**Ixia-CloudShell content installation procedure**

The following procedure describes the steps necessary to load Ixia demo content on an existing CloudShell deployment.

The demo content includes a CloudShell suite with few IxNetwork tests, which is associated to a virtual blueprint including IxVM, IxNetwork controller, two IxVM-IxNetwork tier1 licenses and a virtual router DUT (VyOS). When launching the suite the sandbox is being setup, licenses check out, VMs deployed and connected and then the tests are launched sequentially. When the suite ends the test results and reports are available in CloudShell portal.

The procedure consists of the following stages:

1. Validate prerequisites
2. Download components
3. Actions in file system
4. Load ixia licenses
5. Deploy and configure VMs in vCenter
6. Import and configure content in CloudShell

**Stage A – Validate prerequisites**

1. Have a licensed VMWare vCenter hypervisor. Supported ESXi versions are 5.5 to 6.5
2. Have an Ixia License Server installed
3. Have CloudShell 8.3 Patch 1 or above installed with a license to Server and at least one concurrent sandbox

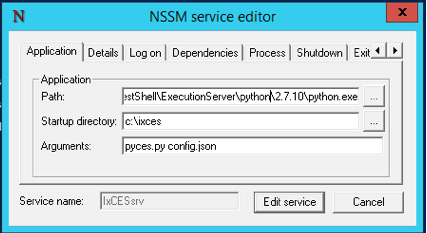
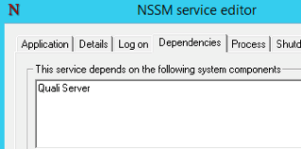
**Stage B – Download components**

1. Download IxNetwork OVA – from <http://downloads.ixiacom.com/support/downloads_and_updates/public/ixnetwork/IxNetworkWeb_vSphere_8.40.1124.8.ova>
2. Download IxVM OVA – from <http://downloads.ixiacom.com/support/downloads_and_updates/public/ixvm/8.40/Ixia_Virtual_Test_Appliance_8.40_EA_ESXi.ova>
3. Download VyOS OVA – from <https://vyos.io/>
4. Download Ixia sample tests scripts along with their tests.txt file and vyosconfig.txt file – from TBD Mano in Ixia Community
5. Download nssm – from <http://nssm.cc/download>
6. Download content artifacts – from TBD Mano in Ixia community. Those artifacts include:
   1. JS extensibility script
   2. VyOS Shell – download from <https://community.quali.com/repos/3806/vyatta-vyos-deployment-app-2-gen-shell>
   3. IxVM Shell – download from <https://community.quali.com/repos/3802/ixia-ixvm-chassis-deployment-app-2-gen-shell>
   4. Ixia License Pool Shell
   5. Quali package – “IxVM Sample.zip”
   6. Custom Execution Server – IxCES.zip

**Stage C – Actions in file system**

1. Place the test.txt file (downloaded in step B4) in the following location on your CloudShell Portal machine:

%CloudShell Installation Path%\CloudShell\Portal\tests.txt  
usually this path - C:\Program Files (x86)\QualiSystems\CloudShell\Portal\tests.txt

1. Place the VyOS config file (downloaded in step B4) in the following location on your CloudShell Portal machine:  
   %CloudShell Installation Path%\CloudShell\Portal\vyosconfig.txt  
   usually this path - C:\Program Files (x86)\QualiSystems\CloudShell\Portal\vyosconfig.txt
2. On the machine that will have the Custom Execution Server installed (this CES will actually run the Ixia python tests and will need to access the IxNetwork), place the python sample test scripts (downloaded in step B4) in the following location:  
   C:\PythonTests
3. Unzip the IxCES.zip file (downloaded in step B6f) in the following location on the CES machine:  
   C:\IxCES
4. Open CloudShell’s Portal and go to MANAGE\JOB SCHEDULING. Select “Edit Execution Server Types” and add a new type named IxCES.
5. Update the configuration details of the IxCES (following step C4) to point to your Quali server in the IxCES configuration file.
6. Install nssm (downloaded in step B5) on the CES machine
7. Make the IxCES a service:
   1. Launch the nssm
   2. A window will open, provide the following
      1. 
      2. Python path from the execution server folder
      3. startup dir at c:\ixces
      4. arguments: pyces.py config.json
   3. in the Dependencies tab, add: Quali Server  
      

**Stage D – Load Ixia licenses**

1. Load two tier-1 IxNetwork IxVM licenses to your license server

**Stage E – Deploy and configure VMs in vCenter**

1. Deploy the IxNetwork (downloaded in step B1) in your vCenter
2. Deploy the IxVM (downloaded in step B2) in your vCenter
3. Deploy the VyOS (downloaded in step B3) in your vCenter
4. Configure the VyOS in your vCenter as follows:
   1. By default the image comes only with 2 NICs. Add another one.
   2. Make sure the first NIC (Network Adapter 1) is connected to the management network.
   3. The other two NICs (Network Adapter 2 and Network Adapter 3) need to be connected to the “holding network”, the same one that you will use when configuring the holding network in the vCenter cloud provider in CloudShell (step F6).
5. Create a VM snapshot for the VyOS and power off the VM
6. Create a VM snapshot for the IxVM and power off the VM

**Stage F - Import and configure content in CloudShell**

1. Open CloudShell’s Portal and go to MANAGE \ JAVASCRIPT EXTENSION. Select the module “Test input - all parameters” and copy the JS extensibility script (step B6a) to the “On Load Custom Script” section.
2. Go to MANAGE \ SHELLS, and import the IxVM shell (downloaded in step B6c). Note that if your environment is offline you should also download the shell’s offline dependencies and place them in the PyPi repository folder in you Quali Server, more info [here](http://help.quali.com/Online%20Help/8.3/Portal/Content/Admn/Pyth-Cnfg-Mds.htm?Highlight=pypi%20server).
3. Still in MANAGE \ SHELLS, import the VyOS shell (downloaded in step B6b). Note that if your environment is offline you should also download the shell’s offline dependencies and place them in the PyPi repository folder in you Quali Server, more info [here](http://help.quali.com/Online%20Help/8.3/Portal/Content/Admn/Pyth-Cnfg-Mds.htm?Highlight=pypi%20server).
4. Still in MANAGE \ SHELLS, import the IxiaLicensePool shell (downloaded in step B6d). Note that if your environment is offline you should also download the shell’s offline dependencies and place them in the PyPi repository folder in you Quali Server, more info [here](http://help.quali.com/Online%20Help/8.3/Portal/Content/Admn/Pyth-Cnfg-Mds.htm?Highlight=pypi%20server).
5. Go to the Blueprints catalog, import the Quali Package provided in step B6e (just drag into CloudShell portal.
6. Create and configure your vCenter cloud provider resource. To do that:
   1. Go to INVENTORY
   2. Click “Add new”
   3. Select “VMware vCenter”
   4. Give a name to your vCenter resource (for example “US vCenter”)
   5. Supply the address of the vCenter
   6. Click “Create”
   7. Supply all the required details, use the description of each attribute for guidance or refer to [this article](http://help.quali.com/Online%20Help/8.3/Portal/Content/Admn/vCenter-Cld-Prvdr-Rsc.htm?) in the online help.

\*note that if your vCenter is already modeled in CloudShell there is no need to re-create it and you can just skip this step

1. Update your IxNetwork controller address:
   1. Open Resource Manager client
   2. Open the Admin tab and then the Resource Families tab
   3. Select the “IxNetwork Conrtoller” model under the “Traffic Generator Controller” family.
   4. Select the “Address” attribute and click “Edit Rules”
   5. Provide the address of the IxNetwork Controller VM (deployed in step E1) and save.
2. Go back to CloudShell portal and open the MANAGE \ APPS page. Click on the IxVM app and go to the “Deployment Paths” tab. Select the vCenter resource you created (in step F6) as Cloud Provider. Enter the path to the deployed IxVM VM on this vCenter in the “vCenter VM” field. Enter the snapshot name that you created on this VM (in step E6).
3. Repeat step F8 for the VyOS app and the corresponding VyOS VM and VM Snapshot.
4. Got to INVENTORY, delete the resource named “vCenter” (this resource came with the package and is not required anymore).
5. Go to INVENTORY, click the “more” button on the Ixia License Pool resource and click “Edit”. Update the ADDRESS field with the address of your Ixia License Server that has the two tier-1 IxVM IxNetwork licenses loaded.
6. Go to the Blueprints Catalog and open the “IxVM Sample” blueprint diagram. Do the following:
   1. Hover on the IxVM application and click “Refresh From Template”.
   2. Repeat for the VyOS application.
   3. Hover on the IxNetwork Controller service and click the “Edit” button. Update the
   4. Address field with the address of the IxNetwork VM (deployed in step E1).
7. Go to the JOB SCHEDULING page. Make sure the IxCES type is selected under the “Add New Suite” button, and click “Add New Suite”.
8. In the suite creation page do the following:
   1. Enter the name “IxVM Sample Tests” to the suite
   2. Create a new Job called “Ixia Samples Job”
   3. Enter duration of 50 minutes.
   4. Add the following tests (type the test name for each test, no arguments):
      1. sample\_BGP\_stats\_traffic
      2. sample\_IPv4\_traffic
      3. sample\_IPv6\_stats\_traffic
      4. sample\_OSPFv2\_stats\_traffic
      5. sample\_REST\_ospf
   5. Save the suite