

IEC Type3 R6 Maturity Review

Y-semi Computing



Agenda

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

Overview

◆ Basic Structure

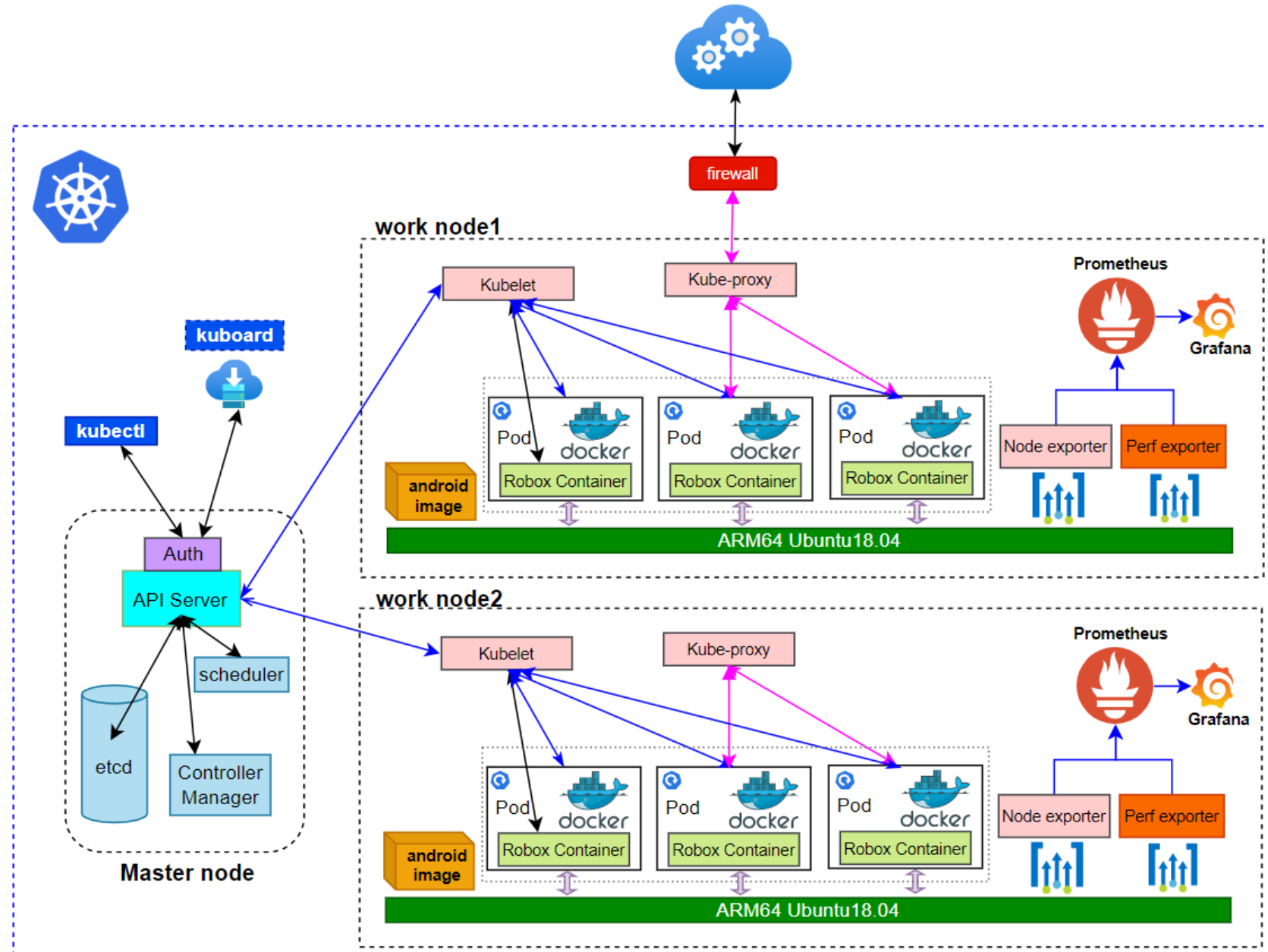
- ❑ Android Source Stack
- ❑ Preparations For Robox
- ❑ Start & Debug Robox
- ❑ Install Different App
- ❑ Access Through VNC

◆ Pod Instance Deployment

- ❑ Setup K8S Cluster
- ❑ Deploy Robox Inside
- ❑ Visualization By Kuboard

◆ Node Performance Analysis

- ❑ Run Games On Each Pod
- ❑ Perf & FlameGraph
- ❑ Monitoring Via Prometheus
- ❑ Visualization By Grafana



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



Platform Test Cases

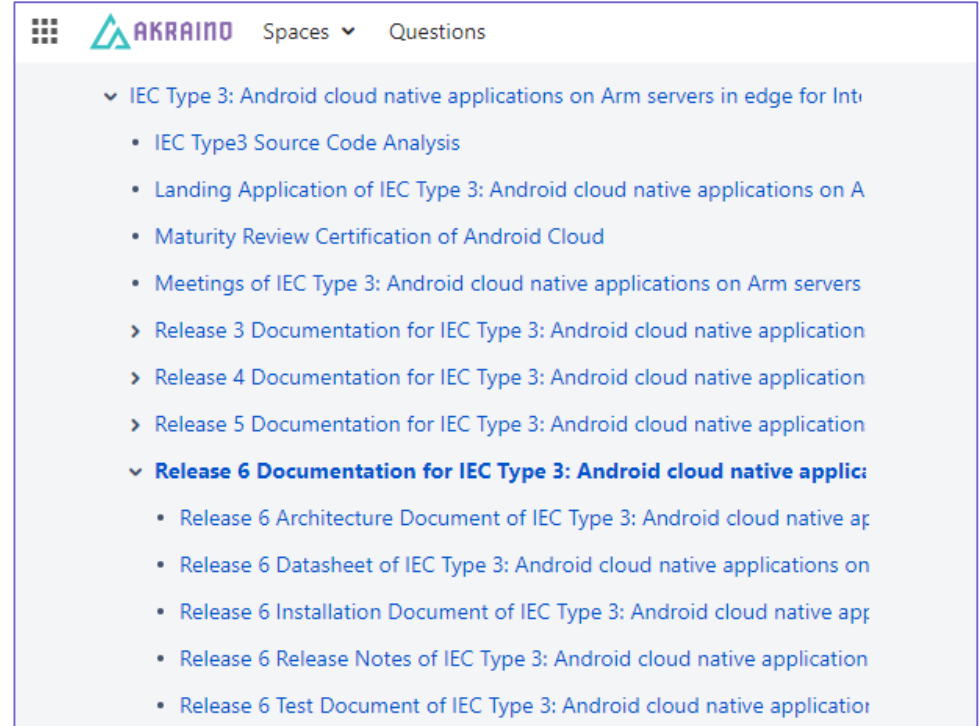
Layers	Item	Brief Introduction
Application	Prometheus	Monitoring solution with metrics and alerting
	iPerf	Measurements of the maximum achievable bandwidth on IP networks
K8S	conformance	kubernetes e2e suite, Sonobuoy
	kube-hunter	hunts for security weaknesses in Kubernetes clusters
OS	Perf	CPU performance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

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

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>



The screenshot shows the Akraino Wiki interface. At the top, there is a navigation bar with the Akraino logo, 'Spaces', and 'Questions'. Below this, a dropdown menu is open, showing a list of links related to IEC Type 3: Android cloud native applications on Arm servers in edge for Int. The menu items include:

- IEC Type3 Source Code Analysis
- Landing Application of IEC Type 3: Android cloud native applications on A
- Maturity Review Certification of Android Cloud
- Meetings of IEC Type 3: Android cloud native applications on Arm servers
- Release 3 Documentation for IEC Type 3: Android cloud native application
- Release 4 Documentation for IEC Type 3: Android cloud native application
- Release 5 Documentation for IEC Type 3: Android cloud native application
- Release 6 Documentation for IEC Type 3: Android cloud native applic:**
 - Release 6 Architecture Document of IEC Type 3: Android cloud native ap
 - Release 6 Datasheet of IEC Type 3: Android cloud native applications on
 - Release 6 Installation Document of IEC Type 3: Android cloud native app
 - Release 6 Release Notes of IEC Type 3: Android cloud native application
 - Release 6 Test Document of IEC Type 3: Android cloud native applicator

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	Edge_Infrastructure	Container	android/robox	promethues+Grafana			



Code Committed

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

Gerrit CHANGES YOUR DOCUMENTATION BROWSE

Merged as [5e8e332](#) 4811 ROBOX: Upload robox scripts for IEC release 6

Updated Apr 29
Owner ysemi ysemi
Assignee Set assignee...
Reviewers Tina Tsou, Akraino Jobbuilder, Jingzhao Ni
AND 3 MORE
ADD REVIEWER
CC ADD CC
Repo | Branch [iec](#) | [master](#)
Parent [e2a6b32](#)
Topic ADD TOPIC
Hashtags ADD HASHTAG

REPLY

ROBOX: Upload robox scripts for IEC release 6
RT
Signed-off-by: rd-sw <rd-sw@ysemi.cn>
Change-Id: [I1695c71cb291273b926370bc9a84528107663ef0](#)

✓ Verified +1 Akraino Jobbuilder
✓ Code-Review +1 ysemi ysemi
+1 Tina Tsou
+2 Trevor Tao

Files Findings

Base Patchset 18 [5e8e332](#) ADD PATCHSET DESCRIPTION

File
Commit message
A src/use_cases/robox/deploy_robox.sh
A src/use_cases/robox/load_components.sh
A src/use_cases/robox/loadimages.sh
A src/use_cases/robox/setupenv/arm64_env_setup.sh
A src/use_cases/robox/setupenv/build_android.sh
A src/use_cases/robox/setupenv/xorg.conf
A src/use_cases/robox/sm_ctrl.sh
A src/use_cases/robox/test_config/ys_perf_exporter.yml
A src/use_cases/robox/test_config/ys_prometheus.yml

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

ysemi-computing / RoboxWidget Public

<> Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main 1 branch 0 tags Go to file Add file Code

tcutee [script] add basic script cd3afae 2 days ago 10 commits

components	add perf_exporter, prometheus, grafana-server	4 days ago
config	[conf] add perf_exporter, prometheus configuration	4 days ago
scripts	[script] add basic script	2 days ago
.gitattributes	[attr] add more large file support	4 days ago
README.md	Initial commit	4 days ago
android.img	[img] add android.img	4 days ago



Maturity Security Test

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

No.	Project Name	PTL	Main Committer	Self-Certification Page	Documentation Sub-Committee	Logs (Vuls, Lynis, KubeHunter)	Security Sub-Committee	Process Sub-Committee	TSC
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 @Ike Alisson	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	@Randy Stricklin @Daniil Egranov @Wenhui Zhang 2022-7-5 Approved by Security Sub-Committee.	@Biswajit De @haihui wang 2022-6-16 Approved by Process Sub-Committee.	@Tina Tsou @Oleg Berzin 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	<i>It is recommended to Akraino TSC to deem the submitted BP documents as "approved" and accept it.</i>
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Thank you

