2023-04-05 Agenda and Minutes

New Time: 6AM Pacific Wednesday. 3PM CET, 2PM GMT, 1930 India time   US is on Standard Time. Pacific time is UTC+0800.   **US Daylight Savings Time (clocks move ahead 1 hour)**

- Attendees
- Agenda
- Progress for NILE Release

Attendees

Al Morton Sridhar Rao Trevor Cooper

Agenda

main topics today: UNH IOT Transition.   Other possibilities:

Item	Desc	who	Notes/minutes
	UNH transition	All	Sridhar working on a bug with the deployment of eBPF-based solutions, intending to benchmark the OVS and VPP, North Bound userspace CNI.
			May need special network connectivity to restore our Node back2back capability (from Intel lab)
			Sridhar will contact Fulvio Risso in Italy for possible chat and maybe some collaboration - just want to learn from his experiences.
			Have began to move IXIA generator to UNH, for connection there to the pod we are using.
			Notes of 29 Mar 2023 Sridhar has started setup in the new testbed. Seems stable and going well. VPN is good stability. Need a few more days to get going (all the basic stuff needs to be setup.) Completing install of PROX and Trex.
			eBPF support varies from OS to OS: Different form Ubuntu 20.04 to 20.04 - strange - trying to create superset of library of eBPF support and deployment. Needed kernel rebuild in one system, but not in another - so need to re-build to to be safe or check in the kernel. All the details must be known so that the automation works.
			Sawyer Bergeron says that the booking has been extended to **late May, 2023.**
	CN Perf Verification	Trevor and Luc	Market in Edge-cloud Infra..structure. For smallish Companies who need to make decisions on their deployments, but don't have the people or expertise to do the work in a timely way.
			Sridhar - Are you in an SI – What is this? has established suppliers and a complete framework.
			Sridhar - HW gives SW compatibility only, visa-versa, but do not guarantee specific performance. They begin and end with their Compatibility Lists, but in reality this is not enough! They may never get the performance they are promised, then finger-pointing between CNF and HW vendors. There is an enormous amount of stuff to configure.
			acm - TCO is the most important aspect of this proposal - modeling is hard, cores/resources can be stranded. Networking costs can be really high - swamping the rest of costs!
			Sridhar - work-out what the follow-up would be, every time the HW or SW changes (frequent event). Training can be a part of the solution - but only if the customer will build or have access to a lab.
			Sridhar - Artifacts should include the golden configurations.
			Sridhar - Also provide Root-Cause Analysis - benchmarking with bottlenecks identified.
			acm - power benchmarking - see https://datatracker.ietf.org/doc/html/draft-manral-bmwg-power-usage-04
			Sridhar - apart from solving today's problems, additional HW adds complexity and performance improvements - can ID ability to solve the next generation of problems (DPUs and beyond).
			Sridhar - How are Tier 1 Operators doing this? A Major question = Obsession with Tier 2 and lower.
	Student Volunteers	Federica	Notes from 22 Mar 2023 No news on Student Candidates. (from student forum)
			It would be to know the school deadline. - It is the entire Semester.
			ViNePerf will not do an LFN internship this year.
	Deepdive on eBPF XDP AF_XDP	Sridhar	Note from 22 Feb 2023 First step is to verify that a single L2 forwarder will work (Cillium's ability to use DPDK is in question)

	Discussion: Contribution on Containerized network benchmarking in BMWG session IETF-115	All	
	UNH transition	All	Given that our Pod terminated (time-out) is there any way to recover? Or better to start from scratch? Can automate the IP addrs assignments for all the traffic links - How? Can Config.YAML really work? or is Ansible better?
	Testbed - IXIA support	Srid har /Al	Tim Gresham asks for resolution on this. If we can get it, do we want it? No good without license! So, is a license still valid or available for update? THEN - need to ship and install in UNH, get working there - IXIA help to do this. 04 May 2022 Trevor Cooper says connected and powered on, but we still might have a license issue. Need Pierre's help. 11 May 2022 this activity seems to have stalled ... Pod 19 also not accessible - Dan Xu.

Progress for NILE Release

(summary: items 5,6,and 7 lack the necessary automated address discovery feature, defer)

see Nile Release Schedule Nile Release Progress page   M4 currently due on Dec 9,   M5 due on Dec 16

1	Update OS versions https://jira.anuket.io/browse/VINEPERF-673	Tasks: 1. DPDK 2. Qemu 3. Operating Systems 4. Containers	Tasks 1, 3, and 4have been completed/merged. Not doing 2. DONE		
2	Automate setting up eBPF-based CNIs - xdp, cilium, calico. https://jira.anuket.io/browse/VINEPERF-677	setup - xdp, cilium, calico.	Patch submitted patch, will request review.		
3	Improve the ViNePerf Build Stability https://jira.anuket.io/browse/VINEPERF-675	Starting from the build to the 3 environments 1. baremetal 2. openstack and 3. K8s	Testing in-progress: either run in OS or K8s - 2 and 3 are challenging and 3 is the priority.		
4	eBPF Metrics Collection https://jira.anuket.io/browse/VINEPERF-674	Task: Develop Tool to collect metrics from eBPF programs.	Existing tool, just running it with a script Skywalking from Apache skywalking-rover possible eBPF plugin in collectd - propose for barometer or KDDI -		
	Tasks below are deferred from Moselle - likely Defer Again because container networking support is poor and requires significant work-arounds.				
5	Epic-**VINEPERF-652**:Enhance XTesting-ViNePerf Integration	Moved to Next Release	depends on 7		
6	Task-**VINEPERF-658**:Enhance framework for XTesting-K8s Usecase	Partially done (reading results from output), Deployment tool.	1 task remains		

7	Task-**VINEPERF-654**:XTesting-ViNePerf Integration Enhancement - Kubernetes	Will not implement due to limitations with CNIs. Moved to Next release - if CNIs support this.	Need CNI to add flows automatically in Switches (Userspace-CNI, supports DPDK, OVS, VPP). Major impediment to integrate with X-Testing Sridhar will check with Xavier if ARP resolution is supported in Prox as a switch TBD			