

Open sourcing OAM

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What Dell is doing in O-RAN Area?

Dell in O-RAN Ecosystem

(standards groups and industry associations)



Participant and Contributor



TELECOM INFRA
PROJECT
Board Member



A GLOBAL INITIATIVE

Full Member

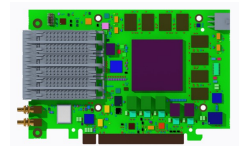


Founding Member

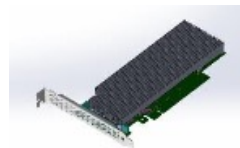


L1 Acceleration

Dell's In-Line L1 solution (HW+SW)



FlexRAN Based HW Accelerator

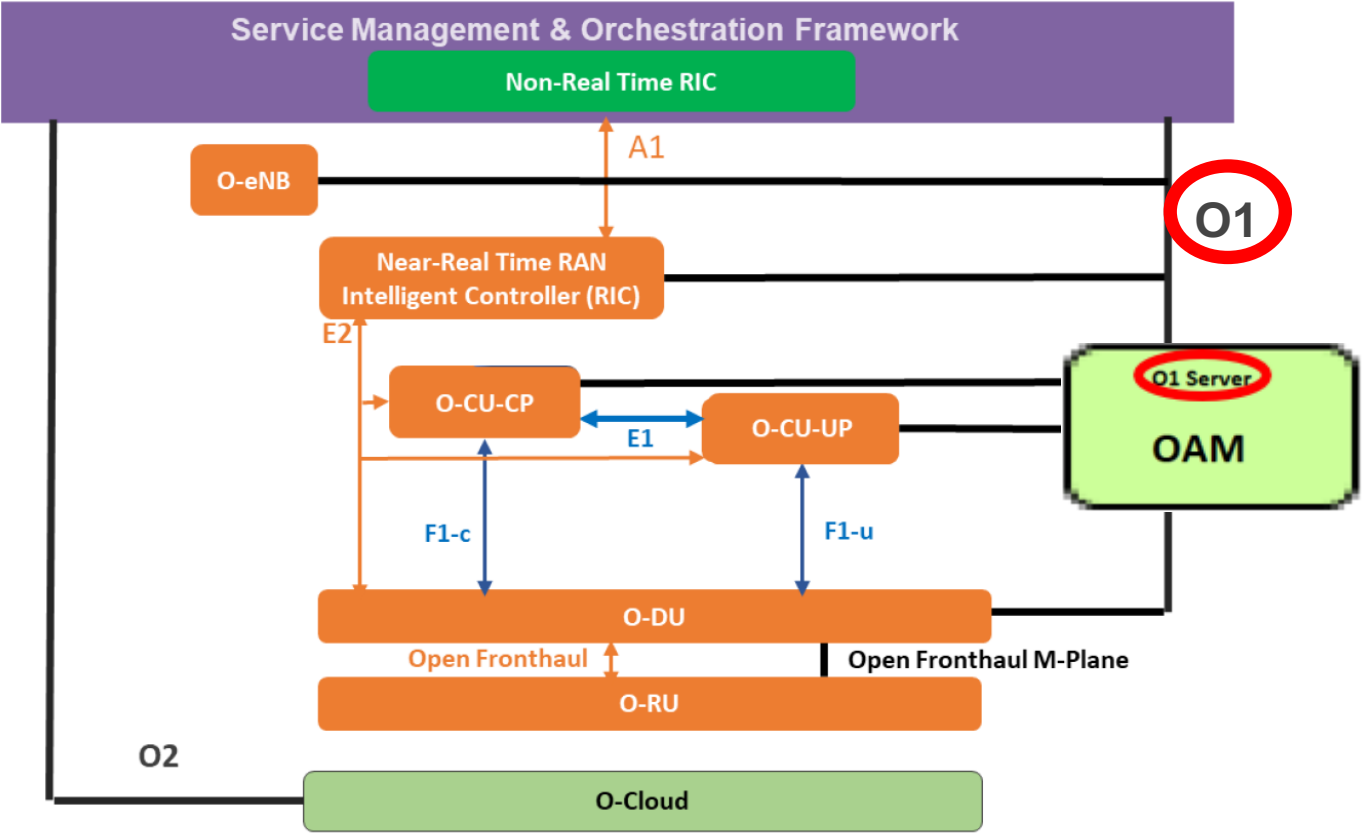


Intel L1 HW
accelerator
and/or NIC

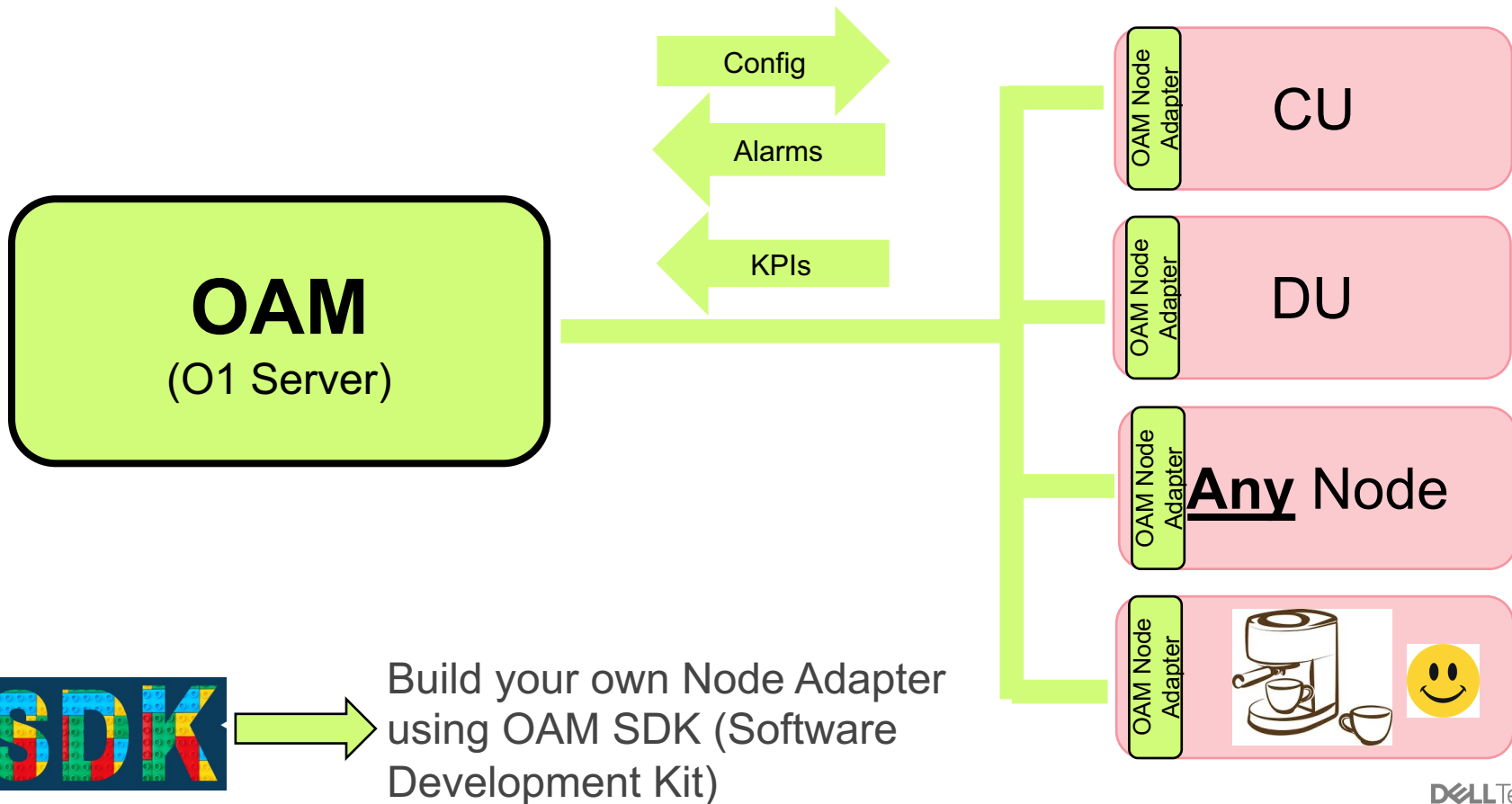
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OAM (Operations, Administration, and Maintenance) in O-RAN Architecture

➤ OAM is a set of processes, protocols, and tools used to manage and monitor the O-RAN network elements (CU, DU, RU) and ensure their proper functioning.



Dell Implementation: OAM (O1 Server) – Generic Approach



Why Opensource?

Does anyone still need to be convinced? 😊

**Community-driven
Development**

Faster development cycles and increased innovation

Improved Quality

More people reviewing and testing the code, bugs and vulnerabilities

Increased Transparency

Increase trust and credibility with users and stakeholders

Cost Savings

A larger community of developers and contributors

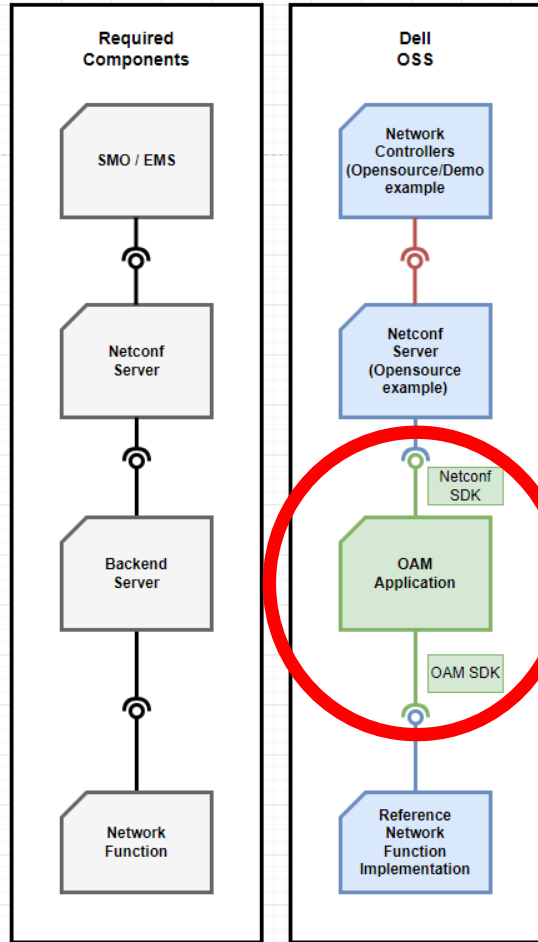
Competitive Advantage

Commitment to innovation and transparency

Customization

Users can customize the software to their specific needs

What exactly are we plan to opensource?

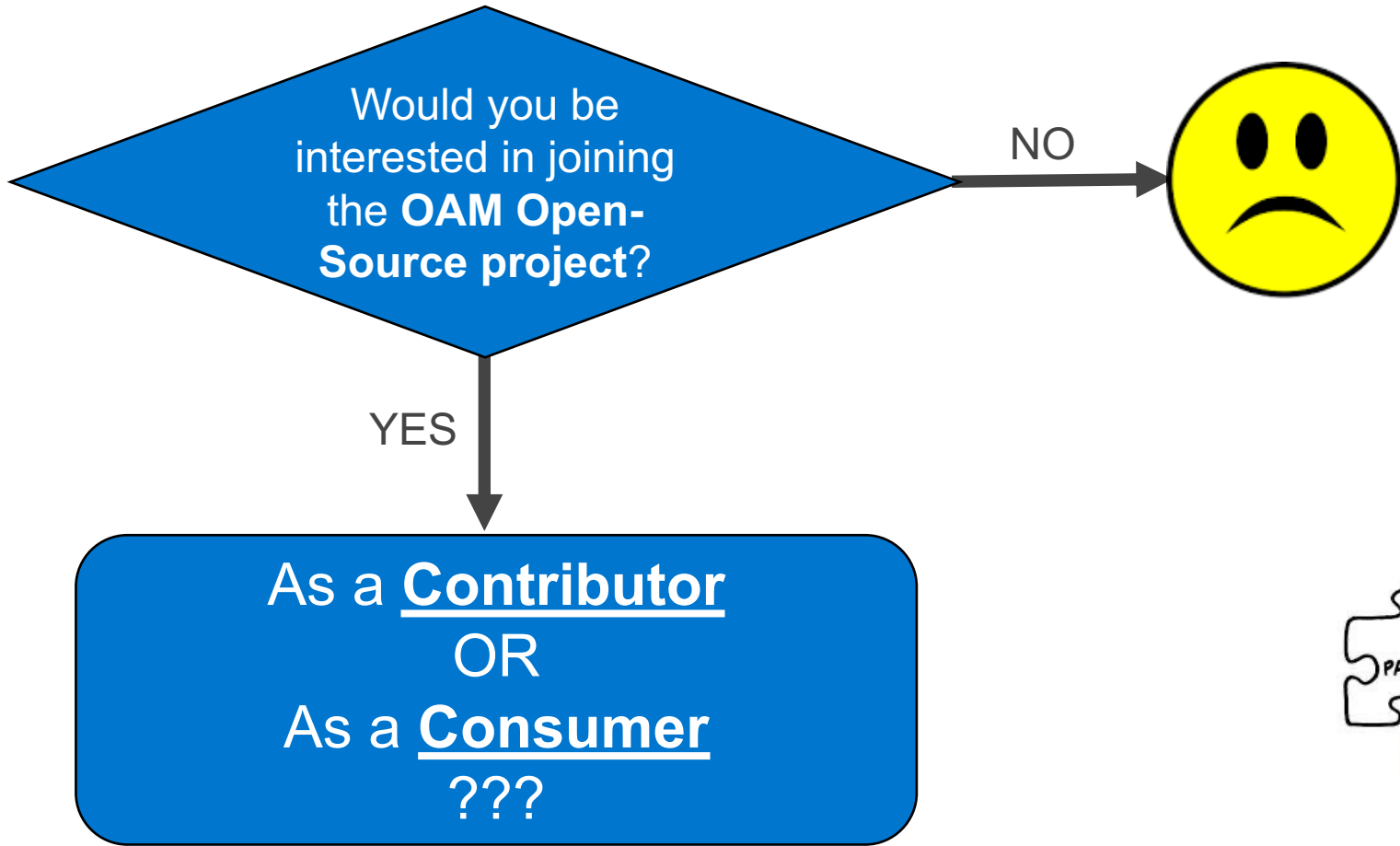


Open-sourced Component

1. OAM Application
2. Software Development Kit
 - ✓ SDK for Network Functions (CU, DU, ...)
 - ✓ Netconf SDK
3. Reference Implementations:
 - ✓ Network Function example
 - ✓ Integration with opensources Netconf Server
 - ✓ Integration with opensources Network Controller

Dell OAM Compliance with O-RAN O1 interface Standard

O1 Service	Compliance
Provisioning Management Services	Compliant
Fault Supervision Management Services	Compliant
Performance Assurance Management Services	Compliant (except for streaming)
PNF Startup and Registration Management Services	Compliant
File Management Services	Compliant
Heartbeat Management Services	Compliant
PNF Software Management Services	Compliant
PNF Reset Management Services	Not supported yet
Cloudified NF Registration Management Services	Not supported yet
Trace Management Services	Not supported yet



Appendix

Supported API(s) by OAM SDK

O1 Service	API(s) Supported
Provisioning Management Services	<ul style="list-style-type: none">• registerCfgHdlr• registerXPath• registerRpc• sendCfgResp• updateOperData
Fault Supervision Management Services	<ul style="list-style-type: none">• registerEventDefinition• sendEventIndMsg• registerFmHdlr
Performance Assurance Management Services	<ul style="list-style-type: none">• registerCounterDefinition• initMoi• updateCounter
PNF Startup and Registration Management Services	<ul style="list-style-type: none">• N/A
File Management Services	<ul style="list-style-type: none">• updateFileReadyList
Heartbeat Management Services	<ul style="list-style-type: none">• N/A
PNF Software Management Services	<ul style="list-style-type: none">• TBD