# ELIOT Release 2 - SD-WAN / WAN Edge / uCPE Test Document

## Introduction

This document covers both ELIOT Blueprint Use Case.

ELIOT is "Enterprise Edge Lightweight and IOT" project under Akraino approved blueprint family and part of Akraino Edge Stack, which intends to develop a fully integrated edge network infrastructure and running edge computing applications on lightweight Edge Nodes. ELIOT targets on making the edge node a lightweight software stack which can be deployed on edge nodes which have limited hardware capacity by leveraging lightweight OS, container running environment and container orchestration applications.

In addition ELIOT stack focuses to have infrastructure for edge computing which will enable high performance, high availability, security and reduce latency.

## Akarino Test Group Information

Not Applicable

## Overall Test Architecture

**ELIOT Cluster Number of Nodes remains same as Release 1.0.**

- 1 Node - ELIOT Manager
- 1 Node - ELIOT Edge Node (uCPE)

Both nodes are running on Virtual Machine - Cent OS 7.5 version.

**In Release 1.0 Test Environment was :-**

- ELIOT Cluster with Kubernetes on Ubuntu OS 16.04

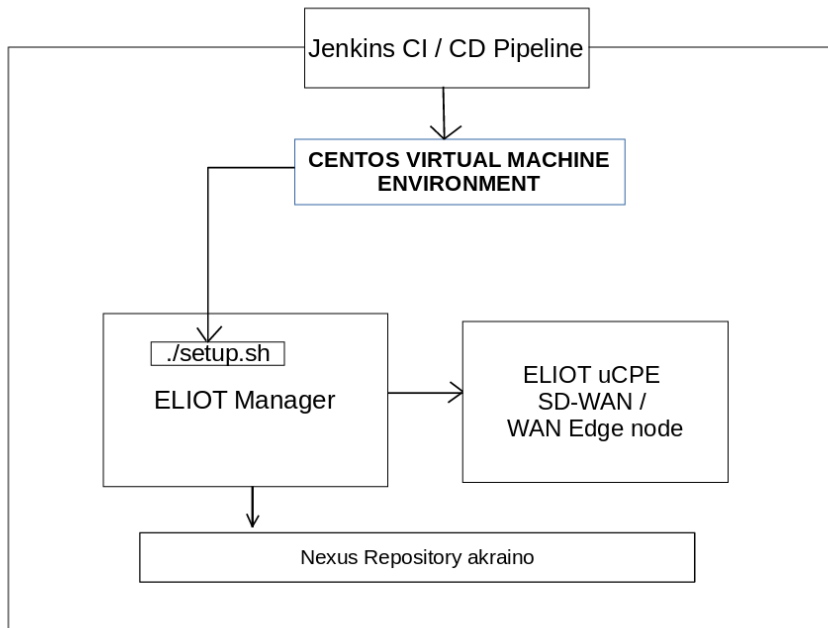**In Release 2.0 Test Environment is :-**

- ELIOT Cluster with Kubernetes on Cent OS 7.5

**The Test Environment consists of one topology :**

- ELIOT topology with Kubernetes Cluster on Cent OS Virtual Machines for ELIOT Manager and ELIOT Edge Node.

In ELIOT Manager the setup.sh is executed which internally installs docker ,k8s and tests k8s deployment by deploying nginx on ELIOT Edge Node

In ELIOT Manager Docker, K8S is installed and in ELIOT Edge Docker is installed.

## Traffic Generator

N/A

# Test API description

*The Test cases in Release 2.0 remains same as Release 1.0; the verification is to check setup of ELIOT Cluster on Cent OS*

## ELIOT Platform Test

### Test Case 1: Test Kubernetes cluster check.

**Test Input :**

Execute the bootstrap script to setup the ELIOT Platform

**Test Procedure:**

root@akraino-slave-001:-# cd eliot/blueprints/ucpe/scripts

root@akraino-slave-001:-# source setup.sh

root@akraino-slave-0001:~# kubectl get nodes

NAME                    STATUS   ROLES    AGE  VERSION

akraino-slave-0001     Ready    master   18h   v1.16.0

akraino-slave-0002     Ready    <none>  18h   v1.16.0


### Test Case 2:

**The Test inputs**

There should be a nginx.yaml configuration files which is used for deploying the Nginx on ELIOT Edge Node.

**Test Procedure**

The setup.sh script will deploy nginx server in the ELIOT Edge Node after Kubernetes Installation.

**Expected output**

It will check nginx deployment and result the details in the log.

**Test Results**

root@akraino-slave-0001:~# kubectl get pods

NAME                       READY   STATUS    RESTARTS AGE

nginx-deployment-74d48dbfb8-kvx9q 1/1     Running        0         18h

# Conformance Test:

**N/A**

# Blueprint extension tests

**N/A**

# Feature Project Tests

Work In Progress

# Test Dashboards

Single pane view of how the test score looks like for the Blue print.

| Total Tests | Test Executed | Pass | Fail | In Progress |
|---|---|---|---|---|
| 2 | 2 | 2 | 0 | |

# Additional Testing

N/A

# Bottlenecks/Errata

N/A