ONAP Casablanca M1 Status Summary: *Scope Update on slide # 41*

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Thursday, July 19, 2018

Items Covered

1. Project Findings: Scope

2. Functional Requirements

3. Non Functional Requirements

4. Casablanca Use Cases

5. Project Risks: Risks

6. Recommendations

Disclaimer

- Things are changing quickly. What was false yesterday at 10:00 pm, may be true today at 7:00 am

- This report is based on M1 findings reported by PTLs

- Please help me to stay honest

AAI

- AAI Scope

Scope

What is this release trying to address?

The scope of the Casablanca Release of AAI will address CII Badging Security Program and Platform Maturity Requirements, as well the approved

Highest priority will be assigned to support security and platform maturity requirements. As next highest priority, AAI will support the approved use cases. Best-effort additional development will continue to support additional features not included in the approved use cases.

Use Cases

AAI will support to the best of its ability the ONAP Casablanca use cases and functional requirements.

AAI will provide support for the following use cases, currently planning on test support with no code or data model changes:

- vFW
- vDNS
- VoLTE
- vCPE
- CCVPN
- OSAM/PNF

AAI will support the functional requirements listed on the Casablanca Release Requirements page, in particular the following:

- Scaling
  - committed to creating a new custom-query
- 5G/PNF
  - schema updates and possible edge rule changes, but additional clarification is needed
- EA/Cloud Infrastructure for Distributed Edge Clouds
  - schema updates and possible edge rule changes, but additional clarification is needed

Minimum Viable Product

- A&AI Core: Resources - CRUD REST API endpoints for A&AI inventory resources
- A&AI Core: Traversal - REST APIs for graph traversals. Some APIs use the Gremlin Server
- UI - An ONAP portal application used by operations for visualizing and searching
- Data Router: Makes decisions about workloads to be dispatched to search and tabular microservces. Includes logic to recognize and direct requests based on request archetypes.
- Search - Enable complex searches for sub graphs and functions that need to perform well across deeply nested structures using Elasticsearch. Used by the UI
- Champ - Abstraction from underlying graph storage systems that A&AI would interface with.
- Gizmo - CRUD Rest API endpoint for resources and relationships, delivering atomic interactions with the graph for improved scalability.
- Enricher - Enables complementing AT&T data with federated data from additional sources
- Cacher - The Response Caching Microservice (Cacher) is built to deliver multiple mechanisms of making API calls and populating the responses into a JSON datastore. The datastore is an embedded mongodb datastore, that stores cached API responses, which are updated via DMAAP events or can be synced by timed tasks or calls to the force sync endpoint.
- ESR - External System Registry component

APPC

- APPC scope

Scope

What is this release trying to address?

The Casablanca Release will be focusing on the following areas:

- Upgrade to Karaf 4
- Upgrade of ODL to Oxygen (CCSDK dependency)
- Migrate DB to use Maria DB with Galera (CCSDK dependency)
- Platform Maturity (i.e., S3P items)
  - Resiliency
    - Level 2 - regression from Beijing, plug close gap on DB resiliency.
    - DB Resiliency was a limitation in Beijing due to the Active/Standby nature of MySQL. MariaDB w/Galera provides an active-active clustered configuration, which will support local fail-over.
  - Scalability
    - Level 1 will be a regression run on Casablanca release - anticipate this to be test only
  - Stability
    - Level 1 will be a regression run on Casablanca release - anticipate this to be test only
    - Level 2 requirement is expected to be covered by the Integration team.
  - Security
    - Level 1 definition has changed in Casablanca. Not clear we are achieve Level 1
    - Address outstanding items related to CII Passing Badge:
      - Clearing Critical and Medium Nexus IQ Security alerts **to the extent possible**
      - Addressing 2 other security related items from Passing Badge related to encryption
    - Secure DMaaP topics **(Dependency on DMaaP project)** - **Stretch Goal**, not currently committed for Casablanca
      - DMaaP indicated delivery would be Sept, plus
      - DMaaP story is still not written to enable APPC to assess impact at this stage.
- Support new LCM action Reboot and various other enhancements to existing LCM actions (Tracked under Epic: APPC-899)
- Documentation updates (readthedocs) for Casablanca, such as, but not limited to:
  - LCM API Guide
  - Release Notes
- Code Coverage for CDT (Javascript) - TBD, no commitment at this stage
- Use Cases
  - ConfigScaleOut - Partially supported
    - Support Retrieval of configuration data from AAI instead of having SO pass configuration data in payload - (investigate if we can we reuse the named query)
      - **Dependency on SO** to pass the vf-module-id of the vDNS instance that must be added.
      - **Assumption** is that AAI data needed is available
    - No commitment on Controller Type since requirements are still unclear.
  - Change Management - No Commitment
  - 5G/PNF - No Commitment (although APPC is listed as an impacted component, there does not appear to be any immediate requirement for Casablanca. Items noted are longer road map items)

Use Cases

Describe the use case this release is targeted for (better if reference to customer use case).

The use cases supported in Beijing release will continue to be supported as part of regression assuming all other components do likewise.

APPC will contribute partially to the following use cases as part of the functional requirements.

- **Scaling Use Case** -
  - APPC will support retrieving the data to be configured from AAI. This however has a dependency on SO to pass the vf-module-id of the vDNS that was instantiated..
  - Discussions around how Controller Type will be handled are still too vague and unclear, so no commitment can be made to support this. APPC will continue to support APPC and SDNC via the Client Library as was done in Beijing.

Minimum Viable Product

Same as was defined for Beijing with the adding of CDT.

CLAMP

- CLAMP [Source](#)

Scope

What is this release trying to address?

CLAMP want to consolidate Beijing achievement by

1. achieve the Casablanca S3P requirement for Casablanca in the limits the available resources permit.
2. making the support of new micro-service generic(no code development needed to support new mS)
3. using service template as Tosca as artifact received from DCAE-D to describe the Control Loop flow

CLAMP will also support the auto scale out of VF-module use case.

Use Cases

The existing use cases are still going to be supported and additional use cases will be supported for the Casablanca Release (as defined by the Control loop sub committee: auto-scale out use case)

Minimum Viable Product

The minimum viable product that we aim to reach within R3 is to have the CLAMP application Beijing(R2) features at least running with the new service template as artifact exchanged between CLAMP and DCAE-D.

CCSDK

- CCSDK [Source](#)

Scope

What is this release trying to address?

The primary focus of the ONAP release 3 (Casablanca) is to advance platform maturity, with a focus on S3P (Scalabllity, Stability, Security and Performance).

Use Cases

CCSDK will support the following use cases as Amsterdam/Beijing:

- vFW
- vDNS
- vCPE
- VoLTE

CCSDK will also support the following new use case for Casablanca:

- CCVPN

Minimum Viable Product

Describe the MVP for this release.

DCAE 1/2

- DCAE [Source](#)

Scope

What is this release trying to address?

DCAE Casablanca release has following primary objectives:

1. Improving platform maturity goals
2. Supporting use cases identified by ONAP and integration.
3. Adding to mS suite of collectors and event processors

Following **new services** will be introduced for R3

1. High-Volume VES collector microservice
2. File collector microservice   **Has dependency on DMaaP project for DataRouter delivery**
3. PM Mapper microservice **Has dependency on DMaaP project for DataRouter delivery** (Stretch Goal, not currently committed for Casablanca))
4. Standalone TCA microservice

In addition, DCAE team will work on following enhancement as Stretch Goal (not currently committed for Casablanca due to resource constraint / external dependencies /unclear requirement)

- Buscontroller integration for dynamic topic provisioning and AAF based role setting. **Has dependency on DMaaP project for BusController delivery**
- Performance optimization
    - VESCollector
    - TCA (new TCA service independent of CDAP will be contributed for R3).
- VES 6.0 upgrade support
    - Primarily VES Collector updates for new domains and transformation
      (Security requirement for mutual TLS needs further clarification)
- DCAE onboarding tool (dcae_cli) enhancement and environment support
- Mutli-site support   **Has dependency on OOM Team**
- Securing api/interface and authorization via AAF (Need further clarification/support from Security/AAF team - 1) CADI library not available for Python 2) Consistent solution for AAF integration not identified (security proposal has many items WIP) 3) Process of AAF certificate distribution in K8S for components not defined and esp for components interfacing with external to ONAP)
- Following R2 items (descoped due to time/resource constraint) will be continued to enhanced for platform integration/S3P needs

    a. Mapper MS
    b. Heartbeat MS
    c. PNDA Integration prep-work

DCAE 2/2

Use Cases

DCAE will provide support for the following use cases, currently planning on test support with no code changes expected:

- vFW
- vDNS
- VVoLTE
- Residential Broadband vCPE
- OSAM/PNF

DCAE will support the following functional requirements listed on the Casablanca Release Requirements page:

- 5G/PNF
    Partial Commit - Support for new collector and services for processing highvolume RAN measurement and bulk data file processing
- Scaling - Test only (No additional development expected from DCAE to support this requirement)

Minimum Viable Product

The MVP of DCAE will include the necessary subcomponents supporting the primary objectives: meeting platform maturity goals and supporting the use cases.

- Cloudify Manager

- Consul (deployed/managed by OOM)

- DeploymentHander

- Policy-Handler

- ServiceChangeHandler

- Inventory-API

- Postgres

- ConfigBinding Service

DCAE Service specific components

- VESCollector

- TCA (Analytics application)

DMAAP

• Dmaap [Source](#)

Scope

What is this release trying to address?

Upgrading the Kafka to 0.11

Updating the Message Router with the Kafka upgrade changes

Native Kafka API support

Message Router and AAF integration

Kafka and AAF integration

Buscontroller and AAF integration

Provisioning of authenticated topics

Use Cases

The existing Beijing use cases are still going to be supported .

Minimum Viable Product

Custom Kafka image with AAF integration

Secured Message Router using AAF

Buscontroller using AAF

Doc

- Doc [Source](#)

Scope

What is this release trying to address?

Expansion of content reflecting the scope of software component projects contributing to the Casablanca release and improvements that make it easier to understand, deploy, and use the end to end platform.

- EXTAPI [Source](#)

Scope

What is this release trying to address?

- Deliver points of interoperability between ONAP and External Systems
- Focus on ONAP External APIs to BSS/OSS (i.e., MEF Legato)
  - **Service Catalog**
    - Add notification for serviceCatalog API (stretch goal)
      - Description:
        - Allow BSS catalog function to receive service catalog notification as serviceSpec status change or characteristic change (new value in an enum list for example). Could be interesting to track these serviceSpec update to update accordingly productSpec
      - Relevance:
      - Complexity: Easy
      - Prerequisites: It requires to have a notification from SDC because NBI will not pool AAI
      - Resources:
    - Improve ServiceCatalog API for service characteristics
      - Description:
        - Expose from NBI json (or other format) file describing the serviceSpec characteristic (same type of file we can retrieve on MEF Git Hub to describe an UNISpec for example)
        - Convert YAML in CSAR to ONAP wide consistent JSON schema for Service Characteristic Input parameters and provide across the ServiceCatalog API
      - Relevance:
      - Complexity: Medium
      - Prerequisites:
      - Resources:
  - **Service Ordering**
    - Upgrade Service Request Status for serviceOrder API (Systems engineering for documenting Use Case; get service_order, status of order item; identify details of status information) (stretch goal)
      - Description:
        - Provide summary and detailed status for both Infrastructure requested VNFs and Customer requested VNFs.
        - Requestors that create transaction requests on the ONAP Platform, have a need to effectively manage the requests they create. The Requestor is the responsible owner for the transaction and thus, need the ability to have visibility into the status of their requests
        - BSS/OSS system will call the API providing one of the following options:
          1. Specific Service Request ID
          2. Many Service Requests based on Selection Criteria such as: Service Request Status and/or Time Frame where appropriate, (e.g., past day completions)
          ONAP will respond with the current status of the workflow for the selected request(s). The status can include not only a status summary of the requests but also the steps taken, start/stop time of the steps taken, notifications generated, and the remaining steps that need to be taken. Different workflows will have different numbers of steps, so this API will need to provide a name or identifier for any and all steps
        - Check Request status via GET {{url}}/ecomp/mso/infra/orchestrationRequests/v4/{requestId}

          Check requestStatus: it must be equal to (if percentProgress not equal to 100, we'll pooling SO till percentProgress = 100):
      - Relevance:
      - Complexity: Easy
      - Prerequisites: Could implement in two phases, 1st phase implement status details that are currently available in the Service Orchestration (SO) API, while the 2nd phase would enhance SO and/or the SO API with any additional status information
      - Resources:

- Add notification for serviceOrder API
  - Description:
    - Allow BSS (or any other) system to receive order/OrderItem update. BSS (or any other system) will not have to pool. We can allow several distinct notification (Nice to have: let subscriber specify notification contains). Minimum is to provide ServiceOrderStateChangeNotifications etc to HUB subscriber. After if we're able to get a notification from SO it will be perfect but initial requirement is only at external API northbound
    - Notifications related to ServiceOrder: - ServiceOrderCreationNotification - ServiceOrderAttributeValueChangeNotification - ServiceOrderStateChangeNotification - ServiceOrderInformationRequiredNotification - ServiceOrderRemoveNotification
  - Relevance:
  - Complexity: Easy
  - Prerequisites: Nothing for basic deliver...SO notifications to have high performance (without SO notification, NBI will pool SO as of today)
  - Resources:
- Update ServiceOrder to to accommodate Service Chaining. (systems engineering) (implementation stretch goal)
  - Description:
    - Enhance the Service Order API (TMF 641) to allow BSS/OSS the ability to flag services as part of a "group". Enhance the Service Inventory API (TMF 638) to allow BSS/OSS to retrieve Service Inventory by "group".
  - Relevance:
  - Complexity: Easy
  - Prerequisites: Service Orchestrator (SO) and its external API, A&AI and its API to SO and its external API
  - Resources:
- Update ServiceOrder to manage Service modification request UC (basic, delete and create for Casablanca, will need SO to evolve for full modify)
  - Description:
    - This will allow BSS system to trigger service modification request. By modification we mean: characteristic value change, status change (other ?). Minimum could be to handle modification that can be managed in SO with a Delete Service and then Add service (this is a change up to nbi but remove/add down to nbi). This is not service order modification butt service modification on existing service instance in the inventory (new service order with action change)
    - Possibly related to CC VPN use case, explore other use cases
  - Relevance:
  - Complexity: Average to High depending on SO capability to handle service modification
  - Prerequisites: could require SO upgrade – Check if some use case can be handle by NBI only (triggering add/remove in SO)
  - Resources:
- Update ServiceOrder to provide user and system workload information for both Infrastructure requested VNFs and Customer requested VNFs (systems engineering, implementation stretch goal)
  - Description:
    - Requestors that create transaction requests on the ONAP Platform, have a need to effectively manage the requests they create. The Requestor is the responsible owner for the transaction and thus, need visibility into the volumes of requests created by a requestor, in order to better balance the workload among their labor resources.
    - •BSS/OSS system will call the API providing one of the following options:
      1.Specific Service Request ID
      2.Specific User ID of the Requestor
      3.All Users
      ONAP will respond with what activity is happening, who is doing it, and how old is it. Profile information can include Service Request Type, Creation/Completion Dates, and User ID of the Requestor. This information may require a dip into VID
  - Relevance:
  - Complexity: Average
  - Prerequisites: Could implement in two phases, 1st phase implement request profile information that is currently available in the Service Orchestration (SO) API, while the 2nd phase add additional status information from VID
  - Resources:

- **Service Inventory**
  - Add notification for service Inventory API (stretch goal)
    - Description: Allow BSS (or any other) system to receive service state update.
    - Relevance:
    - Complexity: Medium
    - Prerequisites: It requires to have a notification from AAI because NBI will not pool AAI; may be able to use DMaaP capability to support
    - Resources:
  - Update Service Inventory to accommodate Service Chaining. (systems engineering; implementation as a stretch goal)
    - Description:
      - Enhance the Service Order API (TMF 641) to allow BSS/OSS the ability to flag services as part of a "group". Enhance the Service Inventory API (TMF 638) to allow BSS/OSS to retrieve Service Inventory by "group".
    - Relevance:
    - Complexity: Easy
    - Prerequisites: Service Orchestrator (SO) and its external API, A&AI and its API to SO and its external API
    - Resources:
  - Improve ServiceInventory API
    - Description:
      - As of now we retrieve very few information from AAI – Perhaps digging more in the instantiated VNF or VF could allow us to have more information as service state or serviceCharacteristic for example.
    - Relevance:
    - Complexity
    - Prerequisites: Need AAI expertise; Need enhancement to AAI UI to see more topology details across API
    - Resources:
- **Performance Management** (specification focus) (stretch goal: implementation)
  - Provide performance data for both Infrastructure VNFs and Customer VNFs
    - Description:
      - Capacity planning engineers must be able to determine the performance and quantities of VNFs running on the network for planning purposes. Performance Management data is required to develop Site Level Tenant and VNF & VM Forecasts that are the basis for Capacity Planning of the Network Infrastructure. May also be used in support of customer self service to provide customers with performance information about their specific services and VNFs
      - BSS/OSS system will call the API providing starting and ending dates and times. This API will be called either on-demand or on a regular timed basis. ONAP will respond with performance management data from DMaaP and Performance Data Store, may be trended for forecasting process, and include specific metrics & KPIs for all existing VNFs/VMs in service. May make use of TM Forum Performance Management API (TMF 628).
    - Relevance:
    - Complexity: Easy
    - Prerequisites: Could implement in two phases, 1st phase implement performance information that is currently available in the DMaaP API, while the 2nd phase enhance the DMaaP API with additional performance information. Requires additional micro-service development for collecting information from DMaaP or data store to store and aggregate the information
    - Resources:
- License Usage (stretch goal) (specification focus)

- License Usage (stretch goal) (specification focus)
- **Integration**
  - Integrate External API/NBI within ONAP MSB
    - Description: May need to consider how External API agent functionality can be decoupled from MSB
    - Relevance:
    - Complexity
    - Prerequisites:
    - Resources:
  - Build End-to-End Use Case
    - Description: Showcase External API from a complete Service Lifecycle perspective. Apply ONAP Use Cases.
    - Relevance:
    - Complexity
    - Prerequisites:
    - Resources:
- Initial focus specification of ONAP External APIs supporting Inter-Provider (i.e., MEF Interlude)
  - Service Control (specification focus)
  - Service State (operational state) (specification focus)
  - Service Inventory / Details (specification focus)
- Explore Role-based view of single APIs descriptors for both Legato and Interlude
- Alignment with MEF Legato, MEF Interlude and TM Forum APIs
- Definition of Use Cases, Interactions, and Information Model engaging service providers and BSS/OSS vendors
- UML Models (Eclipse Papyrus) (with Modeling sub-committee) and API definition (JSON Swagger) for
  - License Usage
  - Service Modeling and Service Topology
  - Service Inventory
  - Service State Management
  - Service Quality Management
- Define API Styles to be applied to External APIs (along with Micro-service Bus (MSB) and Modeling Project)
- API development (in conjunction with specific ONAP component projects)
  - Well defined specifications for the NB APIs (e.g., JSON Swagger / OpenAPI).
  - ONAP implementation of these APIs
- Architecture for External APIs
  - Identification and involvement of stakeholder ONAP projects
  - Describe key External API foundation functionalites
  - Work with Architecture and MSB projects
- Document the role and requirements of External APIs in Model Driven ONAP
  - Work with Modeling project and sub-committee to explore a Model Driven approach: a cohesive way to have a shared view of information across ONAP external interfaces that can be used for or be input into a model driven process whereby the cost of delivering platform functionality is drastically reduced and the time to delivery is dramatically decreased.
- Explore use of Model Driven Tool Chain to automatically generate APIs based on models with Modeling Project

Use Cases

Describe the use case this release is targeted for (better if reference to customer use case).

The TSC identified the following Use cases for Release A:

TSC Use Case	VNFs identified in TSC Use case
(obselete)Use Case: VoLTE (vIMS + vEPC)	N/A
Use Case: Residential Broadband vCPE (Approved)	vBNG, vG_MUX, vG, vAAA, vDHCP, vDNS
Use Case: vFW/vDNS (Approved)	vFW, vPacketGenerator, vDataSink, vDNS, vLoadBalancer, all VPP based.
Use Case: VoLTE(approved)	vSBC, vPCSCF, vSPGW, vPCRF, VI/SCSCF, vTAS, VHSS, vMME

The External API developed by this project are applicable to the Services identified in the TSC E2E use cases.

Minimum Viable Product

- Documentation of User Stories; Use Cases and Interactions (e.g., UML); Information Models (e.g., UML); Data Models (e.g., JSON); Interface Profiles and Functional Definition;
- ONAP Component Mapping and Functional Analysis;
- Code contribution for External API Agent functionality.

Holmes

- Holmes [Source](#)

Scope

What is this release trying to address?

- S3P requirements approved by TSC
- Optimizing the integration with Kubernetes based DCAE
- Supporting the use cases which need correlation analysis

Use Cases

- Use Case: VoLTE(approved)

Minimum Viable Product

- Scalable engine management component - the actual running place for Holmes rules.
- Scalable rule management component - responsible for the CRUD operations on Holmes rules.
- Rule templates/entities for specific use cases

Integration

- Int [Source](#)

Scope

What is this release trying to address?

This project will provide cross-project system integration, CI/CD, and all related end-to-end release use cases (approved by TSC) integration with VNFs, PNFs, SDN Controllers, s-VNFMs, etc. end to end maturity testing, necessary for the successful delivery and industry adaption of the ONAP project as a whole. The same Beijing use cases will be tested with more automation, and new use cases for Casablanca.

Optimizing the docker image build and deployment processes, the new sub-project approved by TSC:

- Docker images
- Docker image size optimization
- Docker best practice
- Docker architecture agnostic deployment to committed projects
- Leveraging cached docker image layers

Offline Deployment

CD / Clover integration (stretch goal)

Use Cases

- vFW
- vDNS
- vCPE
- VoLTE
- CCVPN
- OSAM (Still need to talk to OSAM owner)

Minimum Viable Product

- CI/CD
- Automatic unit testing, CSIT testing, and end-to-end testing
- Guidelines, frameworks, or best practice recommendations on S3P testing for ONAP project teams.

Log Enhancement

• Log [Source](#)

Scope

What is this release trying to address?

Logging related collection, shipping, indexing, storage, searching, display. And S3P performance, scaling, resiliency of the ELK stack and filebeat infrastructure.

Additional stretch goals is a pluggable common ELK chart.

Adding the POMBA audit seed code.

Use Cases

Log collection and triage of any ONAP supported use case transaction for vFW, vDNS, vVOLTE or vCPE

(POMBA) audit of any of the above use case transactions for the purposes of out of band model based audit.

Minimum Viable Product
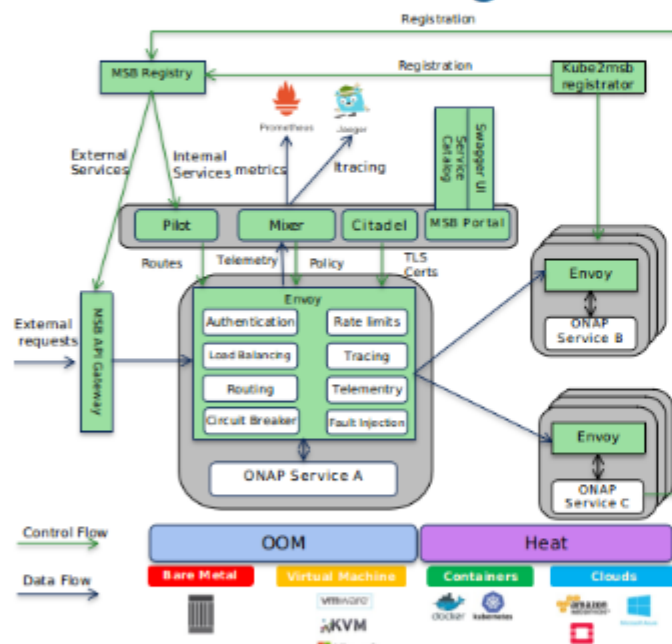
ELK stack functions

POMBA stack functions

MSB

- MSB [Source]

ONAP Istio Integration

- Integrate Istio with ONAP to provide a reliable, secure and flexible service communication layer(service discovery/retries/circuit breaker/route rule/policy)
- Integrate with CNCF projects
  - jaeger to provide distributed tracing
  - prometheus and grafana for metrics collection and display
- Add MSB Portal to control plane to provide service Catalog ,swagger UI of Restful API, service mesh configuration ,etc
- Leverage Istio to achieve close loop operation for ONAP system itself - long time goal

Principles:
- Minimize the impacts to ONAP projects
- Start from a few Microservices
- Keep it compatible with existing inter-services communication approaches

Use Cases

MSB is an infrastructure layer project to support ONAP microservices architecture, it means that MSB supports every ONAP use case without difference.

Minimum Viable Product

- Meet the planned Casablanca platform maturity(S3P) requirements
- Integrate Istio with at least one ONAP project to provide service-2-service communication, metrics collection and distributed tracing
- Integration MSB with Istio to make service communication via MSB API gateway compatible with service communication via Istio service mesh

Modelling

- Modelling [Source](#)

Scope

What is this release trying to address?

1 Continue to work on microservice based parser together with RT catalog

2 TOSCA simple YAML 1.2 profile support and validation

Use Cases

VoLTE, CCVPN, vCPE, vFW

Minimum Viable Product

Support VFC project

Multi Vim

- Multi Vim [Source](#)

Scope

What is this release trying to address?

Describe the problem being solved by this release

1, Align to S3P and security requirements and Architecture.

2, Fulfill functional requirements: "HPA", "Centralized Representation and Consistent ID of Cloud Regions", "EA/Cloud Infrastructure for Distributed Edge Clouds",

3, Expanding the infrastructure's support: more OpenStack releases/distributions, Azure, kubernetes.

Use Cases

Describe the use case this release is targeted for (better if reference to customer use case).

1, vFW

2, vDNS

3, vCPE

4, VoLTE

Minimum Viable Product

Describe the MVP for this release.

1, Consistent ID of cloud region enablement

2, Upgrade plugin for Wind River

3, New plugin for Pike & Traits

4, Security enhancement: secured communication

Stretch Goal

1, Use OOF selected flavor for HEAT based VNF orchestration

2, Security enhancement: RBAC enablement

3, Kubernetes plugin

4, azure plugin

5, StarlingX plugin

6, Cloud Region decommission

7, Deploy MultiCloud service to edge cloud with AAI in centralized ONAP

8, HEAT orchestration enhancement

9, SRIOV-NIC support

10, HPA telemetry data collection and persistence

Music

- ## Music [Source](#)

Scope

What is this release trying to address?

MUSIC was released in the ONAP Beijing release and provides a service with recipes that individual ONAP components and micro-service can use for state replication, consistency management and state ownership across geo-distributed sites. This is a crucial component enabling ONAP components to achieve S3P in terms of resiliency both within and across sites (platform-maturity resiliency level 3).

In this release we plan to provide to address the following items:

- MUSIC as a service: while MUSIC was consumed internally by components in the Beijing release, in Cassablanca we intend to provide MUSIC as an independent multi-site clustered service
- Enable automated failure detection and consistent failover across sites for ONAP components using MUSIC through the PROM recipe. It will require no change to the code of the ONAP components and just a few scripting/configuration steps to achieve single-step automated failover while ensuring that the new leader/owner has access to the latest state information.
- Provide the design to make MUSIC a fully sharded, scale out system, where as many ONAP sites/component replicas can be added as required for performance. The significant technical challenge is to eliminate the need for Zookeeper and build MUSIC completely based on Cassandra while preserving all its guarantees. We expect this change to improve both deployabiity (just one tool – Cassandra) and performance (initial benchmarks indicate a factor of at least 4-5 times in terms of throughput). This is a crucial precursor for its use in edge computing and as the state management service for a federated ONAP.
- Provide the design to allow MUSIC to support database (RDBMS) clustering across sites using the mdbc recipe wherein ONAP components that require it can continue using a SQL database within a site while using MUSIC is as the underlying transport layer across sites, with much better performance than standard solutions like Gallera clustering.
- Continued adherence to ONAP S3P requirements in Cassablanca

Use Cases

- Targeted goal for Cassablanca
    - OOF-Homing Optimizer (HAS) uses MUSIC for its state persistence (as a queue) and as a highly available distributed messaging service. (2)
    - ONAP Portal will use MUSIC to store its http session state across sites in a persistent manner.
- Stretch goal for Cassablanca: SDN-C will use the MUSIC PROM recipe for automated and consistent failover across sites.

CLI

- CLI Source

Scope

- Standardise Open Command Specification (OCS) standard.
- Add VNFSDK commands (Stretch goal)
- Meed CII bading stanadard

Use Cases

As a user/operator, i should be able to perform the ONAP operations from OCC/Linux console, required for Casablanca release.

Minimum Viable Product

Standardize Open Command Specification (OCS) standard.

Support and add support for VNFSDK

OOM

- OOM [Source](#)

Scope

What is this release trying to address?

During the Casablanca release OOM will further the "Production" aspects of ONAP deployments by enabling geographic distribution, backup & restores, and elimination of extraneous database instances. In addition, during this release the OOM team will start to transfer ownership of OOM artifacts to the project teams should that wish to do so and accept the inherent responsibility of doing so.

Use Cases

OOM isn't impact by, nor does it impact ONAP use cases.

OOF

• OOF Source

Scope

What is this release trying to address?

Committed:

- Harden the OOF development platform (Highest priority)
  - Deployment scripts, CSIT, CI for different streams, Nexus image cleanup
  - Using Music as a service
- Maintaining current S3P levels of the project as new functional requirements are supported (Highest priority)
  - Security enhancements progressing towards Silver badge
    - All internal communication encrypted
    - AAF integration - role-based access control and authorization for all calls (depending on Python support from AAF)
    - Code coverage: achieve 60% target code coverage
  - Performance: Creating a plan for performance improvements
  - Manageability:
    - Adherence to log specification v1.2 - ONAP Application Logging Specification v1.2 (Casablanca)
    - Externalized config management
  - Usability
    - Adherence to ONAP API Common Versioning Strategy (CVS) Proposal
    - move all internal and external facing APIs to Swagger 2.0

Functional Requirements:

- HPA enhancements *(resources from Intel)*
  - Service Assurance - streaming telemetry about health of platform (CPU pinning, and NUMA) - primarily from OpenStack
- Homing enhancements improving the *deployability of Services Using ONAP platform*
  - Homing multiple simultaneous instances of the service: queueing homing requests based on discovering dependency on shareable resources *(resources from AT&T)*
  - Considering Latency Reduction (in addition to geographical distances) for homing optimization *(resources from AT&T)*
  - Enhanced capacity checks *(resources from VMWare)*
- 5G SON Optimization *(resources from Nokia, AT&T, Reliance Jio)*
  - PCI optimization POC using OSDF
  - Health Checks, CSIT, Dockerization, K8S HELM Chart, S3P with 60% code coverage
- Edge Automation through ONAP *(resources from VMWare)*
  - HAS in Edge Orchestration

Stretch goals:

- Homing 5G RAN VNFs
  - Extending the Homing feature developed in R2 for 5G RAN VNFs
- Auto Scale Out Functional requirement
  - Homing in VNF Scale Out
- Change Management
  - Scheduler for CM (schedule VNF instance at specific time)
- OOF POC with Service Mesh (ITSIO) ❓
  - Aligned with the MultiCloud efforts on the sam item.
- Homing enhancements
  - Resource reservation

Use Cases

- vCPE (supporting R2 homing workflows)

Minimum Viable Product

- OOF-HAS - Homing Service that can be provides optimized placement based on policy constraints, across multiple clouds and multiple sites
- OOF-OSDF - Optimization Design framework, that supports HAS, the Homing Optimizer

OPEN NETWORK AUTOMATION PLATFORM

Use Case UI

- Use Case UI Source

Scope

What is this release trying to address?

Describe the problem being solved by this release.

The Usecase-UI Casablanca release is planning to support below features and functionality:

1. Support NS/VNF upgrade
2. Provide alarm and performance display for VM
3. Support Multi-language for GUI
4. Support CCVPN use case requirements

Use Cases

Describe the use case this release is targeted for (better if reference to customer use case).

1. Use Case: VoLTE(Approved)
2. Use Case: Residential Broadband vCPE (Approved)
3. Hardware Platform Enablement In ONAP
4. Centralized Representation and Consistent Identification of Cloud Regions In ONAP

Minimum Viable Product

Describe the MVP for this release.

LCM GUI (instantiation/termination/scaling/upgrade) for VoLTE service

Monitor GUI for VNFs and VMs

Multi-Language for GUI

Policy

- Policy [Source](#)

Scope

What is this release trying to address?

- Maintenance of current Platform MVP components (Highest Priority)
    - 50% code coverage (Java and Javascript)
    - Reliability of S3P functionality
    - Security Enhancements to further progress towards Silver badge
        - internal communication encrypted
        - role-based access control and authorization for all calls
    - Logging spec v1.2 requirements
- Auto Scale Out Use Case (High Priority)
    - Implement new SO API call for Scale Out
    - Support Guard Policies creation by CLAMP (Stretch Goal - not enough resources)
    - Implement min/max of instances check similar to VID (Stretch Goal - not enough resources and/or information to fully commit)
    - Implement Prov_Status=PROV check (Stretch Goal - not enough resources and/or information to fully commit)
- HPA Functional Requirement (Medium Priority)
    - Creation of Application that integrates with SDC Service Distribution
        - Must support current API and have hooks to support future Policy Lifecycle API
        - Health Check, CSIT, Dockerized, K8S HELM Chart, S3P, 70% code coverage
    - Code implementation for automatic creation of HPA Placement policies located in VNF descriptor for OOF to perform placement (Dependent upon creation of Policy SDC Service Distribution application)
        - Include CSIT test
- Re-architecture of the Platform components for long term roadmap (Low Priority)
    - Ingest of Apex PDP engine
        - Health Check, CSIT, Dockerized, HELM Chart, S3P, 70% code coverage
    - PAP 2nd Generation
        - Re-build of PAP ↔ PDP Policy Distribution API using Maven Nexus Repo.
        - Re-build of PAP ↔ PDP Grouping
        - Above 2 requirements will involve creation of PDP SDK (2nd Generation)
        - Policy Lifecycle API
        - Health Check, CSIT, Dockerized, HELM Chart, S3P, 70% code coverage
    - XACML PDP 2nd Generation
        - Configurability of XACML Combining Algorithms for root engine
        - Open support for raw XACML policies
        - Integration with PDP SDK (2nd Generation)
    - Policy Engineer Development Environment
        - Documentation

Use Cases

vFW/vDNS/vCPE/VOLTE - Test only support

Minimum Viable Product

- Policy Portal Dashboard - Console GUI where Models, Templates can be imported, updated, deleted, as well as, policies can be created, updated and deleted. The console GUI also has a dashboard where PDP's can be grouped and where Operators can control where policies are distributed to.
- Policy PAP web application - Policy backend that manages communication with PDP engines for policy distribution.
- Policy Drools PDP - run-time execution of Control Loop operational policies. Supports queries from other ONAP components to retrieve
- Policy XACML PDP - run-time execution of Control Loop configuration policies of DCAE collectors, analytics and micro services.
- Policy BRMS Gateway - intermediary backend for distributing policies to the Drools PDP and configuration details to the Drools PDP controller.

Portal

- Portal [Source](#)

Scope

What is this release trying to address?

Scope: The scope of this release will be for the Portal Platform to support the below list:

1. Internationalization language support (Platform Feature) - ChinaMobile support
   a. Design language/internationalization component in Portal and provide service apis to partnering apps like Policy, VID, SDC, AAI.
   b. This is collaborative work with larger community (Use Case UI ONAP Team), expecting implementation details soon from ChinaMobile resources.
2. Testing (Technical Debt) - AT&T, IBM, TechM support
   a. CSIT tests for new Casablanca features.
   b. Support 50% code coverage without JavaScript. However, enable JavaScript Unit tests coverage to view the coverage results.
3. Reporting feature enhancement in portal/sdk (Platform Feature) - AT&T support
4. Defect fixes

Not-in-Scope: Please check Gaps.

Gaps

This section is used to document a limitation on a functionality or platform support. We are currently aware of this limitation and it will be delivered in a future Release.
List identified release gaps (if any), and its impact.

Gaps identified	Impact

Originally planned priority items, but de-scoped due to lack of resources (below items are added to backlog and not being committed for Casablanca release).
 	
1. OOM integration and enhancement (Modularity)
  a. Support deployment, scalability issues of the platform (DB docker)
  b. Music cassandra as a service - integration
  c. Music team to provide DB as a service
2. AAF integration (Technical Debt)
  a. Truning ON AAF and starting using role management for partners - Policy, SDC, VID, AAI requires SDK upgrade.
  b. AAF certificate management integration (both for FE HTTPs and BE rest API calls)
3. Security issues from Nexus-IQ (Technical Debt)
  a. Angular upgrade to address the security issue - may impact partnering apps like Policy and VID.
  b. Possibly in phases - start removing the vulnerabilities that are maeked as - "Not vulnerable in ONAP".
  c. Fix pending Fortify issue
4. API Versioning and Backward Compatibility (Technical Debt)
5. Performance and Optimization (Technical Debt)
  a. Memory usage optimization
  b. Split DB, Portal and SDK docker images
  c. UI upgrades - Angular, Bower
  d. Simplify deployment by avoiding the etc/hosts file entries
  e. Logging enhancements
6. Testing (Technical Debt)
  a. Convert ECOMP selenium tests into CSIT ONAP Robot Framework tests.
  b. Code Coverage needs to be improved to 50% on both portal and portal/sdk repos with JavaScript.
	1. Policy, VID apps that use portal/sdk will be directly impacted under S3P for logging support; also impacted under the JavaScript coverage support;
	2. Policy, VID, AAI, SDC will be impacted under Security for AAF role management support required from portal/sdk;
	3. OOM deployment is impacted if the DB scaling changes are not supported by Portal team; also the changes for simplification of etc/hosts entries impacts the OOM deployment which cannot be committed by Portal team.

SDNC

- SDNC [Source](#)

Scope

What is this release trying to address?

The SDN-C project provides a global network controller, built on the Common Controller SDK, which manages, assigns and provisions network resources.   As a "global" controller, the SDN-C project is intended to run as one logical instance per enterprise, with potentially multiple geographically diverse virtual machines / docker containers in clusters to provide high availability. The project also will support the ability to invoke other local SDN controllers, including third party SDN controllers.

In the Casablanca release, the SDN-C project will be used to manage, assign and provision network resources for the Casablanca release use cases, listed in the Use Cases section below.

Use Cases

The use cases supported in the Beijing release are:

- Virtual Domain Name Server (vDNS)
- Virtual Firewall (vFW)
- Virtual Voice over LTE (vVoLTE)
- Virtual Customer Premise Equipment (vCPE)
- **CCVPN *** New in Casablanca**

Minimum Viable Product

The Minimum Viable Product for Beijing is the set of capabilities needed to support the use cases listed above.

SDC

- SDC [Source](#)

Scope

What is this release trying to address?

- Platform Maturity (i.e., S3P items)
  - Resiliency
    - Level 1 - test only based on the work from Beijing
    - DB Resiliency was a limitation in Beijing due to the Active/Standby nature of MySQL. MariaDB w/Galera provides an active-active clustered configuration, which will support local fail-over.
  - Scalability
    - Level 1 will be a regression run on Casablanca release - anticipate this to be test only
  - Stability
    - Level 1 will be a regression run on Casablanca release - anticipate this to be test only
    - Level 2 requirement is expected to be covered by the Integration team.
  - Security
    - Required Level 1
    - Address outstanding items related to CII Passing Badge:
      - Clearing Critical and Medium Nexus IQ Security alerts **to the extent possible,** Including no critical and high known vulnerabilities > 60 days old.
      - Addressing security-related items from Passing Badge related to encryption
  - Performance
    - level 0 no work required.
- Support new LCM action Reboot and various other enhancements to existing LCM actions (Tracked under Epic: APPC-899)
- Documentation updates (readthedocs) for Casablanca, such as, but not limited to:
  - LCM API Guide
  - Release Notes
- Code Coverage for CDT (Javascript) - TBD, no commitment at this stage
- Use Cases
  - ConfigScaleOut - Partially supported
    - Support Retrieval of configuration data from AAI instead of having SO pass configuration data in payload - (investigate if we can we reuse the named query)
      - **Dependency on SO** to pass the `vf-module-id` of the vDNS instance that must be added.
      - **Assumption** is that AAI data needed is available
    - No commitment on Controller Type since requirements are still unclear.
  - Change Management - No Commitment
  - 5G/PNF - No Commitment (although APPC is listed as an impacted component, there does not appear to be any immediate requirement for Casablanca. Items noted are longer road map items)

Use Cases

SDC will contribute to support:

Use Case: Residential Broadband vCPE (Approved)

Use Case: VoLTE(approved)

SDC will continue to support:

Use Case: vFW/vDNS (Approved)

Use Case: Residential Broadband vCPE (Approved)

Use Case: VoLTE(approved)

SO

- SO Source

Scope

What is this release trying to address?

The Casablanca Release will be focusing on the following areas:

- Platform Maturity (i.e., S3P items)
  - Resiliency
    - Level 2 - regression from Beijing, plug close gap on DB resiliency.
    - DB Resiliency was a limitation in Beijing due to the Active/Standby nature of MySQL. MariaDB w/Galera provides an active-active clustered configuration, which will support local fail-over.
  - Scalability
    - Level 1 will be a regression run on Casablanca release - anticipate this to be test only
  - Stability
    - Level 1 will be a regression run on Casablanca release - anticipate this to be test only
    - Level 2 requirement is expected to be covered by the Integration team.
  - Security
    - Level 1 definition has changed in Casablanca. Not clear we are achieve Level 1
    - Address outstanding items related to CII Passing Badge:
      - Clearing Critical and Medium Nexus IQ Security alerts **to the extent possible**
      - Addressing 2 other security related items from Passing Badge related to encryption
    - Secure DMaaP topics **(Dependency on DMaaP project)** - Stretch Goal**, not currently committed for Casablanca**
      - DMaaP indicated delivery would be Sept, plus
      - DMaaP story is still not written to enable APPC to assess impact at this stage.
- Support new LCM action Reboot and various other enhancements to existing LCM actions (Tracked under Epic: APPC-899)
- Documentation updates for Casablanca, such as, but not limited to:
  - LCM API Guide
  - Release Notes
- Code Coverage for CDT (Javascript) - TBD, no commitment at this stage
- Use Cases
  - ConfigScaleOut - Partially supported
    - Support Retrieval of configuration data from AAI instead of having SO pass configuration data in payload - (investigate if we can we reuse the named query)
      - **Dependency on SO** to pass the `vf-module-id` of the vDNS instance that must be added.
    - No commitment on Controller Type since requirements are still unclear.
  - Change Management - No Commitment
  - 5G/PNF - No Commitment (although APPC is listed as an impacted component, there does not appear to be any immediate requirement for Casablanca. Items noted are longer road map items)

Use Cases

Describe the use case this release is targeted for (better if reference to customer use case).

The use cases supported in Beijing release will continue to be supported as part of regression assuming all other components do likewise.

APPC will contribute partially to the following use cases as part of the functional requirements.

- **Scaling Use Case -**
  - APPC will support retrieving the data to be configured from AAI. This however has a dependency on SO to **pass the** `vf-module-id` of the vDNS that was instantiated..
  - Discussions around how Controller Type will be handled are still too vague and unclear, so no commitment can be made to support this. APPC will continue to support APPC and SDNC via the Client Library as was done in Beijing.

Minimum Viable Product

Same as was defined for Beijing with the adding of CDT.

VFC

- VFC [Source](#)

What is this release trying to address?

The VF-C Casablanca release has following primary objectives:

1. Improving platform maturity:enhance scalability, manageability,security (i.e., S3P items)

2. Supporting use cases identified by ONAP and integration: VoLTE, vCPE,

3. Supporting Functional Requirements identified: HPA, Centralized Representation and Consistent Identification of Cloud Regions In ONAP

4. Enhancement to VF-C existing features:

   Integration with OOF, AAF(Strech goal)

   R3 tosca data model alignment

   ETSI Interface alignment(Depend on resource contribution)

Use Cases

Describe the use case this release is targeted for (better if reference to customer use case).

Use Case: VoLTE(approved)

Use Case: Residential Broadband vCPE (Approved)

Functional Requirements:

Hardware Platform Enablement In ONAP

Centralized Representation and Consistent Identification of Cloud Regions In ONAP

Auto Scaling - stretch goal

Minimum Viable Product

VF-C will include the necessary subcomponents supporting the primary objectives: meeting platform maturity goals and supporting the use cases.

LCM(instantiate/terminate/heal/scaling) for NS and Vendor VNFs

FCAPS for vendor VNFs

LCM(instantiate/terminate) for open source VNFs

Minimum VF-C components supporting above functionalities:

NSLCM/Catalog/GVNFM/Vimproxy/EMS driver/vendor VNFM driver

VID

- VID [Source](#)

Scope

What is this release trying to address?

1. S3P improvements
2. VNF Scaling enhancements
3. Scheduling capabilites
4. PNF support

Use Cases

VID will continue supporting the following use case:

Use Case: Residential Broadband vCPE (Approved)

Use Case: vFW/vDNS (Approved)

Use Case: VoLTE(approved)

Use Case Proposal - VNF Scale Out

And will add support to the following:

Scaling Use Case Extension

Deployment of the hybrid 5G Network (PNF/VNF)

Change Management Extensions (best effort)

Centralized Representation and Consistent Identification of Cloud Regions In ONAP (best effort)

Minimum Viable Product

- Instantiation of service, vnfs and vf modules
- change management support

VNFSDK

- VNFSDK
[Source](#)

Scope

What is this release trying to address?

VNF SDK's mission is to simplify the process of developing and onboarding VNFs and expanding ONAP's VNF ecosystem. For Service Providers, VNFSDK will reduce the time and level of testing required to identify, select, and onboard a VNF. For vendors, VNFSDK will reduce integration efforts by defining a standard for VNF packaging with widespread operator acceptance. VNFSDK can be used in a validation/conformance testing program in the future.

The Casablanca release will enhance existing functionality, introduce security, integrate with ONAP use-case flow and progress towards being carrier grade with high quality.

1. Enhance dovetail integration so we can use it in LFN Compliance/Verification testing
   a. Improvements to function test for better integration into the framework
2. Incorporate vnfreqs testable requirements
   a. consistent support for HEAT/TOSCA VNFs (as defined in VNFReqs) - may not be 100% common
      i. NB. HEAT tests will be developed by VVP, but may be implemented in VNFSDK for VNF Compliance Testing
3. modular marketplace framework to make it easier to plug in tests (maybe configurable per application such as compliance testing, operator-vendor engagement, 3rd party enhancements, etc.)
4. Support SDC on boarding tests (maybe allow SDC to replace refrepo portal, but use vnfmarket-be for their own onboarding test engine
5. Package data model enhancements (internal and onboarding models?)
6. VES: multivim enhancements, PNF registration, notification, and RAN metrics (5G use case)
7. Enhance HPA, SOL-004 certificate, and other carry-over items

Use Cases

1. VNF provider uses VNFSDK for VNF Compliance Testing
2. Support operator use of VNFSDK for vendor engagement/acceptance testing
3. 3rd Party Lab uses VNFSDK for extended VNF testing (may include functional, non-functional, and/or performance tests developed by 3rd party labs)
4. HPA
5. Enhance Security

Minimum Viable Product

Describe the MVP for this release.

1. Support the VNF packaging model & VNF Requirements defined in Beijing
2. Support VNF Compliance under LFN CVC umbrella
3. HPA

VNFRQTS 1/3

- VNFRQTS [Source](#)

Scope

What is this release trying to address?

The Casablanca release of VNFRQTS project will address the following items:

- bug fixes, maintenance and feature alignment of **VNF Guidelines**, **VNF Requirements** and **VNF Test Descriptions** consistent with the rest of the ONAP Casablanca release.
    - including updates to HEAT and TOSCA requirements for VNF Package onboarding
    - PNF capabilities supported by the ONAP platform
    - 5G use cases supported by the ONAP platform
    - Autoscaling use case supported by the Platform
    - management interface updates
- The **VNF Provider Use case** for Autoscaling to be documented with associated VNF Requirements
- The **VNF Test Descriptions** *appendix* to be updated to reflect test implementations planned for Casablanca by other projects (VVP, VNFSDK, etc.)
- **Toolchain** improvements for the management of VNF Requirements
- Categorization of VNF Requirements to support VNF Badging & certification initiatives

Use Cases

Describe the use case this release is targeted for (better if reference to customer use case).

The TSC identified the following Use cases for Release A:

Release first proposed	TSC Use Case	VNFs identified/impacted in TSC Use case
Amsterdam	Use Case: Residential Broadband vCPE (Approved)	vBNG, vG_MUX, vG, vAAA, vDHCP, vDNS
Amsterdam	Use Case: vFW/vDNS (Approved)	vFW, vPacketGenerator, vDataSink, vDNS, vLoadBalancer, all VPP based.
Amsterdam	Use Case: VoLTE(approved)	vSBC, vPCSCF, vSPGW, vPCRF, VI/SCSCF, vTAS, VHSS, vMME
Beijing	5G- RAN deployment, Slicing, SON	
Beijing	Enterprise vCPE --potential R1 use cases' extension	vCPE, vAAA, vDHCP
Beijing	ONAP Change Management	
Beijing	SD-WAN	vBG
Beijing	Scale Out	VOLTE, vDNS
Beijing	Centralised Parser Distribution	
Casablanca	5G Use case Items Casablanca Requirements to Support 5G Use Case	•Complete PNF Support PNF onboarding & Packaging PNF Registration, VES Event domain
Casablanca	CCVPN(Cross Domain and Cross Layer VPN) USE CASE	• Service onboarding • Service configuration
Casablanca	Centralized Representation and Consistent Identification of Cloud Regions In ONAP	
Casablanca	Change Management Extensions	Traffic migration building block 5G RAN PNF Software upgrade
Casablanca	Edge Automation through ONAP	Access Management will leverage the PNF management
Casablanca	OpenSource Access Manager	Access Management will leverage the PNF management
Casablanca	Scaling Use Case Extension	In Beijing the operator had to manually select the controller type (SDNC or APPC) within VID. The controller type should be part of the VNF model and not a run time option.
Casablanca	HPA Casablanca Plans (ONAP).pdf	• Specification of VNF HPA requirements as part of the VNFD (TOSCA only) • On-boarding and use of VNFs with TOSCA based VNFDs

The VNF Requirements developed by this project are applicable to the VNFs identified in the TSC E2E use cases.

- a **VNF Provider (developer)** using VNF Requirements in designing, testing, and certifying a VNF for use on ONAP
- a **Service Provider** using VNF *Requirements as prototype text for RFPs* to acquire VNFs to run in an ONAP context see VNFRQTS-16
- VNF Validation Project uses VNF Test Descriptions developed by this project to implement VNF testing for validation purposes.
- VNF SDK Project also uses VNF TEst Descriptions developed by this project to implement VNF testing for validation purposes

The VNF Requirements also cover nonfunctional requirements. ONAP non-functional requirements proposed for the Casablanca release that impact the VNF requirements include:

- Security
  - Description of how the xNFs receive their certificates

Minimum Viable Product

Describe the MVP for this release.

- A **VNF Guidelines** document summarizing VNF provider oriented deliverables and providing informative, forward lookiging guidance.
- A set of Integrated **VNF Requirements** for use as prototype RFP text.
- **VNF Test Descriptions** for use by VNF Validation project, and VNF SDK Project traceable from the VNF Requirments.
  - Appendix identifying which VNF requirements are testable by inspection of the VNF Package, and where the tests are implemented.
- **VNF Use Case** - VNF Provider Guidelines for VNF Scale Out Use Case
  - Manual Scale out
  - Automated Scale Out
- **VNF Badging Categories**
  - Groomed list of VNF Requirements for VNF Badging
  - Groomed list of VNF Requirements for VNF Certification by testing

VVP

- VVP [Source](#)

Scope

What is this release trying to address?

- For the Casablanca release, the vvp project adds no new tool functionality, but the code integrated into the Beijing release plan is maintained.
- The HEAT test suite of validation scripts is updated to align with published VNF Requirements
- Discussion Forum to support the LFN Certification programs.

Use Cases

We will not target any specific use case as the VNF Validation Program is focused on developing a mechanism for any VNF to obtain a ONAP Compatible Label

Minimum Viable Product

The VVP should be able to be installed and booted as a standalone tool, and the HEAT validation scripts run against VNF packages.

Functional Requirement: HPA ✓

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement	Notes
HPA	@Alexander Vul	VNFSDK (minor) SDC (minor) Policy OOF (minor) SO (minor) AAI, Multi-Cloud VNFRQTS	HPA Enhancements (For Casablanca Release)	Orange: 2 ATT: 2 China Telecom: 2 China Mobile: 1 Verizon: 2 Vodafone: 2	VNFSDK: none SDC: VNFSDK, VNFD model Policy: SDC OOF: SO, Policy, AAI AAI: Multi-CLoud	**VNFSDK: M** **SDC:XS** Policy: M OOF: S SO: S AAi: S/M Multi-Cloud: M	VNFSDK (C) SDC (TO/C) Policy (C) OOF (C) SO (C/TO) AAI (C) Multi-Cloud (C)	Policy: Committed based on Intel providing resources OOF: Committed VNFSDK: Committed SDC: committed based on Intel contribution. SO: committed AAI: committed Multi-Cloud: committed		Intel ARM AT&T Huawei	

Note: Intel is committing any resources necessary to complete HPA (Alex)

Functional Requirement: Change Management

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD: etc)	Company Engagement
Change Management - Flexible designer/orchestrator ✔	@Ajay Mahimkar	SDC, SO, VID	Link to Slide	Orange: 1 ATT: 1 China Telecom: 2 China Mobile: 2 Verizon: 1 Vodafone: 2	VID: on SO SDC: on SO	SDC:XL VID: M	Code: SO,VID,SDC	VID: Not committed (Note: VID part is "nice to have" - no dependency on VID from other projects) SDC: committed based on Amdocs contribution SO : Committed (with support from ATT resources)	VID: requires additional resources	AT&T, Amdocs
Change Management - traffic migration ✔	@Ajay Mahimkar	SDNC, APPC, VNFSDK	Link to Slide	Orange: 1 ATT: 1 China Telecom: 2 China Mobile: 2 Verizon: 1 Vodafone: 2			Code: SDNC, APPC	SDN-C: committed APPC: Not committed Orange: Committed	APPC: Not enough details on requirements, plus limited resources	AT&T, Orange, Intel
Change Management - 5G PNF software upgrade ✔	@Ajay Mahimkar	APPC, SO, SDC, A&AI, Ansible/EM	Link to Slide	Orange: 1 ATT: 1 China Telecom: 2 China Mobile: 2 Verizon: 1 Vodafone: 2				SDC: Not committed	SDC: missing information on requirements and designe.	AT&T, China Mobile, Huawei
Change Management - CM scheduler ✔	@Ajay Mahimkar	OOF, VID VID - Nice to have - the functionality can still be delivered with OOF only (scheduler would need to be invoked through CLI)	Link to Slide	Orange: 1 ATT: 1 China Telecom: 2 China Mobile: 2 Verizon: 1 Vodafone: 2	VID on OOF	VID: S	Code: OOF, VID	OOF: Committed VID: Not committed	OOF: Risk on resources - being worked out VID: requires additional resources	AT&T

Note: Eric - Orange to potentially commit resources for "Traffic Migration".

Outcome: Resource in vacation for 2 weeks. No firm commitment. Stretch Goal.

Update on July 5 from Ajay: CM Scheduler is committed into Casablanca.

Update on July 5 (after TSC meeting): Firm commitment from Orange to commit resource on "Trafic migration".

Update on July 5 (after TSC meeting): Firm commitment from Ajay on PNF Software Upgrade

Functional Requirement: Scaling ✓

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement
Scaling Closed Loop Scaling (High Priority)	@Scott Blandford	Policy, CLAMP, SO, DCAE	Link to Slides	Orange: 1 ATT: 1 China Telecom: 1 China Mobile: 1 Verizon: 3 Vodafone: 1	CLAMP: on Policy Policy: on SO	CLAMP: M	Code: SO, CLAMP, Policy Test: DCAE	**CLAMP:** Committed with risks (dependency on Policy) **Policy:** Committed with risks (TBD) **SO:** Committed **DCAE:** Committed		AT&T
Scaling Beijing Fixes (High Priority)	@Scott Blandford	APPC, SDNC, SO, AAI, VID			VID: on SO APPC: on SO	VID: XS AAI: XS	Code: APPC, SDNC, SO, AAI	**AAI:** Committed **APPC:** Committed **SDNC:** Committed **SO:** Committed **VID:** Committed		AT&T
Scaling Homing and Capacity Check (Low Priority)	@Scott Blandford	Multi-VIM, OOF, SDNC, SO			OOF: on Multicloud and Policy	OOF: S	Code: OOF, SO, SDNC, Multi-VIM	**OOF:** Partially Committed	OOF: Resource issue if R2 solution needs to be extended for new policy constraints.	AT&T

Functional Requirement: Scaling ✓

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement
Scaling Controller_Topic_ID (Medium Priority)	@ Scott Blandford	SO					Code: SO	SO: Committed		AT&T

- **AI - Scott:** Still in discussion. Back by Noon EDT on July 2.
- **Outcome from Scott**: The team has agreed on a path forward for the Controller_Topic_ID Feature. The Casablanca solution will be a short term solution only and will be just enough to support the other features in both Manual and Auto Scale Out. The controllers and architecture teams are taking on the long term solution and will propose that solution for a future release.

Functional Requirement: 5G/PNF ✔

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement
5G/PNF Plug and Play	@Benjamin Cheung @Vimal Begwani @Shekar Sundaramurthy	SDC, SO, SDN-C, A&AI, CDT, Modeling, VID, DCAE, DMaaP	Link to Slide	Orange: 2 ATT: 1 China Telecom: 3 China Mobile: 1 Verizon: 1 Vodafone: 2	VID: on SO	VID: S AAI: XS? need clarification on what's expected OOF: No impact	Code: VID Test Only: SDC Code : DCAE	VID: Committed based on Nokia's contribution SDNC: committed SO: Committed (with resources from Nokia) SDC: support based on current sdc capabilities from Beijing. APPC: No impact AAI: No code change, only modeling changes OOF: No impact	APPC: Per review of slides, does not appear to be anything specific for APPC in Casablanca. Items mentioned are more longer term, roadmap items AAI: Expecting this to be modelling/schema updates only but unclear. Need additional information and analysis by AAI SMEs OOF: Additional information required on policies required for PNF placement DCAE: Committed based on Nokia's contribution on PRH	AT&T, Nokia,

AI - Vimal: to clarify by 1 pm EDT, July 2.

Outcome from Vimal: APPC: not impact. AAI: not code change, only modelling changes. OOF: no impact

Functional Requirement: 5G/PNF ✓

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement
5G/PNF Software Version Reporting	@Vimal Begwani @Shekar Sundaramurthy	CCSDK, SDN-C	Link to Slide					CCSDK: committed SDN-C: committed		AT&T

Functional Requirement: 5G/PNF ✓

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement
5G/PNF Lifecycle Management Support	@Vimal Begwani @Shekar Sundaramurthy	CLAMP, SDN-C	Link to Slide							AT&T

- Note: Vimal confirmed not committed for Casablanca
- Update: Sarat confirmed

Functional Requirement: 5G/ Performance Analysis and Optimization ✓

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement	Notes
5G/performance Analysis and Optimization

High Volume and RT Data Collection of PM | @ Benjamin Cheung

@ Vimal Begwani

@ Shekar Sundaramurthy | DCAE, SDN-R, CCSDK, SDNC | Link to Slide | Orange: 2

ATT: 2

China Telecom: 1

China Mobile: 3

Verizon: 3

Vodafone: 3 | DCAE: on DMAAP (native Kafka support) | OOF: M

DCAE: L | code change: OOF

Code : DCAE | CCSDK: committed

SDN-C: committed

OOF: No Impact

DCAE: Committed (based on Nokia contribution) with dependency risk | OOF: Limited resources | AT&T, Nokia, | DCAE: Edge deployment support for R3, DDS-VES and new analytic platform (flink) not committed due to resource constraint |

- Note: Vimal confirmed OOF is not necessary

Functional Requirement: 5G / Performance Analysis and Optimization ✓

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement
5G/performance Analysis and Optimization Bulk PM	@Oskar Malm @Vimal Begwani @Shekar Sundaramurthy	DCAE, DMaaP	Link to Slide		DCAE: on DMAAP-DR	DCAE:L	code change: DMaaP Code change: DCAE	DCAE: DataFileCollector-Committed (based on Ericsson Contribution) with dependency risk PMMapper - Partial Commit (Based on Ericsson contribution) + dependency risk – *Not a hard requirement*	DCAE: Dependency on DMAAP-DR + PMMapper (Stretch goal)	AT&T, Ericsson

Note: Vimal, Vijay: DCAE committed with risks dependency on availability of DataRouter.

Functional Requirement: 5G / Performance Analysis and Optimization ✓

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement
5G/performance Analysis and Optimization Optimization Framework Enhancements (Placement, Formulation, Solving)	@Sarat Puthenpura @Vimal Begwani @Shekar Sundaramurthy @Benjamin Cheung	OOF	Link to Slide			OOF: M	code change: OOF	OOF: Committed to SON		AT&T, Nokia, Reliance Jio

Functional Requirement: 5G Network Slicing ✘

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement	Notes
~~5G/Network slicing~~	@Vimal Begwani @Shekar Sundaramurthy @Benjamin Cheung	Withdrawn from Casablanca release by the requirement owner		Orange: 3 ATT: 3 China Telecom: 1 China Mobile: 2 Verizon: 2 Vodafone: 3							

Functional Requirement: Centralized Representation ✓

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement	Notes
Centralized Representation and Consistent ID of Cloud Regions, Plan B, Phase 1: Centralized Representation of Cloud Regions	@ Bin Yang	SO, Integration	Centralized Representation and Consistent Identification of Cloud Regions In ONAP	Orange: 1 ATT: 2 China Telecom: 2 China Mobile: 3 Verizon: 1 Vodafone: 1			code : SO, Integration	SO: committed based on Intel's contribution Integration: committed			To align MVP, propose alternative **action plan B:** break this requirement into 3 phases. **Phase 1 is to centralize the representation of cloud regions;** **Phase 2 is to apply consistent ID** across all related ONAP projects. Phase 3 is to correlate and align dcaeLocation to AAI's cloud region. This phase requires further discussion, hence not listed here. Note on "Intel's contribution": This is the synergy effort with HPA, no further special changes needed here. hence this can be deemed as a dependency on HPA's impact on SO.
Centralized Representation and Consistent ID of Cloud Regions, Plan B, Phase 2: Consistent ID of Cloud Regions	@ Bin Yang	SO,VID,SDNC,OOF,VFC, UUI,MultiCloud.	Centralized Representation and Consistent Identification of Cloud Regions In ONAP	Orange: 1 ATT: 2 China Telecom: 2 China Mobile: 3 Verizon: 1 Vodafone: 1	VID/SDNC: on SO SO/OOF/VFC: MultiCloud	VID: XS MultiCloud: S VFC:S	code : SO,VID,SDNC,OOF,VFC, UUI,MultiCloud	SO: not committed VID: Not Committed SDNC: Not committed OOF: Committed MultiCloud:Committed VF-C :Committed UUI: committed	SDNC: Limited resources VID: requires additional resources		

Note: Seshu: Plan B, Phase 1 for Casablanca: committed with Resources from Intel

Functional Requirement: Edge Automation through ONAP ✓

Functional Requirements	Owner	Projects Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Priority (from SP perspective)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects
Edge Automation Through ONAP (EA)	@ramki krishnan @Raghu Ranganathan @Vimal Begwani	A&AI, Multi-Cloud, OOF, SO	Edge Scoping MVP for Casablanca - ONAP Enhancements	Orange: 3 ATT: 3 China Telecom: 3 China Mobile: 3 Verizon: 2 Vodafone: 1	OOF: on MultiCloud Multi-Cloud: on A&AI	AAI: XS SO: XS OOF: M Multi-Cloud: L	Code: OOF, Multi-Cloud, SO, A&AI Test: Integration	Casablanca MVP: • **OOF**: Committed • **Multi-Cloud**: Committed • **SO**: Committed • **A&AI**: Committed **Casablanca Stretch Goal:** • Discussion In Progress

Notes: Ethan: more discussion for Multivim on resources. Xinhui to confirm on Tuesday, July 3. All requirements at Stake if no resource.

Integration to confirm: Hardware needed.

Outcome: As of July 3, Multivim has not been able to confirm resource availability (Xinhui has been facing flights delays). As such this requirement is proposed as a Stretch goal for now. (Multivim team to keep community posted in case of changes)

Update: July 5: Resource committed

Non Functional Requirement: S3P ✓ Overall, there are some improvements in scope even if same level is maintained

		AREA																				
	Design / Run-Time	Performance			Stability			Resiliency			Security			Scalability			Manageability			Usability		
Min TSC Recommendations		M1 Actual	M1 Target	M4 result	M1 Actual	M1 Target	M4 result	M1 Actual	M1 Target	M4 result	M1 Actual	M1 Target	M4 result	M1 Actual	M1 Target	M4 result	M1 Actual	M1 Target	M4 result	M1 Actual	M1 Target	M4 result
Project Name																						
A&AI	R	1	1		1	2		2	2		1	1 (stretch goal; 2 unlikely)		1	1		1	2		1	1	1
Application Authorization Framework	R	0	1		0	1		1	2		1	2		0	1		1	1		1	1	1
APPC	R	0	0		1	1 (APPC) 2 (integration) (Note 1)		2	2		1	1 - Partial (Note 2)		1	1		1	1		0	1	1
CLAMP	D	0	0		1	1		1	1		1	1		1	1		1	1 (2 if CLAMP get more resource)		1	1 (2 if CLAMP get more resource)	
Common Controller SDK	R																					
DCAE	D & R	1	2 (stretch)		2	2		2	2		1	1 (+topic security w/dependency Note3)		1	1		1	1 (+logging v1.2)		1	1	
DMaaP	R	1	1		1	1		2	2		1	2		1	1		1	1		1	1	1
Documentation	NA																					
External API Framework	R	0	0		0	0		0	0		0	1		0	0		0	0		0	0	
Holmes	R	1	1		1	1		1	2		1	2 Stretch		1	1		1	1		1	2 Stretch	
Integration	NA																					
Logging Enhancements Project	R	1	2		2	3		2	2		1	2		1	1		1	2		1	2	
Microservices Bus	R	1	1		1	1		2	2		0	1		1	1		1	1		1	1	
Modeling	D	0	1		1	1		1	2		0	1		0	1		0	1		0	1	
Multi VIM/Cloud	R	1	1		1	1		2	2		1	1		1	1		1	1		1	1	
MUSIC	R	1	1		1	1		2	2		2	2		1	1		1	1		1	1	
ONAP CLI	D & R	1	1		1	1		2	2		1	1		1	1		1	1		2	2	
ONAP Operations Manager	R																					
ONAP Optimization Framework	R	1	1		1	1		2	2		1	1		1	1		1			1	1	
ONAP Usecase UI Project Proposal	D	1	2		1	2		2	2		1	1+		0	1		1+			1	1+	
Policy Framework Project Proposal	D & R	1	2		1	1		2	2		1	2		1	1		1	1 (logging v1.2 only)		1	1	
Portal Platform Project Proposal	D & R	1	1		1	1		2	2		1	1		1	1		1	1		2	2	
SDN-C	R	0	0		0	1		1	2		0	1		0	1		1	1		0	1	
Service Design & Creation	D	0	0		1	2		1	1		1	1+(AAF integration and https support)		0	0		1	1 (with logging v1.2 spec support)		1	1	
Service Orchestrator	R	0	1		1	1		2	2		1	1		1	1		1	1		1	1	
VFC	R	1	1		1	2		2	2		1	1		0	1		1	1		1	1	
VID	R	0	0		1	2		2	2		1	1		1	1		1	1 (with logging v1.2 spec support)		1	1	
VNF SDK	D	0	0		1	1		1	1		1	1		0	0		1	1		1	1	
VNF Requirements	NA																					
VNF Validation (VVP)	D	NA			NA			NA			1	1		NA			NA			NA		

THE LINUX FOUNDATION

ONAP OPEN NETWORK AUTOMATION PLATFORM

Non Functional Requirement: S3P ✓

Non Functional Requirements	Owner	Sub-category	Project Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement
S3P	@ Jason Hunt	• Performance • Stability • Resiliency • Security (see below) • Scalability • Manageability • Usability	Likely ALL depending upon TSC determination of new level requirements per category	Materials Usability: New API's adhere to Versioning strategy Versioning & API Documentation Recommendations Manageability: Adherence to ONAP Logging Spec v1.2	Portal: on AAF, MUSIC, OOM VID, Policy, SDC, AAI: on Portal	Portal: XL	Portal: Code	Portal: Not Committed APPC: Partial DCAE: Partial SDC: committed VID: Partial (depends on Portal) AAI: Partial	Portal: See Risk #2 APPC: Please refer to M1 Planning template for details DCAE: Refer to DCAE R3 M1 Release Planning#PlatformMaturity for details AAI: Please refer to AAI R3 Platform Maturity	Portal: IBM (only forAngularupgrade - shown interest, but not committed yet)

Non Functional Requirement: Security ✓

Non Functional Requirements	Owner	Sub-category	Project Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement	Notes
Security	@ Stephen Terrill		Note: This does not cover what is in S3P. However, based on that it is expected to have a certificate or use CADI to get certificates to enable secure communication Pluggable authentication and Authorization (Use of CADI and ?): • JAVA projects to use CADI client and enforcement point • Non-JAVA projects:Wait until there is multi-language. • All projects either need to have certificates (for secure communication) (based on a common trust store of AAF). The certificate distribution can be part of deployment mechanism and will be further detailed. Secure communication toxNFs(Security for 5G Use cases). DCAE, APPC, VFC? VNF requirements. (Secure Communication to Network Functions) - TLS and/or SSH for netconf (APP-C, SDN-C, CCSDK) - HTTPS security for VES (DCAE) (with certificates, slowly deprecating username/pasword) • Description of how the xNFs will get their certificates (VNFreqs). Vnf package security following SOL 004: SDC, VNFreqs, VNF SDC	Materials CADI/AAF Integration: • AAF Documentation • Client access to AAF	Portal: on AAF Test coverage (js): (1) js Sonar plug-ins activation (2) min. 3 additional containers per application => Jenkins enhancements (3) Maven build to be updated Risk #1 DMaaP on AAF DCAE on AAF, OOM,DMAAP OOF on AAF	Portal (CADI): M DCAE: XL SDC: L Test coverage (js): All: M/L	Portal: Code SDC: code VID: Code	Portal: Not Committed APPC: Partial OOF: Partial DCAE: Not Committed SDC: Partial VID: Partial (depends on Portal) AAI: Partial	Portal: See Risk #3 APPC: Please refer to M1 Planning template for details DCAE: Refer to DCAE R3 M1 Release Planning#PlatformMaturity table for open issues/question with current proposal OOF: Please see OOF Casablanca M1 Release Planning Template SDC: because of the size of the sdc source code we will be able to reach only 10% unit test coverage on the Javascript. VNF package security missing information. AAI: Please refer to AAI R3 Platform Maturity		Portal: Looking for resources who understand the AAF based certificate management to upgrade using CADI client in Portal. OOF: Need more clarity on AAF support for python projects in Casablanca

Note from Steven: must maintain Critical and High vulnerability goals

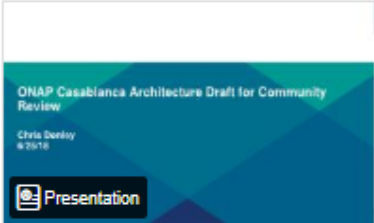# Non Functional Requirement: Upgrade ✖

Non Functional Requirements	Owner	Sub-category	Project Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)
Upgrade (from Beijing to Casablanca)	@ Helen Chen					All: XL		APPC: Not Committed CLAMP: Not Committed DCAE: Not Committed SDC: not commited VID: Not Committed AAI: Not committed	APPC, CLAMP, Portal, SDC, DCAE, VID, AAI: Lack of resources require additional information (does it include rollback, retrofit, no impact on run-time, etc)?

Note: Helen to reach out to PTLs. Need more information on scenario. Not part of the Casablanca Release: Helen to provide plan for M2.

Non Functional Requirement: Architecture Alignment ✓

Non Functional Requirements	Owner	Sub-category	Project Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)
								AAI: Not committed	
Architecture Alignment	@Chris Donley	• API improvement • Realtimestreaming • K8S Support (for VNFs)	ONAP Casablanca Architecture Draft for Community Review Chris Donley 6/26/18 📇 Presentation		DCAE on DMAAP (for DR)	DCAE:XL		DCAE:Partial Commit (New service committed based on Ericsson/Nokia) SDC: partial MultiVIM: Committed External API: Committed SO: Partially committed A&AI: partially committed CCSDK: committed	DCAE: DDS-VES and new analytic platform (FLINK) not committed due to resource. xNF-DCAE authentication not committed due to open issue listed under security. SDC: policy designer not planned for Casablanca, ETSI compliance only sol004 is planed. PNF suport will be done ontop of the existing capabilities. RTC stretch goal. DCAE-DS committed. Flow designer committed. ExtAPI: Interlude is a stretch goal SO: "decomposition" committed; "service instantiation" stretch goal A&AI: abstract topology sync-up committed

Note: Chris to update information: by noon PDT, Monday July 2.
Note: K8S, Alex is committing Intel resources to support K8S

Non Functional Requirement: HEAT Support ✓

Non Functional Requirements	Owner	Sub-category	Project Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement	Notes
HEAT support	@Helen Chen @Brian Freeman		HEAT-based ONAP deployment support should be dropped once OOM-based ONAP deployment's issues are fully identified and resolved. **Recommendation from TSC:** keep supporting HEAT in Casablanca for testing and integration purposes. However, HEAT won't be a gating item at Release Sign-Off.		Portal: on OOM	Portal: S SDC:S	Portal: Code SDC: code	**Portal**: Not Committed **APPC**: Will support Heat partially **OOF**: Support HEAT for testing **SDC**:committed	Portal: See Risk #4		Portal: Switching CSIT jobs from using HEAT based to OOM based requires resources who can understand the current setup.

Non Functional Requirements	Owner	Sub-category	Project Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement	Notes
Internationalization language support	@Tao Shen	• User Experience	Multi-Language Proposal CMCC, AT&T 📇 Presentation Design language/internationalization component in Portal and provideserviceapistopartnering apps like Policy, VID, SDC, AAI **Note**: This will need to go through the whole process (Architecture review,...) to understand whatthesdk will be providing and dependenciesonother ONAP project (Portal, SDC,...) **As per Lingli and Tao from chinamobile, this is reviewed and approved by Arch Team.**		UsecaseUI: on Portal	Portal: L	Portal: Code	**Portal**: Partial **APPC**: Not Committed **CLAMP**: Not Committed **SDC**: Not committed	**Portal**: Limited resources	Portal: AT&T, ChinaMobile	Portal: Policy, VID, SDC, AAI can choose to use this Internationalization feature based on their capacity. Only UsecaseUI team is committed to develop and use this feature for now in Casablanca.

Non Functional Requirements	Owner	Sub-category	Project Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement
Testing	@Helen Chen	• Unit tests • CSIT tests	Most UI projects with javascript. **Recommendation from TSC:** This is related to Code Coverage: recommendation is to keep 50% Code Coverage for Casablanca including JavaScript. (In Beijing Release code coverage was only covering Java and Python code, not javascript)		Linux Foundation Unit test and CSIT coverage framework, Policy, VID, SDC, AAI: on Portal, DCAE (for JavaScript coverage)	Portal: XL SDC:S VID:S	Code: portal, SDC, VID	**Portal:** Partial (no Javascript) **APPC:** Partial, Java code will maintain 50%, no commitment for Javascript **CLAMP:** Partial, Java code will maintain 50%, no commitment for Javascript **DCAE:**Partial (except javascript) **SDC:** maintain 50% coverage for java and python add 10% coverage for UI(java script) **VID:** maintain 50% coverage for java add 10% coverage for UI (java script) **AAI:** Partial, Java code will maintain 50%, add 10% coverage for sparky (javascript)	Portal, APPC, CLAMP, DCAE: See Risk #1	Portal: AT&T, IBM, TechM

Note: Despite the wish on enabling Code Coverage on Java Script, due to technical issue this won't be achieved in Casablanca.

Use Cases ✓

Use Case	Owner	Projects or functional requirements Impacted for Casablanca	Link(s) to High Level Design (HLD) /Low Level Design (LLD) (if any)	Dependency (from/to) another project(s)	T-Shirt Size (XS, S, M, L, XL)*	Project's Impact: Test Only (TO), Code (C)	Committed (C)/Partially Committed (P) or not (N) per Impacted projects	If Partially or not Committed, then what are the gaps per impacted project (people/FTEs; HLD/LLD; etc)	Company Engagement	Notes
vFW	AT&T	HPA				All: Test Only	N/A - part of regression tests	N/A - part of regression tests		
vDNS	AT&T	HPA				All: Test Only	N/A - part of regression tests	N/A - part of regression tests		
VoLTE	China Mobile	HPA				All: Test Only	N/A - part of regression tests	N/A - part of regression tests		
vCPE	Kang Xi	HPA				All: Test Only	N/A - part of regression tests	N/A - part of regression tests		
CCVPN	LIN MENG Chaker Al-Hakim	SO,OOF, SDNC,UUI, integration Stretch goal: SDC, DCAE, external API. **NOTE**: No project should be code impacted by this use case.	Materials Lin Meng. Material Jianguo Zeng			All; Test Code: SO,OOF, SDNC,UUI Stretch goal: SDC, DCAE, external API, CCSDK	SO:committed, OOF:committed (Huawei resources as required). UUI:committed Integration: committed SDNC: (Huawei resources as required). Stretch goal: **DCAE** : Not committed(Huawei &CMCC plan to contribute) SDC: Not committed External API:(VDF & huawei plan to contribute) CCSDK: (Huawei resources as required).	if projects not committed is just in strech goal, then we will dev based on exist features, may impact some usibiligy, but won't impact the final result. **DCAE** : From discussion with Xin Miao (Huawei), this usecase requires new RESTCONF collector to be added into DCAE.This cannot be committed for R3 due to pending requirement clarification and architectural alignment besides resourcing constraint.	China Mobile, Vodafone	Contingent that Use Case owner are able to add resources on impacted projects and Integration agreement
OSAM/PNF	Sumithra Bhojan Bora Eliacik Ryan Hallahan	SO; Portal, External API, APPC, DCAE HPA **NOTE**: OSAM uses the PNF capability similar to 5G use case. No new development efforts were identified to support OSAM using PNF VNFRQTS (include PNFs)	OSAM Material			All: Test Only			ATT, Turk Telecom, Swisscom	Contingent that Use Case owner are able to add resources on impacted projects and Integration agreement

Risk ID	Project Team or person identifying the risk	Identification Date	Risk (Description and potential impact)	Team or component impacted by the risk	Mitigation Plan (Action to prevent the risk to materialize)	Contingency Plan - Response Plan (Action in case of the risk materialized)	Probability of occurrence (probability of the risk materialized) High/Medium/Low	Impact High/Medium/Low	Status
1	Katel34	6/27/2018	CII Badging - Casablanca Release Criteria is about addressing test coverage (including JS) Therefore some projects might not pass their CII Badging.	Any Project team who has JS as part of their code and who will not have enough bandwidth	Find an alternative to the current proposal https://lists.onap.org/g/Onap-seccom/topic/cii_badging_passing_level/22721721?p=,,,20,0,0,0::recentpostdate%2Fsticky,,,20,2,0,22721721	If it is confirmed that the solution (https://lists.onap.org/g/Onap-seccom/topic/cii_badging_passing_level/22721721?p=,,,20,0,0,0::recentpostdate%2Fsticky,,,20,2,0,22721721) is the right way to move forward then we believe that we should split the JS test coverage into several phases that will be implemented across multiple ONAP releases depending on each project's bandwidth: Phase 1 – Setup the infrastructure Phase 2- Analyze the SONAR test coverage and build a plan to meet JS test coverage criteria Phase 3- Add test cases to meet the JS test coverage criteria	High	High	In-Process 6/27/18 update: • Current proposal presented to the Security Subcommittee to provide awareness
2	Portal	6/27/2018	Policy, VID apps that use portal/sdk will be directly impacted under S3P for logging support; also impacted under the JavaScript code coverage support required from portal/sdk due to lack of resources;	Policy, VID, Portal	Requesting open community for resources who can help with logging and JavaScript coverage in portal/sdk.		High	High	Assessed
3	Portal	6/27/2018	Policy, VID, AAI, SDC will be impacted under Security for AAF role management support required from portal/sdk due to lack of resources;	Policy, VID, AAI, SDC, Portal	Requesting open community for resources who can help with AAF role management in portal/sdk.		High	High	Assessed
4	Portal	6/27/2018	OOM deployment is impacted if the DB scaling changes are not supported by Portal team; also the changes for simplification of etc/hosts entries impacts the OOM deployment which is not committed by Portal team so far due to lack of resources.	OOM, Portal	Requesting open community for resources who can help with deployment upgrades in Portal using OOM.		High	High	Assessed

Recommendations to TSC

- Pass all projects
- Pass the functional requirements, non functional requirements and Uses case marked with ✔

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