



# Large Contributing OpenStack Operators

*An OpenStack Working Group*

*November 2017*



# LCOO Origins & Founding Vision



APR 26 Service Providers reception hosted by AT&T

## OpenStack Austin Summit Gathering to Share the Vision

Greetings from Texas!

Our industry is transforming at a remarkable rate due to an increasingly demanding marketplace with a broad set of competitive alternatives. As we all pursue our respective business transformation strategies, we recognized here at AT&T that we can take better advantage of the opportunities available to us to collaborate.

The common fabric for our industry's transformation is cloud, and while we're all racing to solve largely the same business problems, with largely the same collection of technologies, we're not taking advantage of opportunities we can create together. With this in mind, we will be jointly forming a working group focusing on Service Provider's operational and technical needs. Join us in Austin, TX, on Tuesday the 26th, from 5:30 – 7pm, as we bring together leaders throughout our industry to begin mapping a direction that will benefit us all.

Sincerely, Sorabh Saxena

## Founding Members



at&t

Your world. Delivered.

orange™



中国移动  
China Mobile



NTT

Walmart\*

## First Meeting August 2016

### OpenStack Days Silicon Valley



You are invited to...

Join like-minded service providers and large operators to contribute to OpenStack.

- Share your experiences and thought leadership
- Commit your people into joint development of OpenStack
- Get the efficiency of shared development while meeting business needs
- Make new relationships with other Senior Executives
- [Learn more](#)

We hope you'll join us in the late afternoon August 8 the day before OpenStack Silicon Valley. The goal of our first meeting is to establish a preliminary foundation to guide our ongoing collaboration. We benefit from the pure-play, no lock-in, software-only solution so we should be a source of real-time direction and active participation for joint success with OpenStack.

Sincerely, Greg Stiegler



# LCOO is an OpenStack Community “Working Group”

## Foundation Board of Directors

Strategic and Financial Oversight

### Active Technical Contributors

#### Technical Committee (TC)

13 Elected Members



#### Mission:

- Provide Technical Oversight and Leadership
- Enforce OpenStack Ideals
- Oversee Issues Affecting Multiple Projects
- Ultimate Appeals Board for Technical Decisions

### Active User Contributors

#### User Committee (UC)

5 Elected Members



#### Mission:

- Provide Requirements to the Board and TC
- Provide User Feedback to Project Teams
- Gather OpenStack Usage and User Experience Data
- Keep the Community Vibrant and Informed

### Foundation Staff



29 Staff Serving the OpenStack Community

Budget

Marketing

Operations

Infrastructure

Release Management

Community Events

### Projects



Project Team Lead's (PTL's)

Project Core Members

General Contributors

### Working Groups

API

Architecture

Deployment

VM & Bare Metal

Stewardship

### Working Groups

Product

Scientific

Fog Edge Massively Distributed Clouds

Fault Genes

Enterprise

Large Deployment

Operators Telecom/NFV

LCOO

Emerging: Special Interest Groups (SIG's) - Combinations of both Technical & User Contributors

# The LCOO 2.0 Mission and Scope

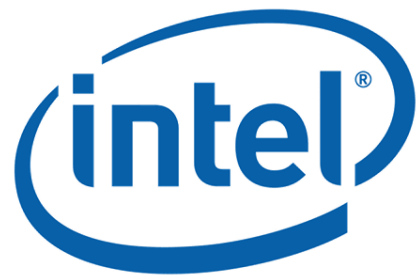
- Provide a Forum for Intra-Company Sharing/Discussing of OpenStack Priorities, Strategy, Challenges and Successes
- Share Information about Community Happenings
- Provide a Framework to Encourage Intra-Company Collaborations
- Promote the Operational Needs of Large Users
- Encourage Increased Contribution and Platform Enhancement



## Key Differentiators

- Membership by *Company*
- Collaboration by Individuals
- Companies are Contributors
- Private Cloud focused
- Horizontal scaling focus
- Carrier dominated, but not Exclusive

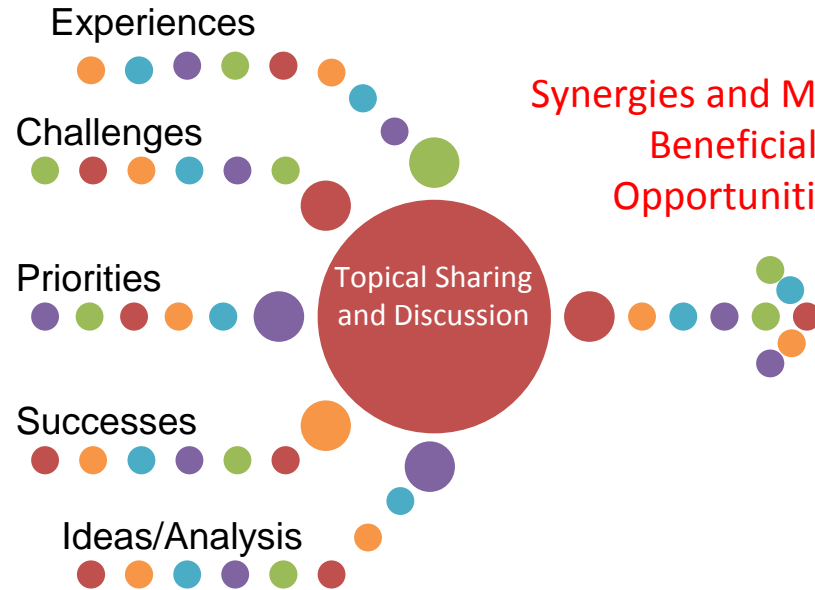
# LCOO Member Companies



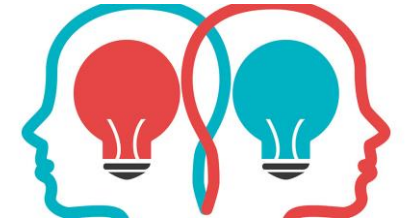
# Benefits of Active Membership in LCOO



Increased Professional Network



Synergies and Mutually Beneficial Opportunities



Awareness of Community happenings

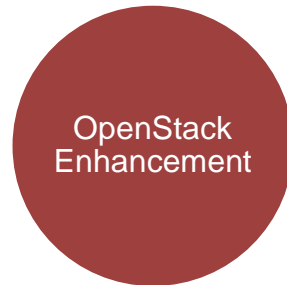


Common Purpose  
Amplified Voice

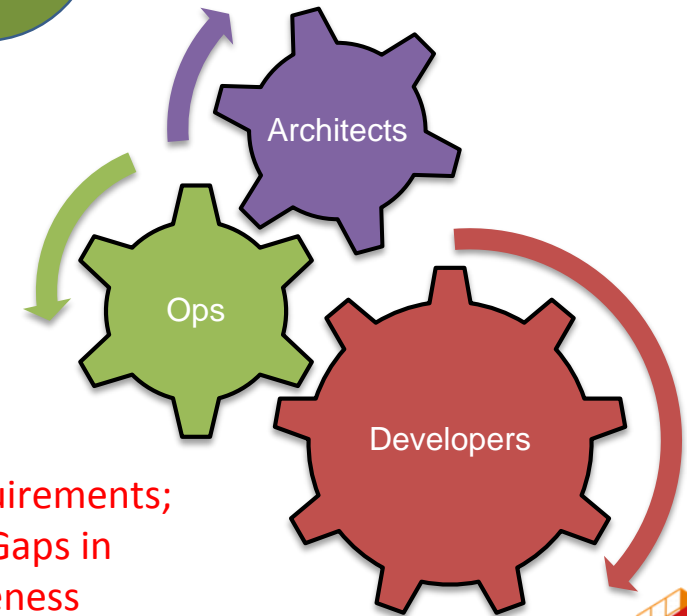
More Impactful Contribution



Critical Use Cases



Shaping OpenStack



Better Requirements;  
Closed Gaps in Awareness



# LCOO Roles & Responsibilities

## Executive Board Members

- Executive Leadership representing each Member Company
- Set the overall direction and priorities for LCOO

## Coordinators

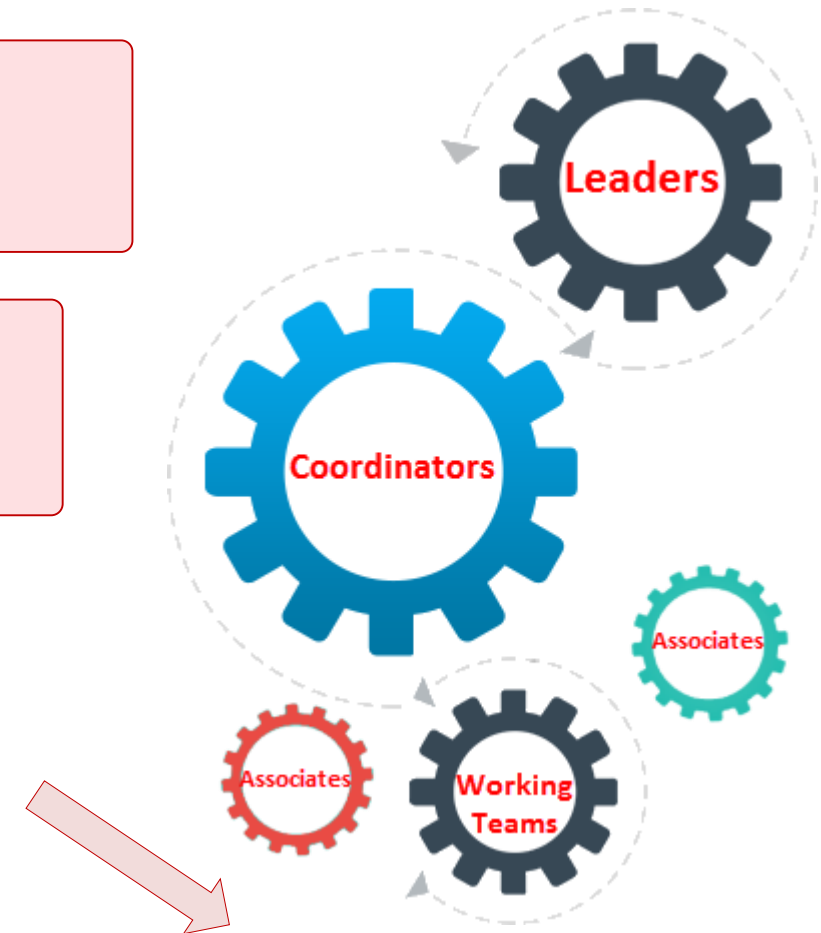
- Represent their Member Company in the day to day LCOO functioning
- Shares in the overall coordination of LCOO activities

## Contributors

- Opportunities for Collaboration emerge organically from LCOO activities resulting in sub-teams spinning off
- Stakeholders / SME's from Member Companies
- Stakeholders / SME's from the Community at large
- Meet Ad Hoc per the needs of the engagement

## Associates/Collaborators

- Attend Topical Meetings when desired / do not present at sessions
- Misc interested, non-member individuals, who attend meetings and/or occasionally participate in 'Contributor' sub-teams



Special Interest Groups (SIG's)

Project Teams

PoC Teams

Any other Collaboration



# LCOO's Revised Meeting Structure and Cadence

## Topical Sessions

- Open to ALL
- Monthly for 90 minutes
- Rotate times to accommodate global participation
- Web-Meeting / Video Conference
- Members each present key interests, priorities, strategy, pain points, accomplishments, etc., for the topic
- Q&A and discussion
- Capture synergies and opportunities for collaboration

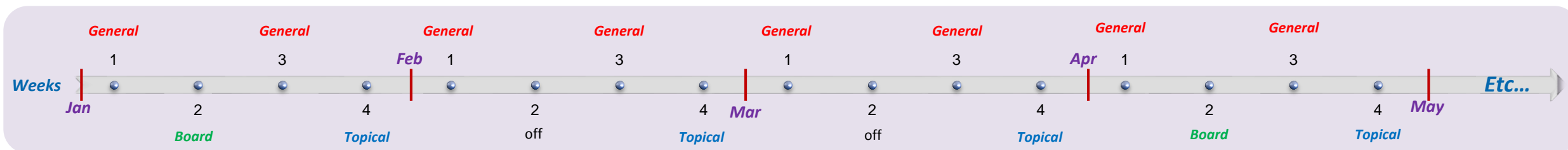
## General Meetings

- Open Meeting attended by LCOO Coordinators
- Bi-weekly for 60 minutes
- Rotate times to accommodate global participation
- Web-Meeting / Video Conference
- Plan/coordinate Topical Sessions
- Status updates for collaborations underway
- Share information / plan for community happenings, etc.

## Executive Board Meetings

- Attended by executive leadership from member companies
- Meet 2-4 times per year as needed for ~ 90 minutes
- Telepresence or face to face
- Steer the overall activities and direction of LCOO
- Set common priorities and strategy relevant to LCOO

## Month to Month Meeting Cadence





# LCOO Tools: A Key Part of the Framework for Collaboration

In addition to the standard OpenStack tools, LCOO uses the following tools to provide a framework for intra-company collaboration. These tools are all fully Open to everyone.



\***JIRA** for agile issue tracking and lifecycle management of LCOO projects/collaborations:  
<https://openstack-lcoo.atlassian.net>



\***Confluence** wiki for joint editing and sharing of documents, maintaining meeting notes, action item tracking and more: <https://openstack-lcoo.atlassian.net/wiki>



**GitHub** provides Git source code repositories for our efforts that cannot utilize [git.openstack.org](https://git.openstack.org):  
<https://github.com/LCOO>



Our Meeting Agenda's and notes are published in Confluence here:  
<https://openstack-lcoo.atlassian.net/wiki/pages/viewpage.action?pageId=8847424>



Meetings are also announced in advance through the User Committee mail list



**Slack** for convenient instant messaging across our global members and collaborators: <https://lcoo.slack.com>



**Skype for Business** and **Webex** are used for Web-Meetings and Video Conferencing.

\*We are grateful to Atlassian the maker of Jira and Confluence for providing these tools to open-source efforts, free of charge on their cloud



# LCOO Sessions and Collaborations

## Examples of past Topical Sessions



Contrail



Gluon



cLCP



Destructive  
Testing

## Resulting Successful Project Collaborations



OpenStack  
-Helm



LCOO Jira  
cLCP Portfolio



Patrole



Eris

The screenshot displays the JIRA interface for the 'Large Contributing OpenStack Operators Working Group'. The main view is a Kanban board for 'cLCP (All) Kanban Board'. The board is organized into columns representing different stages of work: Analysis/Vetting (19 items), In Design (18 items), Ready (35 items), In Progress / Coding (32 items), Blocked (11 items), In-Review (35 items), and Done (296 items). Each column contains several task cards with details such as issue titles, IDs, assignees, and progress indicators. For example, in the 'Ready' column, there is a task 'OSH-64 Documentation - ...' assigned to 'OSH-300'. In the 'In Progress / Coding' column, there is a task 'Add helm testing coverage to each chart' assigned to 'OSH-89'. The interface also includes a navigation menu on the left with options like 'Backlog', 'Kanban board', 'Reports', and 'Invite your team', and a top navigation bar with various menu items and a search bar.

## Characteristics

- Utilizes OpenStack as a key Technology Enabler
- Embraces the 'open-source philosophy' of openness, collaboration and contribution
- Is committed to driving OpenStack enhancement
- A Large Operator
- Maintains a self-hosted private cloud
- Is Horizontally Scaling / Distributed Cloud focused



# How to Join

Any individual may participate in LCOO and all are welcome.

If a *company* wishes to become an 'LCOO Member Company', there are some minimum requirements and procedures.

## Requirements for Member Companies:

- Prospective member company must commit:
  - A minimum of one Executive representative to the Executive Board Member Role
  - A minimum of one person to the Coordinator Role
- The Executive representative must commit to the active participation in these roles on behalf of their company



## Procedure to Join:

- One or more people from the company actively participate in the General (Coordinator) Meetings and other activities of LCOO
- Participant(s) formally express their company's desire to join during a General Meeting
- The company provides an Executive representative
- The Executive representative attends the next LCOO Executive Board Meeting and is welcomed by the other board members



# LCOO Members are plugged in to the Community

LCOO member company's also contribute to many other Community efforts, representing our member interests and obtaining valuable information to bring back and share.

*Product Team*

*Foundation Board*

*Ops Meetup Team*

*SIG Task Force*

*More...*

*Fog Edge Massively Distributed Clouds Team*

*Numerous Big Tent Projects:  
Nova, Neutron, Keystone,  
Horizon, Etc.*

# LCOO Members Contributed to 70+ OpenStack Modules in Pike

LCOO member companies contributed 5 or more code commits to each of these OpenStack modules for the Pike release

|                            |                     |                   |                           |                          |                        |                     |                  |
|----------------------------|---------------------|-------------------|---------------------------|--------------------------|------------------------|---------------------|------------------|
| <b>Barbican</b>            | <b>Horizon</b>      | <b>Kolla</b>      | murano-tempest-plugin     | <b>Octavia</b>           | python-glanceclient    | python-troveclient  | <b>Syntribos</b> |
| <b>Blazar</b>              | interop             | Kolla-Ansible     | <b>Networking-bagpipe</b> | <b>OpenStack-Helm</b>    | python-ironicclient    | python-zunclient    | <b>Tempest</b>   |
| blazar-dashboard           | <b>Ironic</b>       | Kolla-Kubernetes  | <b>Networking-bgpvpn</b>  | openstack-helm-addons    | python-magnumclient    | <b>Rally</b>        | <b>Trove</b>     |
| blazar-nova                | ironic-inspector    | Kuryr-Kubernetes  | networking-odl            | <b>OpenStack-Manuals</b> | python-masakariclient  | <b>Ranger</b>       | <b>Valence</b>   |
| <b>Cinder</b>              | ironic-lib          | <b>Magnum</b>     | networking-ovs-dpdk       | openstack-user-stories   | python-novaclient      | releases            | <b>Valet</b>     |
| collectd-ceilometer-plugin | ironic-python-agent | <b>Masakari</b>   | networking-sfc            | osc-lib                  | python-octaviaclient   | requirements        | watcher-specs    |
| <b>Devstack</b>            | ironic-specs        | masakari-monitors | <b>Neutron</b>            | oslo.policy              | python-openstackclient | rsd-lib             | <b>Zun</b>       |
| <b>Glance</b>              | <b>Keystone</b>     | <b>Mogan</b>      | neutron-lib               | <b>Patrole</b>           | python-openstacksdk    | <b>Stackalytics</b> |                  |
| <b>Gluon</b>               | keystone-specs      | <b>Murano</b>     | <b>Nova</b>               | project-config           | python-rsdclient       | <b>Storlets</b>     |                  |
| <b>Grenade</b>             | keystonemiddleware  | murano-dashboard  | nova-specs                | python-blazarclient      | python-tricircleclient | <b>Swift</b>        |                  |

Source: Stackalytics.com



## **LCOO Birds of a Feather Session**

Monday, 11:35 - 12:15, Level 2 - C2.4



## **LCOO Working Session**

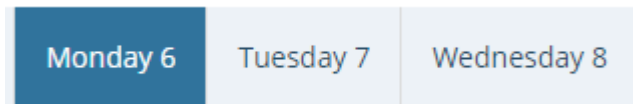
Wednesday, 11:50 - 12:30, Location - TBD



# LCOO Members Sessions at the Summit - Monday



## Schedule



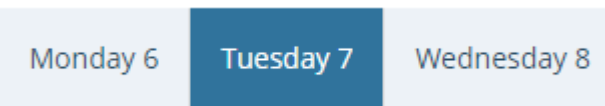
| Topic   | Summit Schedule URL   | When        | Who   |
|---|---|-------------|---|
| <b>AT&amp;T's Strategy for Implementing a Next Generation OpenStack Cloud</b> | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20565/at-and-ts-strategy-for-implementing-a-next-generation-openstack-cloud">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20565/at-and-ts-strategy-for-implementing-a-next-generation-openstack-cloud</a> | 09:00-11:15 | Sorabh Saxena (AT&T)<br>Ryan Van Wyk (AT&T)     |
| <b>Implications of 5G RAN and IoT on OpenStack based edge computing</b>       | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19547">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19547</a>   | 14:20-15:00 | Kandan Kathirvel (AT&T)                         |
| <b>LCOO 'Birds of a Feather'</b>  | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20581/lcoo-bof6">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20581/lcoo-bof6</a>   | 11:35-12:15 | Jaesuk Ahn (SKT)                                |
| <b>Congress - Project Onboarding</b>  | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20429/congress-project-onboarding">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20429/congress-project-onboarding</a>   | 11:35-12:15 | masahito muroi (NTT)<br>Hiroaki Kobayashi (NTT) |
| <b>Blazar - Project Onboarding</b>  | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20432/blazar-project-onboarding">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20432/blazar-project-onboarding</a>   | 13:30-14:10 | masahito muroi (NTT)                            |



# LCOO Members Sessions at the Summit - Tuesday

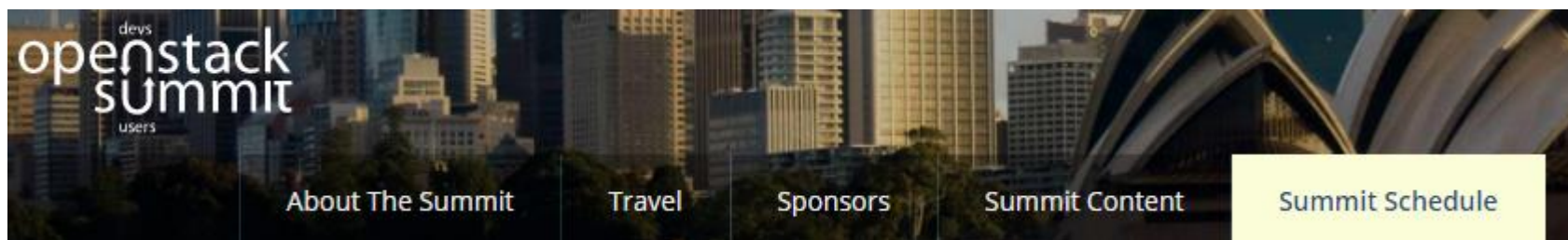


## Schedule

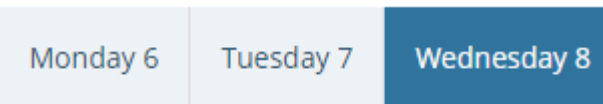


| Topic  | Summit Schedule URL   | When        | Who   |
|--|---|-------------|---|
| <b>"I pity the fool that builds his own cloud!" – Overcoming challenges of OpenStack based telco cloud:</b>                    | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19860/i-pity-the-fool-that-builds-his-own-cloudovercoming-challenges-of-openstack-based-telco-clouds">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19860/i-pity-the-fool-that-builds-his-own-cloudovercoming-challenges-of-openstack-based-telco-clouds</a> | 09:50-10:30 | Ryan Van Wyk (AT&T)<br>Alan Meadows (AT&T)<br>Jaesuk Ahn (SKT)<br>Shintaro Mizino (NTT) |
| <b>Containerised Cloud from Core to the edge</b>   | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20548/containerised-cloud-from-core-to-the-edge">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20548/containerised-cloud-from-core-to-the-edge</a>   | 10:50-11:30 | Kandan Kathirvel (AT&T)<br>Seungkyu Ahn (SKT)   |
| <b>From Kubernetes to OpenStack - Kubespray, Helm and OpenStack</b>  | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20053/from-kubernetes-to-openstack-kubespray-helm-and-openstack">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20053/from-kubernetes-to-openstack-kubespray-helm-and-openstack</a>   | 11:40-12:20 | Jaesang Lee (SKT)<br>Taeil Choi (SKT)   |
| <b>Guaranteed Provisioning by the Resource Reservation with Blazar</b>   | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19424/guaranteed-provisioning-by-the-resource-reservation-with-blazar">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19424/guaranteed-provisioning-by-the-resource-reservation-with-blazar</a>   | 11:40-11:50 | masahito muroi (NTT)<br>Ko Harada (NTT)   |
| <b>Murano Project Update</b>   | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19266/murano-project-update">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19266/murano-project-update</a>   | 11:40-12:00 | Felipe Monteiro (AT&T)  |
| <b>From Kubernetes to OpenStack - Kubespray, Helm and OpenStack</b>  | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20053/from-kubernetes-to-openstack-kubespray-helm-and-openstack">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20053/from-kubernetes-to-openstack-kubespray-helm-and-openstack</a>   | 11:40-12:20 | Seungkyu Ahn (SKT)<br>Taeil Choi (SKT)  |
| <b>Neutron-Neutron interconnections</b>  | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19465/neutron-neutron-interconnections">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19465/neutron-neutron-interconnections</a>   | 13:50-14:00 | Thomas Morin (Orange)   |
| <b>Cloud-Native Design/Refactoring Across OpenStack (Part II)</b>  | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20472/cloud-native-designrefactoring-across-openstack-part-ii">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20472/cloud-native-designrefactoring-across-openstack-part-ii</a>   | 13:50-14:30 | Alan Meadows (AT&T)   |
| <b>Extreme Testing (ERIS)</b>  | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20470/extremedestructive-testing">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20470/extremedestructive-testing</a>   | 13:50-14:30 | Sampath Priyankara (NTT)  |
| <b>AT&amp;T's CI/CD Revolution: A Conversation: Ship it! Charting the way to smoother CI/CD with Kubernetes and OpenStack:</b> | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20067">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20067</a>   | 15:35-15:45 | Elise Eiden (AT&T)<br>Jared Stein (AT&T)  |
| <b>A slimmer, thinner, lightweight OpenStack – why it is needed for the success of Edge Cloud?:</b>                            | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19568/ship-it-charting-the-way-to-smoother-cicd-with-kubernetes-and-openstack">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19568/ship-it-charting-the-way-to-smoother-cicd-with-kubernetes-and-openstack</a>   | 16:10-16:50 | Jared Stein (AT&T)  |
| <b>OpenStack-Helm: The Ideal Solution for Telco Cloud Life-Cycle Management</b>  | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19579/a-slimmer-thinner-lightweight-openstack-why-it-is-needed-for-the-success-of-edge-cloud">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19579/a-slimmer-thinner-lightweight-openstack-why-it-is-needed-for-the-success-of-edge-cloud</a>                 | 17:00-17:40 | Kandan Kathirvel (AT&T)   |
|  | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19938/openstack-helm-the-ideal-solution-for-telco-cloud-life-cycle-management">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19938/openstack-helm-the-ideal-solution-for-telco-cloud-life-cycle-management</a>   | 17:50-18:30 | Alan Meadows (AT&T)   |

# LCOO Members Sessions at the Summit - Wednesday



## Schedule



| Topic   | Summit Schedule URL   | When        | Who                                      |
|---|---|-------------|--|
| <b>Multi-cloud management project</b>   | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20471/multi-cloud-management-project">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20471/multi-cloud-management-project</a>   | 09:50-10:30 | Matt McEuen (AT&T)                       |
| <b>LCOO Working Group</b>   | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20532/lcoo-wg-session">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20532/lcoo-wg-session</a>   | 11:50-12:30 | Shintaro Mizuno (NTT)                    |
| <b>OpenStack-Helm Workshop: Deploy OpenStack on Kubernetes</b>                      | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20424/openstack-helm-workshop-deploy-openstack-on-kubernetes">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20424/openstack-helm-workshop-deploy-openstack-on-kubernetes</a>                                     | 13:50-15:20 | Matt McEuen (AT&T)<br>Pete Birley (AT&T) |
| <b>Moving tenant workloads transparently across hosts</b>                           | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20479/moving-tenant-workloads-transparently-across-hosts">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/20479/moving-tenant-workloads-transparently-across-hosts</a>   | 15:30-16:10 | Matt McEuen (AT&T)                       |
| <b>Integrating OpenContrail into the OpenStack Neutron Stadium</b>                  | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19570/integrating-opencontrail-into-the-openstack-neutron-stadium">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19570/integrating-opencontrail-into-the-openstack-neutron-stadium</a>                           | 16:00-16:10 | Bin Hu (AT&T)                            |
| <b>Life or Death - AT&amp;T's First Responder VNF Platform Enablement Approach:</b> | <a href="https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19883/life-or-death-at-and-ts-first-responder-vnf-platform-enablement-approach">https://www.openstack.org/summit/sydney-2017/summit-schedule/events/19883/life-or-death-at-and-ts-first-responder-vnf-platform-enablement-approach</a> | 16:30-17:10 | Elise Eiden (AT&T)<br>Matt McEuen (AT&T) |

<https://wiki.openstack.org/wiki/LCOO>



<https://openstack-lcoo.atlassian.net/wiki/wiki/spaces/LCOO>

