Rural Edge blueprint for Tami COVID-19 Blueprint Family

Attributes	Description
Type	New
Industry Sector	HealthCare, Education
Business driver	With corona virus spreading worldwide, 62% Rural kids are missing their classes since the Pandemic started, due to no or very low internet bandwidth. While teachers and students are predominantly from surrounding areas, there is no need for the video feeds to be processed 100s or 1000s of miles away from the rural network. Processing at the edge will allow localized educational platform to operate with low internet bandwidth. Patients and doctors need very high definition video to engage with real impact. 5G provides low latency/high bandwidth opportunity but unless the processing is done at the edge, near to where the doctor and patient is, the opportunity can't be utilized to improve doctor-patient engagements.
Business use cases	1. Video Processing : Enhance Engagement Quality, Augment Video with information, Create Virtual environment, Transcribe engagements 2. Telehealth : Appointment Scheduling, Payment Processing, Electronic Health Records 3. Gamification : Reinforce Corrective Behavior, Track Progress, Generate Trends 4. Learning Management System : AI Teacher Assist, Early Progress Prediction
Business Cost - Initial Build Cost Target Objective	Host Video applications, Health Application, LMS on the edge, control plane on the cloud, and media plane close to customer site such as MEC servers in telco central offices. We choose X86 server to deploy the MEC platform to reduce the cost. •2 X86 Nodes (The PowerEdge XE2420 provides a short-depth, dense, Dual-socket, 2U server) •Kubernetes v 1.17 (Open Source) •GPU (NVIDIA V100/s or NVIDIA RTX6000) for AR/VR and AI
Business Cost – Target Operational Objective	It more like a cloud platform, but it's specific for the edge site. •It needs Helm and Ansible for the automation and management tools to keep operational cost lower •Maintain a mixed edge platform including x86 and ARM. •Kubernetes v1.17 •Android, IOS •GPU (NVIDIA V100/s or NVIDIA RTX6000) •Both ARM and X86 can support it.
Security need	Security mechanisms that can be implemented at each layer of abstraction.
Regulations	N/A
Other restrictions	N/A
Additional details	N/A

Case Attributes	Description
Type	New
Blueprint Family - Proposed Name	Tami COVID-19 Blueprint Family
Use Case	1. Health Application on Edge 2. Education Application on Edge
Blueprint proposed Name	Tami COVID-19 Blueprint Family: RuralEdge
	2 PowerEdge XE2420 bare metal machines Dual-socket, 2U server, 1 10G switch, 1 GPU

Scale & Type	For the smallest deployment, this requires 2 X86 bare metal machines. For large deployments, this could span to large number of bare metal machines.
Applications	Online Education(Sage.Camp), Telehealth(docs@home), Gamification(Roblox), Video Processing
Power Restrictions	N/A
Infrastructure orchestration	Host: •Orchestrator: Kubernetes •Bare Metal Provisioning : Ansible •Kubernetes Provisioning: KuD •OS: Ubuntu •Database: MySQL /MariaDB •Application: Python, Node.js, React •GPU Driver: X86,NVIDIA •Network: OVS, WebRTC •**GPU Driver (X86, NVIDIA)**
SDN	N/A
Workload Type	•Android /IOS applications
Additional Details	N/A

As per the Akraino Community process and directed by TSC, a blueprint which has only one nominee for Project Technical Lead (PTL) will be the elected lead once at least one committer seconds the nomination after the close of nominations. If there are two or more, an election will take place.

Self Nominations begins on 16 December 2020 and will conclude on 23 December 2020

Committer	Committer Company	Committer Contact Info	Committer Bio	Committer Picture	Self Nominate for PTL (Y/N)
Tina Tsou	Arm				N
Wenhui Zhang	Bytedance	wenhui.zhang@bytedance.com wenhuizhang.psu@gmail.com			N
Biswajit De		hibisu2006@gmail.com			
Surojit Banerjee	AWS	surojitb@amazon.com			Y
K. Daya		sdayak@gmail.com			
Apoorv Salaria	DHS	apoorvsalaria@gmail.com			
Subhranshu Das	Ericsson	subhranshu.das@gmail.com			