SE Intern Project Proposal

Proposer Name:

Vertical Team or Organization:

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| Project Details | |
| **Project Title** | Integrate (and Automate) Junos Telemetry with AppFormix |
| **Current State**  **(Problem Statement)** | Juniper has a great global presence with the MX routers. One of the main pain points of customers is ‘how to monitor/visualize the usage/capacity of their Juniper devices’. While SNMP works well, it has its own set of limitations.  To tackle this, Juniper came up with an extremely innovative solution: JTI.  Now the issue is that we still need to rely on a third-party tool (like OpenNTI) to consume all the information that JTI can produce.  Juniper also has a software-product offering called AppFormix, which has the potential to be our one-stop-solution for monitoring all kinds of hardware/software devices: whether it’s networking devices or computes or storage.  The problem here is that we do not have an official integration between JTI and AppFormix.  We (field SE’s) can do a great job of selling JTI and AppFormix separately, but we’ll be much more effective (and much more successful) if Juniper can officially integrate JTI with AppFormix and sell it as a single product/solution to our customers.  The end-users will be our customers, and mostly their Network-Engineers/SREs/Operations-Engineers.  PS: our new QFX line of switches (QFX5110) also supports JTI. So, the possibilities are endless if we can officially integrate (and announce) the integration of JTI with AppFormix. |
| **Expected Outcome**  **(Solution)** | In the end-game: there would be a one-click solution which will integrate JTI with AppFormix.  The customers will then be able to visualize the load/capacity of their Juniper devices in real time, and will also be able to set automated/dynamic alarms based on machine-learning-based thresholds. This will save them a lot of time in trying to ‘keep the lights on’.  It’ll also mean less-outages as they can be proactively avoided. It’ll make everyone’s life much easier! |
| **Final Deliverable(s) Date and Format(s)** | Deliver a software (script or ansible-playbook or an AppFormix-plugin) that will automatically integrate JTI with AppFormix. Also, deliver clear instructions on how a single-click enables the users to see their Juniper devices’ JTI data in real-time. |
| **Resources required** | 1x MX, 1x QFX5110, 1x AppFormix controller |
| **Skills required** | Ansible, Python, minimal JunOS knowledge required (only a couple of CLI config statements needed) |
| **Difficulty Level** | Moderate – Project scope is well defined but the path to solution will take some creative thinking, innovation and cross-functional collaboration. There is a known subject matter expert who could offer guidance if the intern gets stuck.  This integration can be done today with custom scripts, or a manual effort. The beauty would be to make it a single-click-solution. On paper, it should be really easy. But marking it as ‘Moderate’ because we need to make it as simple as possible for the user. |
| **Time Estimate** | 4-5 weeks, at max |
| **Mentorship** | YES! I’m extremely passionate about this, and have already done this manually. The TT aliases have returned radio-silence. I’ll certainly make time to mentor our interns on this project. |