Akraino Certification Program

Companies or products are certified for Akraino blueprints if logs are pushed to Akraino Nexus servers, and passed any Akraino Release. Security Badges and System Badges are given through partnered certification program used by blueprints.

Akraino Apps can run on shared community lab, private lab, or cloud infrastructure like GCP, Google Edge Cloud, AWS, Tencent Cloud, Equinix, etc, with or without Public Cloud Edge Interface (PCEI) Blueprint Family.

################ FOR DISCUSSION ONLY ###################

Purpose and Principles

Akraino Certification Program is intended to enable infrastructure and service providers certify their products and capabilities for running Akraino Blueprints while satisfying requirements of the Akraino Release qualification established by the Technical Steering Committee.

In principle, Akraino Blueprints span various architecture domains (e.g. Public Cloud, Private Cloud, Device Edge, Network Edge, Enterprise Premises), a variety of device, server, network hardware, as well as visualized infrastructure (clouds), operating systems and virtualization environments. Akraino Blueprints, in many cases, are based on a Hybrid/Multi-Cloud Architecture that often combines infrastructure elements from multiple architecture domains.

The Akraino Certification Program Principles

1. Best industry practices. The certification process of individual infrastructure components that are used to support Akraino Blueprints must follow best known industry practices in hardware and software integrity, security, performance and management/observability.
2. Hybrid/Multi-Cloud Architecture. For Blueprints that rely on Hybrid Architectures, the certification process should ensure that the individual certified elements can be assembled into a Hybrid/Multi-Cloud Architecture even if the individual elements are from different providers (e.g. hardware, edge, cloud, devices).
3. Security. At the minimum, the Certification Process must comply with Akraino BluVal requirements for hardware, os, virtualization.
4. CI/CD. The certified solution should comply with Akraino CI/CD requirements.
5. Completeness of the certified solution. The outcome of the certification process must result in a complete and tractable solution where all individual components comply with the certification requirements.
6. Performance...
7. Usability. The certified solution should provide "easy" deployment and installation capabilities even if the solution involves multiple providers /components.

Certification Process

At this time this section is used to collect questions to be addressed in order to develop the certification process.

1. Blueprint selection.
    a. Do certification program applicants select blueprints to be certified against?
    b. Will the certification program require applicants to certify against ALL approved blueprints?
2. Component certification.
    a. Would a certification program applicant have an option of offering individual components for certification, e.g. IoT device, servers, network, software?
    b. If yes, then whose responsibility to ensure that the complete solution is also certified?
3. Who initiates certification process.
    a. Will individual Blueprints decide to initiate the certification process and select the applicants?
4. Certification tracking and badge awards
    a. Will applicants perform self-certification?
    b. Will there be a need for an Akraino sub-committee?
5. Recertification and Release alignment.
    a. Will there be a recertification requirements?
    b. Will there be a requirement to re-run certification for new Releases?

############## FOR DISCUSSION ONLY #################

Example

VNF Certification Lifecycle

Security Badges

https://www.psacertified.org/

https://openssf.org/

System Badges

https://developer.arm.com/architectures/system-architectures/arm-systemready

Certified List

Company Name	Blueprint Family	Blueprint	Product (Software, Hardware, Middleware, etc.)	Apps	Security Badges (e.g. PSA, Parsec)	System Badges (e.g. WHQL, SystemReady)	Hardware Badges (e.g. OCP-Ready)	CD	Run on Google Edge Cloud	Run on Tencent Cloud
Dianomic	IIoT at the Smart Device Edge (family)	Predictive Maintenance (with a Thermal Imaging Camera, vibration sensors, etc.)						https://nexus.akraino.org/content/sites/logs/ai_solutions/job/Eden-flir/		
Ampere		Connected Vehicle Blueprint(Aka CVB)	Mt. Jade Platform			SystemReady SR Mt. Jade Platform	OCP-Ready	https://nexus.akraino.org/content/sites/logs/ampere/cvb/		Yes
Ampere	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 4: AR/VR oriented Edge Stack for Integrated Edge Cloud (IEC) Blueprint Family	Mt. Jade Platform	Virtual Classroom		SystemReady SR Mt. Jade Platform	OCP-Ready	https://nexus.akraino.org/content/sites/logs/ampere/iec-type4/		Yes
Arm China	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 1 for Integrated Edge Cloud (IEC) Blueprint Family						iec-type1-deploy-compass-virtual-ubuntu1604-daily-master/ iec-type1-install-seba_on_arm-compass-virtual-ubuntu1604-daily-master/		
Arm China	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 2 for Integrated Edge Cloud (IEC) Blueprint Family						iec-type2-deploy-compass-virtual-ubuntu1604-daily-master/		
Arm China	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 3: Android cloud native applications on Arm servers in edge for Integrated Edge Cloud (IEC) Blueprint Family						iec-type3-android-cloud-ubuntu1804-daily-master/		
Nvidia	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 3: Android cloud native applications on Arm servers in edge for Integrated Edge Cloud (IEC) Blueprint Family						iec-type3-nvdroid-daily-master/		
AT&T	Telco Appliance Blueprint Family	Radio Edge Cloud (REC)					OCP-Ready	https://nexus.akraino.org/content/sites/logs/att/		
Baidu	The AI Edge Blueprint Family	The AI Edge: School /Education Video Security Monitoring						https://nexus.akraino.org/content/sites/logs/baidu/job/		
CMTI	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 5: SmartNIC for Integrated Edge Cloud (IEC) Blueprint Family						iec5_r4/		
CMTI	Public Cloud Edge Interface (PCEI) Blueprint Family							pcei-daily/		

Enea	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 1 for Integrated Edge Cloud (IEC) Blueprint Family						https://nexus.akraino.org/content/sites/logs/enea/		
Enea	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 2 for Integrated Edge Cloud (IEC) Blueprint Family						https://nexus.akraino.org/content/sites/logs/enea/		
Ericsson	Network Cloud Blueprint Family	OVS-DPDK Unicycle Blueprint Project						https://nexus.akraino.org/content/sites/logs/ericsson/		
Futurewei		KubeEdge Edge Service Blueprint						https://nexus.akraino.org/content/sites/logs/futurewei/		
Huawei	5G MEC System Blueprint Family	Enterprise Applications on Lightweight 5G Telco Edge						ealt-edge/		
Huawei	ELIOT: Edge Lightweight and IoT Blueprint Family	ELIOT IoT Gateway Blueprint						iotgateway/		
Huawei	ELIOT: Edge Lightweight and IoT Blueprint Family	ELIOT SD-WAN/WAN Edge/uCPE Blueprint						uCPE/		
Nvidia	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 5: SmartNIC for Integrated Edge Cloud (IEC) Blueprint Family						https://nexus.akraino.org/content/sites/logs/iec5_nv/		
Intel	Integrated Cloud Native NFV/App stack family (Short term: ICN)	ICN						https://nexus.akraino.org/content/sites/logs/intel/		
Intel	Integrated Cloud Native NFV/App stack family (Short term: ICN)	Multitenant secure cloud native - MTSCN						https://nexus.akraino.org/content/sites/logs/intel/bluval_results/icn/master-kata/		
Inwinstack		Connected Vehicle Blueprint(Aka CVB)						https://nexus.akraino.org/content/sites/logs/inwinstack/		Yes
Inwinstack	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 4: AR/VR oriented Edge Stack for Integrated Edge Cloud (IEC) Blueprint Family						https://nexus.akraino.org/content/sites/logs/inwinstack/		Yes
Juniper	Network Cloud Blueprint Family	Network Cloud and TF Integration Project						NC-Tungsten_Fabric/		
Juniper	Integrated Cloud Native NFV/App stack family (Short term: ICN)	Private LTE/5G ICN Blueprint						Private 5G BP/		
Suse	MicroMEC	MicroMEC						https://nexus.akraino.org/content/sites/logs/micromec/		
Nokia	MicroMEC	MicroMEC						https://nexus.akraino.org/content/sites/logs/micromec/		
Nokia	Telco Appliance Blueprint Family	Radio Edge Cloud (REC)						https://nexus.akraino.org/content/sites/logs/nokia/		
Parserlabs		Connected Vehicle Blueprint(Aka CVB)						cvb/		

Parserlabs	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 4: AR/VR oriented Edge Stack for Integrated Edge Cloud (IEC) Blueprint Family						iec-type4/		
Equinix	Public Cloud Edge Interface (PCEI) Blueprint Family							https://nexus.akraino.org/content/sites/logs/pcei/		
RedHat/IBM	Kubernetes-Native Infrastructure (KNI) Blueprint Family	Provider Access Edge (PAE) Blueprint						https://nexus.akraino.org/content/sites/logs/redhat-kni/		
RedHat/IBM	Kubernetes-Native Infrastructure (KNI) Blueprint Family	Industrial Edge (IE) Blueprint						https://nexus.akraino.org/content/sites/logs/redhat-kni/		
Tencent		Connected Vehicle Blueprint(Aka CVB)						cvb/		
Tencent	5G MEC System Blueprint Family	5G MEC/Slice System to Support Cloud Gaming, HD Video and Live Broadcasting Blueprint						https://nexus.akraino.org/content/sites/logs/tencent/job/tencent_5g_mec/		
Tencent	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 4: AR/VR oriented Edge Stack for Integrated Edge Cloud (IEC) Blueprint Family						iec-type4/		
WeBank	The AI Edge Blueprint Family	The AI Edge: Federated ML application at edge						https://nexus.akraino.org/content/sites/logs/webank/		
WindRiver		StarlingX Far Edge Distributed Cloud						https://nexus.akraino.org/content/sites/logs/windriver-stx-ex/		
Centec, Inspur, China Unicom	Project Cassini - IoT and Infrastructure Edge Blueprint Family	Smart Cities			Parsec	SystemReady SR, ES certification in progress		https://nexus.akraino.org/content/sites/logs/myais/job/parsec/10/		
Centec, Inspur, China Unicom, CapGemini	Project Cassini - IoT and Infrastructure Edge Blueprint Family	Software Defined Camera (SDC)				SystemReady IR certification in progress				
Fujitsu		Smart Data Transaction						https://nexus.akraino.org/content/sites/logs/fujitsu/job/sdt-bluval/		
Fujitsu	CPS Robot Blueprint family - Akraino - Akraino Confluence	Robot basic architecture based on SSES						https://nexus.akraino.org/content/sites/logs/fujitsu/job/robot-family/		