Expanding Scope: Edge Computing Working Group Update
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Scope for the OSF Edge Computing Working Group

➡ Identify use cases and scenarios related to edge computing
➡ Focus on challenges and solutions in the IaaS layer
  • Find common requirements
  • Define common edge computing architectures
  • Design and implement
    • Enhancements to existing projects and services to provide a better fit for edge
    • New projects and services to implement missing functionality
➡ Emphasize the importance of open infrastructure
➡ Encourage industry-wide collaboration
➡ Whitepaper: https://www.openstack.org/assets/edge/OpenStack-EdgeWhitepaper-v3-online.pdf
Collaboration

- Weekly calls
  - Zoom calls in alternating time slots
- Mailing list
- IRC - #edge-computing-group on Freenode

https://www.openstack.org/edge-computing/
MVP Reference Architectures

Centralized Control Plane

Centralized DC
- Identity Provider
- Nova API
- Nova Compute
- Nova Conductor
- Nova Placement
- Neutron API
- Neutron Agent
- Cinder API
- Cinder Agent
- Keystone
- Glance API
- Glance Registry

Large/Medium Edge
- Nova Compute
- Nova Conductor
- Nova Placement
- Neutron Agent
- Cinder Agent
- Glance API

Small Edge
- Nova Compute
- Neutron Agent
- Cinder Agent
- Glance API
- Glance Registry

Distributed Control Plane

Large/Medium Edge
- Nova API
- Nova Compute
- Nova Conductor
- Nova Placement
- Neutron API
- Neutron Agent
- Cinder API
- Cinder Agent
- Keystone
- Glance API
- Glance Registry

Centralized DC
- Identity Provider
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- Glance API
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Small Edge
- Nova Compute
- Neutron Agent
- Cinder Agent
Some Relevant Open Source Projects

• **OpenStack**: Cyborg, Glance, Keystone
  • IoTronic – unofficial, Airship, StarlingX

• **Adjacent communities**
  • Linux Foundation EDGE Projects
    • Akraino
    • EdgeX Foundry
    • Project EVE
    • HomeEdge
    • Glossary
  • ONAP Edge Automation Group
  • OPNFV Edge Cloud Project
  • Kubernetes IoT Edge Working Group

• **Adjacent communities**
  • OpenEdge based on Baidu’s existing Intelligent Edge (BIE)
  • MEF Projects
  • ETSI Projects
  • OpenCompute
  • And more all the time….
The Lay of the Land

[Diagram of networking and computing components, including Virtualised Infrastructure Manager(s), NFV Orchestration, OSS/BSS, and various managers and service descriptions.]
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Thanks