



Version 2.2
Installation Guide for Cloud VST/IST
10/15/2023

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Introduction

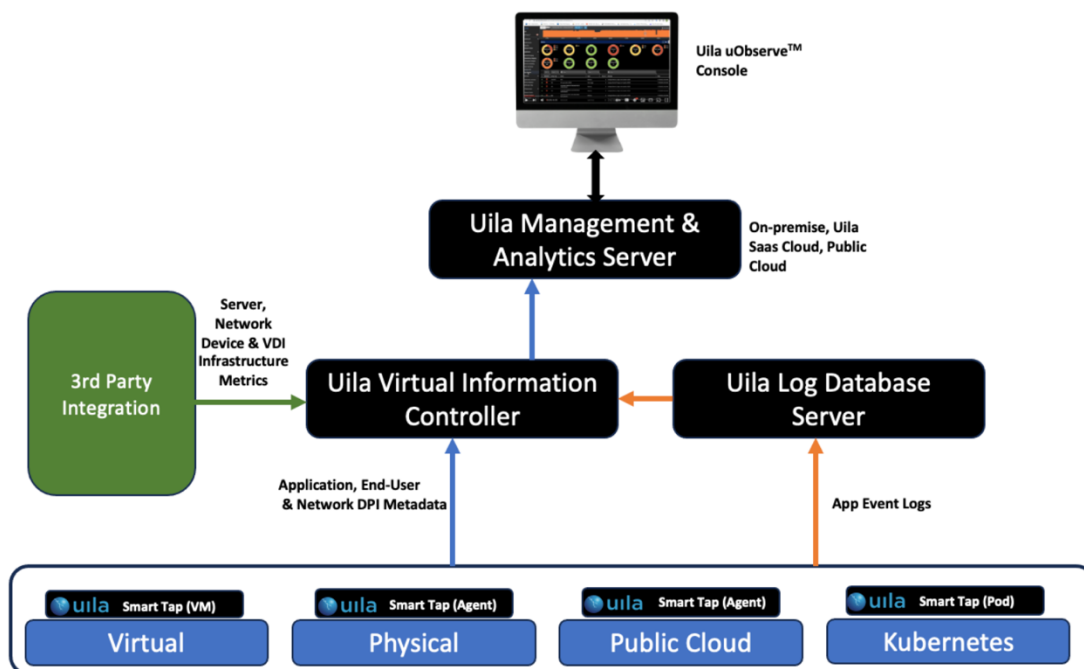
Scope and Purpose

This document describes the system requirements, installation and configuration steps for the Cloud Virtual Smart Tap(cVST) and Instance Smart Tap(iST) on the Public Cloud, Physical Server, or Desktop.

Pre-requisite: It is assumed that the reader has already installed the Uila Virtual Information Controller(VIC) and the Uila Management and Analytics Server(UMAS).

Architecture Overview

The diagram below shows the Uila Management and Analytics System architecture (UMAS) and its relationship to Private and Public cloud environment.



Uila Architecture

Uila consists of three major components –

- **Management and Analytics system(UMAS)** – UMAS is a big data store and analytics engine that was designed to accommodate a large data center deployment with thousands of servers. UMAS can store data for up to 60 days and record data in minute resolution, while maintaining real time responsiveness. UMAS's built-in redundancy offers high availability, removes downtime and reduces maintenance overhead.

The UMAS can be used to provide a single pane of glass view for end-to-end visibility into performance, capacity and resource usage/allotments across all on-premise and cloud-hosted services (VMware, Microsoft Hyper-V, Amazon Web Services, Microsoft Azure, Google Cloud and other cloud provider deployments).

- *Virtual Information Controller(vIC)* - vIC is installed as a virtual appliance on-premise or on cloud datacenter. The vIC retrieves the infrastructure configuration and collects network, storage and compute performance metrics. This is then combined with the data from the vST and transmitted to the UMAS.
- *Virtual Smart Tap(vST)* – Virtual Smart Tap (vST) is deployed in a distributed manner across the Data Center or the Public Cloud. The vST installs in the host (Private Cloud) or VM/instance (Public Cloud) or Kubernetes Node as an efficiently designed guest Virtual Machine or Pod where it promiscuously listens to all traffic from the virtual switch or getting traffic from Uila’s Instance Smart Tap (iST) that traverses the virtual networks (North-South and East-West). Using embedded Deep Packet Inspection (DPI) technology, the vST identifies unique applications and their attributes.

In a cloud deployment, the VST (a.k.a cVST), 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.

Getting Started

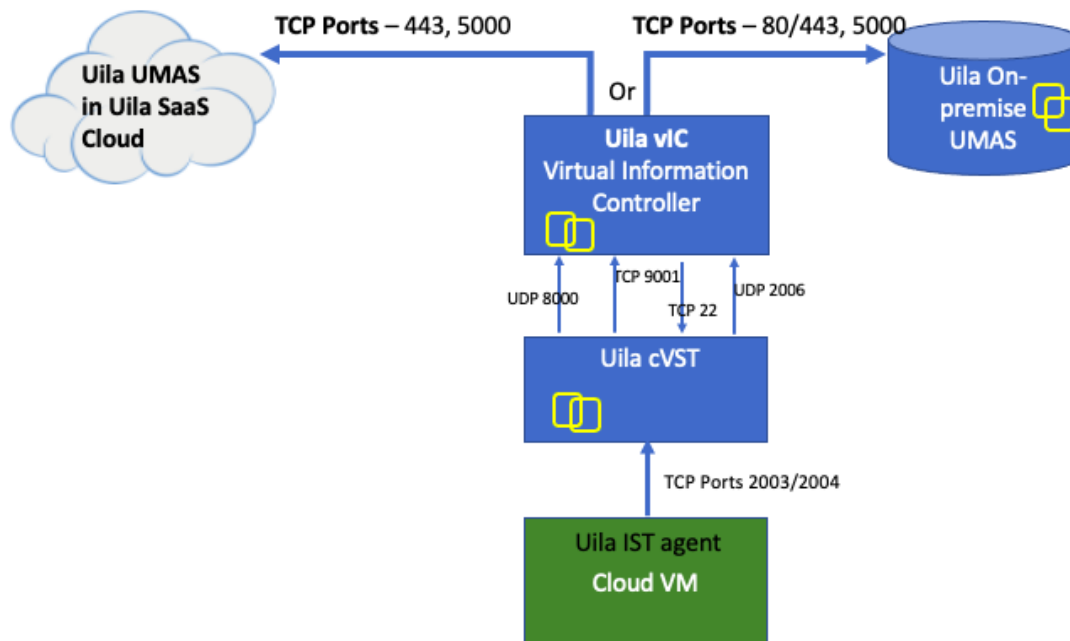
System Requirements for cVST/IST

User must provision and setup a Ubuntu appliance from marketplace and setup the following network requirements before installing Uila.

- Uila Virtual Smart Tap (vST) requirements -
 - **cVST for Public Cloud –**
 - t2.large for AWS
 - D2s v3 for Azure
 - 4Gb disk space required
 - 1G RAM + 512M x each IST (i.e. 5 iST = 3.5G RAM)
 - Ubuntu, CentOS or Redhat (Recommended Ubuntu 20.04)
 - Create an account with sudo permissions

- Network requirement
 - Allocate one IP address for each of the cVST's. This can be either a static IP address or assigned via DHCP, prior to the deployment.
 - The IST's will be installed as an agent inside the guest OS. It will use the IP address assigned to the guest OS.
- Port Requirements: VERY IMPORTANT to verify the following Ports are opened to allow Uila software to communicate.
- cVST must be able to initiate traffic to the VIC IP

Uila Solution for Public Cloud Deployment



Deploy Uila Virtual Smart Tap

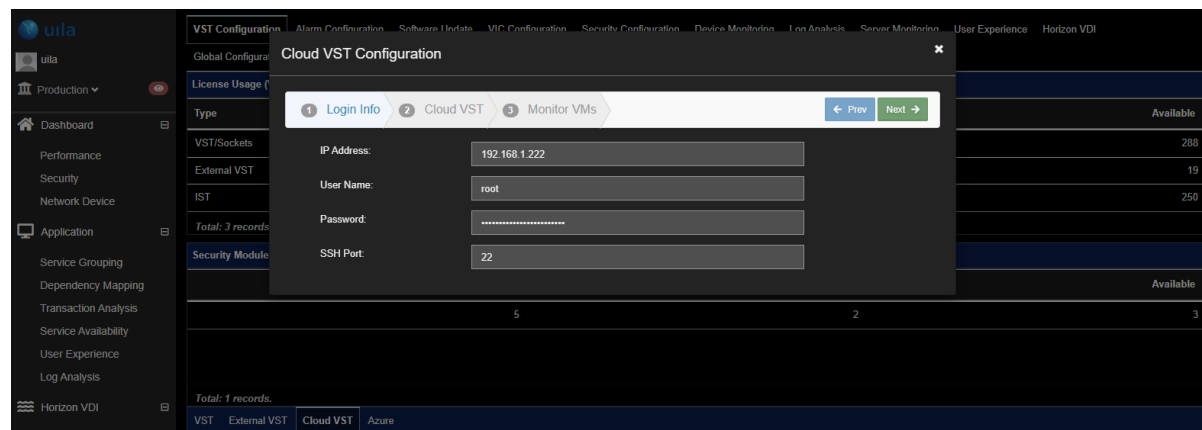
1. Setup a brand new VM/Instance for the cVST. The recommended guest OS is Ubuntu 20.04.
2. Upload the VST installer to the VM
 - a. The installer file will be provided by Uila and its name would resemble **"installer-vst.tar.gz"**
 - b. Upload the Uila Installer file to **"/opt"**
3. Execute the vST installation -
 - a. Run the commands -
 - i. **tar -xvf installer-vst.tar.gz**
 - ii. **cd UilaInstaller/**
 - iii. **./install.sh -rpcap deployment.properties**

4. Configure the cloud vST

- a. Run the command –
 - i. **`/opt/uila/VST/bin/setconfig -v <VIC IP address>`**

5. Now go to finish the cloud VST configuration –

- a. Go to settings → vST configuration
- b. Click on Cloud VST
- c. You will see the Cloud VST appear
- d. Under “Actions” click on “config”
- e. Fill in the field below to identify the cloud VST
- f. The account must have ‘sudo’ rights to perform service related operations



6. If cloning a VST to be the cVST, here are some notes

- a. Find a VST that does not have transaction analysis, no 2nd HD
- b. If there are multiple NICs, make sure to delete all the unnecessary NICs
- c. For 4 IST instances, requires 3G RAM, 2 cores, 3GB HD.

ADD NEW DEVICE

> CPU	2			
> Memory	3	GB		
> Hard disk 1	3	GB		
> SCSI controller 0	LSI Logic Parallel			
> Network adapter 1	VM Network			<input checked="" type="checkbox"/> Connect...
> Video card	Specify custom settings			
VMCI device	Device on the virtual machine PCI bus that provides support for the virtual machine communication interface			
> Other	Additional Hardware			

- Get rid of the unneeded NIC config:
- vi /etc/netplan/00-installer-config.yaml to only have one NIC and IP

```

This is the network config written by 'subiquity'
network:
  ethernets:
    eno1:
      dhcp4: no
      addresses:
        - 192.168.1.50/24
      gateway4: 192.168.0.1
      nameservers:
        addresses: [192.168.0.20, 192.168.0.5]
    eno2:
      dhcp4: true
    enp1s0f0:
      dhcp4: no
    enp1s0f1:
      dhcp4: no
  version: 2

```

- Make sure there is only 1 uvst.conf

```
total 40
-rw-r--r-- 1 uila uila 285 Dec 1 23:46 uvst.conf.synesis
-rw-r--r-- 1 uila uila 288 Dec 1 23:46 uvst.conf.default
drwxr-xr-x 2 uila uila 4096 Dec 1 23:46 ssh
-rw-r--r-- 1 uila uila 1440 Dec 1 23:46 log4crc
-rw-r--r-- 1 uila uila 2437 Dec 1 23:46 groonga-httpd.conf
-rw-r--r-- 1 uila uila 910 Dec 1 23:46 Q1800705-20180627.bin
-rw-r--r-- 1 uila uila 453 Dec 1 23:48 version.h
-rw-r--r-- 1 uila uila 910 Dec 1 23:49 QA-14-084-2014-12-17.bin
-rw-r--r-- 1 uila uila 292 Dec 6 18:31 uvst.conf
-rw-r--r-- 1 uila uila 109 Dec 6 18:31 uvst-global.conf
```

- g. And uvst.conf

```
# uvstd configuration file
[general]                                ; section comment
external = true
device=enp1s0f1

[ service ]
background = false
pidfile = /tmp/pidfile

[server]
address=192.168.1.83
port = 8000
interval = 60
maxrecord=1024

[debug]
verbose=2
```







- h. Running the cVST installer should make those settings into the uvst.conf.
 i. Change the permission for the Uila (or custom account) to have sudo
 Run visudo
 j. Comment out the 'uila' setting and add this new line at bottom:

```
Cmd_Alias UILA_CMDS = /opt/uila/VIC/bin/hosts-manager, /opt/
-agent, /opt/uila/bin/dmidecode, /bin/date, /usr/sbin/ntpdate,
ade/UilaInstaller/install.sh, /tmp/UilaInstaller/install.sh, /s
/shutdown, /opt/uila/bin/nagios-config.sh, /opt/uila/bin/nagios
opt/uila/bin/wmic
Cmd_Alias NAG_CMDS = /usr/bin/nmap
#uila ALL=(root) NOPASSWD: UILA_CMDS
nagios ALL=(root) NOPASSWD: NAG_CMDS
uila ALL=(ALL:ALL) ALL
```

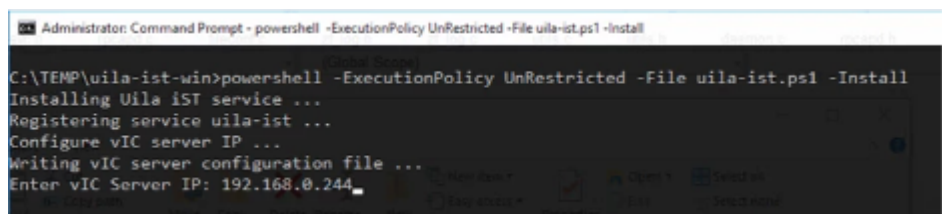
- h. Then use the 'uila' account in the Uila configuration page.

Deploy Uila Instance Smart Tap (IST) for Windows

1. Install Winpcap or Npcap on the target system. You can choose whatever version. They both work –
 - a. https://www.winpcap.org/install/bin/WinPcap_4_1_3.exe
 - b. <https://npcap.com/>
2. Download the IST install image (i.e. installer-ist-windows.zip) and copy it onto the target system. This image will be provided by Uila.
3. Install the iST on the target VM
 - a. Unzip the IST install package
 - b. Launch PowerShell as Administrator



Name	
	Packet.dll
	pthreadVC2.dll
	rpcapd.conf
	rpcapd.exe
	uila-ist.ps1
	wpcap.dll

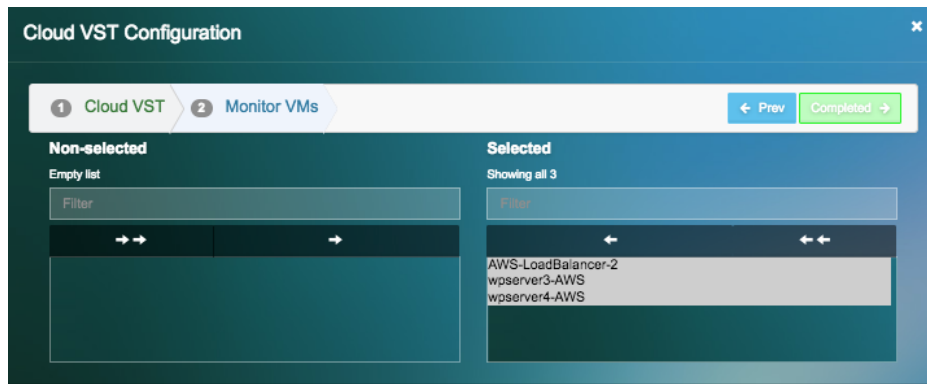
- c. Run the command below in PowerShell console to install iST
 - i. PowerShell.exe -ExecutionPolicy UnRestricted -File uila-ist.ps1 -Install
Enter the VIC IP address when prompted –





```

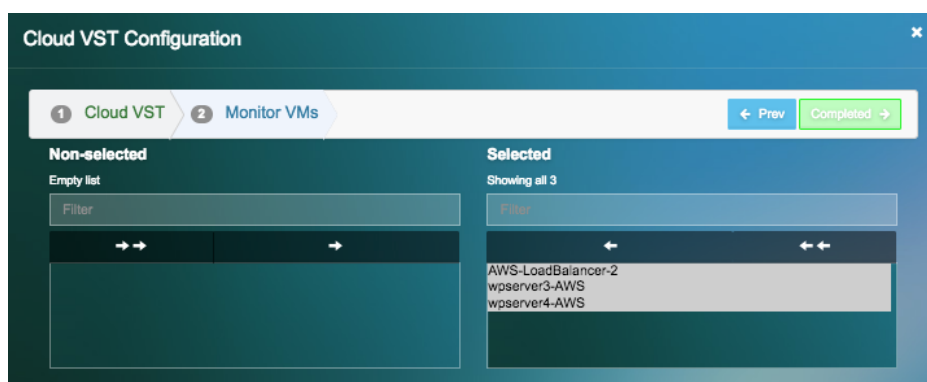
Administrator: Command Prompt - powershell -ExecutionPolicy UnRestricted -File uila-ist.ps1 -Install
C:\TEMP\uila-ist-win>powershell -ExecutionPolicy UnRestricted -File uila-ist.ps1 -Install
Installing Uila iST service ...
Registering service uila-ist ...
Configure vIC server IP ...
Writing vIC server configuration file ...
Enter vIC Server IP: 192.168.0.244
  
```

4. Go to the Uila Webpage
 - a. Settings   VST Configuration
 - b. Click on Cloud VST
 - c. You will see the Cloud VST appear
 - d. Under “Actions” click on “config”
 - e. Fill in the field below to identify the cloud VST
 - f. Click Next
 - g. Now you will see the IST’s reporting to the cloud VST
 - h. Select the appropriate IST’s that need to be monitored.



Deploy Uila Instance Smart Tap for Linux

1. Upload the IST installer to the VM
 - a. The installer file will be provided by Uila and its name would resemble **“installer-ist-linux.tar.gz”**
 - b. Upload the Uila Installer file to **“/opt”**
2. Execute iST installation
 - a. `tar -xvf installer-ist-linux.tar.gz`
 - b. `cd UilaInstaller/`
 - c. `./install.sh -vic <vic ip> deployment.properties`
3. Go to the Uila Webpage
 - a. Settings   VST Configuration
 - b. Click on Cloud VST
 - c. You will see the Cloud VST appear
 - d. Under “Actions” click on “config”
 - e. Fill in the field below to identify the cloud VST
 - f. Click Next
 - g. Now you will see the IST’s reporting to the cloud VST
 - h. Select the appropriate IST’s that need to be monitored.





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

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.