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Contents

Contents	3
Intellectual Property Rights	10
Foreword.....	10
Modal verbs terminology.....	10
Executive summary	10
1 Scope	11
2 References	11
2.1 Normative references	11
2.2 Informative references.....	14
3 Definition of terms, symbols and abbreviations.....	14
3.1 Terms.....	14
3.2 Abbreviations	16
4 General	17
4.1 Conventions.....	17
4.2 Void.....	17
4.3 Revision and compatibility handling.....	17
4.4 Namespace compatibility handling	18
5 High level description	18
5.1 Top level functional description, terminology, including hybrid, hierarchical	18
5.1.1 Architecture for O-RAN WG4 fronthaul functional split	18
5.1.2 M-Plane architecture model.....	19
5.1.3 Transport network.....	20
5.1.4 M-Plane functional description.....	20
5.2 Interfaces	21
5.3 YANG module introduction.....	22
5.4 Security	22
6 "Start-up" installation	24
6.1 General	24
6.2 Management plane transport aspects.....	27
6.2.1 Transport establishment.....	27
6.2.2 O-RU identification in DHCP.....	30
6.2.3 Management plane VLAN discovery aspects.....	31
6.2.4 O-RU management plane IP address assignment	31
6.2.5 O-RU controller discovery.....	32
6.2.6 Certificate handling.....	33
6.2.6.0 Trust anchor provisioning	33
6.2.6.1 Certificate enrolment.....	34
6.2.6.2 CMPv2 based certificate enrolment	34
6.2.6.3 Operation with vendor-signed certificates	35
6.2.7 Event-Collector discovery	35
6.3 NETCONF call home to O-RU controller(s).....	36
6.4 NETCONF connection establishment	39
6.4.0 General.....	39
6.4.1 NETCONF security	39
6.4.2 NETCONF authentication	39
6.4.3 User account provisioning	40
6.4.3.1 General.....	40
6.4.3.2 Certificates to NETCONF usernames mapping list provisioning	41
6.5 NETCONF access control	41
6.6 NETCONF capability discovery	43
6.7 Monitoring NETCONF connectivity.....	44
6.8 Closing a NETCONF session.....	47

6.9	PNF registration	47
6.9.1	Introduction.....	47
6.9.2	PNF registration procedure	47
6.9.3	Encoding of PNF registration notification	48
7	O-RU to O-DU interface management.....	49
7.1	O-RU interfaces.....	49
7.2	Transceiver	50
7.3	C/U-Plane VLAN configuration.....	50
7.4	O-RU C/U-Plane IP address assignment	50
7.5	Definition of processing elements	51
7.6	O-DU verification of C/U-Plane transport connectivity.....	52
7.6.1	C/U-Plane transport connectivity verification	52
7.6.2	Ethernet connectivity monitoring procedure.....	53
7.6.2.1	Transport connectivity verification monitoring Procedure	53
7.6.2.2	Validating the transport configuration	53
7.6.2.3	Monitor network connectivity.....	53
7.6.2.4	Managing ethernet connectivity monitoring procedure.....	54
7.6.3	IP connectivity monitoring procedure.....	54
7.6.3.1	Monitoring procedure.....	54
7.6.3.2	Managing IP connectivity monitoring procedure	54
7.7	C/U-Plane delay management	54
7.7.1	Introduction.....	54
7.7.2	Delay parameters	54
7.7.3	Reception window monitoring.....	55
7.7.4	External antenna delay control.....	55
7.8	O-RU adaptive delay capability	56
7.9	Measuring transport delay parameters.....	56
7.10	O-RU monitoring of C/U-Plane connectivity	57
7.11	Bandwidth management	57
7.12	IEEE 802.1X port based access control.....	57
7.12.1	Configuring port based access control.....	57
7.12.2	EAP authentication	58
7.12.3	Certificate time validation	58
8	Software management	59
8.1	General	59
8.1.1	Introduction.....	59
8.1.2	Software slots.....	59
8.1.3	Software management procedures	59
8.2	Software build	59
8.3	Software package	60
8.3.1	Software package name	60
8.3.2	File server storage of software package.....	60
8.3.3	Software package content and manifest.xml file	60
8.4	Software inventory	61
8.5	Download	63
8.6	Install	65
8.7	Bringing software into operation.....	67
8.7.1	Procedure	67
8.7.2	Software activation	67
8.7.3	Reset	69
8.8	Software update scenario.....	69
8.9	Factory reset	70
9	Configuration management	70
9.1	Baseline configuration.....	70
9.1.1	NETCONF operations	70
9.1.2	Retrieve state	70
9.1.3	Modify state.....	71
9.1.4	Retrieve parameters	74
9.1.5	Modify parameters	75
9.1.6	Deleting parameters	76

9.1.7	Notification framework.....	78
9.1.7.1	General.....	78
9.1.7.2	Event streams	78
9.1.7.3	 Event stream discovery and subscription	78
9.2	Framework for optional feature handling	78
9.3	M-Plane operational state	79
9.4	Notification of updates to configuration datastore	79
9.4.1	Introduction.....	79
9.4.2	Subscribing to updates from an O-RU.....	79
9.5	Resetting O-RU	80
9.5.1	O-RU reset procedure.....	80
9.5.2	O-RU controller triggered O-RU reset operation	80
9.5.3	O-RU controller triggered O-RU reset procedure	80
10	Performance management	81
10.1	General	81
10.2	Measurement activation and de-activation	81
10.3	Collection and reporting of measurement result.....	82
10.3.0	Introduction.....	82
10.3.1	NETCONF process for dynamic subscriptions.....	83
10.3.2	File management process	84
10.3.3	Configured subscription process.....	86
11	Fault management	87
11.1	Introduction	87
11.2	Alarm notification	87
11.3	Manage alarms request to NETCONF clients	88
11.4	Fault sources.....	90
11.5	Manage alarms request to event-collector	91
11.6	Historical Alarms List	91
12	File management	91
12.1	Introduction	91
12.2	File system structure.....	92
12.3	File management operation: upload	93
12.4	File management operation: retrieve file list.....	94
12.5	File management operation: download.....	95
13	Synchronization aspects	96
13.1	Introduction	96
13.2	Sync status object	97
13.3	Sync capability object	98
13.4	PTP configuration.....	99
13.4.1	Introduction.....	99
13.4.2	G.8275.1 specific parameters.....	100
13.4.3	G.8275.2 specific parameters.....	100
13.5	PTP status.....	100
13.6	PLFS/SyncE configuration	101
13.7	PLFS/SyncE status	101
13.8	GNSS configuration	102
13.9	GNSS status.....	103
14	Operations use cases.....	103
14.1	Supervision failure handling and supervision termination handling	103
14.1.1	Supervision failure handling	103
14.1.2	Supervision termination handling	104
14.2	Log management	104
14.2.1	Introduction.....	104
14.2.2	Troubleshooting log management.....	105
14.3	Trace.....	109
14.4	Operational aspects of antenna line devices	111
14.4.1	Introduction.....	111
14.4.2	HDLC interworking	111

14.4.3	ALD operations	112
14.5	Operational aspects of external IO	114
14.5.1	Introduction.....	114
14.5.2	External input.....	114
14.5.3	External output.....	115
14.6	O-RU connectors.....	117
14.6.1	Introduction to O-RU connectors.....	117
14.6.2	Connectors related to antennas and antenna arrays.....	117
14.6.2.1	Antenna connectors	117
14.6.2.2	Distinguishable types of antenna connectors	117
14.6.2.2.1	Feeder	117
14.6.2.2.2	Beamforming calibration.....	118
15	Details of O-RU operations.....	118
15.1	Retrieval of O-RU information	118
15.2	User plane message routing.....	119
15.2.1	Introduction.....	119
15.2.2	Configurable format for eAxC_ID.....	119
15.2.3	U-Plane endpoint addressing	120
15.2.4	General configuration scenario	120
15.3	Carrier configuration	123
15.3.1	Carrier creation	123
15.3.2	Activation, deactivation and sleep	124
15.3.3	Carrier state's relationship to synchronisation state.....	125
15.3.3.1	Synchronisation state and carrier state transitions.....	125
15.3.3.2	Synchronization lost and HOLDOVER mode expired	126
15.3.3.3	External timing source restored.....	127
15.4	Beamforming.....	130
15.4.1	Beamforming configuration.....	130
15.4.2	Pre-defined beamforming configuration.....	130
15.4.3	Beamforming configuration update	130
15.4.4	Tilting pre-defined beams.....	134
15.4.5	Dynamic beamforming control option.....	136
15.5	Antenna calibration	136
15.5.1	Background.....	136
15.5.2	Overall operation	137
15.5.2.1	General	137
15.5.2.2	Initiation.....	137
15.5.2.3	Self-calibration operation.....	138
15.5.2.4	Calibration completion.....	138
15.5.2.5	Antenna calibration procedure	138
15.5.3	O-RU antenna calibration capability parameter configuration	140
15.5.4	antenna-calibration-required notification parameters	140
15.5.5	Start-antenna-calibration RPC request parameters	141
15.5.6	Example antenna calibration operation.....	141
15.5.7	Calibration with multiple timing resource sets	144
15.5.8	antenna-calibration-multiple-time-resource-params notification parameters	144
15.6	Static configuration for PRACH and SRS.....	145
15.6.1	Background.....	145
15.6.2	Static configuration for PRACH processing.....	145
15.6.3	Frequency domain configuration	145
15.6.4	Time domain configuration.....	146
15.6.5	Operation	147
15.6.6	Static configuration for raw SRS processing	148
15.6.7	Operation	149
15.7	TDD pattern configuration	149
15.8	C-Plane message limits	150
15.9	Advanced endpoint capability report.....	150
15.10	U-Plane message limits	155
16	Licensed assisted access.....	155

16.1	Introduction:	155
16.2	LAA-initiation process	156
16.2.1	LAA module capabilities	156
16.2.2	LAA O-RU parameter configuration	157
16.3	Carrier selection	158
16.3.1	LAA measurements	158
16.3.2	LAA carrier frequency configuration	158
17	Shared cell	158
17.1	Introduction	158
17.2	Architecture	159
17.3	Start-up and Installation	160
17.4	Performance management	164
17.5	Delay management	165
17.6	Details of O-RU operations for shared cell	166
17.6.1	O-RU information for shared cell	166
17.6.2	Topology discovery procedure	168
17.6.3	Shared cell configuration	169
17.6.4	U-plane configuration for FHM mode	173
17.6.5	Support of selective transmission and reception function	173
17.7	Cascade-FHM mode	174
17.7.1	Background	174
17.7.2	Shared cell configuration on cascaded FHMs	174
18	Configured subscriptions	175
18.1	Introduction	175
18.2	Description	175
18.3	Procedure	175
18.4	Notification encoding	176
18.5	Notification transport	177
18.6	Monitoring the communications channel between O-RU and Event-Collector	178
18.6.1	Background	178
18.6.2	Heartbeat encoding	179
18.6.3	Heartbeat control	179
18.6.4	Heartbeat procedure	179
19	Multi-Operator O-RU Operation	181
19.1	Introduction	181
19.2	High level shared O-RU architecture	181
19.3	Shared O-RU "start up" procedure	185
19.3.1	NETCONF server user account provisioning for shared resource operators	185
19.3.2	NETCONF call home to shared resource operator O-DUs	185
19.3.3	Enhanced sro-id based NETCONF access control	185
19.3.4	Supervision monitoring between shared O-RU and shared resource operator O-DUs	191
19.4	Shared O-RU interface management	191
19.4.1	VLAN and IP address management	191
19.4.2	Processing element configuration	191
19.4.3	Shared resource operator O-DU verification of C/U-Plane transport connectivity	192
19.5	Shared O-RU C/U-Plane delay management	192
19.5.1	Adaptive delay operation with shared O-RU	192
19.5.2	Measuring transport delay parameters with Shared O-RU	192
19.6	Shared O-RU configuration management	192
19.6.1	Carrier configuration of the shared O-RU	192
19.6.2	Notification of configuration updates to shared resource operators	193
19.7	Shared O-RU performance management	193
19.8	Shared O-RU fault management	193
19.9	Synchronization aspects of shared O-RU	193
19.10	Co-ordinating service impacting procedures	193
19.10.1	Reset operation	193
19.10.2	Locked administrative state	193
19.10.3	Antenna calibration	194
19.11	Partitioning of shared O-RU carrier resources	194
19.11.1	Partitioning of Shared O-RU advertised resources	194

19.11.2	Partitioning of eAxC identities	194
19.11.3	Partitioning of links, endpoints and array carriers	194
19.11.4	Partitioning of static endpoints	194
19.11.5	Shared O-RU beamforming configuration.....	194
19.11.6	Shared O-RU with antenna line devices	195
19.12	Example shared O-RU carrier configuration and operation procedure	195
19.13	Shared O-RU and LAA operation	196
19.14	Shared O-RU operation in combination with shared cell	197
20	Network energy saving.....	197
20.1	Introduction	197
20.2	Carrier deactivation for energy saving	197
20.2.1	High level principle of carrier deactivation for energy saving.....	197
20.2.2	Synchronization aspects for carrier deactivation for energy saving.....	197
Annex A (normative):	Common alarm definition.....	198
A.1	Introduction	198
Annex B (normative):	Counters.....	206
B.1	Counter definition.....	206
B.2	Transceiver statistics	207
B.2.1	Transceiver measurements.....	207
B.2.2	Statistics calculation	208
B.2.3	Frequency table generation.....	208
B.3	Rx window statistics.....	209
B.3.1	Rx window measurement.....	209
B.4	Tx statistics.....	210
B.5	Energy, power and environmental statistics	210
B.6	Symbol RSSI statistics	210
B.6.1	Statistics calculation	210
B.6.2	Frequency Table Generation.....	211
Annex C (informative):	Optional multi-vendor functionality	211
C.1	Optional multi-vendor namespace.....	211
C.2	Optional YANG features.....	212
C.3	Optional features exposed using O-RAN YANG models	216
Annex D (informative):	YANG module graphical representation	224
D.1	Introduction	224
D.2	System folder.....	224
D.2.1	o-ran-supervision.yang module.....	224
D.2.2	o-ran-usermgmt.yang module	224
D.2.3	o-ran-hardware.yang module	225
D.2.4	o-ran-fan.yang module.....	225
D.2.5	o-ran-fm.yang module	225
D.2.6	o-ran-ves-subscribed-notifications.yang module	226
D.2.7	o-ran-certificates.yang module	226
D.3	Operations folder.....	226
D.3.1	o-ran-operations.yang module	226
D.3.2	o-ran-file-management.yang module	227
D.3.3	o-ran-software-management.yang module.....	227
D.3.4	o-ran-lbm.yang module.....	228
D.3.5	o-ran-udp-echo.yang module	229
D.3.6	o-ran-ecpri-delay.yang module	229
D.3.7	o-ran-performance-management.yang module	229
D.3.8	o-ran-uplane-conf.yang module	235
D.3.9	o-ran-ald module.....	244
D.3.10	o-ran-troubleshooting module.....	244
D.3.11	o-ran-laa-operations module	245
D.3.12	o-ran-trace module	245
D.3.13	o-ran-ieee802-dot1q-cfm module	245
D.4	Interfaces folder.....	245

D.4.1	o-ran-interfaces.yang module	245
D.4.2	o-ran-processing-elements.yang module	246
D.4.3	o-ran-transceiver.yang module	248
D.4.4	o-ran-mplane-int.yang module	248
D.4.5	o-ran-dhcp.yang module	249
D.4.6	o-ran-externalio.yang module	250
D.4.7	o-ran-ald-port.yang module	251
D.4.8	o-ran-ethernet-forwarding.yang module	251
D.5	Sync folder	251
D.5.1	o-ran-sync.yang module	251
D.6	Radio folder	253
D.6.1	o-ran-module-cap.yang module	253
D.6.2	o-ran-delay-management.yang module	254
D.6.3	o-ran-beamforming.yang module	255
D.6.4	o-ran-laa.yang module	261
D.6.5	o-ran-antenna-calibration.yang module	261
D.6.6	o-ran-shared-cell.yang module	262
Annex E (normative):	Corresponding YANG Module Definition	265
Annex F (informative):	Out of scope functionality	267
F.1	Out of scope functionality	267
Annex G (informative):	o-ran-lbm.yang and o-ran-ieee802-dot1q-cfm.yang co-ordination	268
G.1	Model structure	268
G.2	Mapping between models	269
Change history		271
History		275

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Foreword

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Executive summary

This Technical Specification defines the Management Plane for the O-RAN Open Fronthaul based on the selected lower-layer split point as defined within the Open Fronthaul Control Plane, User Plane and Synchronization Plane specification. This Technical Specification is used in combination with a set of associated YANG models to enable operation of an O-RAN alliance defined O-RU.

1 Scope

The contents of the present document are subject to continuing work within O-RAN and may change following formal O-RAN approval. Should the O-RAN Alliance modify the contents of the present document, it will be re-released by O-RAN with an identifying change of version date and an increase in version number as follows:

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The present document specifies the management plane protocols used over the fronthaul interface linking the O-RU (O-RAN Radio Unit) with other management plane entities, that may include the O-DU (O-RAN Distributed Unit), the O-RAN defined Service Management and Orchestration (SMO) functionality as well as other generic Network Management Systems (NMS).

2 References

2.1 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

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2.2 Informative references

References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific. For a specific reference, subsequent revisions do not apply. For a non-specific reference, the latest version applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

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3 Definition of terms, symbols and abbreviations

3.1 Terms

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [i.1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [i.1].

Ad-Hoc O-RU Controller: O-RU controllers that are not configured by DHCP when O-RU performs M-plane transport resolution and not configured by an O-RU controller using o-ran-mplane-int YANG model. An O-RU shall not perform call home to an Ad-Hoc O-RU Controller.

Antenna Line: connection between O-RU and antenna.

C-Plane: Control Plane: refers specifically to real-time control between O-DU and O-RU, and should not be confused with the UE's control plane.

Call home O-RU Controller: O-RU controllers that are configured by DHCP when O-RU performs M-plane transport resolution as part of start-up installation procedure or that are provisioned by an O-RU controller in o-ran-mplane-int.yang.

Cascade mode: Mode of Shared cell which is realized by several O-RUs cascaded in chain topology.

DL: DownLink: data flow towards the radiating antenna (generally on the LLS interface).

eAxC: extended Antenna-Carrier: a data flow for a single antenna (or spatial stream) for a single carrier in a single sector.

Event-Collector: A REST server to which an O-RU supporting NON-PERSISTENT-NETCONF feature can send a JSON notification, for example PNF registration. Event-collectors are configured when O-RU performs M-plane transport resolution as part of start-up installation procedure.

FHM mode: Mode of Shared cell which is realized by FHM and several O-RUs in star topology.