Jakarta Release Key Updates

Deadline for contribution by

This page provides a summary of project-by-project release updates. The table shows the list of approved projects.

Project	Key Updates	Benefits
A&AI	• The R10 Jakarta release of ONAP A&AI addressed security vulnerabilities and enhanced the model for the CCVPN Use Case - Schema updated for CCVPN use case mainly enhancing and bug fixes of the Cloud Leased Line (CLL) service - Updated versions for indy, httpclient, freemarker, activemq, commons-io, commons-compress, logback-core, commons-codec, groovy, netty-all, netty-handler, gson, and snakeyaml in various mS	
AAF (unmaintained)		
APPC (unmaintained)	Not part of the release	Not part of the release
CCSDK	CNFO Changes for CDS integration with k8splugin: • The creation of the profile allows the specification of labels and additional k8sresource types to be returned by the status API • Better Configuration API support including rollback, improved deletion of the configuration with or without removal of the configuration resources in the cluster • creation of the configuration template without a dedicated helm chart which allows for easy update of the override values by configuration API without a need to duplicate configuration template helm chart from the main helm chart. The configuration template (Helm chart) is taken from the main definition. CCSDK/O-RAN: A1 Policy Functions • Continued maturing A1-Policy controller functions: ○ Security enhancements in cert-handling, supporting token-based security, improved HTTPs support, improved deployment permissions/configuration, 3PP updates, etc. ○ A1 Policy (JSON) schema validation improved ○ Improved searching/filtering in query APIs ○ Removed deprecated CBS/Consul configuration - enabling dynamic configuration using K8S ConfigMap & REST ○ Removed deprecated v1 API, replaced with more intuitive & style-compliant v2 NBI ○ Improved improved HTTP return code compliance for O-RAN Alliance A1-AP spec (releases 1,2 &3).	CCSDK/O-RAN: A1 Policy Functions: • The O-RAN A1 interface provides a flexible way for RAN operators to manage wide area RAN network optimization, reducing capex investment needs. • Enhanced A1 interface controller and A1 Policy capabilities are now usable by any service provider deploying and using ONAP. • This functionality is also used downstream in O-RAN-Source Community (OSC) Non-RealTime RIC project, strengthening alignment between ONAP & OSC.
CLI		
CPS	• cmHandle Module discovery & sync • passthrough-running read & write • DMI refactoring for better scale and interface improvements • cmHandle metadata • cmHandle meta-data search (using YANG module)	• These updates provide a link from the network to the proxy interface and pave the way to persisting cache. • They enable applications to understand the nature of equipment in the network and interact with it's CM data. • The DMI updates make it easier for developers to create new integrations for NCMP.

DCAE	New Enhancements/Features
	
	DCAEGEN2-2773 DCAE Helm Transformation (Phase 3/Final)
	  - DCAEMOD enhanced to support Helm chart generation for onboarded MS/flows
	  - Cloudify and related Handlers removal from ONAP/DCAE Deployments
	  - Removed Consul dependency across all DCAE service components.
	  - All DCAE microservices migrated to use internal CBS SDK library to support configmap/policy retrieval
	  - Enhancement on DCAE common template for DR Feed pub/sub configuration consistency and disable Consul loader
	  - v3 spec introduced for MOD Helm flow support
	
	DCAEGEN2-3021 DCAE Enhancements for E2E Network Slicing
	  - Slice selection taking into consideration resource occupancy levels
	  - IBN based Closed loop for Network Slicing
	
	DCAEGEN2-3063 CCVPN Jakarta Enhancements for Intent-based Cloud Leased Line and Closed-loop
	  - Support bandwidth evaluation and CL event generation
	  - AAI Interface for bandwidth update notification
	
	DCAEGEN2-2906 - Bulk PM / PM Data Control Improvements (PMSH)
	  - PMSH functional enhancement and support for dynamic filter/subscription change via API
	
	DCAEGEN2-3031 - Topic alignment for DCAE microservices
	  - Migrate DCAE MS to use standard topics for PM-Mapper, Slice-Analysis, KPI-MS
	
	Non-Functional
	  - DCAEGEN2-2829 - CII Badging improvements
	  - DCAEGEN2-3006 - Vulnerability updates for several DCAE MS (TCA-gen2, DataFileCollector, RESTConf, VES,Mapper, PM-Mapper, PRH, SON-handler, KPI-MS, Slice-Analysis MS, DCAE-SDK, VES OpenAPI Manager)
	  - DCAEGEN2-2961/DCAEGEN2-2962/DCAEGEN2-2963 - Removed GPLv3 license from software by switching to onap/integration base images for VESCollector, RESTConf, SliceAnalysis MS
	  - DCAEGEN2-2958 - STDOUT log compliance for DCAE SNMPTRap collector and Healthcheck container
		1) ONAP/DCAE Resource saving with transformation initiative
		
		- CPU utilization reduced by ~75% among bootstrapped DCAE components (100% w.r.t to DCAE platform)
		- Memory utilization reduced by ~60% among bootstrapped DCAE components (100% w.r.t to DCAE platform)
		
		(More info DCAE Resource Optimization with Helm transformation#ResourceOptimization)
		
		2) Simplified deployment for DCAE services via Helm without dependency of DCAE
		
		- Removing platform and Consul dependency enables each DCAE MS deployment handled uniquely via respective charts
		
		3) Security enhancements and vulnerability updates
		
		4) Support evolution on Network Slicing, Bulk PM, CCPVN/IBN usecases

DMaaP	Introduction of Strimzi Apache Kafka as an alternative to deploy a kafka cluster. Addition of strimi kafka bridge as an alternative to Message Router.	
Documentation	• Documentation cleaned up. Chapters which include unmaintained projects were removed to avoid misunderstandings at the readership. • Projects (repositories) which do not create a stable release branch are no longer included in the release documentation. This should help to improve the release management process. • Beginning with this release we are providing example configuration files for setting up a proper process of documentation creation. Please check the 'doc' repository. • The Interactive Architecture Overview was updated. Learn about the ONAP architecture in an intuitive way. • The guide to set up a development system for documentation was updated.	
External API Framework (unmaintained)	Not part of the release	Not part of the release
Holmes	• Changed the deployment from Cloudify+Consul based to Helm based. • Fixed some bugs.	
Integration	• Create Java and Python base images • Adapt robot tests to DCAE project changes - cloudify to Helm migration • New test - basic_cnf_macro • Release ONAP data provider tool • Automate repositories INFO.yaml updates • Bug fixes	

Logging (unmaintained)	Not part of the release	Not part of the release
Modeling	- Update Django version - Update the vulnerable direct dependencies - Update Docker image - Fix bug	
MSB	- Update the vulnerable direct dependencies - Remove obsolete docs - Fixed some bugs (security).	
MultiCloud	Security fixes for log4j vulnerability and removed most of the GPLv3 dependencies CNFO Enhancements: - Better Configuration API support including rollback, improved deletion of the configuration with or without removal of the configuration resources in the cluster - Creation of the configuration template without a dedicated helm chart which allows for easy update of the override values by configuration API without a need to duplicate the configuration template helm chart from the main helm chart. The configuration template (Helm chart) is taken from the main definition. - Instance upgrade endpoint that allows upgrading existing CNF instance. We can change the definition (Helm chart), and override values of even the cluster in which the instance is deployed which in consequence allows the realization of the migration procedure.	
Music (unmaintained)	Not part of the release	Not part of the release
OOM	Introduction of Strimzi Kafka Operator Migration of all kafka native clients to use strimzi apache kafka. Disable VID Disable Portal	
OOF	**Functional enhancements** Capacity based Slice selection in OOF	
OSA (SecCom)		

Policy	• **REQ-994** - Control Loop in TOSCA LCM improvement `DONE` - Control Loop in TOSCA LCM Improvement
	CLAMP (Control Loop Automation Management Platform) functionalities, moved to the Policy project in the Istanbul release, provides a Control Loop Lifecycle management architecture. A control Loop is a key concept for Automation and Assurance Use Cases and remains a top priority for ONAP as an automation platform but it is not the only possible composition of components that is possible to combine to deliver functionality. This work evolves the Control Loop LCM architecture to provide abstract Automation Composition
	
	Management (ACM) logic with a generic Automation Composition definition, isolating Composition logic from ONAP component logic. It elaborates APIs that allow integrate with other design systems as well as 3PP component integration.
	
	The current PMSH and TCS control loops are migrated to use an Automation Composition approach. Support for Automation Compositions in SDC is also introduced.
	• Metadata Sets for Policy Types
	A Metadata set allows a global set of metadata containing rules or global parameters that all instances of a certain policy type can use. Metadta sets are introduced in the Policy Framework in the Jakarta release. This means that different rule set implementations can be associated with a policy type, which can be used in appropriate situations.
	• Introduction of Prometheus for monitoring Policy components so that necessary alerts can be easily triggered and possible outages can be avoided in production systems.
	  ○ Expose application level metrics in policy components. An end user can plug in a prometheus instance and start listening to the metrics exposed by policy components and either raise alerts or show them on a Grafana dashboard for operations team to keep monitoring the health of the system.
	  ○ Improve the policy/api and policy/pap readiness probes to handle database failures so that the policy/api and policy/pap kubernetes pods are marked ready only if the policy database pod is ready.
	  ○ Provide sample Grafana dashboards for policy metrics
	• Migration of Policy Framework components to Springboot to support easier handling, configuration and maintenance.
	The migrated components are policy/api, policy/pap, policy/clamp, and policy/gui
	• Policy Framework Database Configurability. The Policy Framework can be configured to use any JDBC-compliant RDBMS and configuration files are supplied for the Postgres RDBMS. MariaDB remains the default RDBMS for the Policy Framework in ONAP
	• System Attribute Improvements
	  ○ Transaction boundaries on REST calls are implemented per REST call
	  ○ JDBC backend uses Spring and Hibernate rather than Eclipselink
	  ○ All GUIs are now included in the policy/gui microservice
	  ○ Documentation is rationalized and cleaned up, testing documentation is now complete
	  ○ Scripts are added to make release of the Policy Framework easier	

Portal (unmaintained)	Not part of the release	Not part of the release
SDC	• Improved support for tosca features • Added Automation Composition Management model • Support for large csars via S3 storage	
SDN-C	• Upgrade to OpenDaylight Phosphorus release	
SO	Improvements of the VNF LCM support: • Removal of the VNF instance from the existing service instance in the macro mode • Adding the VNF instance to the existing service instance in the macro mode • Upgrade of the model of the existing service instance what, when combined with VNF delete/create allows to perform build and replace upgrade procedure of the resources. CNFO Enhancements: • Improved synchronization of k8s resources after the creation of the CNF. Now, when some change occurs for the CNF in the k8s cluster, k8splugin sends a notification to the cnf-adapter which performs an update of the changes into AAI.	

UUI	- Providing a common user interface for CCVPN, E2E Slicing and other usecases by intent-based service. - Providing a common data set for NLP training. - Enhancing the NLP algorithm and model for more accurate intent translation. - Ability to display underlay L1 network topology and resource utilization status. - Ability to display installation and configuration for each OTN tunnel. - Update the vulnerable direct dependencies.	
VF-C	- Update Django version - Update the vulnerable direct dependencies - Update Docker image of vfc-lcm - Fix some bugs in the script	
VID (unmaintained)	Not part of the release	Not part of the release
VNFSDK		
VNFRQTS	Not part of the release	Not part of the release
VVP (unmaintained)	Not part of the release	Not part of the release
Benchmark		
Infrastructure Improvements		

This table shows use case blueprints:

Use Case Blueprint	Key Updates	Benefits
5G		
OOF SON	- Update of SDN-R to use O-RAN aligned O1 yang models - Update of RAN-Sim to use O-RAN aligned O1 yang models - Convergence on VES message formats for PM, FM, CM	Better alignment with O-RAN O1 models
E2E Network Slicing	- CPS Integration with SDN-R for RAN Slice allocate and reconfigure scenarios - E2E network Slicing with CPS is completed for allocation and re-use scenarios - E2E Closed loop with CPS is functional - IBN based closed loop with ML MS (POC) and Config DB is functional - Optimization of cm-handle registration with CPS-DMI Plugin to upload yang model - CPS Integration Stabilization for RAN Slice activate/deactivate scenarios - Addition of call to OOF for allocateNSSI to enable TN NSSI reuse in TN NSSMF - Addition of call to OOF for terminateNxi API to deallocate NSSI (without terminating TN NSSI even when NSI is terminated) in TN NSSMF - Closed-loop enhancement in CCVPN to support Transport Slicing's closed-loop	
PNF software upgrade without schema update		
PNF software version onboarding		
CCVPN	- Support for 1+1 protection of Cloud Leased Line (CLL) - Support for closed-loop and user-triggered intent update - UUI display of CCVPN topology and L1 and L2 services	
BBS		

O-RAN Harmonization		
Tactical Use Case Blueprint		
PNF support		
Change Management		
Control Loop		
K8s cloud region		
Scaling		

Here is a list of a few subcommittees (use-case, architecture, security), Anuket Assurance, and other activities.

Subcommittee	Key Updates	Benefits
Requirements Subcommittee	Reviewed Jakarta Release Requirements. Application Service Descriptor (ASD) was a newly introduced. The rest were continuation from earlier releases: Control Loop in TOSCA LCM, PM Data Collection Control, CNFO Enhancements, 5G SON, CCVPN, Intent Based Networking, A1 Policy Function Extensions, E2E slicing, DCAE transformation, and a number of Security related requirements aimed for GR or BP.	Allow visibility to the community in which areas work is planned and suggested in the upcoming release.
Arch Subcommittee		
Security Subcommittee		
Modeling Subcommittee	approved ASD model for CNF modeling	support the ASD PoC, which provides another solution for CNF onboarding and deployment in ONAP
Standards Harmonization		
Other Activities		
Anuket Assurance		
Controller Design Studio (CDS)	CNFO Changes for CDS integration with k8splugin: - The creation of the profile allows the specification of labels and additional k8sresource types to be returned by the status API - Better Configuration API support including rollback, improved deletion of the configuration with or without removal of the configuration resources in the cluster - creation of the configuration template without a dedicated helm chart which allows for easy update of the override values by configuration API without a need to duplicate configuration template helm chart from the main helm chart. The configuration template (Helm chart) is taken from the main definition.	

Finally, here is a list of S3P activities (security, documentation covered above)

S3P Activity	Key Updates	Benefits
Stability		
Scalability		
Performance		
Manageability		
Resilience		

Usability		
Code Footprint Reduction		