles sub-area
      - Below Application Profile\*:
        - From the **dropdown** 
          - Select System-Secure-HTTP-VDI
      - Below Error Page Profile:
        - From the dropdown
          - Select Custom-Error-Page-Profile

| • Pool •   |       |
|--|-------|
| Pool Oroup   |       |
| Pool 💿   |       |
| Horizon-L7-Pool-Site-1   | × 🗸 🌶 |
| $\square$ Ignore network reachability constraints for the server pool $\circledcirc$ |       |
| SSL Settings   | •     |
| SSL Profile <sup>*</sup> 😡   |       |
| System-Standard  | × /   |
| SSL Certificate* 🐵   |       |
| HZNcert2023 🗙  | ~ /   |

- 10. In the New Virtual Service wizard
  - Step 1: Settings area
    - In the \***Pool\*** sub-area
      - Under **Pool** 
        - Select the dropdown
          - Select: Horizon-L7-Pool-Site-1
    - In the \*SSL Settings\* sub-area
      - Under SSL Profile\*
        - Select the dropdown
          - Select: System-Standard
      - Under SSL Certificate:
        - Select the **dropdown** 
          - Select HZNcert2023
            - Remove the System-Default-Cert
        - Leave all other settings as default
  - In the bottom right corner
    - Select Next

| New Virtual Service: Horizon-  | UAG-L7-Site-1              |               |                      | ×                     |
|--------------------------------|----------------------------|---------------|----------------------|-----------------------|
| Step 1: Settings               | Step 2: Policies           |               | Step 3: Analytics    | Step 4: Advanced      |
| Network Security HTTP Security | HTTP Request HTTP Response | DetaScripts   | Access               |                       |
| IP Reputation DB               |                            |               | Geo DB (0            |                       |
| Select IP Reputation DB        |                            | ~             | Select Geo DB        | ~                     |
| <b>0</b>                       |                            |               |                      |                       |
| INDEX ENABLE NAME              | MATCHING ITULES            |               | ACTION               |                       |
|                                |                            | No ite        | ms found.            |                       |
|                                | - Role                     | -Based Acce   | ess Control (RBAC) • |                       |
| ADD                            |                            |               |                      |                       |
| Кеу                            |                            |               | Value(s)             |                       |
|                                | V                          | Ve couldn't f | ind any objects!     |                       |
| 0                              |                            |               |                      | items per page 🛛 10 🖂 |
|                                |                            |               |                      |                       |
| Cancel                         |                            |               |                      | eus Next +            |

#### 11. In the **New Virtual Service** wizard

- Step 2: Policies area
  - (Leave everything as default)
- Select Next

|                                 | 25                | Step 2: Policies            |                               | Step 3: Analytics          | 💙 🖏 Step 4: Advanced |     |
|---------------------------------|-------------------|-----------------------------|-------------------------------|----------------------------|----------------------|-----|
| nalytics Profile (              | 0                 |                             |                               | Metric Update Frequency () |                      |     |
| System-Analyti                  | cs-Profile        |                             | ~ /                           | Real Time Metrics          | 30                   | min |
|                                 |                   |                             |                               |                            |                      |     |
|                                 |                   |                             | <ul> <li>Client Ir</li> </ul> | nsights •                  |                      |     |
| ent Insights @<br>Active Passiv | No Insiahts       |                             |                               |                            |                      |     |
|                                 | . Horneyna        |                             |                               |                            |                      |     |
|                                 |                   |                             | Client Loo                    | Settings +                 |                      |     |
|                                 |                   |                             | . energieseg                  | accounts .                 |                      |     |
| Log all header                  | 9.0               |                             |                               |                            |                      |     |
| nificant log thr                | ottle 🛛           |                             |                               |                            |                      |     |
| )                               | logs/sec          |                             |                               |                            |                      |     |
| er defined filter               | is log throttle @ |                             |                               |                            |                      |     |
| 5                               | logs/sec          |                             |                               |                            |                      |     |
| Non-significa                   | nt logs 🕀         |                             |                               |                            |                      |     |
|                                 | a thrattle D      | Non-significant los duratio | n 0                           |                            |                      |     |
| n-significant lo                | logs/sec          | 30                          | min                           |                            |                      |     |
| in-significant lo               |                   |                             |                               |                            |                      |     |
| n-significant lo<br>)           |                   |                             |                               |                            |                      |     |

- 12. In the New Virtual Service wizard
  - Step 3: Analytics area
    - (Leave everything as default)
    - Select Next

- Step 4: Advanced tab,
  - (Leave everything as default)
  - Select Save

| Step 1: Settings             | Step 2: Policies         | Step 3: Analytics                  | 🗳 Step 4: Advanced                    |
|------------------------------|--------------------------|------------------------------------|---------------------------------------|
|                              | Perform                  | ance Limit Settings +              |                                       |
| Performance Limits           |                          |                                    |                                       |
|                              | • Qui                    | ality of Service -                 |                                       |
| ight 😡                       |                          | Fairness @                         |                                       |
|                              |                          | Throughput And Delay Fairness Thro | oughput Fairness                      |
|                              | • 0                      | ther Settings •                    |                                       |
| Auto Catavas D               | Use VIP as SNAT @        | Host Name Translation 🐵            |                                       |
| Auto Geteway to              |                          | a.b.com                            |                                       |
| Advertise VIP via BGP @      | Advertise SNAT via BGP @ | Service Engine Group @             |                                       |
|                              |                          | Service Engine Group               | · · · · · · · · · · · · · · · · · · · |
| AT IP Address @              |                          | Remove Listening Port when VS D    | own ©                                 |
|                              |                          |                                    |                                       |
| rffic Clone Profile ()       |                          | Scale and FCMP (D                  |                                       |
| Select Traffic Clone Profile |                          |                                    |                                       |
|                              | Role-Based               | Access Control (RBAC) -            |                                       |
|                              |                          |                                    |                                       |

- 13. In the **New Virtual Service** wizard
  - Step 4: Advanced area
    - (Leave everything as default)
  - Select Save

Creating L4 Virtual Service for Site-1

Part 8: Creating the Layer 4 Virtual Service for Site-1



- 1. From the NSX-ALB admin console
  - Navigate to Applications > Virtual Services



- 2. In the **Virtual Services** window
  - In the top right corner,
    - Select CREATE VIRTUAL SERVICE
    - Select Advanced Setup.

| New Virtual Service: Horizon     | New Virtual Service: Horizon-UAG-L4-Site-1 |            |  |  |  |  |
|----------------------------------|--|------------|--|--|--|--|
| Step 1: Settings                 | Step 2: Policies                           |            |  |  |  |  |
| Name* 🚱<br>Horizon-UAG-L4-Site-1 |  | Enabled 🔞  |  |  |  |  |
|                                  | VIP Address •                              |            |  |  |  |  |
| VS VIP* 🔞                        |  |            |  |  |  |  |
| VIP-Horizon-UAG-Site-1           |  | $\bigcirc$ |  |  |  |  |

- 3. In the New Virtual Service wizard
  - Step 1: Settings area
    - configure the following <u>under:</u>
      - Name\*
        - type Horizon-UAG-L4-Site-1
      - VS VIP \*
        - select the **dropdown**,
          - select VIP-Horizon-UAG-Site1

| TCP/UDP Profile*      |   |
|-----------------------|---|
| System-TCP-Proxy      | ~ |
| Application Profile*  |   |
| System-L4-Application | ~ |

- 4. In the New Virtual Service wizard
  - Step 1: Settings area
    - \*Profiles\* sub area
      - Under Application Profile\*
        - from the **dropdown** 
          - Select: System-L4-Application

| • Service Port • | Switch to Advanced |
|------------------|--------------------|
|                  |                    |
|                  |                    |
|                  |                    |
|                  |                    |
|                  |                    |
|                  |                    |

- 5. In the New Virtual Service wizard
  - Step 1: Settings area
    - \*Service Port\* sub area
      - Select Switch to Advanced.

| Step 1: Settings   |  | Step 2: Policies |
|--|--|------------------|
| VIP-Horizon-UAG-Site1  |  |                  |
|  |  |                  |
|  |  |                  |
|  |  |                  |
|  |  |                  |
|  |  |                  |
|  |  |                  |
|  |  |                  |
|  | • Ser                                    | vice Port •      |
| ervices ©  | • Ser                                    | vice Port •      |
| ervices ©  | • Ser<br>TO 443                          | vice Port •      |
| ervices ⊜<br>143<br>] Use as Horizon Primary/Tu  | • Ser<br>TO 443<br>nnel Protocol Ports © | vice Port •      |
| ervices ©<br>443<br>] Use as Horizon Primary/Tu<br>verride Application Profile ©   | • Ser<br>TO 443<br>nnel Pratocol Ports © | vice Port •      |
| ervices 🛛<br>443<br>] Use as Horizon Primary/Tu<br>verride Application Profile 🕄<br>Science Application Profile                              | • Ser<br>TO 443<br>nnel Protocol Ports © | vice Port •      |
| ervices ©<br>443<br>] Use as Horizon Primary/Iu<br>verride Application Profile ©<br>Colore Application Profile<br>Colore Application Profile | • Ser<br>TO 443<br>nnel Protocol Ports © | vice Port •      |

- 6. In the New Virtual Service wizard
  - Step 1: Settings area
    - **\*Service Port\*** sub area
      - Under Services
        - Replace port 80 with port 443
          - Port Min and Port Max areas to 443
      - Select the Checkbox next to Override TCP/UDP

| New Virtual Service: Hori      | zon-l    | JAG-L4        |                  |
|--------------------------------|----------|---------------|------------------|
| 🧔 Step 1: Settings             |          | 0             | Step 2: Policies |
|                                |          |               |                  |
|                                |          | • Service Por | t.               |
| Services 💿                     |          |               |                  |
| 443                            | то       | 443           |                  |
| Use as Horizon Primary/Tunn    | nel Prot | tocol Ports 📀 |                  |
| Override Application Profile 💿 |          |               |                  |
| Select Application Profile     |          |               | $\sim$           |
| u 🗸 Override TCP/UDP           |          |               |                  |
| System-UDP-Fast-Path-VD        | 1        |               | ~                |
| + Add Port                     | -        |               |                  |

- 7. In the **New Virtual Service** wizard
  - Step 1: Settings area
    - Below the checkbox enabled **Override TCP/UDP** 
      - Select the dropdown
        - Select System-UDP-Fast-Path-VDI
      - Select + Add Port

|  |         |      | Service Port |   |
|--|---------|------|--------------|---|
| Services 🚱                             |         |      |              |   |
| 443                                    | то      | 443  |              | 圃 |
| Use as Horizon Primary/Tunnel Protocol | Ports 🛞 |      |              |   |
| Override Application Profile (2)       |         |      |              |   |
| Select Application Profile             |         |      |              | ~ |
| 🖌 🔽 Override TCP/UDP                   |         |      |              |   |
| System-UDP-Fast-Path-VDI               |         |      | ~            |   |
| 8443                                   | то      | 8443 |              | Û |
| Use as Horizon Primary/Tunnel Protocol | Ports 🛞 |      |              |   |
| Override Application Profile 💿         |         |      |              |   |
| Select Application Profile             |         |      |              | ~ |
| ➡ Override TCP/UDP                     |         |      |              |   |
| 8443                                   | то      | 8443 |              | Ē |
| Use as Horizon Primary/Tunnel Protocol | Ports 🛞 |      |              |   |
| Override Application Profile 💿         |         |      |              |   |
| Select Application Profile             |         |      |              | ~ |
| 🖌 🗹 Override TCP/UDP                   |         |      |              |   |
| System-UDP-Fast-Path-VDI               |         |      | ~            | / |
| + Add Port                             |         |      |              |   |
|  |         |      |              |   |

- 8. In the **New Virtual Service** wizard
  - Step 1: Settings: continued
    - Type 8443 in Port Min and 8443 to Port Max
      - **Note**: You will notice Port Max will change automatically to 8443.
  - Uncheck Override TCP/UDP box if selected
  - Select + Add Port again.
  - Type **8443** in Port Min and **8443** to Port Max
  - Check the box Override TCP/UDP
  - Under Select Dropdown
    - Select System-UDP-Fast-Path-VDI
      - Note: Ensure all the Service Port details matches as per the screenshot above.
  - Select + Add Port again

| System-UDP-Fast        | -Path-VDI                    | ~ 🥒    |
|------------------------|------------------------------|--------|
| 4172                   | TO 4172                      | Ē      |
| Use as Horizon Prir    | nary/Tunnel Protocol Ports 💿 |        |
| Override Application P | rofile 💿                     |        |
| Select Application P   | rofile                       | $\sim$ |
| ⊾ Override TCP/        | UDP                          |        |
| 4172                   | TO 4172                      | Ē      |
| Use as Horizon Prir    | nary/Tunnel Protocol Ports 💿 |        |
| Override Application P | rofile 💿                     |        |
| Select Application P   | rofile                       | ~      |
| 🛏 🔽 Override TCP/      | UDP                          |        |
| System-UDP-Fast        | -Path-VDI                    | ~ 🖌    |
| + Add Port             |                              |        |

- 9. In the **New Virtual Service** wizard
  - Step 1: Settings: continued
    - Type **4172** in Port Min and **4172** to Port Max
      - Uncheck Override TCP/UDP box if selected.
  - Select + Add Port again
    - Type **4172** in Port Min and **4172** to Port Max
      - Check the box Override TCP/UDP
        - Under Select Dropdown
        - Select System-UDP-Fast-Path-VDI
  - Note: Ensure all the Service Port details matches as per the screenshot above.

| Pool    | O Po       | ol Group |  |   |        |   |
|---------|------------|----------|--|---|--------|---|
| Pool 🔞  |            |          |  |   |        | _ |
| Horizor | n-L4-Pool- | Site-1   |  | × | $\sim$ | 1 |

- 10. In the **New Virtual Service** wizard
  - Step 1: Settings area

- To the right of **\*Service Port\*** 
  - You will see the **\*Pool\*** area
    - Under **Pool** 
      - From the **dropdown** 
        - Select Horizon-L4-Pool-Site-1
- Select Next

| Step 1: Settings   | Step 2: Policies     | Step 3: Analytics  | Step 4: Advanced                                      |   |   |
|--|----------------------|--|---|---|---|
|  |                      | Bot Detection Policy (50) (<br>Select Bot Detection Policy<br>Error Page Profile ()<br>Custom-Error-Page-Profile | ×   | ~ | ~ |
| + Serv<br>Services ()<br>443 TO 443  | rice Port + Switch 1 | io Basic<br>Pool O Pool Group<br>Pool O  | • Pool •  |   |   |
| Use as Horizon Primary/Tusnel Protoc<br>Override Application Profile @<br>Select Application Profile | ol Ports ©           | Horizon-L4-Pool-Site-1   | ${\bf x}$ attaints for the server pool ${\bf \Theta}$ | ~ | / |
| System-UDP-Fast-Path-VDI   | ~ 🖌                  |  |   |   |   |
| 8443 TO 8443<br>Use as Horizon Primary/Tunnel Protoc<br>Override Application Profile (9              | ol Ports @           |  |   |   |   |
| Select Application Profile   | v                    |  |   |   |   |

- 11. In the New Virtual Service wizard
  - Step 2: Policies area
    - Leave everything as default
  - Select Next

| Step 1: Settings                   |                     | Step 2: Policies                     |                               | Step 3: Analytics         | 💙 💙 Step 4: | Advanced              |
|------------------------------------|---------------------|--------------------------------------|-------------------------------|---------------------------|-------------|-----------------------|
| nalytics Profile ()                |                     |                                      |                               | Metric Update Frequency @ |             |                       |
| System-Analytics-Pro               | file                |                                      | ~ /                           | Real Time Metrics         | 30          | min                   |
|                                    |                     |                                      | Client Log                    | g Settings +              |             |                       |
| ignificant log throttle 🤅          | 0                   |                                      |                               |                           |             |                       |
| 10                                 | logs/sec            |                                      |                               |                           |             |                       |
| iser defined filters log t         | hrottle 🛛           |                                      |                               |                           |             |                       |
| 10                                 | logs/sec            |                                      |                               |                           |             |                       |
| ion-significant log throt          | ttle ()<br>logs/sec | Non-significant log duration (<br>30 | min                           |                           |             |                       |
|                                    |                     |                                      | CE                            | P11.                      |             |                       |
|                                    |                     |                                      | <ul> <li>Client Lo</li> </ul> | og Filters -              |             |                       |
| ۹                                  |                     |                                      | • Client Lo                   | og Hiters •               |             | Add Client Log Filter |
| Q<br>Displaying © items            |                     |                                      | • Client Lo                   | g Filters •               |             | Add Client Log Filter |
| Q<br>Displaying 0 items<br>Enabled |                     |                                      | - Client Lo                   | ng Hilters •              |             | Add Client Log Filter |
| Q<br>Doplaying © items<br>Enabled  |                     |                                      | No. Jon                       | ne<br>ne                  |             | Add Client Log Fiter  |

#### 12. In the New Virtual Service wizard

- Step 3: Analytics area
  - Leave everything as default
- Select Next

| Step 1: Settings             | Step 2: Policies                | Step 3: Analytics             | Step 4: Advanced    |        |
|------------------------------|---------------------------------|-------------------------------|---------------------|--------|
| and more thanks              | / and an and a set of the set   | 1 - auto accountance          | a contractor        |        |
|                              | • Perform                       | ance Limit Settings -         |                     |        |
| Performance Limits           |                                 |                               |                     |        |
|                              | - Qu                            | ality of Service •            |                     |        |
| Veight ©                     |                                 | Fairness ()                   |                     |        |
| 1                            |                                 | Throughput And Delay Fairness | Throughput Fairness |        |
|                              | • 0                             | ther Settings -               |                     |        |
| Auto Cateway D               | Use VIP as SNAT @               | Service Engine Group 🛞        |                     |        |
| Auto Galeway G               | _                               | Service Engine Group          |                     | $\sim$ |
| Advertise VIP via BGP        | Advertise SNAT via BGP 🐵        |                               |                     |        |
| NAT IP Address (             |                                 | _                             |                     |        |
| 1.1.1.1, 2001=1              |                                 | Remove Listening Port when V  | 'S Down ⊕           |        |
| Traffic Clone Profile 🛛      |                                 |                               |                     |        |
| Select Traffic Clone Profile |                                 | Scale out ECMP @              |                     |        |
|                              | Dula Durad                      | A                             |                     |        |
|                              | <ul> <li>Role-Based.</li> </ul> | Access Control (RBAC) •       |                     |        |
| ADD                          |                                 |                               |                     |        |
|                              |                                 |                               |                     |        |
|                              |                                 |                               |                     |        |

- 13. In the **New Virtual Service** wizard
  - Step 4: Advanced area
    - Leave everything as default

Select Save

| The second         | LIY | Name -                | Health  | Address         |
|--------------------|-----|-----------------------|---------|-----------------|
| K Virtual Services |     | Haritza-HAGJ 4-Ste-1  |         | E 172 16 20 100 |
| © VS VIPs          | 0   | HUIDOIHUAGHUIDIGH     | •       | U 172.10.20.100 |
| Pools              |     | Horizon-UAG-L4-Site-2 | <u></u> | 172.16.50.100   |
| E) Pool Groups     |     | Horizon-UAG-L7-Site-1 |         | 172.16.20.100   |
|                    |     | Horizon-UAG-L7-Site2  |         | 8 172.16.50.100 |
|                    |     |                       |         |                 |

#### 14. In the NSX-ALB admin console

- Select Applications
  - Select Virtual Services
- In the right pane your configurations should look like the image above.

**Testing LTM Configuration for both Site1 and Site2** 

### Part 9: Configuring the Unified Access Gateway for Site 1

Section 1. Configuring UAG-HZN-01a for AVI Integration

# Section 1. Configuring UAG-HZN-01a for AVI Integration

| 🖷 uag-ha        | m-01a.euc-livefire.co | xm.9443/admin/in | dex.html#!/Login#  |                 |             |   |
|-----------------|-----------------------|------------------|--------------------|-----------------|-------------|---|
| divefire.lab/ip | Horizon®Site 1        | NSX manager      | App Volumes Site 1 | UAG-HZN-01a     | UAG-HZN-01b | 0 |
|                 |                       |                  |                    |                 |             |   |
|                 |                       |                  |                    |                 |             |   |
|                 |                       |                  |                    |                 |             |   |
|                 |                       |                  |                    |                 |             |   |
|                 |                       |                  |                    | $\sim$          |             |   |
|                 |                       |                  | _                  | <del>,</del> רש |             |   |
|                 |                       |                  |                    |                 |             |   |
|                 |                       |                  | 1                  | VMware          |             |   |
|                 |                       |                  | Unified /          | Access G        | atoway      |   |
|                 |                       |                  | Onlined A          | 400035 0        | ateway      |   |
|                 |                       |                  | admin              |                 |             |   |
|                 |                       |                  | ••••••             |                 |             |   |
|                 |                       |                  |                    | Login           |             |   |
|                 |                       |                  |                    |                 |             |   |
|                 |                       |                  |                    |                 |             |   |
|                 |                       |                  |                    |                 |             |   |

- 1. On your **ControlCenter** Server
  - Open your Chrome Browser for Site-1
  - In the Address bar, browse to https://uag-hzn-01a.euc-livefire.com:9443/admin/ index.html
  - Login username: admin
  - Login password: VMware1!



- 2. In the UAG Admin Console
  - Under Configure Manually
    - Click Select

| General Settings   |       |                         |           |
|--------------------|-------|-------------------------|-----------|
|                    |       | Edge Service Settings   | 80        |
| Advanced Settings  |       | Authentication Settings | $\otimes$ |
| Edge Service Setti | ngs 🤇 | <b>S</b>                |           |
|                    | •     | > Horizon Settings      | ٢         |
|                    | ~     | D D C-++1               |           |

- 3. In the UAG Admin Console
  - Scroll back-up to General Settings
    - Next to Edge Service Settings,
      - Move the **TOGGLE** to the right
    - Next to Horizon Settings
      - Select the **GEAR icon**

|                             |                                | e 💌                   |     |
|-----------------------------|--------------------------------|-----------------------|-----|
| Host Port Redirect Mappings | Source Host:P                  | Redirect Host:Port    | •   |
| Liest Entries               | A .d                           |                       | • • |
| Host Redirect Mapping       | s uag-hzn-avi01                | uag-hzn-01a.euc-live  |     |
|                             | uag-hzn-avi01.euc-livefire.com | uag-hzn-Ota.euc-l 📝 🖨 |     |
|                             | Wellie.com                     |                       |     |

- 4. Next to Host Port Redirect Mappings,
  - In the Source Host Port area
    - enter uag-hzn-avi01.euc-livefire.com
  - In the Redirect Host Port area
    - enter uag-hzn-01a.euc-livefire.com
  - · Once the Host Redirect Mappings are filled,
    - click on + symbol to add the entries.
      - **Note**: It should match the screenshot above
  - To Close the Horizon settings page
    - Select Save

Section 2: Configuring **UAG-HZN-01B** in Site1 for AVI Integration

# Section 2. Configuring UAG-HZN-01B for AVI Integration

| 🖷 uag-ha        | zn-01a.euc-livefire.co | xm:9443/admin/in | dex.html#!/Login#    |             |             |   |
|-----------------|------------------------|------------------|----------------------|-------------|-------------|---|
| divefire.lab/ip | Horizon®Site 1         | NSX manager      | 💠 App Volumes Site 1 | UAG-HZN-01a | UNG-HZN-01b | 0 |
|                 |                        |                  |                      |             |             |   |
|                 |                        |                  |                      |             |             |   |
|                 |                        |                  |                      |             |             |   |
|                 |                        |                  |                      |             |             |   |
|                 |                        |                  |                      | $\sim$      |             |   |
|                 |                        |                  | -                    | TC A        |             |   |
|                 |                        |                  |                      |             |             |   |
|                 |                        |                  | 1                    | VMware      |             |   |
|                 |                        |                  | Unified /            | Access G    | atoway      |   |
|                 |                        |                  | Offined P            | ACCESS O    | ateway      |   |
|                 |                        |                  | admin                |             |             |   |
|                 |                        |                  |                      |             |             |   |
|                 |                        |                  |                      | Login       |             |   |
|                 |                        |                  |                      |             |             |   |
|                 |                        |                  |                      |             |             |   |
|                 |                        |                  |                      |             |             |   |

- 1. On your **ControlCenter** Server
  - Open your Chrome Browser for Site-1
  - In the Address bar, browse to https://uag-hzn-01b.euc-livefire.com:9443/admin/ index.html
  - Login username: admin
  - Login password: VMware1!



#### 2. In the UAG Admin Console

- Under Configure Manually
  - Click Select

| General Settings      |                         |           |
|-----------------------|-------------------------|-----------|
|                       | Edge Service Settings   | 800       |
|                       | Authentication Settings | $\otimes$ |
| Advanced Settings     |                         |           |
| Edge Service Settings | ØC                      |           |
| •                     | > Horizon Settings      | Ó         |
| ~                     | Decome Decome Cambras   | 0         |

- 3. In the UAG Admin Console
  - In the **General Settings** area
    - Next to Edge Service Settings,
      - Move the **TOGGLE** to the right
    - Next to Horizon Settings
      - Select the **GEAR icon**

|                             |                           | · · ·               |     |
|-----------------------------|---------------------------|---------------------|-----|
| Host Port Redirect Mappings | Source Host:P             | Redirect Host:Port  | •   |
| Last Entries                |                           |                     | • • |
| X-                          | Frame-Options: SAMEORIGIN | / •                 |     |
| Host Port Redirect Mappings | uag-hzn-avi01             | ag-hzn-01b.euc-live | 00  |
|                             |                           |                     |     |

- 4. Next to Host Redirect Mappings,
  - In the Source Host Port area
    - enter uag-hzn-avi01.euc-livefire.com
  - In the Redirect Host Port area
    - enter uag-hzn-01b.euc-livefire.com
  - · Once the Host Redirect Mappings are filled,
    - click on (+) symbol to add the entries.
      - **Note**: It should match the screenshot above

- To Close the **Horizon settings** page
  - Select Save

# Part 10: Testing LTM Configuration

#### Part 9 Section 1: Testing Site1 LTM



- 1. On your ControlCenter server
  - On the Desktop
    - Open the **Remote Desktops** Folder
      - Open Site1
        - Launch W11Client-01a.rdp
        - Login as craig
          - With the password VMware1!

Sw11client-01a - 172.16.30.40 - Remote Desktop Connection

| Acycle das soficare<br>feateur-U.c. | VMware Horizon Client |     |                                |         |   |
|-------------------------------------|-----------------------|-----|--------------------------------|---------|---|
| Georgie<br>Gineante                 |                       | ħ   |                                |         |   |
| Viduare<br>Bain                     | *                     |     |                                |         |   |
|                                     |                       | - 1 | Name of the Connection Server  |         |   |
| Semanazanel<br>Pheanage             | ×.                    |     | uag-hzn-avi01.euc-livefire.com | n       | × |
| •                                   |                       |     | Cancel                         | Connect |   |
| Caulted<br>Panel                    |                       |     |                                |         | _ |
| -                                   |                       |     |                                |         |   |

#### 2. In W11Client-01a

• Open Horizon Client from desktop

- In the Horizon Client,
- Click on Add Server Button
  - In the Name of the Connection Sever textbox,
    - Type
      - uag-hzn-avi01.euc-livefire.com
        - Click Connect

۴

| https://uag-hzn-avi01. | euc-livefire.com |
|------------------------|------------------|
| craig                  |                  |
| •••••                  |                  |
| Cancel                 | Login            |

- 3. In the Horizon Client textbox
  - Username
    - craig

- Password
  - VMware1!
- Click login



- 4. In the Horizon Client
  - Double Click BLRW10 Pool
    - You will be presented with the desktop
    - This validates our testing and configuration

Part 9 Section 2: Testing Site2 LTM

|   |  |                                  |   | 1                           |             |
|---|--|----------------------------------|---|-----------------------------|-------------|
| a 🕘 a 🕒   | 📙   🛃 📕 🖛   C:\U   | sers\Admi                        | nistrato Oeskto                           | op\Remote Des               | ktops\Site2 |
| te1 Profile - Site 2 Profile<br>Chrome - Chrome         | File Home S  | Share                            | View                                      |                             |             |
|   | *  | 1 %                              | 💊 Move to 🕶                               | × Delete •                  | 1           |
|   | Pin to Quick Copy Pa   | ste 📄                            | 🕒 Copy to 🔹                               | 🛋 Rename                    | New         |
| lotepad++ VMware  | Clipboard  | -                                | Org                                       | nize                        | New         |
| Honz  | ← → × ↑ 📙  | > Remote                         | Desktops >                                | ite2                        | ~           |
|   |  | ^ N                              | ame                                       |                             | ^           |
|   | 📌 Quick access   | ۰.                               | DC-02a.RDP                                |                             |             |
| Remote<br>Desktops                                      | Desktop 🖈  |                                  | Horizon-Qa.                               | RDP                         |             |
| -   | Downloads  |                                  | RDSH-02                                   | Р                           |             |
|   | Documents #  |                                  | SQL-02a RDP                               | 000                         |             |
|   |  |                                  | w10Mater-02                               | RDP<br>2a.RDP               |             |
| onsole.msc  | hol  |                                  | W11Client-02                              | a.RDP                       |             |
| •   | Site1  |                                  | w11EXT-02a.F                              | RDP                         |             |
|   | Site2  |                                  |   |                             |             |
| DNS   | —  | ~ <                              |   |                             |             |
| Windows Security  | 8 items 1 item selec   | ted 2.32 K                       | .6  |                             | ×           |
|   |  |                                  |   |                             |             |
| Your crede  | ntials did not   | : worl                           | k   |                             |             |
| Your system ad<br>credentials to lo<br>because its ider | ministrator does n<br>og on to the remot<br>ntity is not fully ver | ot allov<br>te comp<br>rified. P | v the use o<br>outer 172.1<br>lease enter | f saved<br>6.40.40<br>' new |             |
| credentials.  |  |                                  |   |                             |             |
| w11client-02a\J   | ackie  |                                  |   |                             |             |
| Password  |  |                                  |   |                             |             |
|   |  |                                  |   |                             |             |
| The logon atten   | npt failed   |                                  |   |                             |             |
| More choices  |  |                                  |   |                             |             |
| (   | ЭК   |                                  | Cano                                      | el                          |             |
|   |  |                                  | 22/10                                     |                             |             |
|   |  |                                  |   |                             |             |

- 1. On your **ControlCenter server** 
  - On the Desktop
    - Open the Remote Desktops Folder
      - Open Site 2
        - Launch W11Client-02a.RDP
        - Login as jackie
          - With the password VMware1!

| N11Client-02a - 172.16.40.40 - Ref  | mote Desktop Connection |                               | the set |
|-------------------------------------|-------------------------|-------------------------------|---------|
| Recycle Bin software<br>(horizon-01 | VMware Horizon Client   |                               |         |
| Google<br>Chrome                    |                         |                               |         |
| VMware                              |                         |                               |         |
|                                     |                         | Name of the Connection Server | ×       |
| Prompt                              |                         | Cancel                        | Connect |
| Control<br>Panel                    |                         |                               |         |
|                                     |                         |                               |         |

- 2. In **W11Client-02a** 
  - Open Horizon Client from desktop
    - In the Horizon Client,
    - Click on Add Server Button
      - In the Name of the Connection Sever textbox,
        - Type
          - uag-hzn-avi02.euc-livefire.com
            - Click Connect

| 🖵 viviware Horizon Client |  |
|---------------------------|--|
|                           |  |
|                           | https://uag-hzn-avi02.euc-livefire.com |
|                           | jackie                                 |
|                           | •••••                                  |
|                           |  |

- 3. In the Horizon Client textbox
  - Username
    - jackie
  - Password
    - VMware1!
  - Click login

| 10 with Client-02a - 172.10.40.40 - Remote Desktop Connection |   |           |
|---|---|-----------|
|   | VMware Horizon Client                     |           |
| Recycle Bin software  | <   | C Refresh |
| (horizon-01   | As https://usa.hzn-avi02.euc.livefire.com |           |
| $\bigcirc$  |   |           |
| Google  |   |           |
|   |   |           |
| 2   | SEAW11 SEAW11FC                           |           |
| VMware<br>Horiz   | (Machine not ass                          |           |
| <b>9N</b> - <b>1</b>  |   |           |
| Compand   |   |           |
| Prompt  |   |           |
| <u>.</u>  |   |           |
| Control   |   |           |
| Panel   |   |           |
|   |   |           |
| Microsoft<br>Edge   |   |           |
|   |   |           |

- 4. In the Horizon Client
  - Double Click **SEAW11** Pool
    - You will be presented with the desktop
    - This validates our testing and configuration

Once the testing complete, this brings to the end of LTM configuration. Move to the next lab of GSLB configuration lab