

# 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?

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## 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.)                                       |                                                |                   |                                    |                                        |                                  | <a href="https://nexu.s.akraino.org/content/sites/logs/ai_solution/job/Eden-flir/">https://nexu.s.akraino.org/content/sites/logs/ai_solution/job/Eden-flir/</a> |                          |                      |
| Ampere       |                                                     | Connected Vehicle Blueprint(Aka CVB)                                                                                  | Mt. Jade Platform                              |                   |                                    | SystemReady SR<br>Mt. Jade Platform    | OCP-Ready                        | <a href="https://nexu.s.akraino.org/content/sites/logs/ampere/cvb/">https://nexu.s.akraino.org/content/sites/logs/ampere/cvb/</a>                               |                          | 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<br>Mt. Jade Platform    | OCP-Ready                        | <a href="https://nexu.s.akraino.org/content/sites/logs/ampere/iec-type4/">https://nexu.s.akraino.org/content/sites/logs/ampere/iec-type4/</a>                   |                          | 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/<br><br>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-nvndroid-daily-master/                                                                                                                                |                          |                      |
| AT&T         | Telco Appliance Blueprint Family                    | Radio Edge Cloud (REC)                                                                                                |                                                |                   |                                    |                                        | OCP-Ready                        | <a href="https://nexu.s.akraino.org/content/sites/logs/att/">https://nexu.s.akraino.org/content/sites/logs/att/</a>                                             |                          |                      |
| Baidu        | The AI Edge Blueprint Family                        | The AI Edge: School /Education Video Security Monitoring                                                              |                                                |                   |                                    |                                        |                                  | <a href="https://nexu.s.akraino.org/content/sites/logs/baidu/job/">https://nexu.s.akraino.org/content/sites/logs/baidu/job/</a>                                 |                          |                      |
| 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                            |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/enea/">https://nexus.akraino.org/content/sites/logs/enea/</a>                                                                 |  |     |
| Enea       | Integrated Edge Cloud (IEC) Blueprint Family                   | IEC Type 2 for Integrated Edge Cloud (IEC) Blueprint Family                            |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/enea/">https://nexus.akraino.org/content/sites/logs/enea/</a>                                                                 |  |     |
| Ericsson   | Network Cloud Blueprint Family                                 | OVS-DPDK Unicycle Blueprint Project                                                    |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/ericsson/">https://nexus.akraino.org/content/sites/logs/ericsson/</a>                                                         |  |     |
| Futurewei  |                                                                | KubeEdge Edge Service Blueprint                                                        |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/futurewei/">https://nexus.akraino.org/content/sites/logs/futurewei/</a>                                                       |  |     |
| Huawei     | 5G MEC System Blueprint Family                                 | Enterprise Applications on Lightweight 5G Telco Edge                                   |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/ealt-edge/">ealt-edge/</a>                                                                                                    |  |     |
| Huawei     | ELIOT: Edge Lightweight and IoT Blueprint Family               | ELIOT IoT Gateway Blueprint                                                            |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/iotgateway/">iotgateway/</a>                                                                                                  |  |     |
| Huawei     | ELIOT: Edge Lightweight and IoT Blueprint Family               | ELIOT SD-WAN/WAN Edge/uCPE Blueprint                                                   |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/uCPE/">uCPE/</a>                                                                                                              |  |     |
| Nvidia     | Integrated Edge Cloud (IEC) Blueprint Family                   | IEC Type 5: SmartNIC for Integrated Edge Cloud (IEC) Blueprint Family                  |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/iec5_nv/">https://nexus.akraino.org/content/sites/logs/iec5_nv/</a>                                                           |  |     |
| Intel      | Integrated Cloud Native NFV/App stack family (Short term: ICN) | ICN                                                                                    |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/intel/">https://nexus.akraino.org/content/sites/logs/intel/</a>                                                               |  |     |
| Intel      | Integrated Cloud Native NFV/App stack family (Short term: ICN) | Multitenant secure cloud native - MTSCN                                                |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/intel/bluval_results/icn/master-kata/">https://nexus.akraino.org/content/sites/logs/intel/bluval_results/icn/master-kata/</a> |  |     |
| Inwinstack |                                                                | Connected Vehicle Blueprint(Aka CVB)                                                   |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/inwinstack/">https://nexus.akraino.org/content/sites/logs/inwinstack/</a>                                                     |  | Yes |
| Inwinstack | Integrated Edge Cloud (IEC) Blueprint Family                   | IEC Type 4: AR/VR oriented Edge Stack for Integrated Edge Cloud (IEC) Blueprint Family |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/inwinstack/">https://nexus.akraino.org/content/sites/logs/inwinstack/</a>                                                     |  | Yes |
| Juniper    | Network Cloud Blueprint Family                                 | Network Cloud and TF Integration Project                                               |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/nc-tungsten_fabric/">NC-Tungsten_Fabric/</a>                                                                                  |  |     |
| Juniper    | Integrated Cloud Native NFV/App stack family (Short term: ICN) | Private LTE/5G ICN Blueprint                                                           |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/private-lte-5g-icn/">Private 5G BP/</a>                                                                                       |  |     |
| Suse       | MicroMEC                                                       | MicroMEC                                                                               |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/micromec/">https://nexus.akraino.org/content/sites/logs/micromec/</a>                                                         |  |     |
| Nokia      | MicroMEC                                                       | MicroMEC                                                                               |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/micromec/">https://nexus.akraino.org/content/sites/logs/micromec/</a>                                                         |  |     |
| Nokia      | Telco Appliance Blueprint Family                               | Radio Edge Cloud (REC)                                                                 |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/nokia/">https://nexus.akraino.org/content/sites/logs/nokia/</a>                                                               |  |     |
| Parserlabs |                                                                | Connected Vehicle Blueprint(Aka CVB)                                                   |  |  |  |  |  | <a href="https://nexus.akraino.org/content/sites/logs/cvb/">cvb/</a>                                                                                                                |  |     |

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