Upstream Dependency Matrix and Upstream Project Information

Akraino Upstream Dependency Matrix:

	Family Name	Blueprint /Feature Project Name	Bare Metal OS & Installer	Edge Hypervisor or Container Runtime	Edge Cloud Orchestrator (under cloud)	Upstream Orchestrator (s)	NFV Orchestration	Edge Cloud Networking	Edge Data Path	Edge Platform or Middleware	Edge IO Protocols	Edge Database or Persistence
1	Network Cloud Blueprint Family	Network Cloud and TF Integration Project Sukhdev Kapur	Ubuntu 16.04		Airship Helm	OpenStack (Stein), Kubernetes (1.14)	Tungsten Fabric 5.1	Tungsten Fabric 5.1	vRouter			
2		Unicycle with SR-IOV Project	Ubuntu 16.04	QEMU 2.5 / libvirt 1.3.1 for OpenStack VMs and Docker 18.09.2 as container runtime	Airship	OpenStack (Ocata), Kubernetes (v1.10.2), Helm (v2.10.0)	ONAP (amsterdam)	Calico (v3.2.1)	SR-IOV, OVS			SDS (Ceph)
3		Rover Project	Ubuntu 16.04	QEMU 2.5 / libvirt 1.3.1 for OpenStack VMs and Docker 18.09.2 as container runtime	Airship in a bottle	OpenStack (Ocata), Kubernetes (v1.10.2), Helm (v2.10.0)	ONAP (Amsterdam)	Calico (v3.2.1)	SR-IOV, OVS			SDS (Ceph)
4		OVS-DPDK Unicycle Blueprint Project Rakesh Bohra	Ubuntu 16.04	QEMU/Libvirt as Hypervisor and Docker as container runtime	Airship	OpenStack (Ocata) Kubernetes (version 1.13)	ONAP (Casablanca)	Calico	OVS-DPDK			SDS (Ceph)
5	StarlingX Far Edge Distributed Cloud	StarlingX Far Edge Distributed Cloud Bill Zvonar	CentOS 7.6 - Linux kernel 3.10.0-957	QEMU 3.0.0 / libvirt 4.7.0	StarlingX 2.0	OpenStack (Stein) Kubernetes 1.13.5 / Docker 18.06.3-ce	StarlingX 2.0	Calico (v3.2.1)	OVS DPDK 2.11.0	StarlingX 2.0	StarlingX 2.0	Ceph 13.2.2
6	ELIOT: Edge Lightweight and IoT Blueprint Family	IoT Gateway khemendra kumar	Ubuntu 18.04.5 LTS	QEMU and Docker as container runtime	K3s (1.19.4+)	KubeEdge(V0.2) Helm (3.0.2) Kubernetes (version 1.17.2)		Calico (Version 3..16.5)	multus	EdgeGallery (Version 0.9)	EdgeX (Edinburgh)	PostGres DB
7		SD-WAN /uCPE khemendra kumar	Ubuntu 16.04 CentOS 7.5	QEMU and Docker as container runtime	Kubernetes (version 1.19.0)	Helm Kubernetes (version 1.19.0)		Calico				
8		ELIOT AIoT in Smart Office Blueprint Buyuan Lin										

9	Telco Appliance Blueprint Family	Radio Edge Cloud (REC) Paul Carver	CentOS 7.8.2003 with Kernel 5.4.65	Docker 3: 19.03.3, containerd 1.2.6	Helm 2.15.2	Kubernetes 1.16.2	N/A	DANM 4.1.0, Flannel 0.11.0	IPVLAN, , SRIOV	N/A	ORAN E2 and A1 (probably just a subset)	N/A
10		SDN Enabled Broadband Access (SEBA) Julie Lorentzen	CentOS 7.6 with LTS Kernel 4.14	Docker v19. 03.2		Kubernetes v1. 14.1, Helm v2. 14.3	Network Edge Mediator (NEM) - edge workflow	DANM, Flannel	OpenFlow 1.3/P4			
11	Integrated Edge Cloud (IEC) Blueprint Family	IEC Type 1 for Integrated Edge Cloud (IEC) Blueprint Family xinhuili	Ubuntu 16.04	Docker (18.06.1-ce)	Kubernetes	Kubernetes(1.13) Helm(2.12.3)		Calico(3.3.2)				
12		IEC Type 2 for Integrated Edge Cloud (IEC) Blueprint Family Trevor Tao	Ubuntu 18.04	Docker (18.06.1-ce)	Kubernetes	Kubernetes(1.13) Helm(2.12.3)		Calico(3.3.2)				
13		IEC Type 4: AR/VR oriented Edge Stack for Integrated Edge Cloud (IEC) Blueprint Family Wen-Ping Ying	Ubuntu 18.04	Docker	Kubernetes	Kubernetes(1.14)		Calico, Flannel				Ceph
14	Micro-MEC	Micro-MEC Tapio Tallgren										
15	Connected Vehicle	Connected Vehicle Blueprint xin qiu	CentOS7	OpenStack VMs;	StarlingX 2.0	Openstack Kubernetes		Flannel	DPDK OVS	TARS		Ceph
16	Edge Video Processing	Edge Video Processing Adnan Saleem	Ubuntu 16.04	QEMU/Libvirt + Docker Runtime	Airship	Openstack (Rocky)	ONAP (Casablanca)		OVS	CORD (TBD)		
17	KNI-Edge Blueprint Family	Provider Access Edge Ricardo Noriega	Red Hat CoreOS (4.7)	CRI-O 1.20	Kubernetes 1.20	Kubernetes Operators	Kubernetes Operators	OpenShift SDN	OvS (2.13.4), SR/IOV, DPDK; Multus			
18		Industrial Edge Ricardo Noriega	Red Hat CoreOS (4.7)	CRI-O 1.20	Kubernetes 1.20	Kubernetes Operators	Kubernetes Operators	OpenShift SDN	OvS (2.13.4)			
19	AI/ML and AR/VR applications at Edge	AI/ML and AR /VR applications at Edge Vikram Siwach				OpenStack Kubernetes	Tungsten Fabric 5.1	Tungsten Fabric 5.1	vRouter, DPDK			
20	Time-Critical Edge Compute	Time-Critical Edge Compute Shane Dewing										

21	Integrated Cloud Native NFV /App stack family (Short term: ICN)	Integrated Cloud Native NFV/App stack family (Short term: ICN) Kuralamudhan Ramakrishnan	Ubuntu 18.04.5	Docker - 19.03.13	Metal3	EMCO K8s v1.18.9	EMCO	Nodus(Formely known as OVN4NFV	OVS; SRIOV;	n/a	n/a	Ceph
22	5G MEC System Blueprint Family	Enterprise Applications on Lightweight 5G Telco Edge Gaurav Agrawal	Ubuntu 18.04	docker-cri- 18.09	EdgeGallery (v1.1.1)	Kubernetes (v1.18.7)		EdgeGallery (v1.1.1)	EdgeGallery (v1.1.1)	EdgeGallery (v1.1.1)		EdgeGallery (v1.1.1)
23	Private LTE /5G Blueprint - ICN Family	Private LTE /5G Blueprint Prem Sankar G	Ubuntu 16.04 CentOS 7.4		Helm	Kubernetes (1.14)	Tungsten Fabric 5.1	Tungsten Fabric 5.1	vRouter	n/a	n/a	
24	Multitenant Secure Cloud Native Platform - ICN Family	Multi-Tenant Secure Cloud Native Platform Salvador Fuentes	Ubuntu 18.04.5	Containerd v1.3.9 Kata Containers v2.1.0	Metal3	EMCO K8s v1.18.9	EMCO	OVN4NFV	OVS; SRIOV	n/a	n/a	Ceph

Akraino Upstream Project Information:

	Upstream Project Name **(if there is also a commercial version in an open core model, specify if only open source version is used or both and give info accordingly)**	**General Info URL**	**URL to JIRA/Issues or Other Upstream Backlog Queue**	**Dependent Akraino Blueprints /Projects**	**Akraino Developers & Contacts for Coordination**
1	Airship	https://www.airshipit.org/		Network Cloud family	
2	Openstack Ocata	https://www.openstack.org/			
3	Kubernetes v1.14.1	https://kubernetes.io/		Telco Appliance Blueprint Family	
4	ONAP (amsterdam)	https://www.onap.org/			
5	OVS (version x)	https://www.openvswitch.org/			
6	Calico v3.3.4	https://www.projectcalico.org/		Telco Appliance-SDN Enabled Broadband Access (SEBA)	
7	SDS (beyond ceph? like opensds?)				
8	Ceph (version ?)	https://ceph.com/			
9	SR-IOV (open source component?)				
10	Ubuntu v16.04.6 LTS (Xenial Xerus)	https://www.ubuntu.com/		Telco Appliance-SDN Enabled Broadband Access (SEBA)	
11	Docker (docker-ce) v18.09.2	https://www.docker.com/		Telco Appliance Blueprint Family	
12	Helm v2.12.3+geecf22f	Info- https://helm.sh/ SEBA Download - https://charts.opencord.org/		Telco Appliance-SDN Enabled Broadband Access (SEBA)	
13	cord-platform v6.1.0	https://guide.opencord.org/cord-6.1/		Telco Appliance-SDN Enabled Broadband Access (SEBA)	

14	SEBA v1.0.0	https://guide.opencord.org/cord-6.1/profiles/seba/		Telco Appliance-SDN Enabled Broadband Access (SEBA)	
15	LEDGE RP	Linaro Edge & Fog Computing group			
16	EdgeGallery	http://docs.edgegallery.org/zh_CN/release-v0.9/		ELIOT IOT-Gateway EALTEdge	
17	Free5GC 3.0.4	https://www.free5gc.org		Private 5G/LTE Blueprint	
18	Containerd	https://containerd.io/		Multi-Tenant Secure Cloud Native Platform	
19	Kata Containers	katacontainers.io		Multi-Tenant Secure Cloud Native Platform	