

5G Use Case Meeting notes for Apr 2, 2020

Meeting Time (Mar-Oct 11AM GMT 3PM)

02 Apr 2020

Attendees

- Benjamin Cheung
- Borislav Glozman
- Lasse Kaihlavirta
- Marge Hillis
- Dongho King
- Oskar Malm
- Vimal Begwani
- Bob Papa
- Joanne Liu Rudel
- -

Discussion items

Item	Who	Notes																																										
Discussion this week 26 Mar 2020		<ol style="list-style-type: none">1. M4 R6 - RC0 is pushed out by 1 week. M4 baselined 02 Apr 2020 Sign-off may get pushed by a week ?2. Testing Automation - RC0 Testing & Integration. (Mar 6) Meeting scheduled for Fri Mar 20 with David McBride we'll be discussing testing automation. Update spreadsheet available at bottom of this page. Test cases that have been identified & described in each of the use pages' integration team's page - are those automated? and can they run in an automated way. The re-run test case quickly - ONAP integration small3. READ THE DOCS - Mar 4 2020 U/C Realization. Intention by docs team to move all the wiki pages into the readthedocs. Sofia will talk again at a U/C realization call. Create Jira ticket in Integration Project / In Integration project FOLDER / update RST file (on RST file per Use Case). Andreas Geissler suggested making Use Case Repo for U/C Documents. <table><tr><th>5G Use Case</th><th>Testing Automation %</th><th>Notes</th></tr><tr><td>5G Service Modeling</td><td>N/A (Modeling only)</td><td></td></tr><tr><td>RunTime Config DB</td><td>Check with Sandeep</td><td></td></tr><tr><td>PM Dictionary</td><td>100%</td><td></td></tr><tr><td>FM Meta-Data</td><td>N/A (No new work)</td><td></td></tr><tr><td>E2E Network Slicing</td><td>TBD</td><td>LinMeng, Swami and ChenchuanYu</td></tr><tr><td>5G NRM</td><td>TBD</td><td></td></tr><tr><td>ORAN ONAP Harmonization</td><td>100%</td><td>No automation needed</td></tr><tr><td>OOF SON PCI Enhancements</td><td>50%</td><td></td></tr><tr><td>PNF / PNF S/W Upgrade</td><td>90%</td><td></td></tr><tr><td>PNF / Onboarding</td><td>100%</td><td></td></tr><tr><td>PNF / Plug and Play</td><td>100%</td><td></td></tr><tr><td>PNF / Netconf Communications</td><td>50%</td><td></td></tr><tr><td>License Management</td><td>N/A (Modeling only)</td><td></td></tr></table>	5G Use Case	Testing Automation %	Notes	5G Service Modeling	N/A (Modeling only)		RunTime Config DB	Check with Sandeep		PM Dictionary	100%		FM Meta-Data	N/A (No new work)		E2E Network Slicing	TBD	LinMeng, Swami and ChenchuanYu	5G NRM	TBD		ORAN ONAP Harmonization	100%	No automation needed	OOF SON PCI Enhancements	50%		PNF / PNF S/W Upgrade	90%		PNF / Onboarding	100%		PNF / Plug and Play	100%		PNF / Netconf Communications	50%		License Management	N/A (Modeling only)	
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Release 7 Guilin Release	All in 5G U /C team	<p>R7 Guilin Requirements & Proposals -</p> <p>TIMELINES: R7 Guilin Release M0 - April 22/23 (may shift due R6)</p> <p>Requirements S/C page: Requirements subcommittee</p> <p>R7 new requirements, currently proposals in R7: Guilin release - functional requirements proposed list</p> <p>Take a R7 - example page.</p> <p>PNF & 5G USE CASES/REQUIREMENTS:</p> <p>Guilin release - functional requirements proposed list#E2ENetworkSlicing</p> <p>Guilin release - functional requirements proposed list#SupportxNFSsoftwareUpgradeinassociationtoschemaupdates</p> <p>Guilin release - functional requirements proposed list#OOF-SON:5GSelf-OrganizingNetwork(SON) usingONAPOptimizationFramework(OOF)</p> <p>Guilin release - functional requirements proposed list#RunTimeConfigurationDatabase/DataPersistencyServiceProject</p> <p>ORAN-ONAP Harmonization Use Case (needs Placeholder) - Needs 3GPP approval (April/May) Sync Marge & Vimal pending meeting to add R7 req proposal. new specification from ORAN</p> <p>CMPv2 work Proposal to be presented 06 Apr 2020</p> <p>PNF Plug and Play ? Added Req Proposal will be presented 06 Apr 2020</p> <p>PNF Onboarding / Pre-onboarding Added proposal present on 06 Apr 2020</p> <p>5G Service Modeling (Modeling) Continue modeling work present 06 Apr 2020</p> <p>Licensing Management (Modeling/Arch) R7 need to plan contribution.</p> <p>5G Bulk PM / RT PM / PM Dictionary R7 align to 3GPP specification RT PM meta-data, changes to collector.</p> <p>5G FM - 3GPP standards & VES ? R7 possible FM updates.</p> <ul style="list-style-type: none"> ▪ Document Use Case Wikis for R7 because the Use Case S/C Requirement S/C; Architecture S/C; ReadtheDocs Use Case page under instead of wiki pages. ▪ New Use Case Template - Use Case Template: Use Case Tracking Template ▪ R7 Modeling Planning - available ONAP R7 Modeling High Level Requirements
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R6 Frankfurt M4 / RC0 Deadline Deliverables	All in 5G U /C	<p>RC0-2 for R6 Deliverables</p> <p>R6 Frankfurt Release: Frankfurt Milestone Status</p> <p>Release Planning Page: Release Planning</p> <p>M1 Deliverables Checklist: Deliverables for Planning Milestone Checklist Template</p> <p>Deliverables by Milestone: Frankfurt Deliverables by Milestone</p> <p>M4 Deliverables:</p> <ul style="list-style-type: none"> • Code Freeze. Mark the end of the Features coding. • JIRA ISSUES - Jira issues are either fixed in the current release or assigned to next release. • AUTOMATED - 100% of Functional Test Case are automated. • INTEGRATION & TESTING - End 2 End Release Test Cases are implemented (Integration Team). • All new VNF Requirements planned for the release reviewed and implemented in VNF Requirements project. • Documentation <p>(CONTINUOUS) - DOCUMENTATION - Documentation (Read the Docs) - M1 - M4</p> <ul style="list-style-type: none"> • READ THE DOCS: https://onap.readthedocs.io/en/latest/index.html • Navigate to > USER GUIDES > Verified USE CASES • Use Case Page: https://docs.onap.org/en/dublin/submodules/integration.git/docs/docs_usecases.html • Repository: Resources and Repositories (Deprecated) Integration https://git.onap.org/integration/tree/docs • How to link Jira Ticket to files. • Doc PTL Sofia Wallin - Ask Sofia to help w/ training. OPEN POINT. <ul style="list-style-type: none"> ◦ Doc TEAM meets at 8AM EDT USA on Thursdays. https://zoom.us/j/907176290 <p>"Are you referring to MS1 and the preliminary documentation?"</p> <p>https://wiki.onap.org/display/DW/Frankfurt+Documentation</p> <p>This is mainly relevant to new projects. The link that you provided below covers that, since the 5G use case team is not a new project, your documentation is already published on RTD."</p> <p>- Gerrit Files, Gerrit Review, Main Branch, Update file, create Gerrit Review,</p> <p>RC0 26 Mar 2020 RC1 09 Apr 2020 RC2 23 Apr 2020</p> <p>Project Team focused its effort on:</p> <ol style="list-style-type: none"> 1. supporting integration testing 2. closing high priority defects 3. supporting Documentation team
CONFERENCE & DEMOS	All in 5G U /C	<p>CONFERENCE</p> <p>PLUGFEST</p> <ul style="list-style-type: none"> • POC & Plugfest in End June 2020 - BRONZE Release of ORAN. • WINLAB? A1/O1 ORAN & ONAP Joint Plugfest. • Tracy Van Brakle Martin Skorupski Marci Haas • Panel Discussion - // Possibly planned for Feb 2020. <p>CONFERENCES</p> <p>April 20-21 Open Network & Edge Summit (ONES) - Los Angeles - GuiLin R7 (Planning).</p> <ul style="list-style-type: none"> • Request for PROPOSALS: • LFN is organizing. Heather Kirksey. 2-3 days of ONES / then separate ONAP • LINK: https://events.linuxfoundation.org/open-networking-edge-summit-north-america/ • How will R7 advance planning & discussion & presentations happen - Sub-committee meeting (LA) April 22-23 will happen virtually Rescheduled for Sept/Oct ; <p>April 21-23</p> <p>https://wiki.lfnetworking.org/display/LN/2020+April+Virtual+Technical+Event</p> <p>Virtual Technical Event</p> <p>Early June DDF - (GuiLin R7)</p> <p>ACTION: Will remote presentations be possible, links to remotely attend? When is final schedule up.</p>

RunTime Config DB	Joanne Liu Rudel Benjamin Cheung	Architecture S/C presentation for Run Time DB.								
		<table><tr><th>TOPIC</th><th>Wiki</th></tr><tr><td>ARCHITECTURE FLOWS</td><td>ARCHCOM: InfoFlow - RunTime Config DB Information Flow</td></tr><tr><td>COMPONENT DESCRIPTION</td><td>ARC RunTime DB Component Description - R6 Frankfurt</td></tr><tr><td>PROJECT PROPOSAL</td><td>RunTime Config DB Project Proposal (Oct 25 2019)</td></tr></table>	TOPIC	Wiki	ARCHITECTURE FLOWS	ARCHCOM: InfoFlow - RunTime Config DB Information Flow	COMPONENT DESCRIPTION	ARC RunTime DB Component Description - R6 Frankfurt	PROJECT PROPOSAL	RunTime Config DB Project Proposal (Oct 25 2019)
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		PROJECT PROPOSAL	RunTime Config DB Project Proposal (Oct 25 2019)							
		Team is working to define the Proposal (see wiki).								
		Then it will be presented at the Arch S/C and then TSC.								
		Sync with Sandeep - will meet with Sandeep Fri 7 2020. Ted Johnson. Existing interface.								
		For R6, will be part of CC-SDK. Met with Yuriy Malakov & Dan Timoney . CONFIGURATION PERSISTENCE SERVICE R6 not a separate component in R6.								
CMNotify - The DCAE, CMNotify VES event (proper) are pushed to R7										
<ul style="list-style-type: none">STEP 1 GENERATE: xNF (RAN Simulator) GENERATES a VES CMNotify - Wipro SON (R6)STEP 2 RECEIVES: DCAE VES Collector RECEIVES the CMNotify - Nokia (R7)STEP 3 DCAE: DCAE PROCESSES Event- Nokia (R7)STEP 4 DMaaP: DCAE PUBLISHES onto DMaaP - Nokia (R7)STEP 5 LISTEN: CCSDK (Controller) LISTENS to DMaaP - SandeepShah (R6)STEP 6 RTCfgDB: RTCfgDB UPDATES with info - SandeepShah / Techmahindra Devendra Chauhan (R6)										
Feb 3-7 Nokia has confirmed that Step 2/3/4 is in R7 due to VES review.										
Meeting setup with Sandeep - R7 planning. Need to make a presentation for Alla's call: ONAP Use Case / Requirements Teams Process Way of Working (WoW)										
R7 - Decide if we can to be a separate component. need to find a PTL lead. 14 Feb 2020										
Automation tool integration. Schema details.										
<input type="checkbox"/> Read the Docs entry https://onap.readthedocs.io/en/latest/submodules/integration.git/docs/docs_usecases.html navigate to USE R GUIDES > VERIFIED USE CASES .										
Network Slicing R6 Proposal	Borisla v Glozman Shankar PN Swaminathan Seetharaman LIN MENG	Update on slicing proposal. SO/Seshu presented.								
		Multiple functional requirements/Use Cases. Recursive orchestration of nested services. Didn't want independent W/F for flows but try to leverage/reuse work. Presented the End to End U/C with macro-view for E2E slice. and components impacted. Right now impact will be on SO, OOF, Policy, SDC and AAI. What controller will be used for managing slices? Focusing on design aspects and instantiation and activation. Put up logical E2E slice. Target simple VNFs. Focus to create VNF vs reconfiguring a VNF? Slice segments are going to be both dedicated/shared. Started with discovering existing resources; assume segments created with VNF /PNFs in inventory & discoverable. Spinup new slice instances.								
		02 Jan 2020: <ul style="list-style-type: none">(1) ROADMAP - Proceeding with detail, developments for roadmap beyond R6.(2) API - defining API in progress.(3) PoC - Prototype of PoC from Orange focusing on VNF-portion.(4) SO - Implementation in SO W/F and hierarchy using Svc ref concept to be discussed beyond R6.(5) ORCHESTRATION - documentation what will ONAP do wr.t. slice orchestration(6) MODELING - Discussing Modeling aspects, how to represent CSI, NSSI, NSSMF etc how to implement in SO how to communicate w/ external domain NSSMF.(7) VID - Discussion: Milind Jalwadi<ul style="list-style-type: none">JSON based screens for VID, <i>Is there a slicing GUI that could be re-used.</i>would want to upstream that NSST NSSDPart of the Network Slicing Use Case.								
		Presentation/slides at: NETWORK SLICING PoC in R6 Frankfurt (Obsolete)								
		13 Feb 2020 - Development is proceeding. Start R7 release in next couple of weeks. Next week there will be presentation on requirements for R7.								
		R4 in 3GPP 28.541 - implemented as part properties of a service. didn't create separate TOSCA type for slice profile. Plan to introduce new service for service & slice profile properties in 3GPP those are recent doc updated in January. introduced many new properties from GSP. You've modeling team presentations were made, platform updated w/ network slicing.								
		<input type="checkbox"/> Read the Docs entry https://onap.readthedocs.io/en/latest/submodules/integration.git/docs/docs_usecases.html navigate to USE R GUIDES > VERIFIED USE CASES .								

ORAN /3GPP ONAP Harmonization U/C	<p>Vimal Begwani</p> <p>Marge Hillis</p> <p>Dongho Kim</p>	<p>Trying to settle on scope of the Use Case. List of many possible contributions that will take more than one release to complete. Impacts for items to be added to wiki (analysis).</p> <p>Prioritize the work items what we could propose to accomplish.</p> <p>CM Notify as a new domain has been accepted on the DCAE S/C today Oct 24 2019.</p> <p>Dongho Kim will be creating the test/integration page.</p> <p>21 Nov 2019 - A1 & O1 test integration pages have been added & links. DongHo Kim leading the Integration</p> <p>02 Jan 2020 Sandeep code was merged w/ SDN-C branch. Current container has the latest code. Continuing to test. In AT&T lab now being tested</p> <ul style="list-style-type: none"> ■ ONAP 3GPP CONVERGENCE MEETING Follow-up meeting SA5. add new domain "Standard Defined" Generic domain (from standards) new field in common header "Name Space" providing more detail help DMAap Route to a specific topic. Two-stage schema validation. validate via a schema-broker concept. could still validate the event. Meeting 02 Apr 2020 ■ CMNotify for PoC/Demo - R6, OOF-SON-PCI & the RunTime Config DB U/C needed the CMNotify, Sandeep Shah said they had a simulation of CMNotify for demo purposes. ■ INTEGRATION - Update from Dongho Kim for A1 interface: (Feb 13 2020) Dongho talked to Sandeep 27 Feb 2020 A1 adaptor unit-test bug fixed & tested. No automation yet. Check with Dan Timoney. Testing was done with A1 mediator from A1C repo south-bound, no device compliant to A1 spec, Sandeep used S/W using A1 mediator. ■ VES Spec updates - VES document has been updated. Link is at: https://onap.readthedocs.io/en/latest/submodules/vnfrqts/requirements.git/docs/Chapter8/VES_Registration_3_2.html ; https://onap.readthedocs.io/en/latest/submodules/vnfrqts/requirements.git/docs/Chapter8/ves7_1spec.html Version 7.2 for R7 will start next release. Weekly meeting setup by Trevor. Create Jira issue Gerrit review ■ Read the Docs entry https://onap.readthedocs.io/en/latest/submodules/integration.git/docs/docs_usecases.html navigate to <u>USE R GUIDES</u> > <u>VERIFIED USE CASES</u>
OOF SON PCI	N.K. Shankaranarayanan	<p>09 Jan 2020 From SDN-R when we send config change align to NetConf Yang model avail. whatever yang model used, want config DB schema to be aligned w/ yang model to keep model driven. wanted Yang Models from ORAN if possible. In license catch-22. Some yang models for RAN on ORAN website due to licensing issues from Martin Skorupski took 3GPP model converted to files to compile. Issue w/ ORAN getting ok from 3GPP that it is a valid rep of 3GPP model. Option (1) use previous yang model, or (2) switch to ORAN model if available immediately. yang to SQL schema. Only need some parts of the model for SON project. Currently MariaDB continue to use. Piotr, Marek, et al. If there are useful file wo/ IPR issues, should be a way to use interim files.</p>
WoW w/ Model & Arch		<p>Way of Working between Architecture , Modeling Subcommittee & Use Case Teams and what happens and touch-points at M0/M1 /M2/M3.</p> <p>Modeling Way of Working / Process:</p> <p>Proposed ONAP Release Process Updates for Information and Data Modeling</p> <p>Use Case Way of Working / Process</p> <p>Use Case WoW Process: ONAP Use Case / Requirements Teams Process Way of Working (WoW)</p>
Use Case Template	<p>5G U /C Team</p> <p>Andy Mayer</p> <p>Scott Blandford</p>	<p>Use Case Template -</p> <p>Ben talked w/ Andy Mayer U/CR call Oct 23. He said he is preparing the page, and would present here at the 5G U/C S/C call.</p> <p>REQUIREMENTS SUBCOMMITTEE - requirements sub-group / not bring use cases any more, refer to them as requirements. / proposed change talk less about architecture in requirements mtgs & reviews. more clear split between req & arch discussion. / Alla Goldberg changed U/C S/C to Requirements S/C. Security and ctl loop req will be discussed in those S/C; other things should go to Req S/C.</p> <p>Monday - 03 Feb 2020 - what input for Req review; should not go into realization aspects should be moved out of req review. What type of info & how much info at M0. when just reviewing proposed req. Andy has said Proposed Functional Template for Use Cases this is ready to go live.</p> <p>1. New Use Case Template: Andy Mayer presented on new additions to Use Case Template: Use Case Tracking Template proposed for R7. If a U/C is extending from a Prior Release should we convert to new Template, or can we maintain. Use cases should to link to new req in the proposals.</p>
PM Dictionary, 5G NRM	5G U /C teams	
PNF Pre-onboarding/onboarding	<p>PNF U /C teams</p> <p>Benjamin Cheung</p>	<p>R7 - Per artifact package security for the onboarding package. ETSI SOL004. Verified in VNF-SDK/VVP</p> <p>R7 - dynamic schemas updates to the RTCfgDB with Yang model files.</p>


PNF / SW Upgrade	Zu Qiang (Ericsson)	<p>Reviewed with SO team.</p> <p>Preparing for DDF. will discuss with Change Management team, might be presenting. R6 in progress.</p> <p>Should be able to update/merge all Jiras by M4. No big risk. Integration RC0-RC2</p>
5G/ Bulk PM	Oskar Malm	<p>Preparing presentations at DDF in Prague in DDF for R6 BulkPM functionality in Jan 2020.</p> <p>R7 - Bulk PM</p>
PNF / NetConf	Oskar Malm	<p>Basic U/C unchanged, support for NetConf over TLS. What is being worked on in R6 is to have a improved functionality around certificate handling. When you have a TLS 1.x for authentication for ONAP so the NF when it connects to ONAP it is a valid xNF. Authenticate user cert ONAP needs to get the certs from somewhere - a centralized solution w/ AAF. and connect to ext. PKI via CMPv2. ONAP component minimum version TLS 1.2. Dependency to REQ-140 (CMPv2); Controller-side NetConf over TLS REQ-76.</p>
PNF / Plug and Play	Benjamin Cheung	<p>held meeting for discussing Civic Address elements & Geolocation information w/ the modeling S/C</p> <p>PnP - PNFD/SDC AID/AAI Schema Modeling - Discussion Jan 2, 2020</p> <p>Eventually will the PNFregistration VES event for PnP (R7).</p> <p>SO presentations related to Building block definitions. Dependency to REQ-140. Option #2 new arch. is agreed. Option #1 continue w/ old. Use Case Realization Call: February 19, 2020</p> <p><input type="checkbox"/> Benjamin Cheung Find out if - will we support >1 PNF instance / template per service 5G Service (Run-Time). Plan to test /Integration how to do the instantiation. Use CLI to do instantiation, limitation in SO workflow limitation in controller, PRH.</p>
5G Service Modeling U/C	Benjamin Cheung	<p>WIKI: 5G RAN SERVICE MODELING & DEFINITION in R6 Frankfurt</p> <p>CDS Data dictionary - Define attribute, in that entry tells you how to get that value. Yuriy Malakov</p> <p>If you needed the IP@ you can go that entry points to the REST call. Used for instantiation and configuration management. Model driven ONAP. Modeling Concepts</p> <p>3GPP TS28.541/TS28.540 - 5G NRM Network Resource Model analysis (spreadsheet). Looking parameters introduce</p> <p>Classify parameters - CDS Data Dictionary, A&AI, RunTime Cfg DB.</p> <p>Presentations - Modeling S/C, U/C S/C, U/C Realization, 5G U/C.</p> <p>Modeling S/C - Experimental info model introduced (standards driven)</p> <p>A&AI - classification of A&AI parameters. Commission (might need at installation & commissioning) A&AI.</p> <p>Onboarding - Onboarding, PNF PNFregistration, CMNotify (VES events), Pre-defined "load 3GPP model"</p> <p>Information Flows - Where these might be used.</p> <p>ORAN Standards - Usage of the 3GPP TS28.541 in ORAN Standards. Might want to consider which 3GPP parameters ORAN cares about & when. They might an opinion of when to incorporate parameters.</p> <p>Presentation at Use Case Realization call 29 Jan 2020</p> <p>Use Case Realization Call: January 29, 2020 - next step to present to Modeling S/C.</p>

CMPv2 Security (AAF enhancements)	Pawel Baniewski Hampus Tjader	<p>M2/M3 CMPv2 & AAF status - CMPv2 GREEN at M2/M3 right now.</p> <p>🔗 REQ-140 - Create Client, Plugin using Client and mechanisms for using CMPv2 as a CA. DONE have committers now. AAF S/W. CMPv2 protocol.</p> <ol style="list-style-type: none"> 1. REPO Avail - Nokia has created a repo, discussing architecture now. 2. Access - Confirmed, we can access the Repo. 3. Deliveries - Nokia planning to deliver the <i>CertService</i> (accept request from client), <i>CertService Client</i> (init container w/ ONAP apps), and integration with external CMP v2 service. 4. Integration to Border Components - Integration with ONAP modules, DCAE/VES, SDNC, DCAE/DFC very likely to be postponed to R7. High Risk The ONAP "bordering" components. Consequences - in scenario where you int ONAP w/ external function won't be able to dist cert generated in external Cert. Authority (CA) within ONAP; thus would still be able to integrate a NF to ONAP but would need to distribute manually bring the certs to ONAP. The Automation of distribution would be missing. The NFs contact the CAs to get certs. Integrate ONAP w/ CMPv2 w/ CertSvc to same Ext. CA. Integrate the xNF gets the cert to Ext. CA. ONAP gets matching trust anchors from same Ext. CA, loaded to an ONAP component. CertSvc bought back dist. within ONAP volume where cert is stored & consumed by ONAP component. 3GPP requires/originated. Consumes maximum of what 3GPP has. 5. Slides - 📄 ONAPARC-553 - AAF impacts for CMPV2 feature in REL F / Content CLOSED 6. Integration - Separate integration efforts. 140 is the common part in AAF, including client component that can be reused, there is integration work which have separate requirements. This creates a dependency on those other requirements, being delivered with enough time to do integration. 7. Plug and Play, Bulk PM, NetConf - CMPv2 PnP got descope, secure Bulk PM is descope, NetConf is proceeding see: Frankfurt Release Requirements 8. REQ-76 - If we manage to complete the integration into SDN-C (REQ-76) additional integration related to that. <p>🔗 REQ-76 - NETCONF/TLS Certificate Management DONE</p> <ol style="list-style-type: none"> 9. DEMO - Plugfest in June 2020 it might be nice to demo something.
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SUPPORTING SLIDES

Document	File

RECORDING

Recording	File
MP4 (Video + Audio)	 <p>zoom_0.mp4</p>

Audio Only



audio_only.m4a

M3U, Chat



playback.m3u



chat.txt