Magpie release schedule

Magpie sprint 2 jiras   Magpie sprint 3 jiras
weekly scrum meeting hangouts link

2018/2/12

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Jovana	**Last week**: **Issues:** **This week**:
Eric	**Last week**: **Issues:** **This week**:
Doyoung	**Last week**: **Issues:** **This week**:
Claudine	**Last week**: None. **Issues:** **This week**: No virtualization activity planned.

Discussions:

- Possible interest from Doyoung's colleague in snapshotting. Need to view topology of virtual network - currently this requires a working OFAgent.   Also OFAgent documentation is needed - currently none is available.

Next scrum: 2018/2/19

2018/2/05

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Jovana	**Last week**: **Issues**: **This week**:
Eric	**Last week**: **Issues**: **This week**:
Doyoung	**Last week**: **Issues**: **This week**:
Claudine	**Last week**: None. **Issues**: **This week**: No virtualization activity planned.

Discussions:

Next scrum: 2018/2/12

2018/1/29

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)

Jovana	**Last week**: did not have time to work on vNet tracer **Issues:** **This week**: Work on [VNET tracer (ONOS-6826)](#)
Eric	**Last week**: **Issues:** **This week**:
Doyoung	**Last week**: Preparing code review for developed virtual gateway **Issues:** Did not enough time to finish development yet **This week**: Preparing code review for developed virtual gateway
Claudine	**Last week**: None. **Issues:** **This week**: No virtualization activity planned.

Discussions:

Next scrum: 2018/2/05

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2018/01/22

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Jovana	**Last week**: did not have time to work on vNet tracer **Issues:** **This week**: Work on [VNET tracer (ONOS-6826)](#)
Eric	**Last week**: **Issues:** **This week**:
Doyoung	**Last week**: Define and consider current issues and next topics for virtualization subsystem. **Issues:** Did not have enough time to finish current work about virtual gateway. **This week**: Preparing code review for developed virtual gateway
Claudine	**Last week**: Did not have time to work on virtualization. **Issues:** Will be busy with other activities for the next 3 weeks, so will most likely not have time to work on virtualization activities.

	This week: No virtualization activity planned.

Discussions:

Next scrum: 2017/1/29

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2018/1/15

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week**: **Issues:** **This week**:
Jovana	**Last week**: did not have time to work on vNet tracer; populated N Sprint #2 - Virtualization (vNet tracer ONOS-6826, vNet virtual gateway ONOS-6378 and vNet VirtualGroupProvider) **Issues: -** **This week**: Work on VNET tracer (ONOS-6826)
Eric	**Last week**: Set up environment for STC. **Issues: Run STC net-setup-vnets and exception occurred.** **This week**: Continue with STC.

Doyoung	**Last week**: Continue to bug fixing of virtual reactive forwarding application
	Issues:
	- Prepare to submit codes for review
	    1. Basic virtual reactive forwarding application
	    2. Virtual gateway codes that include CLI for deployment
	    3. Improved virtual reactive forwarding application including virtual gateway feature that is NAT function
	- Need to consider next topic after virtual gateway, It may be failure recovery mechanism in the virtualization subsystem.
	This week: Modify basic virtual reactive forwarding application and virtual gateway codes for code review

Claudine	**Last week**: on PTO **Issues:** **This week**: May not have a lot of time to devote to vBrigade activities.

Discussions:

Next scrum: 2018/1/22

2018/1/8

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week**: **Issues**: **This week**:
Jovana	**Last week**: did not have time to work on vBrigade tasks **Issues**: - **This week**: Work on VNET tracer (ONOS-6826)
Eric	**Last week**: Set up environment for STC. **Issues**: **This week**: Continue with STC.
Doyoung	**Last week**: Did not have enough time for vBrigade tasks **Issues**: **This week**: Bug fixing of virtual reactive forwarding application
Claudine	**Last week**: on PTO **Issues**: **This week**: on PTO

Discussions:

Next scrum: 2018/1/15

2017/12/25

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week**: **Issues**: **This week**:
Jovana	**Last week**: working on VNET tracer (ONOS-6826) **Issues**: - **This week**: Work on VNET tracer (ONOS-6826)
Eric	**Last week**: **Issues**: **This week**:
Doyoung	**Last week**: Did not have enough time for vBrigade tasks **Issues**: **This week**: Did not have enough time for vBrigade tasks
Claudine	**Last week**: on PTO **Issues**: **This week**: on PTO

Discussions:

Next scrum: 2018/1/8

2017/12/18

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week**:

	Issues: **This week**:
Jovana	**Last week**: a little bit of vnet source code inspection **Issues: lack of time** **This week**: Work on VNET tracer (ONOS-6826)
Eric	**Last week**: Fixing STC net-setup **Issues: STC net-setup using Trellis** **This week**: Continue to set up STC for group mod
Doyoung	**Last week**: Revising Virtual Gateway code and preparing to submit the code for code review **Issues: -** **This week**: Continue to revise virtual gateway code and submit the code (until Jan. 2018)
Claudine	**Last week**: on PTO **Issues:** **This week**: on PTO

Discussions:

Next scrum: 2017/12/25

2017/12/11

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week**: **Issues:** **This week**:
Jovana	**Last week**: did not have time to work on vBrigade tasks **Issues: lack of time** **This week**: Work on VNET tracer (ONOS-6826)
Eric	**Last week**: Fixing ONOS cluster setup **Issues: STC net-setup** **This week**: Continue to set up STC for group mod

Doyoung	**Last week**: Not enough time to revise virtual gateway code, because I needed to finish some tasks to finish this semester course **Issues**: - **This week**: Continue to code revision for ONOS-6378 : extended virtual device for virtual gateway
Claudine	**Last week**: on PTO **Issues**: **This week**: on PTO

Discussions:

Next scrum: 2017/12/18

2017/12/04

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week**: **Issues**: **This week**:

Jovana	**Last week**:
	OFAgent Tracer (ONOS-6825):
	    ● Managed to run *onos-buck test* with patch provided by Brian O'Connor https://gerrit.onosproject.org/16177
	    ● Submitted OFAgent tracer for code review and Claudine merged it to master
	    ● WIP: Still debugging onos.py (checks (single) node state for ever)
	ONOS-7045 STC:
	    ● WIP: still debugging onos-minet
	Issues: -
	This week: Work on VNET tracer (ONOS-6826)

Eric	**Last week**: Continue to set up STC for group mod **Issues**: ONOS cluster start up error - unable to determine local ip **This week**: Continue to set up STC for group mod
Doyoung	**Last week**: Conference attendance (CNSM 2017, Japan, Nov.26 ~ Dec.1) **Issues**: -

	This week: Code revision for [ONOS-6378](#) : extended virtual device for virtual gateway
Claudine	**Last week**: **Issues:** **This week**:

Discussions:

2017/11/27

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week**: **Issues:** **This week**:

Jovana	**Last week**:
	 [OFAgent Tracer (ONOS-6825)](#):
	   ● Rebasing and unsuccessfully trying to run *onos-buck test* which runs into infinite loop while checking code style on Ubuntu 16.10 and Ubuntu 17.10 (both for master and my branch); similar issues were reported for Arch Linux
	   ● Debugging onos.py (checks (single) node state for ever)
	 [ONOS-7045](#) STC:
	   ● WIP: still debugging onos-minet
	 Issues - BLOCKER: *onos-buck test* stuck while checking code style
	 This week:
	   ● Submit [OFAgent Tracer (ONOS-6825)](#) for code review without running onos-buck test
	   ● Continue troubleshooting stc tests and onos.py

Eric	**Last week**: Continue with ONOS-6969 to set up STC for group operation. **Issues:** **This week**: Continue with ONOS-6969 to set up STC for group operation.
Doyoung	**Last week**: **Issues:** **This week**: Conference attendance (CNSM 2017, Japan, Nov.26 ~ Dec.1)
Claudine	**Last week**: Was not able to work on stc or ofagent.

	Issues: **This week**: stc with vnet & ofagent

Discussions:

Next scrum: 2017/12/04

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2017/11/20

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week**: **Issues:** **This week**:
Jovana	**Last week**: OFAgent Tracer (ONOS-6825): ● Changed OFAgent API: added OFAgent.tenantId() ● Added unit tests for modified API ● Tested only ad hoc ONOS-7045 STC: ● Managed to run *stc setup* but had timeout for *stc net-setup* (hypothesis: timeout is caused by firewall for OCN although VM firewall is disabled) ● WIP: source code analysis to find CLI command that creates virtual flow **Issues:** It looks like *onos-buck test* runs into infinite loop on Ubuntu 17.10 (both for master and my branch) **This week**: ● Manage to run *onos-buck test* and submit changes done regarding OFAgent Tracer (ONOS-6825) for code review ● Continue troubleshooting stc tests
Eric	**Last week**: Continue with ONOS-6969 to set up STC for group operation. **Issues:** **This week**: Continue with ONOS-6969 to set up STC for group operation.
Doyoung	**Last week**: Restore virtual gateway implementation code (damaged due to an earthquake) **Issues:** Cannot attend next scrum because of conference attendance (CNSM

	2017, Japan, Nov.26 ~ Dec.1)
	This week:
	   1. Submit code review about [ONOS-6378](#)
	   - Virtual gateway creation CLI
	   - Extended virtual device for virtual gateway
	   2. Create new issue about reactive forwarding application for virtual network ([ONOS-7258](#))

Claudine	**Last week**: [ONOS-7045](#) - stc test case for scenario 2 completed and merged in; working on stc which includes ofagent **Issues:** **This week**: stc with vnet & ofagent

Discussions:

Next scrum: 2017/11/27

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2017/11/13

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week**: **Issues:** **This week**:

Jovana	**Last week**:
	   1. [OFAgent Tracer (ONOS-6825)](#) (source code analysis to find the most suitable way to get *TenantId* for given *NetworkId*); after consultations with Claudine decided to add new method(s) to VirtualNetworkService:
	      ○ VirtualNetworkService.getNetwork(NetworkId networkId) - implementation already existed
	      ○ VirtualNetworkService.getTenantId(NetworkId networkId)
	   2. Requested and got VMs on UoB premises
	Issues:
	   ● Blockers: -
	   ● Non-blocking issues:
	      1. Shall I add log entries in OFAgentManager?
	      2. Shall I add log entries in DistributedOFAgentStore?

	This week:
	1. Test (and finally submit for code review) OFAgent Tracer (ONOS-6825)
	2. "Clustering" provided VMs in order to:
	    a. Test ONOS-7045 STC (and try to provide CLI command for creating virtual flow rule)
	    b. Test OFAgent tracer (ONOS-6825)

Eric	**Last week**: Continue with ONOS-6969. **Issues:** **This week**: Continue with ONOS-6969 to set up STC for group operation.
Doyoung	**Last week**: NAT function development **Issues:** 1. Show demo of a virtual gateway - https://www.youtube.com/watch?v=x9nZpX4e_xc 2. A virtual gateway only handles IP4 packets including TCP and UDP 3. Sometimes, DNS packets have problems when they pass a virtual gateway **This week**: 1. Handling ICMP, DNS by a virtual gateway 2. Prepare submit for code review
Claudine	**Last week**:.ONOS-7045 - stc test case for scenario 2 **Issues:** **This week**: Continue with ONOS-7045. PORT_MOD - investigate side effects.

Discussions:

Next scrum: 2017/11/20

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2017/11/06

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week**: **Issues:** **This week**:
Jovana	**Last week**: Trying to run STC in very unusual environment (single node cluster and everything on local machine)

	Issues: Misconfigured very odd STC environment => will use default (and documented) environment
	This week:
	    1. Setup cluster for STC tests according to documentation
	    2. Continue work on OFAgent tracer

Eric	**Last week**: **Issues:** **This week**:

Doyoung	**Last week**: NAT function development
	Issues:
	    1. Initial NAT function for virtual gateway was implemented.
	      - Virtual device is extended to have a boolean value to show it is a virtual gateway.
	      - Insert flow rules to a virtual gateway to translate packet IP address.
	      - These flow rules are installed by a virtual reactive application
	    2. It needs to build testbed to test this function
	      - I'm trying to build testbed in a container by using mininet.
	This week: Continue with NAT function development (Hope to finish this week)

Claudine	**Last week**: All pending code reviews (OFAgent PORT_MOD, GROUP_MOD, METER_MOD; stc test case) were merged into codebase. **Issues:** **This week**: PORT_MOD - investigate side effects; possibly continue with ONOS-7045

Discussions:

1. How to contribute to ONOS code base - Claudine and Jovana use Sample Gerrit Workflow

Next scrum: 2017/11/13

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2017/10/30

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week**: **Issues:**

	This week:
Jovana	**Last week**: **Issues:** **This week**:
Eric	**Last week**: Continue with ONOS-6969. **Issues:** **This week**: Continue with ONOS-6969. Target to deliver in N release.
Doyoung	**Last week**: NAT function development **This week**: Continue with NAT function development
Claudine	**Last week**: Revived GROUP_MOD/METER_MOD code review./ **This week**: PORT_MOD - investigate side effects; possibly continue with ONOS-7045

Discussions:

1. STC test scenarios - where to document?
   a. Use jira's to describe each test scenario that is to be implemented. ONOS-7045 was created for the 2 scenarios that were attempted at the vBrigade meetup in September.
   b. Have OFAgent child page in vBrigade wiki where all desired stc's are listed + some documentation on how to use/run them.
2. PORT_MOD side effects (observed with mininet using OVS switches)
   a. If a port is part of a link, disabling port results in the neighbor port being disabled too. Suggestions received for further investigation:
      i. Use CPQD switches instead of OVS
      ii. Above behaviour depends on the port type (Ethernet) and attributes. OF 1.5.1 spec is clearer about expected behaviour.   Can look at that for guidance.
   b. Disabling a port does not result in removal of flows for that port
3. Daylight savings time has ended/will be ending. So our scrum time will be 1 hour later for areas that do not have time changes.
4. Claudine on pto - Dec. 4 to 12 - Jovana will try to hold the weekly scrums, etc.
5. Tracer/Logger per OFAgent tenant/virtual network
   Objective: enable filtering of logs per specific OFAgent tenant (OFAgent logs) or virtual network (vnet logs)
   Proposal: Following is summary of Karaf capabilities and steps needed to filter logs per virtual network and per OFAgent tenant:
      1. Configure Apache Karaf branded as ONOS to write specifically formatted log entries in separate files (i. e. files different from default *${ONOS_INSTALL_DIR}/apache-karaf-3.0.8/data/log/karaf.log* (see subsection **Apache Karaf logging service configuration** for more

details); separate file(s) must be used because two appenders cannot write to the same file due to synchronization issues

    a. Configure karaf to write log entries with predefined string "VNET_LOGS" from several packages into separate file (needed for filtering per virtual network id)

    b. Configure karaf to write logs (with predefined string "OFAGENT_LOGS") from only one bundle (org.onosproject.onos-apps-ofagent) to separate file

2. Create new CLI commands (aliases, more precisely) that filter log entries per vnetId/tenantId; log related CLI commands are Apache Karaf (not ONOS) CLI commands and (karaf) CLI commands and variables can be defined on the fly or in script *$ONOS_INSTALL_DIR/apache-karaf-3.0.8/etc/org.ops4j.pax.logging.cfg* which is executed at the beginning of each session (see subsection **Apache Karaf shell configuration**).

Apache Karaf logging service configuration:
- Add needed appenders and loggers to log4j configuration file *$ONOS_INSTALL_DIR/apache-karaf-3.0.8/etc/org.ops4j.pax.logging.cfg*. Appender and logger that will add string "VNET_LOGS" to logs from vnet packages is:

--# vnet appender
log4j.appender.vnet=org.apache.log4j.RollingFileAppender
log4j.appender.vnet.maxFileSize=10KB
log4j.appender.vnet.maxBackupIndex=10
log4j.appender.vnet.file=${karaf.data}/log/vnet.log
log4j.appender.vnet.layout=org.apache.log4j.PatternLayout
log4j.appender.vnet.layout.ConversionPattern=VNET_LOGS | %d | %-5.5p | [%24F:%t:%L] - %m%n
log4j.appender.vnet.appender.append=false

log4j.logger.org.onosproject.incubator.net.virtual=TRACE, vnet
log4j.additivity.org.onosproject.incubator.net.virtual=false

log4j.logger.org.onosproject.incubator.store.virtual=DEBUG, vnet
log4j.additivity.org.onosproject.incubator.store.virtual=false

log4j.logger.org.onosproject.cli.net.vnet=INFO, vnet
log4j.additivity.org.onosproject.cli.net.vnet=false

--
Appender and logger for OFAgent looks like this:

--

 # OF_AGENT appender

l#OFAgent

log4j.appender.ofagent=org.apache.log4j.RollingFileAppender

log4j.appender.ofagent.maxFileSize=10KB

log4j.appender.ofagent.maxBackupIndex=10

log4j.appender.ofagent.file=${karaf.data}/log/ofagent.log

log4j.appender.ofagent.layout=org.apache.log4j.PatternLayout

log4j.appender.ofagent.layout.ConversionPattern=OFAGENT_LOGS | %d |

%-5.5p | [%24F:%t:%L] - %m%n

log4j.appender.ofagent.append=false

log4j.logger.org.onosproject.ofagent=TRACE, ofagent

log4j.additivity.org.onosproject.ofagent=false

Apache Karaf shell configuration:

- According to [karaf-3.0.x documentation](#) Apache Karaf shell CLI command *log:display* accepts logger as an argument. If karaf CLI command *log:display* can be configured to display logs from files other than default *${ONOS_INSTALL_DIR}/apache-karaf-3.0.8/data/log/karaf.log* (i. e. for loggers that use appenders that write to other files) it is enough to create following CLI commands, i. e. aliases to enable log filtering:

  onos>filter_vnet_logs = { log:display | grep "VNET_LOGS" | grep "$1" }
  onos>filter_ofagent_logs = { log:display | grep "OFAGENT_LOGS" | grep "$1" }

- And use new aliases in form:

  onos>filter_vnet_logs <vnet_id>
  onos>filter_ofagent_logs <tenant_id>

Potential (nonblocking) problem: Apache Karaf branded as ONOS cannot be configured to display logs from different files. **Workaround:** Create new CLI command by copying *log:display* source code and making file name/path configurable.

Next scrum:

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2017/10/23

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**Last week:** **Issues:** **This week:**
Jovana	**This week:** Away this week.
Eric	**This week:** Continue with ONOS-6969.
Doyoung	**Last week:** Developing NAT function development **Issues:** Consider to subdivide a jira issue about a virtual gateway into small pieces **This week:** Continue with NAT function development
Claudine	**Last week**: On PTO 2 days. Added STC test case ONOS-7045 - **Issues:** **This week**: Continue with PORT_MOD

Discussions:

1. Quick demo given on vnet stc test case ONOS-7045. Useful link: Developing Your Own STC Test
    a. Current STC is a very simple one - one virtual network with one virtual device with 2 hosts connected to it.
    b. Need a test where we demonstrate that multiple virtual networks does not affect each other (for example, YoonSeon demonstrated creation of 2 virtual networks, each has 2 hosts, and the host of 1 virtual network cannot ping a host of the other virtual network).
    c. There will be several other scenarios - we need to capture them somewhere.

Next scrum:

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2017/10/16

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	
Jovana	Work on OFAgent logger/tracer - Existing email on appenders for - Display log - karaf.log -
Eric	I start working on ONOS-6969.
Doyoung	**Last week:** Reassign ONOS-6378 about virtual gateway implementation to Doyoung. Design NAT function for virtual gateway. **Issues:** 1. Developing NAT function for virtual gateway. 2. Developing reactive forwarding application for general tenant. - Planning to Insert this issue to jira. - Modifying original application by Yoonseon for general test cases. **This week:** Continue with two issues above.
Claudine	**Last week**: **This week**: Continue with PORT_MOD investigation; STC test case

Discussions:

Next scrum: October 23, 2017

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2017/10/09

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	**This week**: Away on personal leave till Oct. 17th.
Jovana	Work on OFAgent logger/tracer
Eric	I start working on ONOS-6969.
Doyoung	**Last week:** Survey and design for virtual gateway implementation **Issues:** Need to define and implement virtual gateway functions. The first step is for NAT function. **This week:** Design NAT function for virtual gateway implementation, Reassign ONOS-6378 about virtual gateway to Doyoung
Claudine	**Last week**: PORT_MOD controller to switch command. ● Investigation into what is required in vCore (Virtualization core) to support enabling/disabling of virtual port. ● Created ONOS-7096 for vCore work ● Submitted initial vCore code to support virtual port enable/disable **This week**: Continue with PORT_MOD investigation

Discussions:

Next scrum: October 16, 2017

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2017/10/02

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Nithya	
Jovana	**This week**:At GÈANT symposium, Budapest.
Eric	
Doyoung	**Last week:** Attendance at APNOMS 2017. **Issues:** Need to define functionality and design for virtual gateway. Need to create jira after discussion with Yoonseon.

	This week: Continue survey and design for virtual gateway implementation
Claudine	**Last week**: PORT_MOD controller to switch command. **Issues**: More than OFAgent work is required - DeviceAdminService has not been implemented in the core, and in virtual providers. PORT_MOD requires DeviceAdmnService.changePortState. **This week**: Continue with PORT_MOD investigation

Discussions:

1. Eric has circulated a intro on openflow group operations link (https://floodlight.atlassian.net/wiki/spaces/floodlightcontroller/pages/7995427/How+to+Work+with+Fast-Failover+OpenFlow+Groups).   Thanks, Eric.
2. Mailing list google group has been created for active members - onos-vbrigade-active@googlegroups.com.   A couple of emails have been sent to this group (Sep. 25, Oct. 2).   Please let Claudine know if you have any issues with receiving emails sent to this group.

Next scrum: October 9, 2017

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2017/09/25

Scrum notes:

1. All active members attended the vBrigade meetup (Sep. 18, 19); and most members attended the ONOS Build event (Sep. 20-22).
2. Activities for this week:
   a. Jovana: tracer/logger
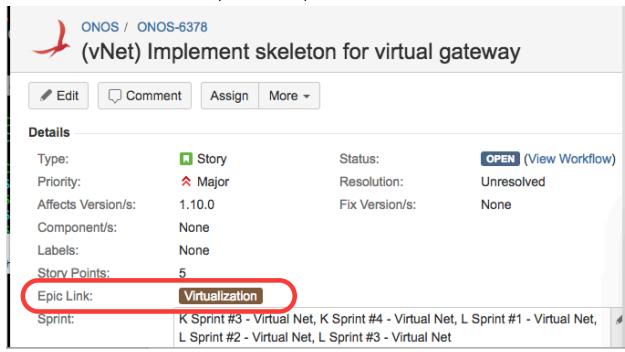   b. Doyoung: external gateway
   c. Nithya: OFAgent meter stats
   d. Claudine: OFAgent PORT_MOD

Discussions:

1. Brigade mailing list brigade-virtualization@onosproject.org consists of active brigade members and the general public.   We need a mailing list that consists of active brigade members only where we can share information that is not ready for sharing with the general public (e.g. Doyoung's slides on external gateway).

2. Jira creation help is available at:
   https://wiki.onosproject.org/display/ONOS/Using+Jira+to+create+an+issue%3A+bugs%2C+feature+requests%2C+documentation.
   a. In addition to above instructions, please set "Epic Link" to "Virtualization"

3. Magpie sprint 2 is starting this week:
   a. Magpie Release Planning Presentation is available at
      https://docs.google.com/presentation/d/1RRh9JyvWpO251FlhP3H--ni7btwydGl54zkXuJOXwoI/edit#slide=id.g1b31e1cbda_3_6. See slide 5 for Magpie schedule.
   b. Sprint 2 is 4 weeks (9/26 - 10/20)
   c. We plan to include the following work items in this sprint.

Jira id	Jira summary	Notes
ONOS-7045	Creating virtual SDN networks for tenants - usecase STC	Jovana
ONOS-6825	(OFAgent) Logger/Tracer per tenant on OFAgent	Jovana
ONOS-5475	(OFAgent) Handle stats request message	Nithya - Meter stats
	External gateway - basic functionality	Doyoung (need to create jira)
ONOS-5457	(OFAgent) Handle controller to switch command messages	Claudine

============== Scrum notes template ==================

2018/2/12

Scrum notes:

Member	Details (Last week's activities, Issues, This week's activities)
Jovana	**Last week**: **Issues**: **This week**:
Eric	**Last week**: **Issues**: **This week**:
Doyoung	**Last week**: **Issues**: **This week**:
Claudine	**Last week**: **Issues**: **This week**:

Discussions:

Next scrum: 2018/2/19

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