

# K8S based Cloud Region Support

## Purpose

Enable support for deploying Virtualized and Containerized networking workloads in Kubernetes based Cloud regions through MultiCloud/k8s plugin.

## Scope:

- Enable the support for Helm charts based deployment.
- Show case using vFirewall use case.
  - Show case Legacy model (where firewall, traffic generator and sink are VMs)
  - Show case Hybrid model (where firewall is a container, traffic generator as a container and sink is VMs)
- Show case using EdgeXFoundry use case.

**Owner:** [Ritu Sood](#) and [Kiran Kamineni](#)

**Contributing companies:** Intel, VMWare

**Interested Operators :** Verizon, ATT

## Use Case Name

Showcase VNF	Test Environment	Integration Team Liaison
vFirewall	Intel/Windriver lab	<a href="#">Akhila Kishore</a> and <a href="#">Ritu Sood</a>
EdgeXFoundry	Intel/Windriver lab	<a href="#">Akhila Kishore</a> and <a href="#">Kiran Kamineni</a>

## Development Status

Project	PTL	JIRA Epic / User Story*	Requirements	Status
MultiCloud	<a href="#">Bin Yang</a>	<ul style="list-style-type: none"> <li><a href="#">ONAPARC-350</a> - MultiCloud K8S plugin - Helm Charts support <span>CLOSED</span></li> <li><a href="#">ONAPARC-349</a> - K8S Plugin in Multi-Cloud to follow the instantiation NB API of Multi-Cloud <span>CLOSED</span></li> <li><a href="#">ONAPARC-337</a> - Multi-Cloud to support storing Cloud specific artifacts <span>CLOSED</span></li> <li><a href="#">ONAPARC-348</a> - Multi-Cloud K8S Plugin to support profiles for resource-bundle Environment and Day0 Configurations <span>CLOSED</span></li> <li><a href="#">MULTICLOUD-454</a> - Provider network support when OVN is used <span>IN PROGRESS</span></li> <li><a href="#">ONAPARC-354</a> - Multi-Cloud Network subplugin &amp; OVN support <span>CLOSED</span></li> <li><a href="#">ONAPARC-364</a> - vFirewall CSARs <span>OPEN</span></li> <li><a href="#">MULTICLOUD-409</a> - EdgeXFoundry use case <span>CLOSED</span></li> <li><a href="#">ONAPARC-336</a> - SDC Client in Multi-Cloud <span>OPEN</span></li> <li><a href="#">MULTICLOUD-464</a> - Day 2 configuration <span>CLOSED</span></li> <li><a href="#">MULTICLOUD-502</a> - KRD should not instantiate K8S plugin <span>CLOSED</span></li> </ul>	<ol style="list-style-type: none"> <li>1. Add Helm Charts support</li> <li>2. Manage and store Cloud artifacts</li> <li>3. Enable the K8s plugin in MultiCloud /Framework project</li> <li>4. OVN4NFV Integration.</li> <li>5. Modify plugin functional tests to support EdgeXFoundry</li> <li>6. SDC Client to receive cloud specific artifacts (e.g Helm)</li> </ol>	
AAI	<a href="#">James Forsyth</a>	<ul style="list-style-type: none"> <li><a href="#">MULTICLOUD-470</a> - MultiCloud K8S plugin to use information in A&amp;AI to reach K8S Cloud regions <span>CLOSED</span></li> <li><a href="#">ONAPARC-355</a> - K8S Cloud region reach ability information in ESR/A&amp;AI <span>OPEN</span></li> </ul>	<ol style="list-style-type: none"> <li>1. Reach ability information</li> <li>2. Plugin consume AAI information</li> </ol>	

SDC	Ofir Sonsino	<p><b>ONAPARC-335</b> - Supporting Cloud specific artifacts in CSARs <span>CLOSED</span></p> <p><b>SDC-2044</b> - SDC supports K8S plugin to add cloud specific artifacts <span>CLOSED</span></p> <p><b>SDC-2045</b> - create User and Password for Multicloud component to access secure api <span>CLOSED</span></p>	<ol style="list-style-type: none"> <li>1. Add non-HEAT files support to SDC</li> <li>2. Add K8S plugin artifact support</li> <li>3. Add User and Password for multicloud client</li> </ol>	
SO	Seshu Kumar M	<p><b>SO-4353</b> - SO to be made independent of Cloud technologies <span>CLOSED</span></p>	<ol style="list-style-type: none"> <li>1. Make it more cloud agnostic</li> </ol>	
Integration	Helen Chen	<p><b>MULTICLOUD-403</b> - Create CSIT for K8s plugin service <span>CLOSED</span></p>	<ol style="list-style-type: none"> <li>1. Create CSIT</li> </ol>	
OOM		<p><b>ONAPARC-363</b> - OOM Helm charts for K8S Plugin service <span>CLOSED</span></p>	<ol style="list-style-type: none"> <li>1. Create Helm charts for deploying the K8s plugin service</li> </ol>	

\*Each Requirement should be tracked by its own User Story in JIRA

## Testing

### Current Status

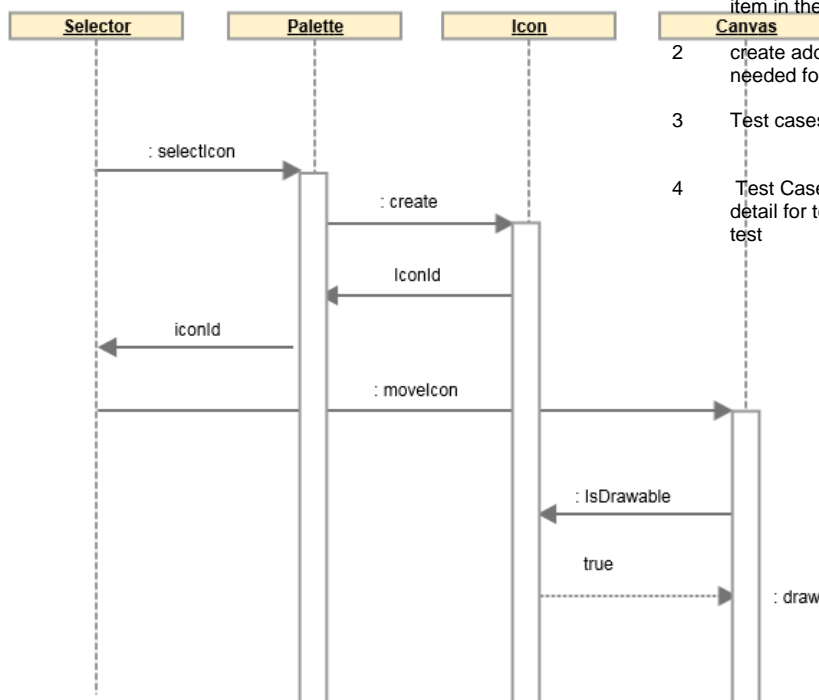
1. Testing Blockers
2. High visibility bugs
3. Other issues for testing that should be seen at a summary level
4. Where possible, always include JIRA links

### End to End flow to be Tested

### Test Cases and Status

\*\*This should be a summary level Sequence diagram done in Gliffy\*\*

Summary Sequence Diagram



#	Test Case	Status
1	There should be a test case for each item in the sequence diagram	NOT YET TESTED
2	create additional requirements as needed for each discreet step	COMPLETE
3	Test cases should cover entire Use Case	PARTIALLY COMPLETE
4	Test Cases should include enough detail for testing team to implement the test	FAILED