

ICN R2 Timelines

Date	Release /Tag	Features	Plan/Status Tracking (Please update your JIRAs and note any issues/road blocks with date stamp)				
Aug. 16th	Initial ICN intermediate release	Baremetal Operator					
	ICN v.0.1.0	BPA controller - Provisioning					
		BPA RestAPI					
	Sprint 1: Aug. 2nd	New KUD addons plugin					
	Sprint 2: Aug. 16th	S R I O V Q A T R O O K					
		KUD without any offline support					
Oct. 30th	ICN v.0.2.0	BPA controller software spec (BPA Software CR Specs)	Itohan Ukponmwan				
		BPA controller cluster	ICN-3 - Binary provisioning Agent controller IN PROGRESS ICN-10 - KuD v2.0 integration with BPA controller DONE ICN-9 - SSH into provisioning node DONE ICN-8 - ListAndWatch API for BPA CR and BMH CR DONE ICN-36 - Ramp up on requirements for Software CRD DONE ICN-49 - Code implementation for the Software CRD in BPA controller DONE ICN-73 - Use BPA controller to Get SW CR corresponding to provisioning CR DONE ICN-73 - BPA controller to ssh into hosts and install software specified in software CR DONE ICN-74 - Ramp up on Unit Testing in golang DONE ICN-75 - Update BPA controller code for multi-cluster purpose DONE ICN-110 - Write code to allow Software CR creation triggers BPA-operator DONE ICN-127 - Write Code for BPA controller to create KUD jobs using cluster name DONE ICN-141 - Write Unit testing code for provisioning part of BPA controller DONE ICN-158 - End to End code for BPA operator baremetal DONE				
		Rest API with MinIO					

Enyinna Ochulor

- Add Unit testing to RESTful API
- Containerizing the ResAPI agent, provide client and server communication
- Add authentication to RESTful API
- Clusterrole, clusterrolebinding and service account
- Expose the RestAPI using Kubernetes Services
 - Expose as the nodeport
- Documentation on the RestAPI
- Possibly Load balancing to next timeline 15th

Epic	JIRA Story	Sprint/Estimated Completion Date	Status/Actual Completion Date	Notes
 ICN-4 - Binary provisioning Agent RestAPI agent IN PROGRESS	 ICN-60 - Sample golang Unit test for ICN DONE	Sprint 3	Sprint 3	
	 ICN-16 - Achieve 35% unit test coverage for ICN RESTful API (image.go) DONE	Sprint 5	Sprint 6	
	 ICN-61 - Investigation on the Containerization of RestAPI DONE	Sprint 4	Sprint 4	
 ICN-76 - Add authentication to RESTful API DONE	 ICN-76 - Add authentication to RESTful API DONE	Sprint 4	Sprint 4	
	 ICN-77 - Clusterrole, clusterrolebinding and service account DONE	Sprint 5	Sprint 5	
	 ICN-78 - Expose the RestAPI using Kubernetes Services DONE	Sprint 5	Sprint 5	
	 ICN-79 - Documentation on the RestAPI DONE	Sprint 4	Sprint 4	
	 ICN-112 - Investigate load balancing the ICN RESTful api service DONE	Sprint 5	Sprint 5	
	 ICN-146 - Ramp up on CPU Manager for Kubernetes DONE	Sprint 6	Sprint 6	
	 ICN-147 - Ramp up on Helm Charts and SDWAN DONE	Sprint 6	Sprint 6	SDWAN CNF dependency. Moved to backlog.
	 ICN-152 - Bug Fix (Unit Tests) DONE	Sprint 6	Sprint 6	
	 ICN-164 - BPA RESTful API End To End Testing DONE	Sprint 7		
	 ICN-166 - BPA Code Refactoring (unit testing) DONE	Sprint 7		
	 ICN-166 - Documentation on the RestAPI DONE	Sprint 7		

Tingjie Chen

- Finished the MiniO Client plugin, and follow up the PR for bug fixes and reviews
- Running Mimio in Kubernetes cluster
- Documentation for the Mimio in wiki to run in Kubernetes cluster
- Investigate the storage backend solution for HTTP Server
- Reliable volume for MioIO server export
- Local controllers federation for MiniO deployment

Epic	JIRA Story	Sprint /Estimated Completion Date	Status /Actual Completion Date	Notes
	 ICN-26 - RestAPI Client code integration with Minio DONE	Sprint 3	Sprint 3	
	 ICN-30 - Documentation work for Minio and Rooks DONE	Sprint 3	Sprint 3	
	 ICN-93 - Follow up the PR for bug fixes and reviews DONE	Sprint 4	Sprint 4	Done and finished.
	 ICN-93 - Running Mimio in Kubernetes cluster DONE	Sprint 4	Sprint 4	Finished running standalone MinIO on Kubernetes environment, file patch: https://gerrit.akraino.org/r/#/c/icn/+1587/
	 ICN-94 - Documentation for the Mimio in wiki to run in Kubernetes cluster DONE	Sprint 4	Sprint 4	Create Wiki for Cloud storage for Local controller: Cloud Storage
	 ICN-100 - Investigate the storage backend solution for HTTP server DONE	Sprint 4	Sprint 4	The Minio deployment with K8s has include the local storage volume and can provision to http server: https://gerrit.akraino.org/r/#/c/icn/+1587/ PVC: minio-local-claim folder to mount with volume: /mnt/minio
	 ICN-110 - Investigate the reliable volume for MinIO Server deployment DONE	Sprint 7	Sprint 7	Reliable volume for MinIO server export, file patch: https://gerrit.akraino.org/r/#/c/icn/+1823/ in review
	 ICN-120 - Investigate MinIO Server federation for Global controller IN PROGRESS	Sprint 7	NA	Local controllers federation for MinIO deployment, which aim to remote clone, which will postpone to next release.
	 ICN-139 - MinIO file upload from original source TO DO	Sprint 7	NA	This for enhancement feature will postpone to next release.
	 ICN-167 - E2E test support for MinIO Cloud storage DONE	Sprint 7	Sprint 7	Sync with Enyinna for E2E test for MinIO cloud storage for REST API Agent, create patch: https://gerrit.akraino.org/r/#/c/icn/+1839/ and try to integrate, and update icn: 1753 to resolve E2E issues.
	 ICN-160 - Document for MinIO E2E for REST API Agent DONE	Sprint 8		Describe the mechanism to check the object size in MinIO server.
	 ICN-193 - Support for BM e2e testing DONE	Sprint 8		Add the uninstall.sh to clean up the MinIO kubernetes resources to support clean in bare metal, and debug issues for Jenkins with CI/CD.

OpenWRT initial code for SDWAN with Intel QAT card

Huifeng Le

- Presentation on the OPENWRT working
- SDWAN configuration in OpenWRT
- Working module with SDWAN
- Containerizing the SWAN working module and creating rbac tor run on ICN

Including QAT is moved to Oct 15th timeline

Epic	JIRA Story	Sprint /Estimated Completion Date	Status /Actual Completion Date	Notes
 ICN-40 - SDWAN for ICN R2 release TO DO	 ICN-41 - Investigation on OpenWRT DONE	Sprint3	Sprint3	
	 ICN-64 - Documentation on OpenWRT for Eng meeting DONE	Sprint3	Sprint3	Wiki: ICN - SDEWAN
	 ICN-96 - POC to Setup SDWAN CNF DONE	Sprint4	Sprint5	Blocked in ubus issue when install mwan3 application, reported in openwrt forum for comments: https://forum.openwrt.org/t/run-openwrt-as-container-failed-to-connect-to-ubus/44345 Contact uCPE team for support Manually enable OpenWRT service as workaround
	 ICN-97 - Restful API for SDWAN module DONE	Sprint4	Sprint5	Updated OpenWRT restful API support at ICN - SDEWAN
	 ICN-103 - SDWAN CNF DONE	Sprint5	Sprint5	
	 ICN-113 - Enable MWAN3 app in SDWAN CNF DONE	Sprint5	Sprint5	
	 ICN-116 - Ramp up lua CGI plugin for OpenWRT DONE	Sprint6	Sprint7	
	 ICN-163 - Enable SDWAN test scenarios DONE	Sprint7	Sprint7	

ONAP in local infra controller

[Kuralamudhan Ramakrishnan](#)

- Task is to get the ONAP in the local infra controller with multicloud
- Running Multiple cluster though bootstrap machine with KUD
- Running workload nginx helm chart in Multicloud region
- After Sept 15th have SDWAN Helm chart as well
- KUD offline will be covered

Epic	JIRA Story	Sprint/Estimated Completion Date	Status/Actual Completion Date	Notes
 ICN-121 - ONAP4K8s in ICN TO DO	 ICN-53 - Getting ONAP setup in Infra local controller - Phase 1 DONE	Sprint 3	Sprint 3	
 ICN-5 - Kud for ICN TO DO	 ICN-52 - Multi cluster support in ICN stack with KUD DONE	Sprint 3	Sprint 3	
 ICN-121 - ONAP4K8s in ICN TO DO	 ICN-24 - ONAP Investigation in Infra global controller DONE	Sprint 3	Sprint 3	
 ICN-3 - Binary provisioning Agent controller IN PROGRESS	 ICN-85 - ICN code refactoring DONE	Sprint 4	Sprint 4	
 ICN-5 - Kud for ICN TO DO	 ICN-84 - Containerized the KUD for the multi-cluster support DONE	Sprint 4	Sprint 4	
 ICN-121 - ONAP4K8s in ICN TO DO	 ICN-92 - Getting ONAP setup in Infra local controller - Phase 2 DONE	Sprint 5	Sprint 5	
 ICN-5 - Kud for ICN TO DO	 ICN-122 - ICN v0.2.0 testing and integration DONE	Sprint 5	Sprint 5	
 ICN-121 - ONAP4K8s in ICN TO DO	 ICN-54 - Automation script for ONAP integration in ICN stack DONE	Sprint 5	Sprint 5	
 ICN-1 - Metal3 Baremetal Operator in ICN Stack IN PROGRESS	 ICN-136 - Metal3 CI integration DONE	Sprint 5	Sprint 5	
 ICN-5 - Kud for ICN TO DO	 ICN-156 - ONAP4K8s in ICN DONE	Sprint 6	Sprint 6	
 ICN-5 - Kud for ICN TO DO	 ICN-154 - KUD containerized PR DONE	Sprint 6	Sprint 6	
 ICN-5 - Kud for ICN TO DO	 ICN-153 - DCM design presentation DONE	Sprint 6	Sprint 6	
 ICN-61 - ICN CI / CD works TO DO	 ICN-156 - ICN e2e DONE	Sprint 7	Sprint 7	
 ICN-61 - ICN CI / CD works TO DO	 ICN-157 - ICN documentation DONE	Sprint 7	Sprint 7	
 ICN-61 - ICN CI / CD works TO DO	 ICN-176 - ICN Release R2 works DONE	Sprint 8		
 ICN-61 - ICN CI / CD works TO DO	 ICN-177 - Edgex Foundry testing with ICN CD DONE	Sprint 8		
 ICN-1 - Metal3 Baremetal Operator in ICN Stack IN PROGRESS	 ICN-179 - Optimization in ICN installer scripts DONE	Sprint 8		
 ICN-178 - ICN SDL works DONE	 ICN-178 - ICN SDL works DONE	Sprint 8		

Baremetal VM with
BPA controller
Provisioning

[ramamani yeleswarapu](#)

- Get the baremetal server in lab with ICN baremetal operator script
- Using KuD install K8s and Virtlet, get the VM created
- BPA controller get the IP address from the Virtlet running on the K8s compute cluster
- Generate hosts.ini for K8s cluster on VMs
- Deploy testing of K8s on VM cluster
- Checking the Redfish support in metal3

Epic	JIRA Story	Sprint /Estimated Completion Date	Status/Actual Completion Date	Notes
 ICN-1 - Metal3 Baremetal Operator in ICN Stack IN PROGRESS	 ICN-43 - Development lab set up with ICN scripts DONE	Sprint 3	Sprint 3	
	 ICN-44 - Getting Virtlet running in the Compute node DONE	Sprint 3	Sprint 3	
	 ICN-68 - Install K8s cluster on Virtlet VMs DONE	Sprint 3	Sprint 3	Added #101 to the backlog to debug pod networking issue
	 ICN-86 - Getting Itohan code for the BPA controller DONE	Sprint 4	Sprint 4	
	 ICN-87 - Getting list api for the Virtlet VM resource DONE	Sprint 4	Sprint 4	#87 and #88 have been tested in independent code.
	 ICN-88 - Automate hosts.ini file from the BPA controller for KUD multi-cluster DONE	Sprint 4	Sprint 4	
	 ICN-101 - Pod network issues on K8s Cluster deployed on Virtlet VMs DONE	Sprint 4	Sprint 4	
	 ICN-123 - List VMs using 'mac address' and cluster vm label and get IP addresses DONE	Sprint 5	Sprint 5	
	 ICN-125 - Create hosts.ini for VM deployment DONE	Sprint 5	Sprint 5	
	 ICN-126 - Launch KuD on Virtlet VMs from autogenerated hosts.ini DONE	Sprint 6	Sprint 6	
	 ICN-148 - Code integration for Virtlet VM support in BPA provisioning controller DONE	Sprint 6	Sprint 6	
	 ICN-151 - Document Virtlet VM Provisioning in BPA DONE	Sprint 7/8	Sprint 7/8	
	 ICN-160 - Unit testing for Virtlet VM provisioning DONE	Sprint 7/8		
	 ICN-161 - Test/debug issues of Virtlet VM provisioning in BPA DONE	Sprint 7	Sprint 7	

CI/CD integration with checkmarx, Akraino recommended tools

Cheng Li

CI/CD

- Jenkins jobs for the all build - 1st Priority
- Load balancing and Fatal fail over mechanism
- Docker repo for ICN - How to use the Intel repo
- Integration CI Travis, Sonar, (AR Kural: Check Akraino code analysis tools)

Epic	JIRA Story	Sprint /Estimated Completion Date	Status /Actual Completion Date	Notes
	 ICN-62 - Documenting ICN CI /CD process in wiki page 	Sprint 3	Sprint 3	
	 ICN-63 - Lab set up for jenkins server 	Sprint 4	Sprint 5	LinuxFoundation will not create the gerrit account which fits our requirement (Gerrit-Trigger plugin requirement). I has replied the ticket to ask if any other way for integration. https://jira.linuxfoundation.org/servicedesk/customer/portal/2/IT-17441
	 ICN-65 - Jenkins job scripts - Phase 1 	Sprint 4	Sprint 5	
	 ICN-66 - Jenkins job scripts - Phase 2 	Sprint 5	Sprint8	No CI code change. Need to remind the guys who work on metal2 to fix issue if the CI doesn't pass. Plan changes, we are using Akraino community Jenkins. Need to create jenkins job by following community rule. working on this task...
	 ICN-114 - Jira project doesn't exist or you don't have permission to view it.	Sprint6	no need anymore	will not do this one
	 ICN-118 - Jenkins Multiple nodes support 	Sprint6	Sprint6	
	 ICN-182 - Jenkins job for pod 11 Jump server 	Sprint8	Sprint8	
	 ICN-183 - Jenkins job for PRC server with QAT and NIC card 	Sprint8	Sprint8	

Oct 15th

- All PRs will go through Checkmarx, Akraino recommend tools for unit testing and code inspection

Akhila Kishore

- **Ansible playbooks for KuD online - Sept 18**
 - Multus - Done
 - Virtlet - Ritu/ Akhila/ Kural should have a conversation on it. Installer + Daemonset (Manage URL for offline)
 - NFD - Done
 - ISTIO - Already Daemonset in KuD. (Manage URLs for offline mode)
 - OVN4NFV - Ritu Installer + daemonset Done
 - OVN Installer + daemonset (Users APT not Daemonsets) Done
- Update the version of Kubespray on KuD online.

Timeline Oct 18 - KuD online

- SRIOV Installer + daemonset moving this to Sept
 - Ramp up on SRIOV
 - Get lab setup POD with SRIOV capable NIC
 - Installer script for SRIOV
 - Run DaemonSets
 - Test on independent SRIOV capable machine with KuD
- Integrate CPU manager for Kubernetes with KuD - Taking over by Enyinna
 - Ramp-up CPU manager
 - Create Ansible script to integrate CPU manager with KuD
 - Generating test cases
- QAT Installer + daemonset
 - Ramp up on QAT
 - Procure SRIOV + QAT capable machine - If possible by Oct -18. **Moved to November release.**
 - Generate install script with KuD
 - Run DaemonSet yaml
 - Test cases

Epic	JIRA Story	Sprint /Estimated Completion Date	Status /Actual Completion Date	Notes
 ICN-6 - KuD V2.0 Addons for ICN IN PROGRESS	 ICN-46 - Ansible playbook for Multus with KuD DONE	Sprint 3	Sprint 3	
	 ICN-47 - Ansible playbook for NFD daemonset in KUD with testing DONE	Sprint 3	Sprint 3	
	 ICN-20 - Update the version of Kubespray in KuD live DONE	Sprint 3	Sprint 3	
	 ICN-80 - Ramp up on SRIOV DONE	Sprint 4	Sprint 4	
	 ICN-81 - NFD Daemonset reviews DONE	Sprint 4	Sprint 4	
	 ICN-83 - Ansible playbook to install SRIOV drivers on KuD DONE	Sprint 5	Sprint 5	In progress; 80% done. requested Kural for Machine with correct NIC card in OPNFV POD. Received credentials to Huiheng's testing machine temporarily for SRIOV ramp-up
	 ICN-116 - Integrating SRIOV Daemonset with KuD online DONE	Sprint 5	Sprint 5	
	 ICN-117 - Testing SRIOV DONE	Sprint 5	Sprint 5	
	 ICN-134 - KuD offline support assist TO DO	Sprint 6	Dropped for this release	
	 ICN-137 - Ramp up QAT Device plugin project to integrate with KuD DONE	Sprint 6	Sprint 6	
	 ICN-140 - SRIOV reviews DONE	Sprint 6	Sprint 7	In progress 50% complete
	 ICN-160 - CI test for KuD add ons DONE	Sprint 7	Sprint 7	Start date 10-23
	 ICN-170 - Installer script runs the KuD test cases before the pods are fully up. DONE	Sprint 7	Sprint 7	
	 ICN-171 - Architecture documentation for KuD. DONE	Sprint 7	Sprint 7	
	 ICN-173 - Testing Documentation for add-ons DONE	Sprint 7/8	Sprint 7/8	In progress.
	 ICN-184 - Update SRIOV playbook to match the new device requirements DONE	Sprint 8	Sprint 8	awaiting reviews

Huang Haibin

- Get offline with Apt local repo, https servers, Docker registry
- Offline ansible-playbook(KuD Vars)
- Kural AR: Add Haibin to the OPNFV pod.

Epic	JIRA Story	Sprint/Estimated Completion Date	Status/Actual Completion Date	Notes
	ICN-42 - Test the Kubespray 2.10.4 and Kube version v1.14.3 DONE	Sprint 3	Sprint3	
	ICN-59 - Script for offline ICN bootstrap Http Server DONE	Sprint 4	Sprint4	
	ICN-106 - Running Http server in container DONE	Sprint4	Sprint4	
	ICN-60 - Script for offline Docker registry in boot strap machine IN PROGRESS			Lower offline script work priority
	ICN-99 - Follow up for bug fix and changes for the HTTP Server PR IN PROGRESS			Lower offline script work priority
	ICN-138 - Running Docker Registry in container TO DO			Lower offline script work priority
	ICN-162 - QAT Kernel deployment IN PROGRESS	Sprint 7	Sprint 7	

Igor Duarte Cardoso

- Ramp on the golang
- Ramp on K8s - Kubeadm setup
- Controller, Operator SDK ramp
- Get the already running Tenant controller
- Documentation and presentation on the proposal in ICN wiki page
- Including the tenant resource quota for ICN

Epic	Story	Sprint/Estimated Completion Date	Status/Actual Completion Date	Notes
ICN-104 - ICN Multi tenancy DONE	ICN-56 - Getting K8s setup with Kubeadm DONE	Sprint 4	Sprint 4	
	ICN-67 - Running Sample Controller DONE	Sprint 4	Sprint 4	
	ICN-98 - Ramp on the Multi-tenancy proposal DONE	Sprint 4	Sprint 4	
	ICN-132 - Ramp-up on multi-tenancy kubernetes-sig DONE	Sprint 5	Sprint 5	

Dashboard

John Hinman

- Ramp on the golang
- build Dashboard, log on
- connect remotely
- determine whether dashboard allows control of baremetal node CRs
- add baremetal CR interface, if not already present
- Launch Ironic CR with dummy setup
- Add Documentation pages to wiki for Installation, Architecture

Epic	Story	Sprint/Estimated Completion Date	Status/Actual Completion Date	Notes
ICN-70 - Akraino ICN Dash board IN PROGRESS	ICN-88 - Modified the Kube dashboard for Bootstrap cluster DONE	Sprint 5		
	ICN-98 - Golang rampup DONE	Sprint 4		
	ICN-93 - Launch the Ironic CR with dummy setup with local k8s cluster DONE	Sprint 5		
	ICN-160 - wiki Documentation DONE	Sprint 7		