IEC Type3 R6 Maturity Review

Y-semi Computing

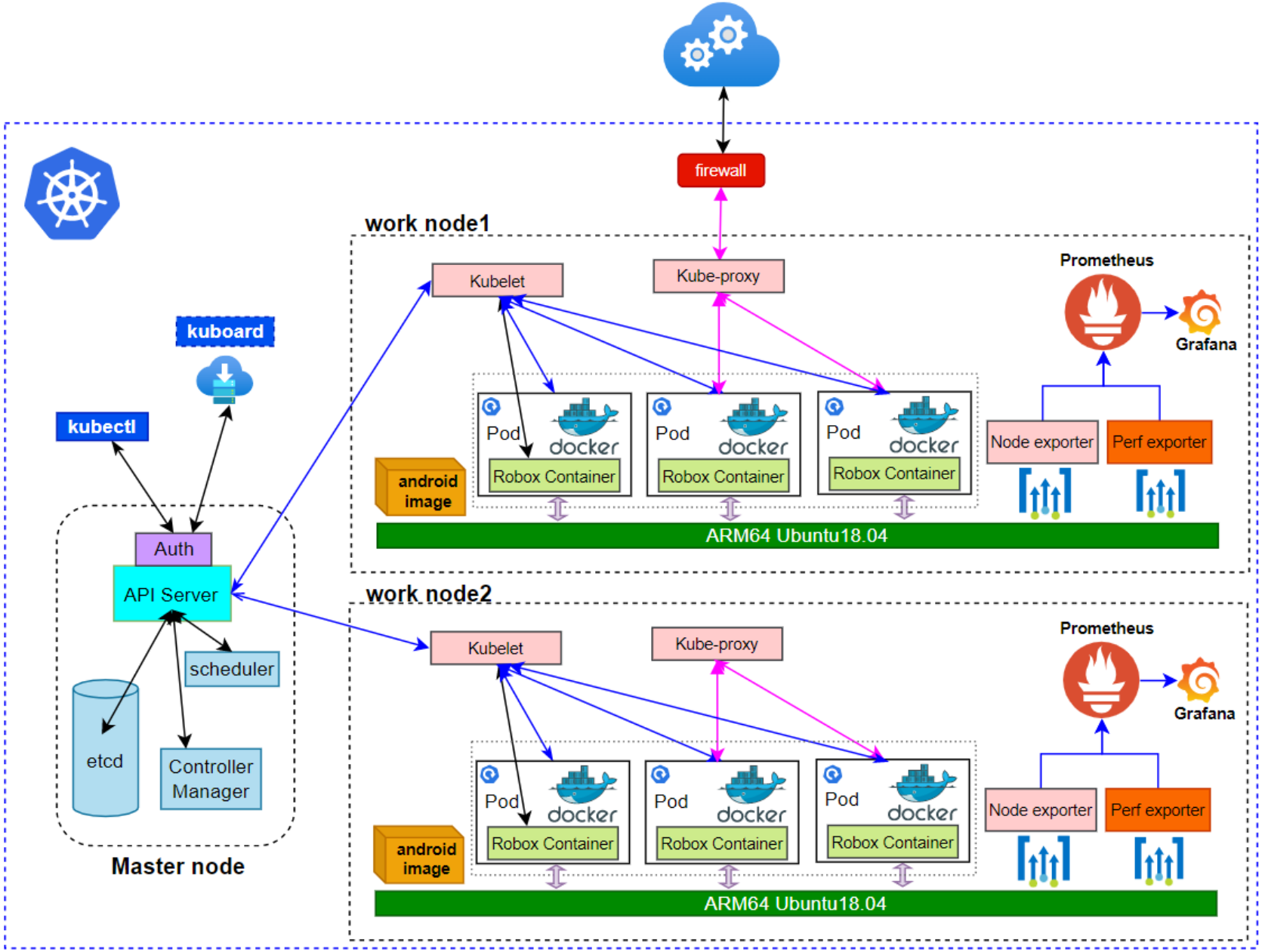
Agenda

- Overview
- Marketing
- Platform Tests
- Extension Tests Case
- Documentations And APIs
- Code Committed
- Maturity Security Test

AKRAINO EDGE STACK

Overview

- **Basic Structure**
  - Android Source Stack
  - Preparations For Robox
  - Start & Debug Robox
  - Install Different App
  - Access Through VNC
- **Pod Instance Deployment**
  - Setup K8S Cluster
  - Deploy Robox Inside
  - Visualization By Kuboard
- **Node Performance Analysis**
  - Run Games On Each Pod
  - Perf & FlameGraph
  - Monitoring Via Promethues
  - Visualization By Grafana



Robox Deployment Framework

Marketing

https://wiki.akraino.org/display/AK/Akraino+Release+6+Marketing

Functions On Arm Servers

- Connect to the server via vnc and log in to each instance
- Deploy the game application to the instance
- Cache data to the central node to prevent user data loss
- Complete the analysis and monitoring of the data of each node through Prometheus or Perf

AKRAINO EDGE STACK

Platform Test Cases

Layers	Item	Brief Introduction
Application	Prometheus	Monitoring solution with metrics and alerting
	iPerf	Measurements of the maximum achievable bandwidth on IP networks
K8S	conformance	kubernetes e2e suite，Sonobuoy
	kube-hunter	hunts for security weaknesses in Kubernetes clusters
OS	Perf	CPU performance counters, tracepoints, kprobes, and uprobes
	Ltp	Performance、Stress、RAS
	Lynis	Battle-tested security、 Extensive health scan
	Vuls	Vulnerability scanner

AKRAINO EDGE STACK

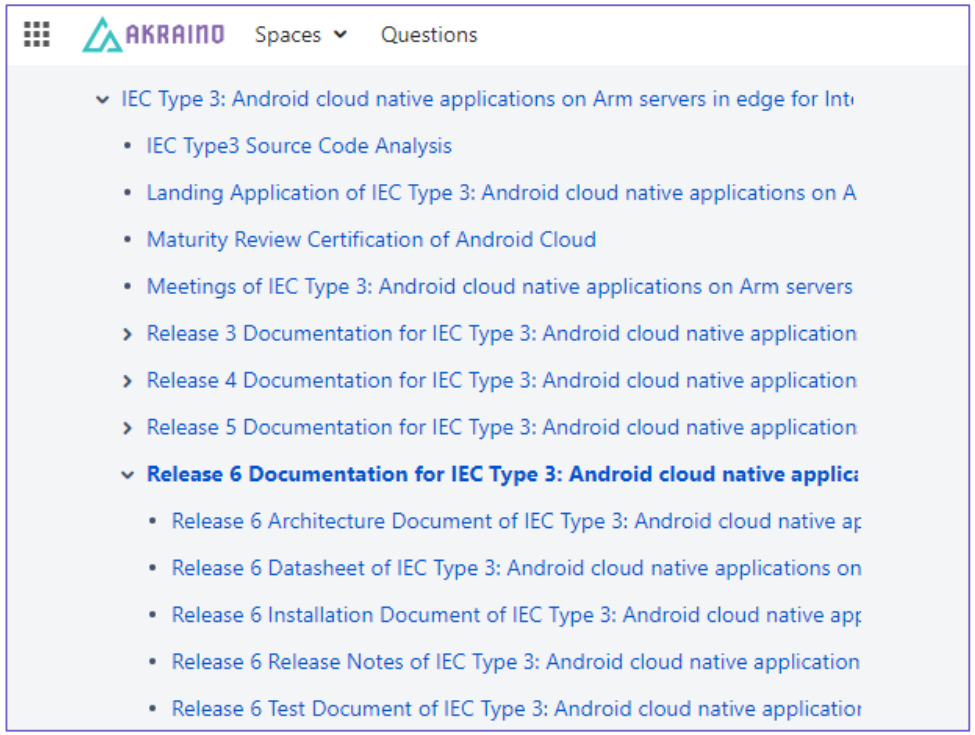
Extension Test Cases

Test	Brief Introduction
Robox Startup	Start Robox By Script
App Installation	Install and run app on a robox
Edge Cluster Deployment	Deploy Edge K8S Clusters
Deploy Robox	Run Robox By K8S
Deploy Prometheus	Run Prometheus on Work node
Deploy Grafana	Run Grafana on Work node
Flame graph	Generate Flame Graph With Perf Events

AKRAINO EDGE STACK

Documentations And APIs

https://wiki.akraino.org/display/AK/Release+6+Documentation+for+IEC+Type+3%3A+Android+cloud+native+applications+on+Arm+servers+in+edge



No API for it's own, Just a demo application. 3rd Part APIs was linked

Akraino Blueprint Project API Information

APIs Offered by Your Project (Mandatory)

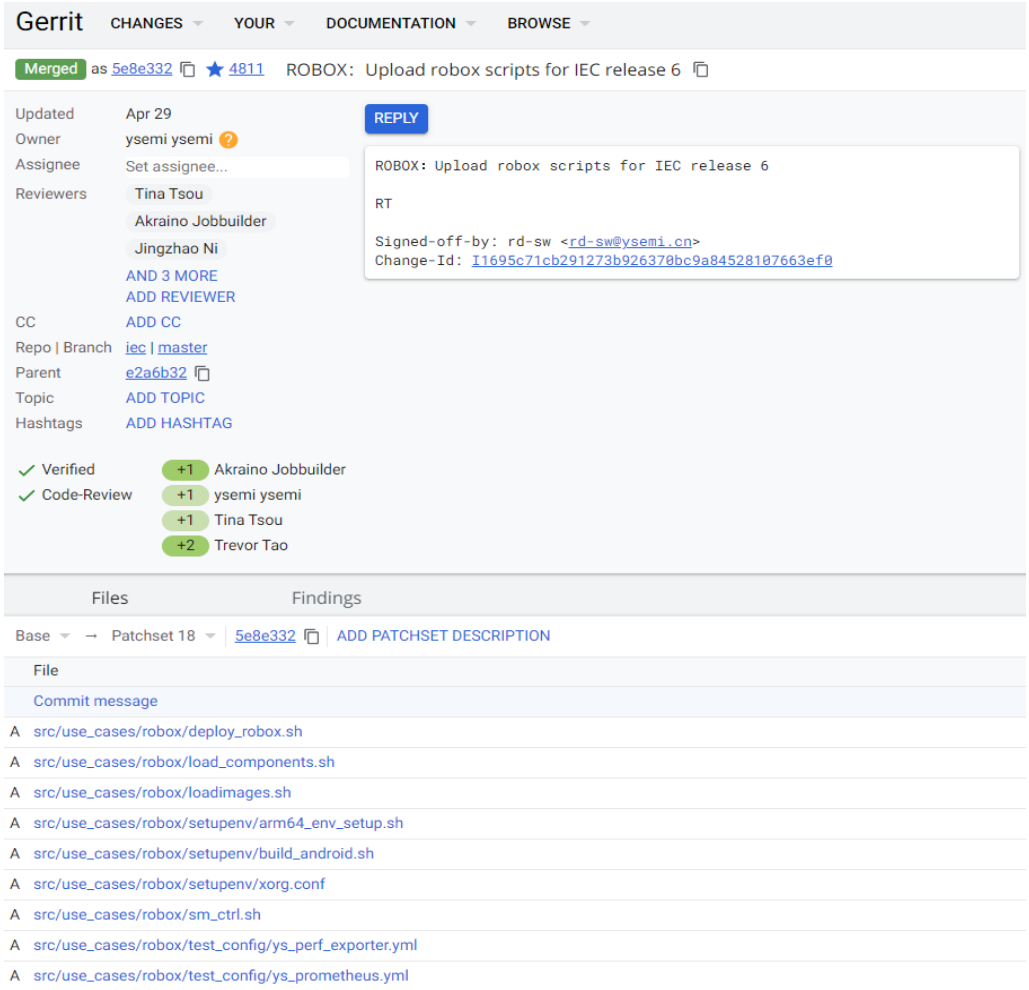
Project Name	API Group Name	API Category Level 1	API Sub-category Level 2	API Sub-category Level 3	API Sub-category Level 4	API Document Link	Protocols	Open
IEC Type 3 Android cloud native applications on Arm servers in edge for Integrated Edge Cloud (IEC) Blueprint Family : R6	Edge_Infrastructure	Container						
Comments: There is no external api exposed in R6 of IEC Type 3								

3rd Party APIs Consumed in Your Project (Mandatory)

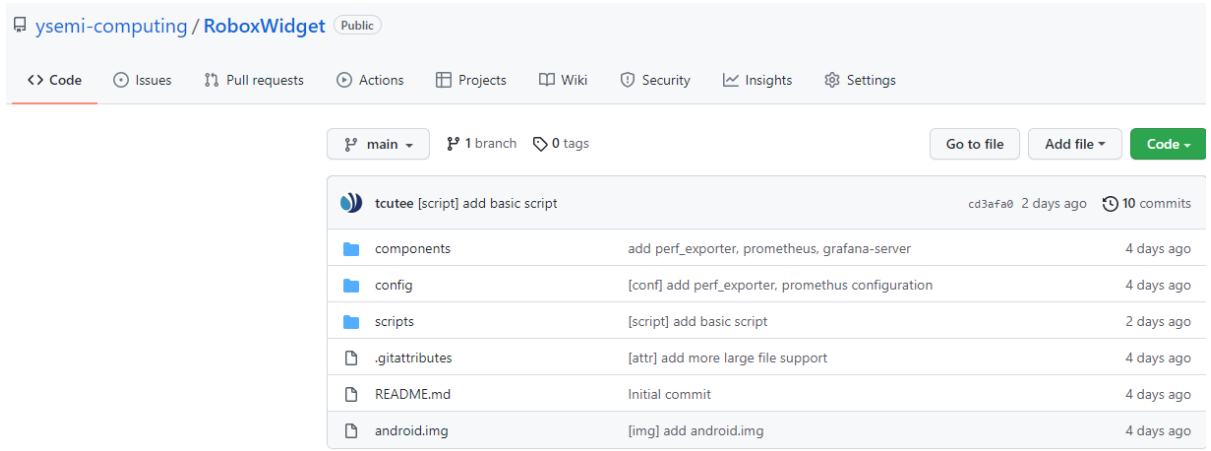
No.	API Group Name	API Category Level 1	API Sub-category Level 2	API Sub-category Level 3	API Sub-category Level 4	
1	Kubernetes	dge_Infrastructure	Container	android/robox	promethues+Grafana	

Code Committed

https://gerrit.akraino.org/r/c/iec/+/4811

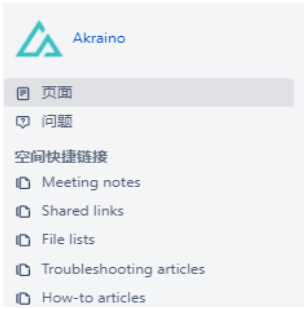


https://github.com/ysemi-computing/RoboxWidget.git



Maturity Security Test

https://wiki.akraino.org/display/AK/Blueprint+Maturity+Reviews



No.	Project Name	PTL	Main Committer	Self-Certification Page	Documentation Sub-Committee @Ike Alisson	Logs (Vuls, Lynis, KubeHunter)	Security Sub-Committee @Randy Stricklin @Daniil Egranov @Wenhui Zhang	Process Sub-Committee @Biswajit De @haihui wang	TSC @Tina Tsou @Oleg Berzin
5	IEC Type 3: Android cloud native applications on Arm servers in edge for Integrated Edge Cloud (IEC) Blueprint Family	@Davy Zhang		Maturity Review Certification of Android Cloud	Documentation Review Meeting notes	~~https://nexus.akraino.org/content/sites/logs/ysemi/job/v2/lynis_v2/lynis/~~ 2022-6-28 https://nexus.akraino.org/content/sites/logs/ysemi/job/v2/lynis_v3/lynis/ 2022-6-30	2022-7-5 Approved by Security Sub-Committee.	2022-6-16 Approved by Process Sub-Commitee.	will be reviewed within TSC

https://wiki.akraino.org/display/AK/Documentation+Review+Meeting+notes

89	IEC Type 3: Android cloud native applications on Arm servers in edge for Integrated Edge Cloud (IEC) Blueprint Family	@Davy Zhang	May 13th, 2022	Akraino Rel. 6	Release 6 Documentation for IEC Type 3: Android cloud native applications on Arm servers in edge	Approve	*It is recommended to Akraino TSC to deem the submitted BP documents as "approved" and accept it.*

Thank you