OpenContrail Monthly Newsletter March 2015

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OpenContrail Newsletter
March 2015

STAY UP-TO-DATE WITH EVERYTHING
IN THE OPENCONTRAIL COMMUNITY

March 2015 | Forward to a Friend

OpenContrail Momentum

"Alone we can do so little; together we can do so much!" OpenContrail
community has proved it time and again about this. In the last month since
we asked for your voting support, we've been overflowing with great news
around OpenStack. First and foremost thanks to our OpenStack Summit –
Vancouver'15 session proposal voters! Cutting to the chase…we got 5 of
our 7 session proposals accepted!!! Remarkable success!

OpenStack Vancouver 2015 Sessions

1. **Building a Secure Multi-tenant Cloud for SaaS Applications:
   Challenges and Lessons Learned** – We'll be presenting with our
   customer friends and OpenContrail advocates from **Symantec**, **WorkDay**
   and **Lithium**.
2. **Delivering an End-to-end Automated and Carrier-class NFV (Network
   Functions Virtualization) Use Case** – We'll be presenting with our
   customer friends and OpenContrail advocates from **NTT-i3**.
3. **Deploying a Hybrid Cloud with OpenStack: Dynamic Service
   Automation** – We'll be presenting with our technology alliance partner
   friends and OpenContrail advocates from **Ubuntu, Supported by**

IN THIS ISSUE

> OpenContrail
  Momentum
> Developer Spotlight
> Media Coverage
> Deep-dive Technical
  Blogs
> Upcoming Events
> Discussions on Twitter
> Demo Videos
> Get Involved
> Stay Connected

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Canonical.

4. **Service Chaining Using Neutron Networks Implemented as Standard Compliant Layer-3 VPNs** – Our OpenContrail advocates and customer friends at **AT&T** will be presenting.

5. **OpenStack Ousts vCenter for DevOps and Unites IT Silos at AVG Technologies** – Our OpenContrail advocates and customer friends at **tcp cloud** will be presenting with their customer **AVG**.

These are all **MUST-SEE** sessions, so hit the 5 links and add them to your summit calendar straightaway.

We are gearing up to support our booth with a few demos, and we'll have a conference room available for private meetings. Should you want to chat, a private test drive of OpenContrail, or the full Juniper Contrail Cloud experience, let us know, and we'll pencil you in for a meeting. Otherwise, be sure to stop by the booth. We'll have some cool surprises and invites to be had, but more on that closer to the actual event.

Also in the month of January and February we have published 3 technical blogs about various capabilities of OpenContrail like load balancing, Heat application and Integrating VMware ESXi with OpenStack. So make sure to check out our blog for similar how-to's and other useful archive posts!

OpenContrail social channels and community continue to grow. If you have not Liked/Followed/Joined the OpenContrail social groups, you should do so now. It is a great way to keep up-to-date with new ideas, new technical content, video tutorials, upcoming events, and more.

Links to these groups are below:

- Facebook
- Twitter
- LinkedIn
- Google+
- YouTube

Developer Spotlight February/March 2015 – Pradosh Mohapatra

Pradosh Mohapatra is co-founder of Sproute Networks. He has over 16 years of experience in networking and system architecture, with focus on

routing protocols. Before Sproute, he led the routing protocol development at Cumulus Networks. His previous stints include Cisco systems as a distinguished engineer, Procket Networks, and Tasman Networks. He is the author of several IETF standards related to BGP and MPLS.

About Sproute:
Sproute Networks is a stealth-mode startup with focus on both products and services. We offer software solutions in Networking technologies.

Sproute supported NTTi3 build an enterprise networking infrastructure (http://www.ntti3.com/blog//ntt-i3-introduces-elastic-service-infrastructure-to-enable-the-cloud-ready-enterprise) using OpenContrail, OpenStack, and Sproute proprietary technologies.

1. How did you first hear about OpenContrail and what was your initial reaction?

I first heard about OpenContrail from a customer who wanted to build a data center network virtualization solution. It was a pleasant realization to learn that OpenContrail applied well-proven (and should I say, quite familiar!) networking technologies (L3VPN, BGP) to a new domain. Appropriate, no reinventing-the-wheel, and, the outcome was impressive.

2. What made you decide to download the OpenContrail code and play around with it? Any particular driver or work initiative?

I initially downloaded the OpenContrail repo out of curiosity, to browse. As to a serious endeavor, it was for the Elastic Service Infrastructure project to build an enterprise networking infrastructure using OpenContrail.

3. What work have you done with the OpenContrail code? Tell us about it and what value it might have to others?

The primary work was to add a next-hop notification service to Contrail Vrouter Agent. Multiple clients can connect to Vrouter Agent and receive notification when overlay network endpoints are added or removed. This lets each client peek at the virtual network topology events as seen by Contrail control plane and use it for monitoring or active forwarding.

4. What has been your experience in working with the OpenContrail team?

It has been a great experience. All the team members responded timely and supported during the initially phase to get me up to speed.

5. What projects do you think people could start working on with OpenContrail?
- User-space networking/vrouter
- Improve operational/debugging tools

6. What would you like to see improved with the OpenContrail code or overall community?

- Documentation on design notes
- Documentation on working with repo/git/gerrit etc. that is specific to OpenContrail code
- More rigid separation (e.g. into separate git repositories along with independent operation) of modules (e.g. BGP) for easier maintenance
- Finer-grained and lighter-weight sandboxes to play with parts of OpenContrail

More tight integration with hardware: Modern NICs are really smart, so supporting those hardware features will increase the compute node performance even further. I hope to see a 10Gbps forwarding rate on a single core vRouter one day.

7. What advice would you give to someone just starting with OpenContrail?

No better way to learn than two things: (1) set up a Contrail fabric and play with it, (2) write test cases in modules of your interest – good way to get familiar with the code. The codebase is large and can be intimidating at first – so have patience – that's the third thing.

8. What do you think the real value of SDN or NFV will be for you or your industry?

Spoiler for a philosophical rant – I see the real value of SDN is in broadening the networking industry mindset to better ways of doing things – be it in thinking about scale-out architectures, in creating network-level management abstractions and programmatic interfaces (devops), or in being resourceful and taking advantage of virtualization (aka NFV).

9. What is your overall perception of the importance of open source in SDN/networking/technology/innovation?

The importance of open source? Huge! We are seeing successful business models that focus on supporting open source software. We are also seeing successful companies built entirely using open source technologies. What more does one need as a testament to the importance of open source, than fueling the economy this way?

My Cumulus experience gave me great insight into the momentum of open systems in Networking industry. It is no secret that some of the largest data center networks are built using white box gear, and powering them all is Linux, perhaps the best open source software out there.

Upward spiral is one of the best aspects at work for open source. As the community using an open source technology becomes larger and stronger, it

fuels the technology upwards.

Open source will definitely influence how we think about and develop software in future and I will happily remain tuned in.

Media Coverage

TWST – March 3 – Juniper Networks and Canonical partner to deliver OpenStack based Cloud Solutions for the Telecommunications industry.

- *Juniper Networks and Canonical have developed Contrail Cloud Platform, a joint carrier-grade OpenStack solution for cloud and converged NFV infrastructure that now integrates Contrail Networking with Canonical's Ubuntu OpenStack and Ubuntu Server OS for enhanced performance, scale and reliability.*
- *Juniper Networks and Canonical will collaborate and coordinate product development, engineering, marketing and upstream contributions to continue to expand an open and functioning OpenStack ecosystem for service providers to deliver cloud and NFV solutions.*
- *"Juniper Networks firmly believes that open source and open standards will continue to drive greater levels of innovation and is pleased to partner with Canonical to help drive faster adoption of the cloud for telecommunication organizations. Our jointly developed converged Ubuntu and Juniper OpenStack solution will help deliver greater performance, scalability and reliability at lower costs."*
    - Ankur Singla, corporate vice president and general manager, cloud software, Juniper Networks
- *"Juniper and Canonical are leading the OpenStack innovation agenda by jointly developing a virtualization solution that will help service providers accelerate cloud deployments for greater agility. Juniper's Contrail addresses the carrier-class issues of virtualized environments and accelerates elastic service delivery across multi-tenant, hybrid cloud OpenStack deployments across a multi-vendor ecosystem. By combining Juniper's open network solutions and leadership in the telecommunications industry with Canonical's leadership in OpenStack and scale-out open source, we will jointly be able to deliver cloud solutions that enable carriers to meet their network modernization challenges."*
    - John Zannos, vice president, cloud channels and alliances, Canonical.

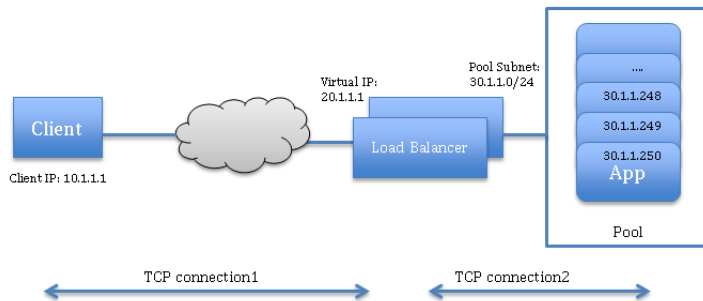TechTarget – March 13 - Juniper SDN switches aimed at enterprise clouds
- *Juniper Networks has introduced a line of SDN switches that give corporations a choice in open and proprietary technology for building public and private clouds.*
- *The company introduced this week a line of spine switches called the QFX 10000 and improvements to its PTX Series router and SRX5000 Series Services Gateways firewall. Juniper launched the new products and upgrades during an Innovation Showcase event at its Sunnyvale, Calif., headquarters.*
- *"The QFX 10000 is groundbreaking, game-changing technology that takes advantage of their move into their own chipset," Jason Gress, president of*

systems integrator InterVision Systems Technologies, said. "If their solution is ready for SDN and the software-defined data center, I think that's going to give them a tremendous advantage in the marketplace."

Deep-dive Technical Blogs

Load Balancer as a Service In Contrail – Aniket Daptari & Foucault De Bonneval
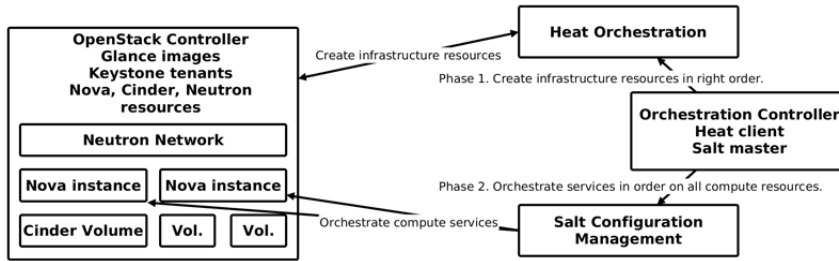
- *French Cloud Service Provider, Cloudwatt, used OpenContrail to deploy a scalable sovereign Public Cloud in France. Cloudwatt's plans to use LBaaS is to make it seamless for Cloudwatt customers to use load balancing without having to manually configure the involved components. This drastically simplifies the customer's life, as they no longer need to know the minutiae of configuring Load balancers. Complex designs can be implemented with "internal-only" or "hybrid internal-external" LBaaS.*
- *Aniket and Foucault explains in the blog about how to to use a common interface and move seamlessly between different load balancing technologies.*

Cluster of compute nodes being managed by the Contrail controller

Heat Application Stack in OpenContrail – Jakub Pavlik & Ales Komarek

- *In this blog Jakub and Ales shows how to orchestrate with OpenStack using Heat and OpenContrail. Also the blog discusses how to create complex application stack with using existing implementation HAProxy Neutron LbaaS in OpenContrail.*
- *Heat is the main project of the OpenStack orchestration program. It allows users to describe deployments of complex cloud applications in text files called templates. These templates are then parsed and executed by the Heat engine.*
- *Setting up Heat templates can solve previously unsolvable issues in virtual infrastructure life-cycles and that is creation and deletion of not-compute resources that compute resources rely on (network and storage resources mostly).*

Heat orchestration

Integrating VMware ESXi with OpenStack & OpenContrail – Jakub Pavlik
- *Jakub tries to answers questions regarding networking on hybrid hypervisor environment in this blog.*
- *Questions like, Can we use KVM for production? Is it not just for experimental purposes? How to integrate current VMware vSphere environment? etc…*
- *Read the blog for answers to all the questions. Also bookmark the blog to learn more about such interesting Q&A's in the future.*

Upcoming Events

4/8 – OpenContrail Technical Overview
- This session provides an overview of Juniper Networks Contrail which is a simple, open, and agile software-defined networking solution that automates and orchestrates the creation of highly-scalable virtual networks.
- These virtual networks let you harness the power of the cloud—for new services, increased business agility, and revenue growth. Service providers can use Contrail to enable a range of innovative new services, including cloud-based offerings and virtualized managed services.
- Please note that you must register with a business/university email address, not a personal email address.

4/13 – OpenStack Live 2015
- OpenStack Live 2015 is a unique opportunity to learn key considerations for cloud strategies, how to improve overall performance, and operational best practices for managing OpenStack and maximizing the MySQL core.
- Run in parallel with the Percona Live MySQL Conference, OpenStack Live 2015 will include sessions presented by OpenStack community members. An optional day of tutorials will focus on making OpenStack users more productive and confident in this emerging technology.
- Because this event is part of the Percona Live MySQL Conference & Expo 2015, attendees will have the opportunity to learn from MySQL experts on topics such as High Availability, security, and more to support the management of their OpenStack infrastructures.

5/18 – OpenStack Summit – Vancouver
- The Summit is a five-day conference for OpenStack contributors, enterprise users, service providers, application developers and ecosystem

members.
- Attendees can expect visionary keynote speakers, 200+ breakout sessions, hands-on workshops, collaborative design sessions and lots of networking. Keynote sessions will take place Monday and Tuesday, the main conference will run Monday – Thursday.
- The Design Summit, a special track for active technical contributors to plan the next software release, will run Tuesday – Friday.

Visit http://opencontrail.org/events/ for a listing of all OpenContrail events. Also you can subscribe to our social networks to get the updates about our upcoming events.

Discussions on Twitter

Meena @Meena_Sankaran • Jan 8

Heard the @OpenContrail webinar with us in Dec2014, Here's a demo video of the solution @CumulusNetworks : https://www.youtube.com/watch?v=PxG9Dfa1QkE …...

Jakub Pavlik @JakubPav • Jan 12

How to deploy #Heat Application Stack in @OpenStack on top of @OpenContrail and using @SaltStackInc http://tcpcloud.eu/en/blog/2015/01/12/heat-application-stack-opencontrail/ … @tcpcloud

Radovan Polanský @radovanpolansky • Feb 11

Interesting @tcpcloud BLOG, about #VMware #ESXi and @OpenStack + @OpenContrail integration: http://disq.us/8m4vvq

Kelly McDowell @ocdune • Feb 11

@ocdune @OpenContrail Ah, found it. Contrail 2.0 release notes and new features http://techwiki.juniper.net/Documentation/

Jakub Pavlik @JakubPav • Feb 11

A new @tcpcloud blog post about hybrid hypervisor environment #KVM & #WMware #ESXi with @OpenContrail @OpenStack http://tcpcloud.eu/en/blog/2015/0

Edgar Magana @emaganap • Feb 10

Reading Five must-know open source #SDN controllers http://bit.ly/1lTbIow @OpenContrail @openflownews @OpenDaylightSDN @openflow

NGNWare @ngnware • Jan 23

NGNgrid, an NFV orchestration platform...based on @OpenContrail architecture. http://goo.gl/0EG9pl

Julie Wider @jawider • Jan 21

RT @jedelman8: Open Source Networking http://www.jedelman.com/home/open-source-networking … > Tx for the @OpenContrail include!

Anthony Chow @vCloudernBeer • Feb 12

wow @OpenContrail have some many announcement/new stuff. Hard to keep up. (but in a good way).

Talligent @talligent • Feb 18

So, there is this - Billing for bandwidth using Openstack and @OpenContrail – https://www.openstack.org/vote-vancouver/

Sandeep Chandu @chanduusc • Feb 17

@ipv6freely @opencontrail How stable is it in contrail env..My love towards that product is never ending!

Talligent @talligent • Feb 17

@Talligent case study submission for #Openstack summit – with our friends from @ubuntu, @OpenContrail, and Wingu https://www.openstack.org/vote-vancouver/p

Jakub Pavlik @JakubPav • Feb 17

Please vote for our #OpenStack #Summit session http://www.openstack.org/vote-vancouver/presentation/openstack-ousts-vcenter-for-devops-and-unites-it-silos-at-avg-technologies … @OpenContrail #AVG deployment

OpenStackNetherlands @OpenStackNLD • Feb 17

Creating a secure multi-tenant production ready #OpenStack #Cloud: http://tinyurl.com/mooqn6p by @OpenContrail @symantec @Workday @LithiumTech

Steven Noble @sonoble • Feb 14

@jmckenty I'm going to take your input and do a bit more with @OpenContrail it's a good fit for @SDNTesting

Steven Noble @sonoble • Feb 19

From here we integrate #FPM -> @OpenDaylightSDN, @ONLab_ONOS, @OpenContrail feeding the routes directly in cc @OSRForum @NetDefOrg

Edgar Magana @emaganap • Feb 19

Yeah!! @opnfv is also working with @OpenContrail I am glad to see all this hard work and looking forward to try the first release!

Martin Millnert @MartinMillnert • Feb 28

Feeling satisfied over great improvements with @OpenContrail DPDK work - https://www.youtube.com/watch?v=ZGiQJrKoDQM … 0.5 -> 4Mpps, untuned. Want to try it!

Jesse Proudman @blueboxjesse • Feb 27

@jmckenty Just spent the day at @JuniperNetworks talking @OpenContrail. Couldn't agree more. What a meaty platform.

Joshua McKenty @jmckenty • Feb 27

Still convinced that @opencontrail is the most important thing @JuniperNetworks is doing.

Demo Videos

We've a dedicated YouTube video channel for OpenContrail - http://www.youtube.com/user/OpenContrail. Here, you will see a variety of different use cases being demonstrated, as well as events where the sessions have been recorded. New videos will be added regularly, so make sure you subscribe to the channel to be notified when new videos are uploaded.

Get Involved

If you are interested in having an OpenContrail focused Meetup or workshop in your area, please let us know. We would be happy to sponsor you Meetup event, and help you create a discussion on OpenContrail with your network. Please send any event requests to Chaitanya Kadiyala, Marketing Manager for OpenContrail, at mailto:ckadiyala@juniper.net.

Stay Connected

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Juniper Networks June collect personal information from our customers for a variety of business purposes, such as sales, marketing and customer support. We June share this information with our affiliates, resellers, distributors and third party service providers, which June be located in other countries, as appropriate to achieve such business purposes. We are committed to protect personal information in accordance with applicable laws. For more information, please refer to our privacy policy.

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