

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	DCAEGEN2-1888 - Impacts for OOF SON use case in Frankfurt release CLOSED	Other impacts to be addressed in DCAE: DCAEGEN2-1811 - dcae-gen2-services-son-handler vulnerabilities CLOSED DCAEGEN2-1433 - CSIT for SON-Handler CLOSED Java 11 migration (Stretch goal)
DMAaP	Mandar Sawant	NA	No impact
External API	Matthieu Geerebaert	NA	No impact
Integration	Morgan Richomme	INT-1330 - 5G OOF SON CLOSED	
MODELING	Hui Deng	NA	No impact
Multi-VIM / Cloud	Bin Yang	NA	No impact
OOF	Shankaranarayanan Puzhavakath Narayanan	OPTFRA-616 - OOF SON use case impacts for Frankfurt release CLOSED	Dynamic and static optimization, DMAaP interface, Harden the OOF features supporting SON
POLICY	Pamela Dragosh	POLICY-2162 - This epic covers the work to support enhancements to the 5G OOF SON Use Case. CLOSED	Enhance the Policy functionality for Control Loop Coordination
PORTAL	Manoop Talasila	NA	No impact
SDN-C	Dan Timoney	CCSDK-1654 - Integration of ORAN YANG models in CCSDK to support SDNR/Non-RT RIC CLOSED CCSDK-1796 - O-RAN compliant A1 adaptor CLOSED	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