OVS vs IVS

Tuesday, September 6, 2016 3:28 PM

http://www.projectfloc
of-indigo-v2-0-and-loxi/

Indigo 2.0 framework.

Hi experts
I need a small help. I would like compare OVS and IVS (Indigo) from the following point of view. Could you please share the pointer or data if you have anything in ur hand.

1) architecture
2) Supported feature (like ofdpa, TTP, etc)
3) Uses cases (where can be used ? Enterprise DC and etc)
4) Not supported features (not supported currently, planning to implement latter)
5) Feature development (which area is going to be focused ?)
6) Scalability data
7) Adaptability with other switches (where it can fit and where it can't fit)

It is really hard to have all these info. But, if you have them, please share. It would be really helpful.
Thanks,
~kals~

From <https://groups.google.com/a/openflowhub.org/forum/#!topic/floodlight-dev/5L36KImD5Cg>

Hi Kals,
I think this is a question best suited for the OVS and Indigo mailing lists.
(1) I would check each's website for docs on this. They're both OSS, so you can also poke around in the source if you need to :-)
As for (2), OVS could certainly mimic an OF-DPA architecture if you restrict the capabilities of each table in the pipeline accordingly. IVS has an OF-DPA agent written with the Open Network Linux project. You can find more information about the project here:
http://opennetlinux.org
I have also written an OF-DPA driver within Floodlight to ease installing L2 forwarding flows on an OF-DPA switch.
(3) Both OVS and IVS can be used as you see fit, be it a DC, campus/enterprise network, etc.
(4) Both support OpenFlow. That's about all I can say on that, since each likely has subsets of the OF protocol that they have either not implemented or have not implemented fully. For example OVS does not support meters last I checked but does support some OF1.4+ features like bundles.
(5) Better question for the developers of each project. I think OVS has a TODO/priority list somewhere in their GitHub repo.
(6) Don't know, although each can scale up to the capabilities of the device they're running on. OVS, if run on some general purpose server can't be expected to scale beyond the capabilities of that server. There are some vendors (e.g. Pica8) that run OVS onboard. As such, you can expect line rate performance in hardware flow tables. IVS can also be run on hardware platforms (e.g. I've done it on Pronto).
(7) From the perspective of other switches, both OVS and IVS are a part of the data plane. Assuming the controller they're connected to implements link layer protocols like LLDP, then the other switches should be able to e.g. discover links. However, integrating an SDN into a traditional network can be challenging.

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Refer to this awesome link:
https://github.com/Broadcom-Switch/of-dpa/issues/16

Ahmed/Kals:
For the demo purpose we did a pretty straight forward demo of a just installing few flows in a single table . We are still evaluating the benefits of using the OVS with OFDPA .One of the obvious reasons(bigger scope of question) is broadcom chipset itself cannot express full functionality of openflow then why take a bigger pain of doing something new.
May be we would go with indigo as the agent who has the entire agent integrated with the OF-DPA and it has been validated by multiple folks/communities.

I am just curious what made you guys to choose OVS over indigo ?

From <https://github.com/Broadcom-Switch/of-dpa/issues/16>