

## ***OpenMuL SDN Controller - FAQs***

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## **1 Where can one find the logs of OpenMuL controller?**

It can be found along with system log files usually placed in /var/log/syslog

## **2 Controller software stopped working. What to do?**

Check log files to find any errors. Mail us at [support@openmul.org](mailto:support@openmul.org)

## **3 Is it possible to use Mul controller to support HA with Openflow 1.0?**

Yes, it is possible to support HA based on Openflow 1.0 switches if they support connecting to two controllers at the same time. However this feature has not been properly validated with Openflow 1.0 switches. We suggest to use HA feature with compatible OF1.3 switches

## **4 Addition of entries such as flows/groups/meters using CLI or restful interface returned failure? How to check what went wrong?**

The failure reason can be found by analyzing the log files. Users can also run the controller components in verbose mode to get more information.

## **5 Is there a way to check or dump Openflow transactions happening inside MuL controller?**

Yes. The easiest way is to run mul director/core component with -p option ( ./mul -p ) which will enable dumping of all valid Openflow transactions with all switches. Alternatively, one can also use cli command to configure per switch RX or TX based dump enable or disable commands.

## **6 Does controller install any default flows to a switch after connection setup with controller?**

Yes. Controller will install default entries per table to redirect all unknown flows to itself.

## **7 Is there a way to stop installing default flow entries to a switch after connection setup with controller?**

Yes. One has to run MuL director/core component with -n option ( ./mul -n ) which will disable this behavior.

## **8 Does controller clear any existing flow/group/meter entries in the switch after connection setup?**

No, controller will not clear any such stale entries. Instead controller will read existing entries when it boots up.

## **9 Can MuL controller in HA mode prevent split-brain syndrome when there is a prolonged period of network outage which might prevent HA heartbeats to fail?**

Yes. Once communication resumes, the controllers will renegotiate and assume slave or master roles.

## **10 How does MuL controller handle packet-ins at line rate sent by switches?**

The controller runs rate-limiting algorithm to discard packet-ins received at a rate higher than a configurable rate (please check CLI documentation regarding this). However this rate-limiting algorithm runs in software and may not be effective to deal with this. Users can also configure meters (OF1.3 feature) to do similar throttling in the switch itself before sending packet-ins to controller.

## **11 The flow/table/group statistics shown by CLI doesn't seem to be getting updated. What is the reason?**

The controller gathers statistics only for those entries for which stats is enabled and to prevent overwhelming the controller, the stats polling timeout happens every ~5 sec so users may experience a slight delay in the updated stats displayed.

## **12 Can MuL controller run in active-active mode instead of active-slave?**

MuL controller core can run in active-active mode but all currently available applications may not support this mode and result in undefined behavior.

## **13 What is the turnaround time if users request an urgent SDN feature to be included in the controller software?**

Normally we do our best to support all the requests from all users but each request has to be evaluated by development team before we can commit to a release schedule for the same.