ICN R5 Timeline

Goals

- TBD

JIRA TRACKER

Features	Plan/Status Tracking (Please update your JIRAs and note any issues/road blocks with date stamp)

• SD-EWAN Restful API (MWAN3) definition
• WMAN3 Restful API POC
• SD-EWAN Service Restful API
  ◦ Get available services (e.g. mwan3, ipsec, firewall)
  ◦ Execute Service
	Huifeng Le

Epic	JIRA Story	Sprint/Estimated Completion Date	Status/Actual Completion Date	Notes
ICN-190 - E2E usages for SDWAN module in ICN to support multiple cluster communcation through security WAN intertaces TO DO	~~ICN-211~~ - MWAN3 Restful API DONE	Sprint 9	Sprint 9	
	~~ICN-221~~ - EWAN Restful API POC DONE	Sprint 10	Sprint 10	
	~~ICN-222~~ - EWAN Restful API Go Client POC DONE	Sprint 10	Sprint 10	
	~~ICN-238~~ - EWAN Service Restful API DONE	Sprint 10	Sprint10	
	~~ICN-271~~ - EWAN MWAN3 API implementation DONE	Sprint 11	Sprint 11	
	~~ICN-272~~ - EWAN Firewall API definition DONE	Sprint 12	Sprint 12	
	~~ICN-273~~ - EWAN Firewall API implementation DONE	Sprint 13	Sprint 13	
	~~ICN-301~~ - EWAN Firewall CRD/Rest API integration DONE	Sprint 13	Sprint20	postpone to R3.1
	~~ICN-313~~ - PoC for integration scenario DONE	Sprint15	Sprint15	
	~~ICN-314~~ - SDEWAN E2E test scenario integration DONE	Sprint16	Sprint17	
	~~ICN-372~~ - SDEWAN Central Controller/Traffic Hub design DONE	Sprint23		
	~~ICN-391~~ - SDEWAN Central Controller: POC for golang Restful API Server DONE	Sprint21	Sprint21	
	~~ICN-420~~ - SDEWAN Central Controller: POC for rsync integration DONE	Sprint23	Sprint23	
	~~ICN-427~~ - SDEWAN Central Controller: POC for remote k8s connection through hub DONE	Sprint24	Sprint24	
	~~ICN-447~~ - SDEWAN Central Controller: Cert Manager Utility DONE	Sprint25	Sprint25	
	~~ICN-440~~ - SDEWAN Central Controller: framework with basic features DONE	Sprint26	Sprint27	
	~~ICN-454~~ - SDEWAN Central Controller: IP Address Manager DONE	Sprint26	Sprint26	
	~~ICN-484~~ - SDEWAN Central Controller: Hub Manager DONE	Sprint28/Sprint29 /Sprint30	Sprint30	
	~~ICN-485~~ - SDEWAN Central Controller: Connection Manager DONE	Sprint28	Sprint28	
	~~ICN-493~~ - SDEWAN Central Controller: Device Manager DONE	Sprint29/Sprint30 /Sprint31	Sprint37	

~~ICN-494~~ - SDEWAN Central Controller: Hub-Device Manager DONE	Sprint29/Sprint30 /Sprint31	Sprint37	
~~ICN-515~~ - SDEWAN CNF: status information query DONE	Sprint31	Sprint31	
~~ICN-526~~ - SDEWAN CR: status information query DONE	Sprint32	Sprint37	
~~ICN-527~~ - SDEWAN Central Controller: Certificate Manager DONE	Sprint31	Sprint31	
~~ICN-558~~ - SDEWAN Central Controller: Setup e2e demo DONE	Sprint38/39	Sprint39	
~~ICN-559~~ - SDEWAN CNF: Enable Https Support DONE	Sprint38	Sprint38	
~~ICN-560~~ - SDEWAN CNF: Change default password DONE	Sprint38	Sprint38	
~~ICN-583~~ - SDEWAN Central Controller: Create IPRange for provider DONE	Sprint40	Sprint40	
~~ICN-588~~ - SDEWAN Central Controller: Add label to show the target deployed device DONE	Sprint41		
ICN-589 - SDEWAN Central Controller: Multiple Hubs support IN PROGRESS	Sprint42		

- ICN R5 Delieverables

Kuralamudhan Ramakrishnan

- All bug fixed for ICN R2 and customer readiness
- DCM, SD-eWAN, Openness in ICN R3 release
- Offline deployment & Global controller completion in R3
- Launch & Performance Dashboard
- CI/CD system & ICN maturity

Epic	JIRA Stroy	Sprint /Estimated Completion Date	Status /Actual Completion Date	Notes
ICN-61 - ICN CI / CD works TO DO	~~ICN-178~~ - ICN SDL works DONE	Sprint 9	Sprint 9	
ICN-1 - Metal3 Baremetal Operator in ICN Stack IN PROGRESS	~~ICN-193~~ - Metal3 Refactoring & ICN R2 bug Fixes - OS and user data DONE	Sprint 9	Sprint 11	
~~ICN-214~~ - DCM dev works DONE	~~ICN-192~~ - DCM lighting talk - API & Design development DONE	Sprint 9	Sprint 9	
ICN-191 - Integration OpenNESS with ICN TO DO	~~ICN-194~~ - Openness & SDWAN Lighting talks - API & design prep DONE	Sprint 9	Sprint 9	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-228~~ - Ramp up on OVN4NFV and running the patches DONE	Sprint 11	Sprint 11	
~~ICN-228~~ - Ramp up on OVN4NFV and running the patches DONE	~~ICN-257~~ - ICN script updates DONE	Sprint 11	Sprint 11	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-250~~ - OVN containerization DONE	Sprint 12	Sprint 12	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-263~~ - Adding OVN4K8s in Kubespray DONE	Sprint 14/15/16/17	Sprint 17	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-264~~ - Making OVN4NFV as the primary network DONE	Sprint 12/13	Sprint 13	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-293~~ - Refactoring OVN coding for OVN containerzation daemonset DONE	Sprint 13/14	Sprint 13/14	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-311~~ - Introducing Provider Network Direct type DONE	Sprint 14	Sprint 14	
ICN-1 - Metal3 Baremetal Operator in ICN Stack IN PROGRESS	~~ICN-321~~ - Bug fixes & Testing for ICN Baremetal Operator version DONE	Sprint 14	Sprint 14	

ICN-1 - Metal3 Baremetal Operator in ICN Stack IN PROGRESS	~~ICN-310~~ - Fix the ICN baremetal operator version DONE	Sprint 14	Sprint 14	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-322~~ - Bug fixes for the OVN4NFV-K8s plugin primary routing issues DONE	Sprint 15	Sprint 15	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-315~~ - Akraino ICN installation issue on barametal server #ICN DONE	Sprint 15	Sprint 15	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-330~~ - CNI Server development in ONAP4K8s DONE	Sprint 16	Sprint 16	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-331~~ - CNI shim development in ONAP4K8s DONE	Sprint 16	Sprint 16	
ICN-189 - ICN CI/CD TO DO	~~ICN-351~~ - ICN BM and VM installer script improvement DONE	Sprint 17	Sprint 17	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-343~~ - Post review patches for OVN4NFV DONE	Sprint 20/21	Sprint 21	
ICN-189 - ICN CI/CD TO DO	~~ICN-349~~ - Documentation and patch review for ICN Release DONE	Sprint 18/19/20	Sprint 21	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-358~~ - Post review for Kubespray DONE	Sprint 20/21	Sprint 21	
ICN-189 - ICN CI/CD TO DO	~~ICN-359~~ - Code review and CI/CD Testing DONE	Sprint 18/19	Sprint 19	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-403~~ - Unit testing in OVN4NFV CNI DONE	Sprint 24/25/26	Sprint 26	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-406~~ - OVN4NFV Kubespray with Centos 7 DONE	Sprint 24/25/26	Sprint 26	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-404~~ - OVN4NFV Service Function Chaining development DONE	Sprint 22	sprint 22	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-405~~ - EMCO and SFC demo preparation DONE	Sprint 22	sprint 22	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-415~~ - Dev. rebased OVN4NFV SFC development with Kubespray DONE	Sprint 23	Sprint 23	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-416~~ - Test rebased OVN4NFV SFC Development with Kubespray DONE	Sprint 23	Sprint 23	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-435~~ - SFC Demo DONE	Sprint 24	Sprint 24	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-434~~ - ICN SDL works DONE	Sprint 29/30	Sprint 30	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-436~~ - SRIOV and SFC chaining CR proposal DONE	Sprint 24/25	Sprint 25	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-452~~ - Ramp up on OVN with VLAN and OVN Load balancer DONE	Sprint 28/29	Sprint 29	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-459~~ - Creating OVN ACL based Network policy PoC DONE	Sprint 28/29/30	Sprint 30	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-460~~ - Network Policy Controller initial PoC work DONE	Sprint 28/29/30	Sprint 30	
ICN-189 - ICN CI/CD TO DO	~~ICN-502~~ - ICN Documentation and release works DONE	Sprint 30/31	Sprint 31	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	ICN-505 - Network Policy Port Group creating using OVS ACN ACL IN PROGRESS	Sprint 32/33	Sprint 33	Moved to backlog
ICN-236 - OVN4K8SNFV development work IN PROGRESS	ICN-506 - Construct Egress /Ingress OVN ACL based on the NP Matches IN PROGRESS	Sprint 32/33	Sprint 33	Moved to backlog
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-507~~ - Network Policy Namespace selector and Pod Selector DONE	Sprint 32/33	Sprint 33	Moved to backlog
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-520~~ - Enhance SFC to have multiple left/Right Network DONE	Sprint 34/35	Sprint 35	

ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-530~~ - Adding additional route in the pods(both running and creating) DONE	Sprint 34/35	Sprint 35	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-531~~ - Testing additional SFC features DONE	Sprint 36/37	Sprint 38	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-547~~ - SFC connectivity using pod labels alone DONE	Sprint 36/37	Sprint 37	
~~ICN-531~~ - Testing additional SFC features DONE	~~ICN-548~~ - SFC connectivity using Pod labels and Provider networks DONE	Sprint 36/37	Sprint 37	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	ICN-564 - Jira project doesn't exist or you don't have permission to view it.	Sprint 38/39/40	n/a	Moved to Todd Malsbary - ~~ICN-591~~ - Enable nodus (formerly ovn4nfv-k8s-network-controller) to work with multiple multus networks DONE
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-565~~ - OVN4NFV-K8S-Plugin ACL framework DONE	Sprint 38	Sprint 38	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-566~~ - Draft proposal for SFC with K8s NPWG DONE	Sprint 38	Sprint 38	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-573~~ - Network Policy initial phase 1 DONE	Sprint 39/40/41	Sprint 41	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-574~~ - Network and Service Function Chaining in a single CR DONE	Sprint 39	Sprint 39	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-578~~ - Kata container with SFC testing DONE	Sprint 39/40	Sprint 40	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	~~ICN-584~~ - Dynamic virtual network creation DONE	Sprint 40/41/42	Sprint 42	
ICN-236 - OVN4K8SNFV development work IN PROGRESS	ICN-593 - Ip rules to redirect primary network in the SFC IN PROGRESS	Sprint 43/44		
ICN-236 - OVN4K8SNFV development work IN PROGRESS	ICN-595 - SFC proxy PoC IN PROGRESS	Sprint 43/44		
ICN-236 - OVN4K8SNFV development work IN PROGRESS	ICN-597 - Nodus - Ubuntu LTS 20.04 TO DO	Sprint 43/44		

Le Yao

- Todo

Epic	JIRA Story	Sprint/Estimated Completion Date	Status/Actual Completion Date	Notes
ICN-217 - KuD R3 Release works IN PROGRESS	~~ICN-260~~ - KUD Multi Vagrant 18.04 issue DONE	Sprint 11/12/14/15	Sprint 15	
	~~ICN-281~~ - Vagrant vm can not get correct name server in ubuntu-1804. DONE	Sprint 11	Sprint 11	
	~~ICN-285~~ - Installer vm cannot install nfs because of nameserver issues. DONE	Sprint 12/14/15	Sprint 15	
	~~ICN-286~~ - All other VMs are unreachable for Installer VM DONE	Sprint 12	Sprint 12	
	~~ICN-303~~ - Compute01 no spcae left in KUD Multi Vagrant DONE	Sprint 12	Sprint 12	
	~~ICN-316~~ - Vagrant Box Build with base Ubuntu-18.04 for ICN DONE	Sprint 13	Sprint 13	
	~~ICN-308~~ - Upgrade the Kubespray 2.12 for KUD DONE	Sprint 16/17/18/19	Sprint 19	
	~~ICN-327~~ - criproxy failed to start up after node reboot DONE	Sprint 16/17	Sprint 17	

~~ICN-336~~ - Vagrant Virtlet testing not working in proxy testings DONE	Sprint 16	Sprint 16	
~~ICN-337~~ - QAT device plugin deploy issue DONE	Sprint 18/19/20	Sprint 20	
~~ICN-367~~ - KUD CI Folder installer DONE	Sprint 18/19	Sprint 19	
~~ICN-377~~ - Catch the cnf Pod no IP error DONE	Sprint 19	Sprint 19	
~~ICN-378~~ - Add watch function for cnf deployment and CR DONE	Sprint 19	Sprint 19	
~~ICN-380~~ - Apply watch to all controllers and test DONE	Sprint 19	Sprint 19	
~~ICN-354~~ - Fix ICN node reboot issue for the containerized version DONE	Sprint 19/20	Sprint 31	
~~ICN-393~~ - Create CNF helm chart DONE	Sprint 20	Sprint 20	
~~ICN-394~~ - Create helm chart for ICN SDEWAN controller DONE	Sprint 20	Sprint 20	
~~ICN-412~~ - A watch to monitor the service IPs changes DONE	Sprint 22	Sprint 22	
~~ICN-413~~ - A new custom Service controller to hold watch function DONE	Sprint 22	Sprint 22	
~~ICN-430~~ - Implement the service RESTful API DONE	Sprint 24/25/26/27	Sprint 27	
~~ICN-445~~ - Implement the CR for Services DONE	Sprint 26/27	Sprint 27	
~~ICN-446~~ - Change the Firewall restart script to update the iptables NAT rules DONE	Sprint 26/27	Sprint 27	
~~ICN-455~~ - Implement the CR for Application DONE	Sprint 29/30/31	Sprint 31	
~~ICN-491~~ - Implement RESTful API for Application DONE	Sprint 29/30	Sprint 30	
~~ICN-492~~ - Test the network connection PoC with Calico as default network DONE	Sprint 29	Sprint 29	
~~ICN-495~~ - Create the Application network accession PoC for flannel and OVN DONE	Sprint 28	Sprint 28	
~~ICN-508~~ - Create Non-root user in CNF DONE	Sprint 31	Sprint 31	
~~ICN-509~~ - Update scripts from helm version v2 to v3 DONE	Sprint 30	Sprint 30	
~~ICN-510~~ - CNF configuration and rule change DONE	Sprint 30	Sprint 30	
~~ICN-511~~ - Handle some missing errors and response it DONE	Sprint 31	Sprint 31	
~~ICN-512~~ - License updates in CNF RESTful API DONE	Sprint 31	Sprint 31	
~~ICN-514~~ - Add watch mechanism for pod to auto sync DONE	Sprint 32	Sprint 32	
~~ICN-522~~ - Route CR controller implemention DONE	Sprint 34/35	Sprint 35	
~~ICN-523~~ - Route CNF RESTful API implemention DONE	Sprint 33	Sprint 33	
~~ICN-532~~ - Register service and applicaion CR to webhook DONE	Sprint 34	Sprint 34	
~~ICN-533~~ - Enhance CNF RESTful API DONE	Sprint 33	Sprint 33	
~~ICN-534~~ - Watch the CNF deployment status and sync DONE	Sprint 33	Sprint 33	

		ICN-543 - CNF status response for route request DONE	Sprint 35/36	Sprint 36	
		ICN-544 - Rule CR controller DONE	Sprint 37	Sprint 37	
		ICN-545 - Rule CNF RESTful API DONE	Sprint 36/37	Sprint 37	
		ICN-555 - CNF status response for rule request DONE	Sprint 37	Sprint 37	
		ICN-571 - CNF helm charts safe update for OpenNess DONE	Sprint 37	Sprint 37	
		ICN-556 - Fix loop errors and lint errors (shell, go, yaml) DONE	Sprint 38	Sprint 38	
		ICN-557 - CNF status response for conntrack query DONE	Sprint 38	Sprint 38	
		ICN-568 - Copyright fix for OpenNESS integration DONE	Sprint 38	Sprint 38	
		ICN-569 - Update CNF base image to latest stable version 19.07 and verify DONE	Sprint 39	Sprint 39	
		ICN-570 - Build CNF OpenWrt image with custom applications DONE	Sprint 40	Sprint 40	
		ICN-585 - BKM - Build custom application based on OpenWRT source code DONE	Sprint 40	Sprint 40	
		ICN-586 - Fix the conntrack and route query errors DONE	Sprint 41	Sprint 41	
		ICN-590 - PoC - Build SCC/RSync image and test with latest rsync code DONE	Sprint 41/42	Sprint 42	
		ICN-587 - Rsync CNF status in overlay controller DONE	Sprint 42	Sprint 42	
		ICN-599 - Integrate latest ewo cnf and crd to icn/sdwan DONE	Sprint 43	Sprint 42	
		ICN-600 - Fix sdewan ewo CI/CD issues and change in icn/sdwan DONE	Sprint 43	Sprint 43	
		ICN-601 - Update codes based on golangci-lint version to 1.40.1 DONE	Sprint 44	Sprint 44	
		ICN-602 - Integrate istio into sdewan overlay controller IN PROGRESS	Sprint 44/45		
		ICN-604 - Fix the null point bug in icn/sdwan and ewo DONE	Sprint 44	Sprint 44	
		ICN-605 - Docs: Setup and guide to integrate auth/vitual_service with istio TO DO	Sprint 45		

Ruoyu Ying

- Todo

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ICN-190 - E2E usages for SDWAN module in ICN to support multiple cluster communcation through security WAN intertaces TO DO				
	~~ICN-242~~ - Investigate IPSec implementation in strongswan DONE	Sprint 11/12		
	~~ICN-275~~ - IPSec CRD Design DONE	Sprint 11/12	Sprint 11	
	~~ICN-276~~ - IPSec RESTful API Design DONE	Sprint 11/12	Sprint 11	
	~~ICN-289~~ - IPSec CRD and REST API implementation DONE	Sprint 18	Sprint 18	
	~~ICN-313~~ - PoC for integration scenario DONE	Sprint15	Sprint15	
	~~ICN-314~~ - SDEWAN E2E test scenario integration DONE	Sprint16	Sprint17	
	~~ICN-390~~ - SDEWAN end-to-end scenario with CRD & controller DONE	Sprint19	Sprint19	
	~~ICN-375~~ - Enable end-to-end test scenario in bare-metal DONE	Sprint20/21		De-prioritized
	~~ICN-373~~ - SDEWAN CNF: enable VTI router based IPSec DONE	Sprint21/22	Sprint 26	
	ICN-451 - Investigation on BGP /OSPF support IN PROGRESS	Sprint26/27		De-prioritized
	~~ICN-484~~ - SDEWAN Central Controller: Hub Manager DONE	Sprint 28/29/Sprint30		
	~~ICN-500~~ - SDEWAN Central Controller: Setup Demo on BM environment DONE	Sprint29/Sprint30	Sprint30	
	~~ICN-503~~ - SDEWAN R4 CI testing DONE	Sprint30	Sprint30	
	~~ICN-493~~ - SDEWAN Central Controller: Device Manager DONE	Sprint33/34	Sprint34	
	~~ICN-494~~ - SDEWAN Central Controller: Hub-Device Manager DONE	Sprint33/34	Sprint34	
	~~ICN-563~~ - E2E demo for HCL DONE	Sprint 35/36	Sprint 38	
	~~ICN-582~~ - Add status query for IPSEC DONE	Sprint 39/40	Sprint 40	
	ICN-592 - NGS demo support IN PROGRESS	Sprint 41/42		
	ICN-589 - SDEWAN Central Controller: Multiple Hubs support IN PROGRESS	Sprint 44/45		
	ICN-606 - E2E scenario with upgraded cnf(19.07) IN PROGRESS	Sprint 44/45		

Todd Malsbary

- Todo

Epic	JIRA Story	Sprint/Estimated Completion Date	Status/Actual Completion Date	Notes
ICN-5 - Kud for ICN TO DO	~~ICN-433~~ - Creating EMCO V2 script in KUD DONE	Sprint 23	Sprint 24	
	~~ICN-448~~ - Create plugin test script for vFW for EMCO V2 script in KUD DONE	Sprint 25	Sprint 27	

	~~ICN-456~~ - Run vFW V2 test script as part of ICN install DONE	Sprint 26	Sprint 29	
	~~ICN-470~~ - Review and update plugin_fw_v2.sh for changes to genericPlacementIntent DONE	Sprint 27	Sprint 27	
	~~ICN-480~~ - Update plugin_fw_v2.sh to use emcoctl DONE	Sprint 28	Sprint 43	
	~~ICN-486~~ - Upgrade the Kubespray 2.14 for KUD DONE	Sprint 28	Sprint 30	
	~~ICN-513~~ - Installed kernel cmdline needs intel_iommu=on iommu=pt to support QAT DONE	Sprint 31	Sprint 31	
	~~ICN-487~~ - Get bluval running as part of CI for R4 release DONE	Sprint 29	Sprint 29	
	~~ICN-501~~ - Resolve security PASS /FAIL criteria for R4 DONE	Sprint 30	Sprint 31	
	~~ICN-453~~ - Re-playing the vm-setup /setup-playbook causes subsequent provisioning to fail DONE	Sprint 26	Sprint 29	
	~~ICN-475~~ - Baremetal deploy make_bm_hosts step fails when baremetal-operator repo is not present DONE	Sprint 27	Sprint 29	
	~~ICN-476~~ - "./02_verify.sh: line 22: [: too many arguments" when the state is "registration error" DONE	Sprint 27	Sprint 29	
	~~ICN-477~~ - interface is spelled inteface (missing r) in several places DONE	Sprint 27	Sprint 29	
	~~ICN-481~~ - metal3 provisioning fails for nvme devices DONE	Sprint 28	Sprint 29	
	~~ICN-490~~ - The ironic-python-agent.tar link on http://images.rdoproject.com is gone which breaks bare metal deploy DONE	Sprint 28	Sprint 29	
	~~ICN-497~~ - username and password from nodes.json are unused DONE	Sprint 29	Sprint 29	
	~~ICN-504~~ - Clean steps should treat missing resources as already deleted DONE	Sprint 30	Sprint 31	
	~~ICN-572~~ - Enable static configuration of BareMetalHost interfaces DONE	Sprint 39	Sprint 39	
	~~ICN-537~~ - Create multicloud-emco charts in OOM repository DONE	Sprint 34	Sprint 34	
ICN-516 - Install addons via EMCO IN PROGRESS	~~ICN-517~~ - Review existing addons and plan for migrating to EMCO deploy DONE	Sprint 33	Sprint 35	
	~~ICN-546~~ - Replace cmk addon with helm chart DONE	Sprint 36/37	Sprint 39	
	~~ICN-549~~ - Replace multus addon with helm chart DONE	Sprint 37	Sprint 39	
	~~ICN-551~~ - Replace nfd addon with helm chart DONE	Sprint 37	Sprint 39	
	~~ICN-553~~ - Replace qat addon with helm chart DONE	Sprint 37/38	Sprint 39	
	~~ICN-552~~ - Replace sriov addon with helm chart DONE	Sprint 38	Sprint 39	
	~~ICN-550~~ - Replace ovn4nfv addon with helm chart DONE	Sprint 38	Sprint 39	

		~~ICN-562~~ - Update emco deploy to 21.03 release DONE	Sprint 39	Sprint 40	
		~~ICN-561~~ - Deploy addons with emco DONE	Sprint 39	Sprint 40	
	~~ICN-520~~ - Comprehensive OVN4NFV connectivity tests DONE	~~ICN-521~~ - Create manual deployment of SFC setup DONE	Sprint 33	Sprint 34	
		~~ICN-535~~ - Automate deployment of SFC setup DONE	Sprint 33	Sprint 34	
		~~ICN-536~~ - Automate OVN4NFV connectivity tests DONE	Sprint 34	Sprint 38	
	~~ICN-518~~ - Replace virtlet with kubevirt DONE	~~ICN-541~~ - Create kubvirt addon playbook and test script DONE	Sprint 35	Sprint 43	
		~~ICN-542~~ - Replace usage of virtlet in emco plugin_fw_v2 test with kubevirt DONE	Sprint 35		
		~~ICN-501~~ - Enable nodus (formerly ovn4nfv-k8s-network-controller) to work with multiple multus networks DONE	Sprint 40	Sprint 42	
		~~ICN-506~~ - Enable CI/CD for Kata-configured builds DONE	Sprint 42	Sprint 42	