2021-07-30 AI/ML for NFV Meeting Minutes

Attendees

Sridhar Rao

Rohit Singh Rathaur

Girish L

Kanak Raj

Al Morton

Akanksha Singh

<table>
<tr><th>Sl. No.</th><th>Topic</th><th>Presenter</th><th>Notes</th></tr>
<tr><td>1</td><td>Committers and Contributors</td><td></td><td>Girish and Rohit will be Committers.

Rest will be Contributors.

Sridhar to complete the info.yaml - and accordingly create (a) Slack.</td></tr>
<tr><td>2</td><td>Data Status</td><td></td><td>Failure Prediction using AI/ML in NFV Environments : The Data description is updated.

ToDo: (a) Location of the Node Failure events (b) Location of the Link Failure events.

<table>
<tr><th>Failure Type</th><th>Data Model Status</th><th>Availability</th><th>Creation Possibility</th></tr>
<tr><td>Node</td><td>IN PROGRESS</td><td>NO</td><td>Difficult</td></tr>
<tr><td>Links</td><td>IN PROGRESS</td><td>NO</td><td>OK</td></tr>
<tr><td>VM</td><td>YES</td><td>YES</td><td>Difficult (Experimental WIP)</td></tr>
<tr><td>Container</td><td>YES</td><td>NO</td><td>Difficult (Experimental WIP)</td></tr>
<tr><td>Application</td><td>IN PROGRESS</td><td>YES</td><td>Difficult</td></tr>
<tr><td>Middleware</td><td>IN PROGRESS</td><td>NO</td><td>Difficult</td></tr>
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</td></tr>
<tr><td>3</td><td>Failure Prediction Implementation Status</td><td></td><td>2 Approaches to Enhance the model.

1. LSTM - RNN. (ongoing)
2. GNN -

15th – Plan to complete both enhancements.

Complete the testing with existing data by End of August.

Implementation is Ongoing - Testing will be blocked until we get some data. Continuing with the existing data.

Jupyter-Notebooks.

If Testing of the models with more Real-world data is not possible - consider doing Gap-Analysis on (Trend/Pattern and Anomaly Detection)</td></tr>
<tr><td>3</td><td>Volunteers - AlgoSelector</td><td></td><td>Kanak: Reinforcement Learning. Going through the articles. Unable to really find right reasoning. When to use which algorithm.

List the algorithms that are part of reinforcement learning - Start 2-3 algorithms. Applicability of these algorithms - when to use points.

Algo-Selector

Implementation Approach:

Chatbot

Use: Decision Tree (Rule-Based).

Goal: Which Python module/project to reuse.</td></tr>
<tr><td>4</td><td>TVLV-Tool - Update.</td><td></td><td>APIs to config and start is completed. Stop API is ongoing.

ToDo: Containerizing and creating VM.</td></tr>
</table>

5			