Meeting of the **T**echnical **S**teering **C**ommittee of the Akraino Edge Stack Project

January 22, 2019

TSC Voting Member Roll Call

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Agenda

- PTL Election Results
- Akraino Validation Framework
- Open Discussion

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Blueprint / Feature Project PTL Election Results

Blueprint	Winner of PTL Election
SDN Enabled Broadband Access (SEBA)	Aaron Byrd- AT&T
Serverless	Itamar Eshet- AT&T
Unicycle	David Plunkett- AT&T
Rover	David Plunkett- AT&T
OVS-DPDK Unicycle Dell	Rakesh Bohra- Ericsson
Network Cloud Integration w/ Tungsten Fabric	**Deferred to 1/24**
Edge Video Processing	Adnan Saleem- Radisys
ELIOT IoT Gateway	Khemendra Kumar- Huawei
ELIOT SD-WAN/WAN Edge/uCPE	Khemendra Kumar- Huawei
IEC Type 1 for Integrated Edge Cloud	Trevor Tao (ARM)
IEC Type 2 for Integrated Edge Cloud	Xinhuli (VMWare)
Industrial Edge	**Deferred to 1/24**
Provider Access Edge	**Deferred to 1/24**
Micro MEC	Tapio Tallgren- Nokia
Radio Edge Cloud	Paul Carver- AT&T
Starling X Far Edge Distributed Cloud	Bill Zvonar- Wind River
Time Critical Edge Compute	Shane Dewing- Intel

Feature Project	Winner of PTL Elected
Portal	Mike Hunter – AT&T
Cluster Health & Overload Monitoring Platform (CHOMP)	Mike Hunter – AT&T
Support of OVS-DPK in Airship	Georg Kunz – Ericsson

Akraino Blueprint Validation Framework
Draft to be Reviewed by TSC

January 22, 2019

Contribution by:
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Background

- The purpose of the Validation framework is to propose a feature project that would define a standard set of tools and tests to evaluate Akraino Blueprints to determine if the blueprints are 'Akraino ready / validated'
- As part of this, we will need a consistent test framework that is automated and will work across all layers of the Akraino Edge Stack and across different BPs/BP Families. Layers of the Akraino Edge Stack include:
  - Hardware
  - OS
  - K8s
  - Kubeless
  - Openstack
  - ONAP
  - VNF (commercially non sensitive opensource VNFs)
  - Application Layer (commercially non sensitive opensource applications)
- Blueprint owners will be expected to conduct the standard tests with the specified tools. Project technical leads will share the results of the platform testing with the Akraino TSC so that the TSC can decide if the blueprint can proceed from the Incubation to Mature or Core stages
  - The proposed test set would be required to be passed for all in-scope layers of Akraino BPs
    - If a BP deploys K8s, the BP must pass the K8s test set using the defined test tool (e.g kubemonkey)
  - The validation framework defines a consistent minimum mandatory test set and test tools
    - Provides consistent and directly comparable results at each layer of BPs
- The validation framework can be extended to meet the requirements of Blueprints that are not included in the standard tests
  - It is incumbent on the blueprint owners to submit additional requirements to extend the validation framework in the feature project
- Leverage pre-existing open source tool sets as much as possible

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Akraino Validation Framework Feature Project Goals

- Akraino shall identify and utilize open source test frameworks for all BP layers
- Akraino shall extend and contribute to the frameworks to satisfy the blueprint testing needs
- Akraino shall automate testing as quality gates in CI/CD* BP verification pipelines
- Akraino shall employ security scanning to detect potential copyright violations
- Akraino shall develop security compliant testing and certification mechanisms (i.e. least privileges)
- Akraino testing shall ensure that each execution cleans up temporary resources that were required for testing
- Akraino tests shall assert meaningful results that can be easily accessed for visualization and comparison
- Akraino shall provide toolsets and documentation for the development of tests
- Akraino shall encourage re-use of test cases across blueprints for each layer of the Akraino Stack

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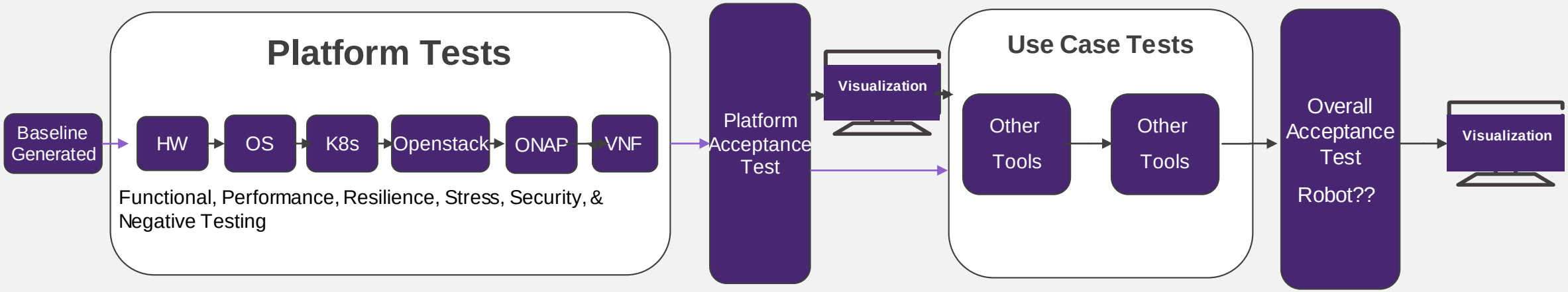
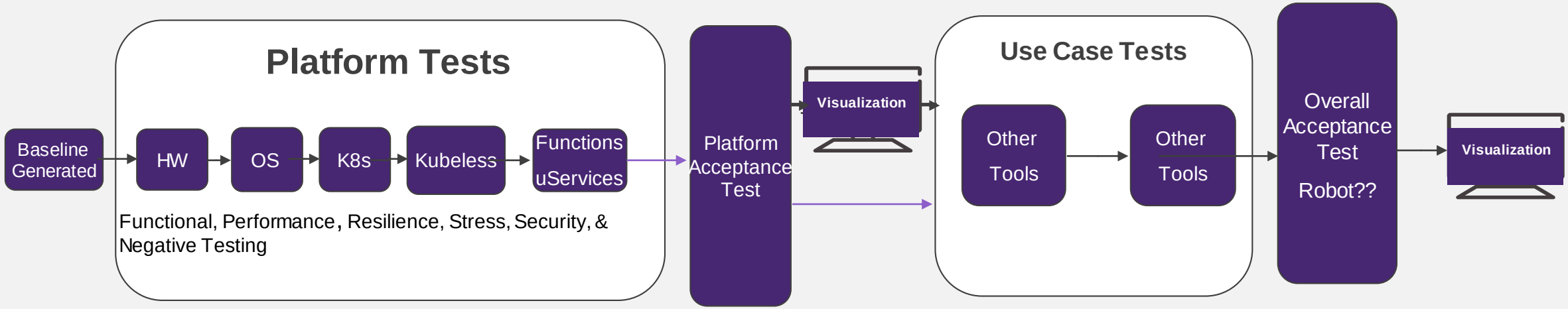
Example Akraino Validation Pipelines

Blueprint 1 Pipeline



Blueprint 2 Pipeline



Akraino Edge Stack Validation Test Suite & Toolset

Layers	Proposed Tests	Proposed Tools	Proposed Pass / Fail Criteria
Hardware	Functional Testing Performance Testing Resiliency Testing Stress Testing Security Testing Negative Testing	TBD	Pass TBD% of tests specified for each layer Pass unit test, system test, integration test, VNF and application test gates applicable for the blueprint
OS			
K8s			
Kubeless			
OpenStack			
VNF			
Application			

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For More Information, Please
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