



Updated Feb 2023

## Installation Guide for UMAS & VIC-VMware ESXi On-Premise Deployment

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time responsiveness. Built-in redundancy offers high availability, mitigates downtime, and reduces maintenance overhead. UMAS can be installed in the Private, Public or SaaS Cloud.

The analytics engine is the brain that correlates application to infrastructure performance metric by providing the smarts to pinpoint the infrastructure root cause behind application performance degradation. The trending reports generated from the historical data helps identify infrastructure hotspots and maintains optimal application performance.

- *Virtual Information Controller(vIC)* - The vIC can be installed in either the Private or Public Cloud. In the Private Cloud, Virtual Information Controller (vIC) is the integration conduit to the VMware Horizon VDI infrastructure & Virtualization Management System e.g., VMware vCenter, Microsoft Hyper-V, Nutanix Prism Central or OpenStack Controller. The vIC retrieves your infrastructure configuration as a template to build Uila monitoring domain and to streamline deployment. The vIC collects network, storage and compute performance metrics that are maintained by vCenter (or equivalent from Microsoft, Nutanix, OpenStack) and combines it with the application and network metadata from all deployed vSTs. In the Public Cloud, the vIC collects the Instance & VM level networking, application, compute statistics from the vSTs. In both cases, the vIC securely transmits it to the Uila Management and Analytics System, either on-premise or in the cloud.
- *Uila Log Database Server*- The Uila Log Database Server can be installed in either the Private or Public Cloud. The Uila Log Database Server collects and consolidates logs and log statistics from multiple Logging Smart Taps (LST). The Uila uObserve web console requests the log data from Uila vIC, which in turn queries the Log Database Server and delivers it back to the Uila UMAS server.
- *Virtual Smart Tap(vST)* – vST is deployed at the host as a small footprint guest VM that utilizes Deep Packet Inspection (DPI) technology to identify unique applications and its attributes. The vST measures application response time and collects network performance data. No packet payload is examined or stored, thus removing the risk of exposing sensitive data.

In a cloud deployment, the VST, also collects the network and performance metrics from the IST and utilizes the Deep Packet inspection technology to identify applications.

- *Instance Smart Tap (IST)* – The Uila Instance Smart Tap (IST) is deployed as a plug-in in a distributed manner across the Public Cloud on the VMs or Instances running the application workload. It collects traffic as well as VM and Instance level Compute statistics and sends it to the vST for Deep Packet Inspection.
- *Logging Smart Tap (LST)* – The Uila Logging Smart Tap (LST) is deployed as a plug-in in a distributed manner across the Data Center on VMs/Physical Servers and Public Cloud in the VMs or Instances. It collects logs from the server and/or application and sends it to the Uila logging server for further analysis.

## Getting Started

### System Requirements

Always refer to the Uila website for updated system requirements as the first step:

<https://www.uila.com/products/uila-system-requirements>

- Internet Browser for your monitoring console
  - Firefox, Chrome on Windows platform
  - Safari, Firefox, Chrome on OS X platform
  - Firefox, Chrome on CentOS, Ubuntu Linux platform
- VMware version requirements
  - vSphere ESXi 5.5 or higher
  - vCenter Server 5.5 or higher
- VMware® NSX requirement (if Applicable)
  - NSX-V
  - NSX-T™ Data Center
- Uila Virtual Smart Tap (vST) requirements -
  - **vST for On-Premise** -
    - Installed as a guest VM
    - 1 vCPU (1 Core)
    - 1Gb memory
    - 2Gb Storage

- **VIC for VMware requirements**

- Installed as a guest VM
- 4 vCPU
- Memory:

**Small VIC** 24 GB RAM allocated (32 GB if using Horizon VDI integration) , 12GB RAM reserved, 50GB storage, thin provisioned: <1000 VMs, less than 200 Network Monitoring ports, less than 100 nodes for server monitoring

**Medium VIC** 32 GB RAM allocated (40 GB if using Horizon VDI integration), 16GB RAM reserved, 100GB storage, thin provisioned: 1000~2000 VMs, 200~400 Network Monitoring ports, 100~200 nodes for server monitoring

**Large VIC** 48 GB RAM allocated (56 GB if using Horizon VDI integration), 24GB RAM reserved, 200GB storage, thin provisioned: 2000~5000VMs, 400~600 Network Monitoring ports, 200-400 nodes for server monitoring

Proper vCenter access right is required for vIC to collect structural information and CPU, memory and storage metrics from vCenter, make configuration changes, deploy and setup vST VM. You must have one of the two options pre-configured before vIC deployment:

1. Full administrative access right (vCenter administrator role), or
2. Partial administrative access right with the following table of privileges enabled (checked).

Privilege Categories	Privilege Items
Datastore	<ul style="list-style-type: none"> <li>• Allocate space</li> <li>• Browse datastore</li> <li>• Remove file</li> </ul>
Global	<ul style="list-style-type: none"> <li>• Cancel task</li> </ul>
Host	<ul style="list-style-type: none"> <li>• Local operations-&gt;Create virtual machine</li> <li>• Local operations-&gt;Delete virtual machine</li> <li>• Configuration → Network Configuration</li> </ul>
Network	<ul style="list-style-type: none"> <li>• Assign network</li> </ul>
Resource	<ul style="list-style-type: none"> <li>• Assign virtual machine to resource pool</li> </ul>

	<ul style="list-style-type: none"> <li>• Modify resource pool</li> </ul>
Scheduled task	<ul style="list-style-type: none"> <li>• Create tasks</li> <li>• Modify tasks</li> <li>• Remove tasks</li> <li>• Run task</li> </ul>
Virtual machine	<ul style="list-style-type: none"> <li>• Configuration</li> <li>• Guest Operations</li> <li>• Interaction</li> <li>• Inventory</li> <li>• Provisioning</li> <li>• Service configuration</li> <li>• Snapshot management</li> <li>• vSphere replication</li> </ul>
dvPort group	<ul style="list-style-type: none"> <li>• Create</li> <li>• Delete</li> <li>• Modify</li> </ul>
vApp	<ul style="list-style-type: none"> <li>• Add virtual machine</li> <li>• Assign resource pool</li> <li>• Assign vApp</li> <li>• Import</li> </ul>

**Table 4.2: vCenter access rights table**

- **UMAS (Uila Management & Analytics System) for VMware**
  - For small scale deployment (under 1000 devices including VM and external device): One-box UMAS (1 VM to host UMAS) with 4 vCPU, 48GB RAM allocated and 32GB reserved, 1TB for 1 month data retention

- For medium scale deployment (1000~2000 devices including VM and external device) One-box UMAS (1 VM to host UMAS) with 4 vCPU, 64GB RAM allocated and 48GB reserved, 2TB for 1 month data retention
- For large scale deployment (2000~5000 devices including VM and external device) you need a Two-box UMAS (2 VMs to host UMAS):  
Web UMAS: 4 vCPU, 48GB RAM allocated and 32GB reserved, 800GB  
DB UMAS: 4 vCPU, 48GB RAM allocated and 32GB reserved, 5TB
- For super-large scale deployment (greater than 5000 devices including VM and external device) Contact Uila to get customized System Requirements for your deployment

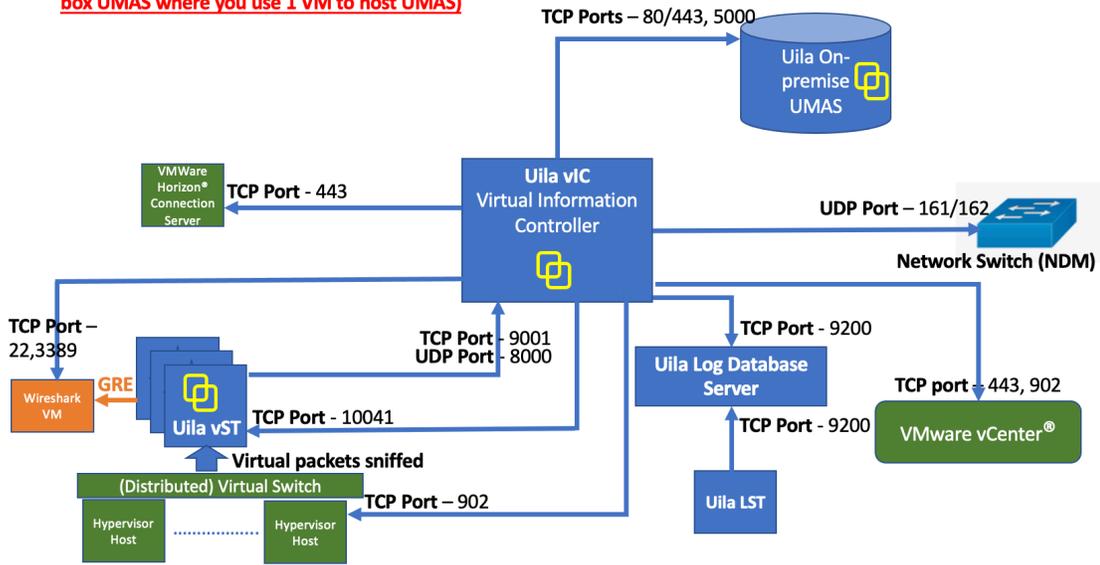
### Visualizing Multiple VMware® vCenter® in a single view

Users can merge **two** separate VMware vCenter and enjoy a single pane of glass into the infrastructure, network and applications. One example of this would be a VDI setup where Virtual desktops are in one vCenter, while the VDI infrastructure servers and backend application servers are hosted in another vCenter. With this new feature, users have the complete end-to-end VDI Application Dependency Mapping visibility across the two vCenters.

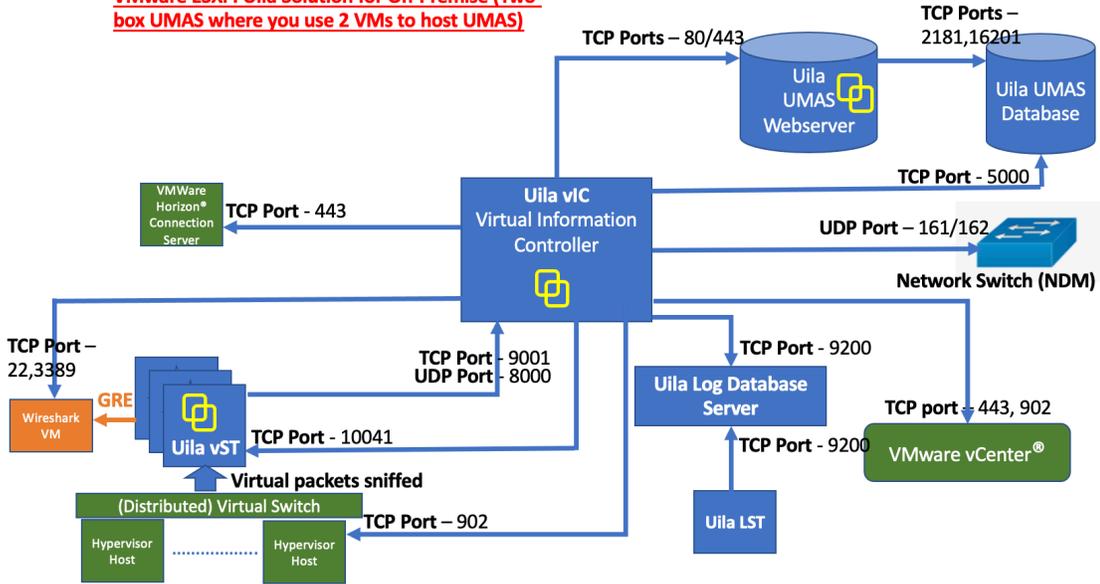
- **Network requirements**

- o Pre-allocate one IP address for each of the vST's, which can be either static IP address or allocated via DHCP, prior to deployment
- o Pre-allocate one static IP address for vIC prior to deployment
- o Pre-configure your network to open TCP and UDP ports to allow communications between Uila sub-systems as illustrated in the chart below.
- o UMAS –
  - If Cloud UMAS is being used, add [ugw1s.uila.com/38.99.127.15](https://ugw1s.uila.com/38.99.127.15) as permitted site on the firewall.
  - Pre-allocate one static IP if the on premise UMAS is used.

**VMware ESXi :Uila Solution for On-Premise (One-box UMAS where you use 1 VM to host UMAS)**



**VMware ESXi : Uila Solution for On-Premise (Two-box UMAS where you use 2 VMs to host UMAS)**

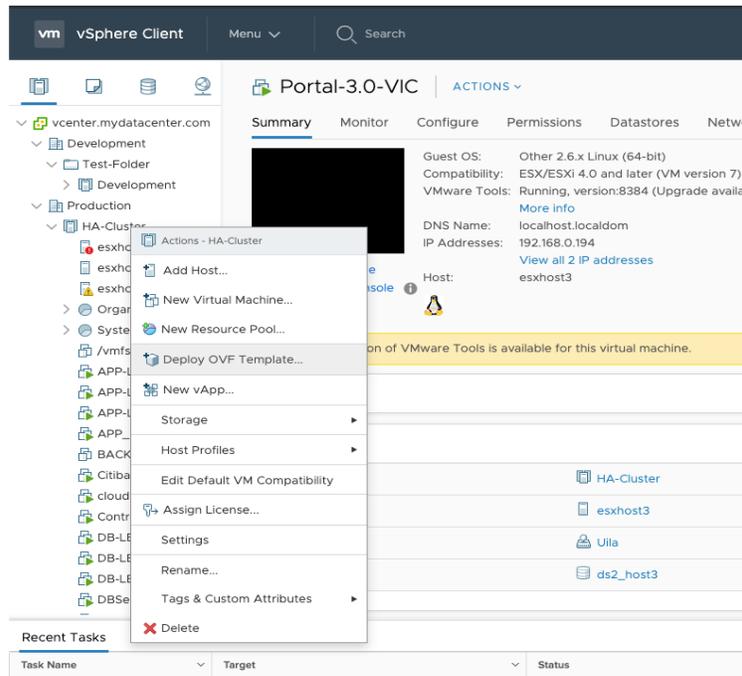


Network connection overview for On-Premise Datacenter

## Deploy Uila Management and Analytics System (UMAS)

This section describes the step-by-step instruction to download, install and activate UMAS.

1. An email with instructions to download UMAS and vIC will be provided by a Uila Support staff. The files are .ova templates that can be deployed onto vCenter.
2. Login to vCenter
3. Deploy UMAS ova in vCenter.



4. Browse to locate UMAS ova file

## Deploy OVF Template

- ✓ 1 Select an OVF template
- 2 Select a name and folder
- 3 Select a compute resource
- 4 Review details
- 5 Select storage
- 6 Ready to complete

**Select an OVF template**  
Select an OVF template from remote URL or local file system

---

Enter a URL to download and install the OVF package from the Internet, or browse to a location accessible from your computer, such as a local hard drive, a network share, or a CD/DVD drive.

URL

Local file

UMAS-3.0.ova

CANCEL BACK NEXT

### 5. Specify a name and location for the deployment template

## Deploy OVF Template

- ✓ 1 Select an OVF template
- 2 Select a name and folder
- 3 Select a compute resource
- 4 Review details
- 5 Select storage
- 6 Ready to complete

**Select a name and folder**  
Specify a unique name and target location

---

Virtual machine name:

Select a location for the virtual machine.

- ✓ vcenter.mydatacenter.com
  - > Development
  - > Production
  - > VDI

CANCEL BACK NEXT

### 6. Select the host/cluster location where the UMAS is to be deployed.

## Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- 3 Select a compute resource**
- 4 Review details
- 5 Select storage
- 6 Ready to complete

**Select a compute resource**  
Select the destination compute resource for this operation

- ∨ Production
  - > HA-Cluster
  - > Standard-Cluster

Compatibility

✓ Compatibility checks succeeded.

CANCEL BACK NEXT

## 7. Select the UMAS Configuration, Small, Medium or Large

### Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- 5 Configuration**
- 6 Select storage
- 7 Select networks
- 8 Customize template
- 9 Ready to complete

**Configuration**  
Select a deployment configuration

	Description
<input checked="" type="radio"/> Small Uila UMAS Deployment	Use Small Deployment configuration for Datacenter environment with less than 1,000 VMs. Uila Management and Analytics (UMAS) will need 4 vCPU and maximum of 48GB memory.
<input type="radio"/> Medium Uila UMAS Deployment	
<input type="radio"/> Large Uila UMAS Deployment	

3 Items

CANCEL BACK NEXT

## 8. Select the datastore for the UMAS VM and select disk format

### Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- 5 Select storage**
- 6 Select networks
- 7 Customize template
- 8 Ready to complete

#### Select storage

Select the storage for the configuration and disk files

Encrypt this virtual machine (Requires Key Management Server)

Select virtual disk format: **Thick Provision Lazy Zeroed** ▾

VM Storage Policy: **Datastore Default** ▾

Name	Capacity	Provisioned	Free	Type
datastore1	458.25 GB	1.15 TB	149.88 GB	VM
datastore1 (1)	458.25 GB	790.99 GB	98.19 GB	VM
ds2_host1	931.25 GB	792.99 GB	319.03 GB	VM
ds2_host2	931.25 GB	282.99 GB	734.54 GB	VM
ds2_host3	931.25 GB	456.89 GB	699.27 GB	VM
host3-local	458.25 GB	71.17 GB	410.42 GB	VM

#### Compatibility

✓ Compatibility checks succeeded.

CANCEL

BACK

NEXT

## 9. Select a network port group where the UMAS can communicate with the vIC.

### Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- ✓ 5 Select storage
- 6 Select networks**
- 7 Customize template
- 8 Ready to complete

#### Select networks

Select a destination network for each source network.

Source Network	Destination Network
Network 1	Uila-BW

1 Items

#### IP Allocation Settings

IP allocation: Static - Manual

IP protocol: IPv4

CANCEL

BACK

NEXT

## 10. Select data partition size. The default is 1 TB

Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- ✓ 5 Configuration
- ✓ 6 Select storage
- ✓ 7 Select networks
- 8 Customize template**
- 9 Ready to complete

Customize template  
Customize the deployment properties of this software solution.

✓ All properties have valid values

Uncategorized	1 settings
Select UMAS data partition size	Select data partition size in gigabytes (GB). Default is 1TB (1024GB). Recommend 2TB (2048GB) for Datacenter with 1,000 - 2,000 VMs and 4TB (4096GB) for Datacenter with more than 2,000 VMs. <input type="text" value="1024"/>

## 11. Review all the settings and click finish.

Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- ✓ 5 Select storage
- ✓ 6 Select networks
- ✓ 7 Customize template
- 8 Ready to complete**

Ready to complete  
Click Finish to start creation.

Provisioning type	Deploy from template
Name	UilaUMAS
Template name	Uila-Management-Analytics-System_OVF10
Download size	1.5 GB
Size on disk	825.0 GB
Folder	Production
Resource	HA-Cluster
Location	datastore1
Storage mapping	1
All disks	Datastore: datastore1; Format: Thick Provision Lazy Zeroed
Network mapping	1
Network 1	Uila-BW
IP allocation settings	
IP protocol	IPV4

CANCEL BACK FINISH

12. Once the system is deployed, power on the UMAS. Depending on the VMware environment this process may take several minutes.

13. Open the remote console to configure the UMAS virtual machine

- Press “Y” to agree to the Software License Agreement
- Go through the setup wizard to setup IP configuration

```
Setup Network Configuration for Interface eth0
Setup DHCP for interface eth0 [y/n]? n
Enter IP address: 192.168.1.221
Enter Subnet mask: 255.255.254.0
Enter Gateway: 192.168.0.1
Enter DNS IP (comma separated list): 192.168.0.5, 192.168.0.20
Enter NTP Server: 192.168.0.5

Setup Static Network Information:
IP      : 192.168.1.221
MASK    : 255.255.254.0
GATEWAY: 192.168.0.1
DNS     : 192.168.0.5, 192.168.0.20
NTP     : 192.168.0.5
Confirm? (y/n): _
```

- Go through the setup wizard setup Uila login account (This is the administrator account)

```
Setup Uila Software ...
Setup Uila Login ID ...

On-Premise Uila Management and Analytics System (UMAS) login ID and password can be used for deploying
virtual Information Controller (VIC) and accessing UMAS for performance analytics.
Uila Login: admin
Uila Password:
Confirm Password:
```

- Wait for a few minutes to install and once completed, you will see the login screen on the console –

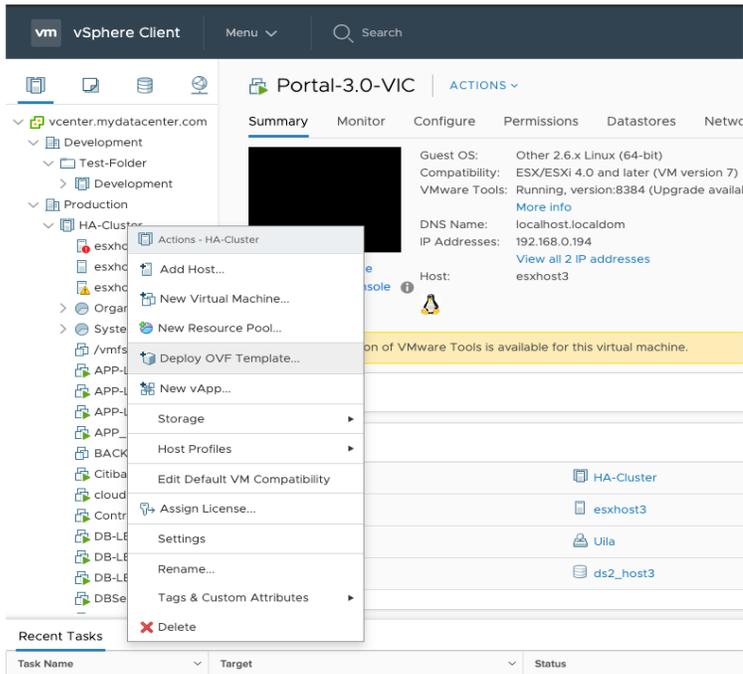
```
Uila Management and Analytics System (UMAS) - OVA Version 4.0.0
uila-umas login: _
```

Now proceed to install the Virtual Information Controller (VIC).

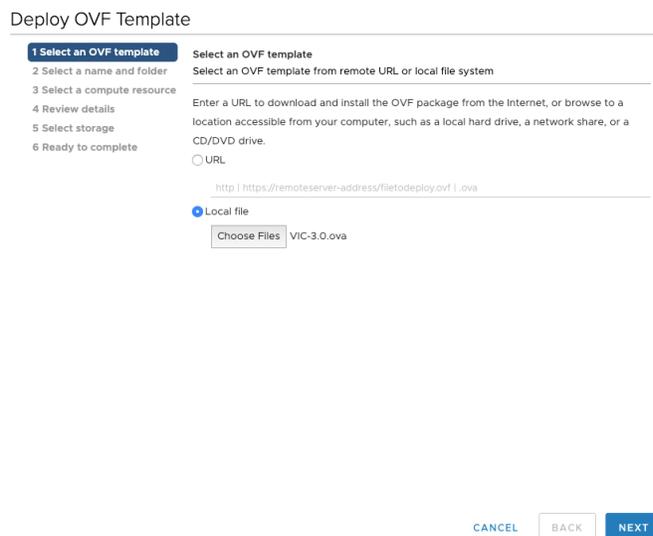
## Deploy Virtual Information Controller (vIC)

This section describes the step-by-step instruction to download, install and activate vIC.

### 14. Deploy vIC.ova in vCenter



### 15. Browse to locate the vIC.ova file



## 16. Choose name and folder location

### Deploy OVF Template

✓ 1 Select an OVF template

2 Select a name and folder

3 Select a compute resource

4 Review details

5 Select storage

6 Ready to complete

Select a name and folder

Specify a unique name and target location

Virtual machine name:

Select a location for the virtual machine.

- ▼  vcenter.mydatacenter.com
  - >  Development
  - >  Production
  - >  VDI

CANCEL

BACK

NEXT

## 17. Select the Compute Resource and click Next

### Deploy OVF Template

✓ 1 Select an OVF template

✓ 2 Select a name and folder

3 Select a compute resource

4 Review details

5 Select storage

6 Ready to complete

Select a compute resource

Select the destination compute resource for this operation

- ▼  Production
  - ▼  HA-Cluster
    -  esxhost1
    -  esxhost2
    -  esxhost3
  - >  Organization vDC (4938fd1d-9f9a-4362-82cd-998543fff674)
  - >  System vDC (7cdf4cfd-1bc4-4279-996c-75b742a7e17d)
  - >  Standard-Cluster

Compatibility

✓ Compatibility checks succeeded.

CANCEL

BACK

NEXT

18. Review the details of the VIC and click Next
19. Select Uila deployment configuration, whether small, medium or large depending on the number of VM's in the environment.

Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- ✓ 5 License agreements
- 6 Configuration
- 7 Select storage
- 8 Select networks
- 9 Customize template
- 10 Ready to complete

Configuration  
Select a deployment configuration

Small Uila Deployment

Medium Uila Deployment

Large Uila Deployment

**Description**  
Use Small Deployment configuration for Datacenter environment with less than 500 VMs. Uila Information Controller will need 2 vCPUs and maximum of 4 GB memory.

3 Items

CANCEL BACK NEXT

20. Select the datastore for the vIC and select disk format to be thin provisioned for more efficient usage of storage space.

Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- ✓ 5 License agreements
- ✓ 6 Configuration
- 7 Select storage
- 8 Select networks
- 9 Customize template
- 10 Ready to complete

Select storage  
Select the storage for the configuration and disk files

Encrypt this virtual machine (Requires Key Management Server)

Select virtual disk format: Thin Provision

VM Storage Policy: Datastore Default

Name	Capacity	Provisioned	Free	Type
 datastore1	458.25 GB	1.15 TB	149.88 GB	VM
 datastore1 (1)	458.25 GB	790.99 GB	98.19 GB	VM
 ds2_host1	931.25 GB	792.99 GB	319.03 GB	VM
 ds2_host2	931.25 GB	282.98 GB	734.55 GB	VM
 ds2_host3	931.25 GB	456.89 GB	699.27 GB	VM
 host3-local	458.25 GB	71.17 GB	410.42 GB	VM

Compatibility

✓ Compatibility checks succeeded.

CANCEL BACK NEXT

21. Select a network port group where the vIC can communicate with the vST and the UMAS.

### Deploy OVF Template

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- ✓ 5 License agreements
- ✓ 6 Configuration
- ✓ 7 Select storage
- 8 Select networks**
- 9 Customize template
- 10 Ready to complete

**Select networks**  
Select a destination network for each source network.

Source Network	Destination Network
Network 1	Uila-BW

1 items

**IP Allocation Settings**

IP allocation: Static - Manual

IP protocol: IPV4

[CANCEL](#)
[BACK](#)
[NEXT](#)

22. Review all the settings and click finish.

### Deploy OVF Template

Click Finish to start creation.

- ✓ 1 Select an OVF template
- ✓ 2 Select a name and folder
- ✓ 3 Select a compute resource
- ✓ 4 Review details
- ✓ 5 License agreements
- ✓ 6 Configuration
- ✓ 7 Select storage
- ✓ 8 Select networks
- ✓ 9 Customize template
- 10 Ready to complete**

Provisioning type	Deploy from template
Name	UilaVIC
Template name	uila-vim_OVFIO
Download size	1.8 GB
Size on disk	3.6 GB
Folder	Production
Resource	HA-Cluster
Location	datastore1
Storage mapping	1
All disks	Datastore: datastore1; Format: Thin Provision
Network mapping	1
Network 1	Uila-BW
IP allocation settings	
IP protocol	IPV4
IP allocation	Static - Manual

[CANCEL](#)
[BACK](#)
[FINISH](#)

23. Once the system is deployed, power on the vIC. Depending on the VMware environment this process may take several minutes.

24. Open the remote console to configure the VIC virtual machine
  - Press “Y” to agree to the Software License Agreement
  - Go through the setup wizard to setup IP configuration

```

Setup Network Configuration for Interface eth0
Setup DHCP for interface eth0 [y/n]? n
Enter IP address: 192.168.0.50
Enter Subnet mask: 255.255.254.0
Enter Gateway: 192.168.0.1
Enter DNS IP: 192.168.0.20
Enter NTP Server:

Setup Static Network Information:
IP      : 192.168.0.50
MASK    : 255.255.254.0
GATEWAY: 192.168.0.1
DNS     : 192.168.0.20
NTP     :
Confirm? (y/n):_

```

- In case of on-prem installation, type “n” for portal service

```

Setup Uila Software ...
Is vIC using Uila Portal Service? [y/n]

```

- Enter IP and login information for UMAS –

```

Setup Uila Software ...
Is vIC using Uila Portal Service? [y/n] n
Enter Uila Management Analytics System (UMAS) IP Address: 192.168.0.49
Please enter the Login ID and password during setup of UMAS
Uila Login: admin
Uila Password:
Confirm Password:

```

- Enter the vCenter login credentials

```

Setup VMware vCenter Login Credentials.
Enter VMware vCenter Login Server: 192.168.0.151
vCenter Login (example@domain.local): administrator@vsphere.local
vCenter Password:
Confirm Password:
Completing the installation. It may take a while ...

```

25. Once you see the login screen, the installation is complete

Now proceed to install the Virtual Smart Tap (vST)

## Contact Uila Support

Uila software solutions are designed with ease of installation and simplified maintenance in mind. The Uila team is dedicated to exceeding your expectations, and knows that any downtime is too much in today's competitive world. Our goal is to keep your applications running 24 X 7. We offer a simple and effective support program to meet your needs. Customers who purchased Uila products and under support contract will receive the following benefits:

- Unlimited support via email or phone call
- Free software minor release update
- Free software major release upgrade

Email: [support@uila.com](mailto:support@uila.com)

Phone: (408) 400-3706

## About Uila

Uila resolves Complex IT Disruptions for Enterprise Organizations with its Intelligent Full-Stack Observability Platform, that correlates Application and Infrastructure Performance to isolate and remediate issues before business impact. With Uila, IT teams can visualize application workload dependencies across cloud platforms, rightsize infrastructure resources, troubleshoot disruptions for any onsite or remote VDI user due to application/network/infrastructure challenges, plan workload migration strategies for Cloud deployments and use AIOps to streamline troubleshooting and reduce MTTR with remediation actions. And most importantly, this is done WITHOUT any agents. Uila also allows security teams to combat advanced cyber threats, by providing comprehensive application anomaly insights, cyber threats & Data Exfiltration activities. Organizations use Uila to align themselves with their IT teams and cut MTTR from days to minutes to always keep End-User Experience at peak performance & secure, across cloud boundaries.