2021-08-06 AI/ML for NFV Meeting Minutes

Attendees

Sridhar Rao

Steve Casey

Beth Cohen

Kanak Raj

Jahanvi Ojha

Akanksha Singh

Ildiko Vancsa

Sl. No.	Topic	Presenter	Notes
1	Project Status		Finally Approved. Thoth will be official name. Gitlab/github/gerrit/jira/slack everything with 'Thoth' Home Page is update: Thoth ToDo: 1. Open LF IT Ticket to get all those things created. Once it is created, we can start uploading our sources.
2	Data Status		**Exact File-names for Link and Node Failures** Need updates from Rohit and Girish
3	Model Status		Implementation Ongoing. Target Date: 15 August 2021 Steve Casey: 1. It makes sense to first start with Decision Trees / Classifiers – **Which will make it easy to 'understand and explain' what is happening.** 2. **In failure definition, you may have to consider 'planned'/'maintenance' shutdowns.** 3. **Failure, especially with VMs, typically occurs due to:** a. **Memory Leaks** b. **Hangs** *** General Tip: For any failure ensure to differentiate true-failure from planned-failure (ex for link: maintenance /fiber-cut) ***
4	TVLV-Tool Goal: Create Failure		stress-ng based Start-load, Time-Step, Load-Step. What constitutes the load: **CPU: utilization, operation** **Memory: read-size, write-size, read-rate, write-rate** **Storage: read-size, write-size, read-rate, write-rate** **Network: TCP and UDP.** Beth Cohen: Yes, by doing so, there are '**good chances**' it may lead to failure. Steve Casey: 1. Another option: **run an opensource-VNFs and, run a Traffic through it. packet-processing: Encrypt /Decrypt** Repeat these for K8S case too.

4	Tools - AlgoSelector (a) Graph Creation Status (b) Implementation approach status		1. Rule-Based Chatbot - Still not clear-cut choice of Opensource. 2. django form - dynamic multi-step form. 3. CLI library. Kanak: 1. https://github.com/jdm/asknot 2. https://spinningup.openai.com/en/latest/ Steve Casey Reinforcement Learning: Not looked at RL yet. Semi-supervised is used as alternative. environment parameter: Network State Adapt: Traffic Policies Casey: For this usecase, as there is "boundary" for these adaptable parameters, RL is not really reqd., we can use other algorithms/approaches.