

# CNTT Technical F2F Work Shop, Antwerp, Belgium, September 26-27, 2019

Sept 26-27 Antwerp, Belgium

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## Overview

The CNTT (Common NFVI Telco Task Force) launched officially in June. Its mission is to define a common NNFV Infrastructure to simplify the development and deployment of virtualized networking application for the telecom industry. The group held its first community wide F2F meeting with around 80 vendor and operator attendees, with the objective of gathering requirements for the contents of the Release 2 document.

GSMA and LF Networking are excited to announce that the next F2F meeting is schedule to follow the ONS EU Summit in Antwerp. This meeting will be a great opportunity to advance the Reference Model work, continue to refine the Reference Architecture definitions, and address implementation considerations for OPNFV and the OPNFV Verification Program (OVP). This will be a hands-on meeting, so please come prepared to work and propose solutions.

As a reminder, the CNTT GitHub can be found here: <https://cنتt-n.github.io/CNTT/>

If you'd like to review the materials from the Paris meeting, they can be found here: [CNTT Technical F2F Work Shop, Châtillon, France, July 23-25, 2019](#)

The link to the GSMA and Linux Foundation agreement to support the CNTT initiative can be found here: <https://www.linuxfoundation.org/press-release/2019/06/linux-foundation-and-the-gsma-announce-partnership-to-further-align-nfvi-efforts/>

## Logistics

### When

September 26th and 27th 9am - 6pm local time (7a - 4p UTC)

### Where

Radisson Blu Astrid Hotel, Antwerpen

Koningin Astridplein 7, 2018 Anvers

Room: Esperanza 3+4

This is the same venue as the ONAP, and OpenDaylight technical communities will be holding their meetings.

This page will be continue to be updated as additional logistics are confirmed.

## F2F Meeting Notes Repositories

General Notes and Future Releases: [https://etherpad.opnfv.org/p/CNTT\\_F2F\\_General\\_Meeting\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_General_Meeting_Notes_Sept2019)

Reference Model Notes: [https://etherpad.opnfv.org/p/CNTT\\_F2F\\_Reference\\_Model\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Model_Notes_Sept2019)

Reference Architecture Notes: [https://etherpad.opnfv.org/p/CNTT\\_F2F\\_Reference\\_Architecture\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Architecture_Notes_Sept2019)

Reference Implementation Notes: [https://etherpad.opnfv.org/p/CNTT\\_F2F\\_Reference\\_Implementation\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Implementation_Notes_Sept2019)

Testing & Validation: [https://etherpad.opnfv.org/p/CNTT\\_F2F\\_Testing\\_Validation\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_Testing_Validation_Notes_Sept2019)

## Registration

Registration for this free developers event is now open and available [here](#). While walk-ins are welcome, registration is requested for planning and communications purposes.

## Remote Attendance

Remote attendance is supported and will be facilitated through a zoom meeting bridge. Zoom bridge for remote attendees: <https://zoom.us/j/314170028>

## Related Event @ ONS EU 2019

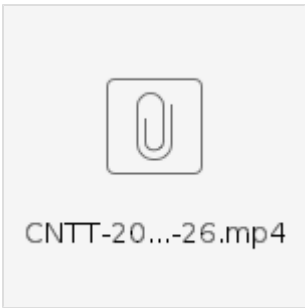
On the day prior to the start of this workshop, Wednesday, Sept. 25 @ 13:50, participants of this CNTT workshop are also urged to attend the ONS panel discussion, *The Common NFVI Taskforce (CNTT): Building Consensus on NFV Infrastructure*, for an introduction to the Common NFVI Lifecycle Framework and discussion following.




## What



Common NFVI Telco Task Force Developers Face to Face meeting.




## Agenda


### Day 1 - September 26, 2019

Sessions /Duration	Major Area & Key Topics Facilitator(s) Detailed Description	Presentation Materials
(08:00)	Registration	
<b>Welcome</b> <a href="https://zoom.us/j/314170028">https://zoom.us/j/314170028</a>		
(09:00) 10 Mins Thu	<b>Welcome Messages</b> <i>Heather Kirksey-Linux Foundation, Michele Zarri-GSMA</i> <i>Housekeeping</i> <i>Conference Bridge, WiFi, Breaks and Lunch, Room Access</i>	 <p>CNTT-20...-26.mp4</p> <p>Poor audio quality as no patch into sound system was available. Used simple speaker/phone to monitor room audio.</p>

<p>(09:10)</p> <p>15 Mins</p> <p>Thu</p>	<p><b>Opening Remarks</b></p> <p><b>Mark Cottrell-AT&amp;T</b></p> <p><i>Executive leaders invited to comment. Opening round table remarks to outline importance, perspectives, value being sought. Key partners, operators, GSMA, and LFN leadership invited up.</i></p> <p><b>Level Setting - Rabi Abdel-Vodafone, Gergely Csatari-Nokia, Petar Torre-Intel</b></p> <p><i>Current state of global framework build out, provide insight guidance on future release scope backlog.</i></p> <p>Notes: <a href="https://etherpad.opnfv.org/p/CNTT_F2F_General_Meeting_Notes_Sept2019">https://etherpad.opnfv.org/p/CNTT_F2F_General_Meeting_Notes_Sept2019</a></p>	 <p>CNTT Int...NAL.pptx</p> <p>+</p>  <p>CNTT_SEP...pub.pptx</p>
<p>(09:25)</p> <p>5 Mins</p> <p>Thu</p>	<p><b>Agenda Review</b></p> <p><b>Jonathan Beltran-AT&amp;T</b></p> <p><i>Brief overview of agenda and how organized</i></p>	 <p>CNTT_Agenda_R...20190926.pptx</p>
<p><b>Refining The Standard – Reference Model</b></p>		

<p>(09:30)</p> <p>60 Mins</p> <p>Thu</p>	<p><b>Botrange Release</b></p> <p><b>Current Status &amp; Lessons Learned</b></p> <p><b>Rabi Abdel-Vodafone, Walter Kozlowski-Telstra</b></p> <p><i>Brief status / main in-flight items</i></p> <p><i>Development velocity: Too fast, too slow, or just right?</i></p> <p><i>Barriers to engagement?</i></p> <p><i>Alignment challenges: new foundational constructs (i.e. levels)?</i></p> <p><i>What else has changed in our approach &amp; thinking?</i></p> <p><i>Some components more complex than others?</i></p> <p><i>Methods and tools to produce? How do we get to 'stability'?</i></p> <p>Notes: <a href="https://etherpad.opnfv.org/p/CNTT_F2F_General_Meeting_Notes_Sept2019">https://etherpad.opnfv.org/p/CNTT_F2F_General_Meeting_Notes_Sept2019</a></p>	 <p>CNTT_SEP...pub.pptx</p>
<p>(10:30)</p> <p>30 Mins</p> <p>Thu</p>	<p><b>Break</b></p>	
<p>(11:00)</p> <p>45 Mins</p> <p>Thu</p>	<p><b>RM Release 2.1 – Beyond Botrange</b></p> <p><b>Supporting Containers</b></p> <p><b>Beth Cohen Mark Shostak Bernard Tsai</b></p> <p><i>Key Questions:</i></p> <p><i>How do we resolve issues/directional conflicts?</i></p> <p><i>I.e. VMware and Kubernetes?</i></p> <p><i>Current State:</i></p> <p><i>Priorities (by Chapter or feature)</i></p> <p><i>Open Issues (Github)</i></p> <p><i>Targeted Next Release</i></p> <p><i>Roadmap:</i></p> <p><i>Identify and define key modelling gaps</i></p> <p><i>Milestones</i></p> <p><i>Timelines</i></p> <p>Notes: <a href="https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Model_Notes_Sept2019">https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Model_Notes_Sept2019</a></p>	
<p>(11:45)</p> <p>45 Mins</p> <p>Thu</p>	<p><b>LFN Community Projects Meetup #1</b></p> <p><b>Gergely Csata-Nokia, Jim Baker-Linux Foundation, Jonathan Beltran-AT&amp;T</b></p> <p><b>Projects</b></p> <p><i>Community Share and Idea Exchange</i></p> <p><i>Current Status</i></p> <p><i>Future Plans</i></p> <p><i>Q&amp;A</i></p>	 <p>CNCF TUG...tro.pptx</p> <p><b>CNCF TUG:</b></p>

<p>(12:30)</p> <p>30 Mins</p> <p>Thu</p>	<p><b>RM Release 2.1 – Beyond Botrange</b></p> <p><b>Infrastructure Abstraction &amp; NFVI Features</b></p> <p><b>Mark Shostak-AT&amp;T, Karine Sevilla-Orange, Bernard Tsai- DT</b></p> <p><i>Infrastructure Abstraction</i> <i>NFVI Features</i> <i>Container Integration</i></p> <p><i>Storage</i></p> <p><i>Paris Issue Resolution</i> <i>Q &amp; A</i></p> <p>Notes: <a href="https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Model_Notes_Sept2019">https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Model_Notes_Sept2019</a></p>	 <p>CNTT_Ant...0923.pdf</p>
<p>(1:00)</p> <p>90 Mins</p> <p>Thu</p>	<p><b>Lunch</b></p>	
<p>(2:30)</p> <p>45 Mins</p> <p>Thu</p>	<p><b>RM Release 2.1 – Beyond Botrange</b></p> <p><b>Security</b></p> <p><b>Mike Bustamente-AT&amp;T, Walter Kozlowski-Telstra</b></p> <p><i>Current state</i></p> <p><i>Opportunities for partnership</i></p> <p><i>Engaging the community</i></p> <p><i>Validation Considerations/Self Attestation</i></p> <p>Notes: <a href="https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Model_Notes_Sept2019">https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Model_Notes_Sept2019</a></p>	 <p>CNTT_Ant...ate.pptx</p>
<p>(3:15)</p> <p>45 Mins</p> <p>Thu</p>	<p><b>RM Release 2.1 – Beyond Botrange</b></p> <p><b>External Interfaces (Ch 06) and Infrastructure Operations &amp; Life Cycle Management (Ch 09)</b></p> <p><b>Pankaj Goyal-AT&amp;T; Ian Gardner (Vodafone)</b></p> <p><i>External Interfaces:</i> <i>ETSI model aligned NFVI Interfaces</i></p> <p><i>Infrastructure Operations &amp; Life Cycle Management:</i> <i>Configuration and Lifecycle Management</i> <i>Resource and Service Assurance</i> <i>Capacity Management</i> <i>Infrastructure Maintenance</i></p> <p>Notes: <a href="https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Model_Notes_Sept2019">https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Model_Notes_Sept2019</a></p>	 <p>CNTT-Antwerp-RM-Ch6-Ch9.pdf</p>
<p>(4:00)</p> <p>30 Mins</p> <p>Thu</p>	<p><b>Break</b></p>	

(4:30)	<b>LFN Community Projects Meetup #2</b>	
30 Mins	<b>Jim Baker-Linux Foundation, Jonathan Beltran-AT&amp;T</b>	
Thu	<b>Projects</b>	
	<i>Community Share and Idea Exchange</i>	
	<i>Current Status</i>	
	<i>Future Plans</i>	
	<i>Q&amp;A</i>	
<b>Refining The Standards – Reference Architectures</b>		
(5:00)	<b>Botrange - RA1 v1.1 – Current and Future</b>	 CNTT_SEP...pub.pptx
50 Mins	<b>Rabi Abdel-Vodafone, Walter Kozlowski-Telstra</b>	
Thu	<i>Status Update</i>	
	<i>Principles</i>	
	<i>Requirements</i>	
	<i>Roadmap</i>	
	<i>Notes: <a href="https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Architecture_Notes_Sept2019">https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Architecture_Notes_Sept2019</a></i>	
(5:50)	<b>Day 1 – Wrap Up</b>	
10 Mins	<b>Jonathan Beltran-AT&amp;T</b>	
Thu	<i>Open Issues</i>	
	<i>Communications Updates</i>	
	<i>Logistics Updates</i>	

## Day 2 - September 27, 2019

<b>Planning The Next Phase</b>				
	<b>TECH NOLOGY - Esperanza 3</b>	<b>Presentation Materials</b>	<b>INTEGRATION - Esperanza 4</b>	<b>Presentation Materials</b>
	<a href="https://zoom.us/j/314170028">https://zoom.us/j/314170028</a>		<a href="https://zoom.us/j/542420144">https://zoom.us/j/542420144</a>	

<p>(9:00) 10 Mins Fri</p>	<p><b>Day 2 - Opening – Logistics / Day Ahead</b></p> <p><b>Jonathan Beltran-AT&amp;T</b></p> <p><i>Brief overview of agenda and how organized</i></p>		<p><b>Day 2 - Opening – Logistics / Day Ahead</b></p> <p><b>Rick Tennant-AT&amp;T</b></p> <p><i>Brief overview of agenda and how organized</i></p> <p><i>Recorded Session:</i></p> <div data-bbox="623 306 927 611" data-label="Image"> </div>	
<p>(09:10) 40 Mins Fri</p>	<p><b>Reference Architecture – Open Stack Based Reference Architecture (Botrange) Deep Dive</b></p> <p><b>Pankaj Goyal-AT&amp;T, Ian Gardner-Vodafone</b></p>	<div data-bbox="277 642 578 947" data-label="Image"> </div>	<p><b>Reference Implementation</b></p> <p><b>Mike Fix-AT&amp;T, Fu Qiao-China Mobile, Mark Shostak-AT&amp;T</b></p> <p><i>Project Goals/Objectives</i></p> <p><i>Review the Project Proposal</i></p> <p><i>Keys to Success with OPNFV:</i></p> <ul style="list-style-type: none"> <li><i>Intake</i></li> <li><i>Onboarding</i></li> <li><i>CI Automation</i></li> <li><i>Timelines and Milestones</i></li> </ul> <p><i>Notes: <a href="https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Implementation_Notes_Sept2019">https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Implementation_Notes_Sept2019</a></i></p>	<div data-bbox="984 663 1484 1167" data-label="Image"> </div>

- Levels (L2, L3)
- Current Outlines and Content
- Issues & Gaps
- Backlog Generation

Notes:  
[https://etherpad.opnfv.org/p/CNTT\\_F2F\\_Reference\\_Architecture\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Architecture_Notes_Sept2019)

(09:50)  
 40 Mins  
 Fri

**Reference Architecture - Beyond Botrange**



**Infrastructure Labs**

**Mike Fix-AT&T, Fu Qiao-China Mobile, Mark Shostak-AT&T**

*Requirements*

*Leverage Lab Templates - PDF and SDF, etc.*

*Intake and on boarding:*

*Lab Procurement (Present/Future)*

*Notes:*



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Antwerp\_Ch8-Te...INFRA LABS.pdf

Deep dive into topic areas identified on Thursday related to scope and direction Beyond Botrange, i.e. OpenStack containerized cloud OR VMware.

MVP development session to outline: next target architecture(s), what the approach is, what technologies, etc., iterate and improve upon latest version RA1 1.0

Notes: [https://etherpad.opnfv.org/p/CNTT\\_F2F\\_Reference\\_Architecture\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Architecture_Notes_Sept2019)

(10:30)  
30 Mins  
Fri

Break

(11:00)  
45 Mins  
Fri

**Reference Architecture – The need for K8s Ref Arch**

**Petar Torontel, Rabi Abdel-Vodafone,**

*Kick off the discussion with some Ideas, Requirements.*

Notes: [https://etherpad.opnfv.org/p/CNTT\\_F2F\\_Reference\\_Architecture\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Architecture_Notes_Sept2019)



RA\_k8s\_2...920.pptx

**Testing & Validation**

**Mike Fix-AT&T, Fu Qiao-China Mobile, Mark Shostak-AT&T, Lincoln Lavoie**

*CVC Introduction - [Lincoln Lavoie](#)*

*Table of Contents*

*Open Items*

*Verification & Validation*

*Terminologies*

*Methodology & Goals*

*Intake into OVP Framework*


*CNTT > OPNFV > CVC Communication*

*Test Case Gap Review/Discussion*

Notes: [https://etherpad.opnfv.org/p/CNTT\\_F2F\\_Testing\\_Validation\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_Testing_Validation_Notes_Sept2019)



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<p>(11:45) 45 Mins Fri (30 minutes lost?)</p>	<p><b>Reference Architecture</b> - <b>Open Discussion about K&amp;S Ref Arch</b></p> <p>Rabi Abdol-Vodafone, Gergely Csateri-Nokia</p> <p>Challenges</p> <p>Issues</p> <p>Approach needed</p> <p>Notes: <a href="https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Architecture_Notes_Sept2019">https://etherpad.opnfv.org/p/CNTT_F2F_Reference_Architecture_Notes_Sept2019</a></p>			
<p>(1:00) 90 Mins Fri</p>	<p><b>Lunch</b></p>			
	<p><b>Major Area &amp; Key Topics</b></p> <p><b>Facilitator(s)</b></p> <p><b>Detailed Description</b></p> <p><a href="https://zoom.us/j/314170028">https://zoom.us/j/314170028</a></p>	<p><b>Presentation Materials</b></p>		

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**Building The Ecosystem**

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30 Mins  
Fri

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Identify and define key gaps

Milestones

Timelines

Notes:  
[https://etherpad.opnfv.org/p/CNTT\\_F2F\\_General\\_Meeting\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_General_Meeting_Notes_Sept2019)

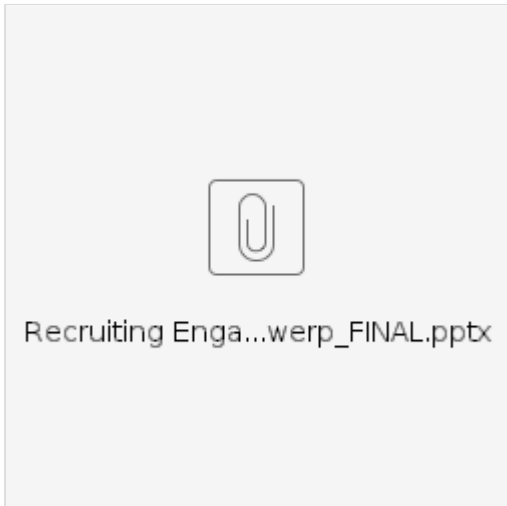
(4:00)  
30 Mins  
Fri

Break

(4:30)  
60 Mins  
Fri

**Recruiting | Community Engagement | Adoption | Marketing**

Beth Cohen - Verizon, Mark Cottrell - AT&T, Heather Kirksey - Linux Foundation, Markus Wueping-Vodafone, Michele Zarri-GSMA



Questions to address:

What else do we need to do to get the right people, skills, costs, internal / external volunteers?

How are we doing on senior-level, engaged participation?

What are companies' and organizations' primary interests and how can we serve them better?

Who are the key influencers & stakeholders who will make decision to migrate to Common NFVI?

Do we, in our respective capacities, have direct access to those influencers?



*What shall our messaging be to those key influencers as of today?*

*What are our unique 'channels' to adoption?*

*Notes:*  
[https://etherpad.opnfv.org/p/CNTT\\_F2F\\_General\\_Meeting\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_General_Meeting_Notes_Sept2019)

(5:30)  
30 Mins  
Fri

**Day 2 – Wrap Up**

**Next Steps / Progress Assessment / Closing Comments**

**Beth Cohen - Verizon, Rabi Abdel-Vodafone, Walter Kozlowski-Telstra, Mark Cottrell-AT&T, Heather Kirksey-LFN, Michelle Zarri-GSMA**

*Action Items*

Accomplishments

What did we get done?

What did we gain alignment/agreement on?

What did we hear and do we need to adjust?

What do we need to collaborate further on?

Notes:  
[https://etherpad.opnfv.org/p/CNTT\\_F2F\\_General\\_Meeting\\_Notes\\_Sept2019](https://etherpad.opnfv.org/p/CNTT_F2F_General_Meeting_Notes_Sept2019)

## CNTT Frequently Asked Questions (FAQ)



FAQ List\_9.22.19.pdf

## Contacts

# Agenda contacts

Jonathan Beltran [Jonathan Beltran](#)

## Site Contacts

## A/V Contacts