

OOF (SON) in R5 El Alto, OOF (SON) in R6 Frankfurt

The Base PCI (SON) Wiki is at: [5G - OOF and PCI \(Casablanca carry-over items\)](#)

Weekly Meetings: OOF-SON Meetings

Frankfurt demo was given at LFN DTF Virtual F2F Meetings on June 24, 2020:

Slides: [OOF_SON_Frankfurt_demo_20200624_v2.0.pptx](#)

Recording: https://wiki.lfnetworking.org/download/attachments/40370243/ONAP_5G_OOF_SON_use_case_demo.mp4?api=v2

R5 El Alto Carry-over

Two Jira carry over items in SDN-C

R6 Frankfurt development

1. Functional enhancements:

- Onboard RAN-Simulator as an official ONAP component (e.g., as part of Demo VNFs repo or Integration test repo),
- Contribute to ConfigDB (or RuntimeDB) enhancements for SON use case (including any impacts in SON-Handler MS, OOF and SDN-C) => this scope currently only includes yang model driven automatic Config DB schema and API generation.

2. Alignment with O-RAN

- Netconf config (O1-CM interface), yang model sourced from OIM => this is now de-scoped as we don't have yang models from O-RAN as of Jan 20th, 2020
- VES messages for config-update notifications also => the scope only includes reception of DMaaP message by SDN-R that would be triggered when RAN sends a VES config-update message. The real VES message sending as well as reception by VES Collector in DCAE is de-scoped as we don't yet have the VES message definition from O-RAN.

3. Control Loop Co-ordination (CLC)

Demonstrate CLC with PCI and ANR CLs

4. Optimization feature enhancements (stretch goal)

Adaptive SON functionality

DEVELOPMENT IMPACTS

PRO JECT	PTL	User Story / Epic	Requirement
A&AI	James Forsyth	Epic#1 - OOF/SON Enhancements	E1a: Models & relationship between Config, Operational DB & AAI
AAF	Jonathan Gathman		
APPC	Takamune Cho		
CLA MP	Gervais-Martial Ngueko	Epic#1 - OOF/SON Enhancements	Control Loop Deployment
CC- SDK	Dan Timoney	Epic#1 - OOF/SON Enhancements	Enhance Yang model to align with 3GPP and O-RAN Configuration/Operational Database, Config History (e.g. to revert changes) RAN Simulator – enhance and include in ONAP codebase*

DCAE	Vijay Venkatesh Kumar	<div> DCAEGEN2-1888 - Impacts for OOF SON use case in Frankfurt release CLOSED </div>	Other impacts to be addressed in DCAE: <div> DCAEGEN2-1811 - dcaegen2-services-son-handler vulnerabilities CLOSED </div> <div> DCAEGEN2-1433 - CSIT for SON-Handler CLOSED </div> Java 11 migration (Stretch goal)
DMAaP	Mandar Sawant	NA	No impact
External API	Matthieu Geerebaert	NA	No impact
Integration	Morgan Richomme	<div> INT-1330 - 5G OOF SON CLOSED </div>	
MODELING	Hui Deng	NA	No impact
Multi-VIM / Cloud	Bin Yang	NA	No impact
OOF	Shankaranarayanan Puzhavakath Narayanan	<div> OPTFRA-616 - OOF SON use case impacts for Frankfurt release CLOSED </div>	Dynamic and static optimization, Dmaap interface, Harden the OOF features supporting SON
POLICY	Pamela Dragosh	<div> POLICY-2162 - This epic covers the work to support enhancements to the 5G OOF SON Use Case. CLOSED </div>	Enhance the Policy functionality for Control Loop Coordination
PORTAL	Manoop Talasila	NA	No impact
SDN-C	Dan Timoney	<div> CCSDK-1654 - Integration of ORAN YANG models in CCSDK to support SDNR/Non-RT RIC CLOSED </div> <div> CCSDK-1796 - O-RAN compliant A1 adaptor CLOSED </div>	Related O-RAN Jira: https://jira.o-ran-sc.org/secure/RapidBoard.jspa?rapidView=7&projectKey=OAM&view=detail&selectedIssue=OAM-9
SDC	Ofir Sonsino	NA	No impact
SO	Seshu Kumar Mudiganti	NA	No impact
VID	Ittay Stern	NA	No impact
VNF RQTS	Steven Wright	NA	No impact
VNF-SDK	Weitao Gao	NA	No impact
CDS	Yuriy Malakov	NA	No impact

List of PTLs: [Approved Projects](#)

Test cases

No.	Description	Involved components	Status
1	Successful reception and handling of Dmaap message by SDN-R with CM notification (simulated from RAN).	Dmaap, SDN-R	NOT YET TESTED
2	Successful update of ConfigDB with CM notification updates by SDN-R (upon reception of CM notification over Dmaap from RAN)	SDN-R, Dmaap	NOT YET TESTED
3	Control Loop co-ordination – denial of 2 nd control loop trigger (by Policy) received from SON-Handler MS when first control loop is active	SON-Handler MS, OOF, Policy, SDN-R, RAN-Sim	NOT YET TESTED
4	Control Loop co-ordination – re-submitting of 2 nd control loop trigger (by SON-Handler MS) and initiating appropriate actions	SON-Handler MS, Policy, SDN-R, RAN-Sim	NOT YET TESTED
5	Keep track of PCI updates being successfully implemented in the RAN and update DB accordingly for future optimizations.	SON-Handler MS, Policy, SDN-R, RAN-Sim	NOT YET TESTED

6	Trigger OOF for adaptive SON with FixedPCI cell list (by SON-Handler MS) when previous PCI updates are not implemented in the RAN	OOF, SON-Handler MS	NOT YET TESTED
7	Yang-model based schema and API generation for ConfigDB (PoC only)	ConfigDB	NOT YET TESTED

Detailed Impacts

Refer to the child wiki pages for the detailed impacts.

SUPPORTING FILES



OOF_SON_Frankf..._20190913.pptx

Dec 20, 2019 version of OOF-SON Frankfurt slide deck:



OOF_SON_Frankf..._20191220.pptx