Test framework for RDK-B Emulator Rack Testing - Design

ⓘ   **This Page is under Development**

1.1. Introduction

1.2. Design Considerations
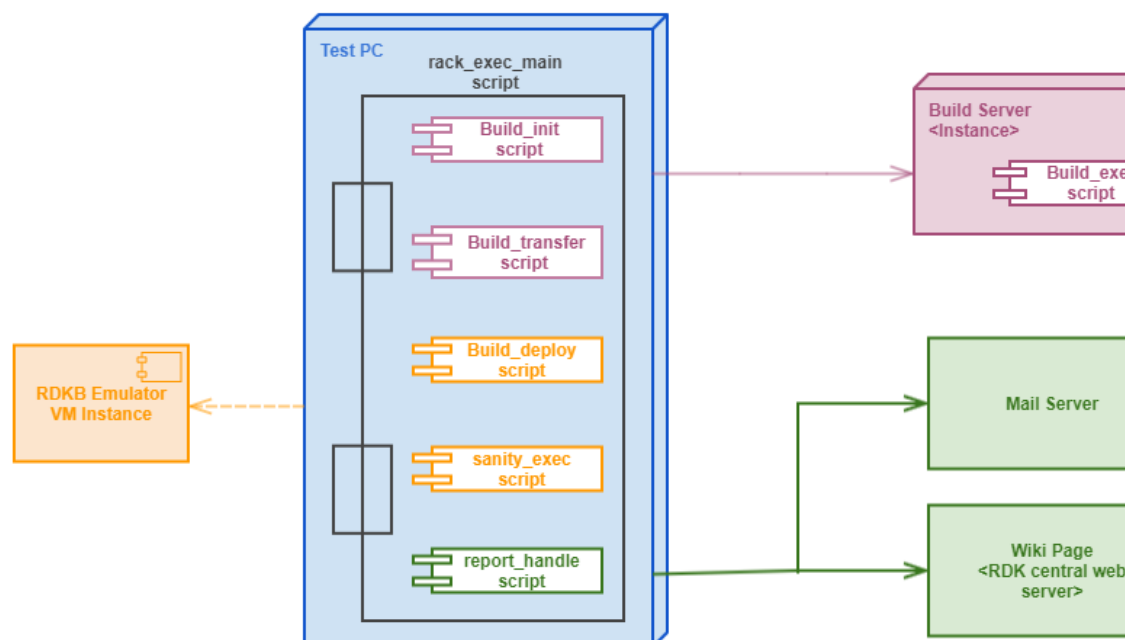
1.2.1. Decision Overview

< Describe the system design in broad terms . Consider benefits, costs and schedule and technical risks. Describe how the proposed solution aligns with the enterprise architecture. >

1.2.2. Other Considerations (DAR)

<Alternative designs considered and why one was chosen>

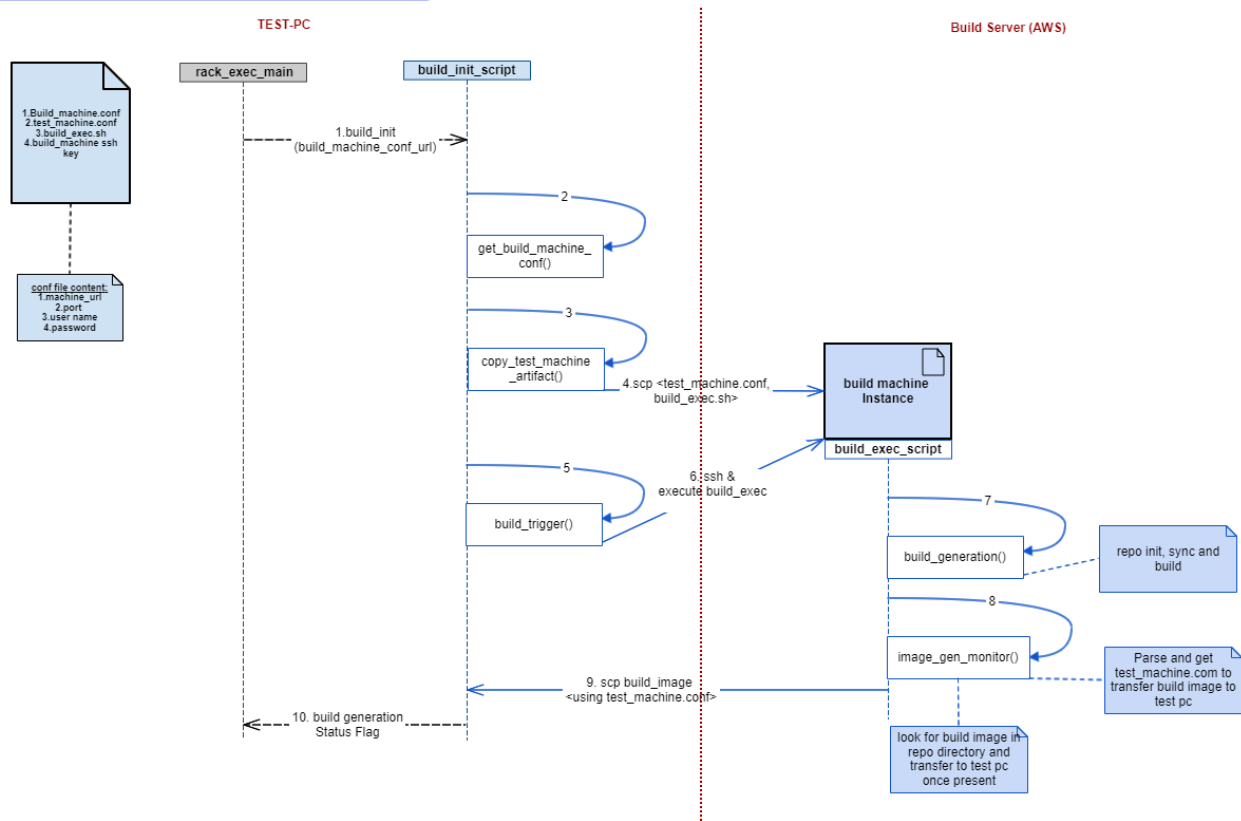## 1.3. Architecture

1.3.1. Layout

1.3.2. Communication

<Describe the communication between the sub-systems. (Diagrams may be used to illustrate communications). >

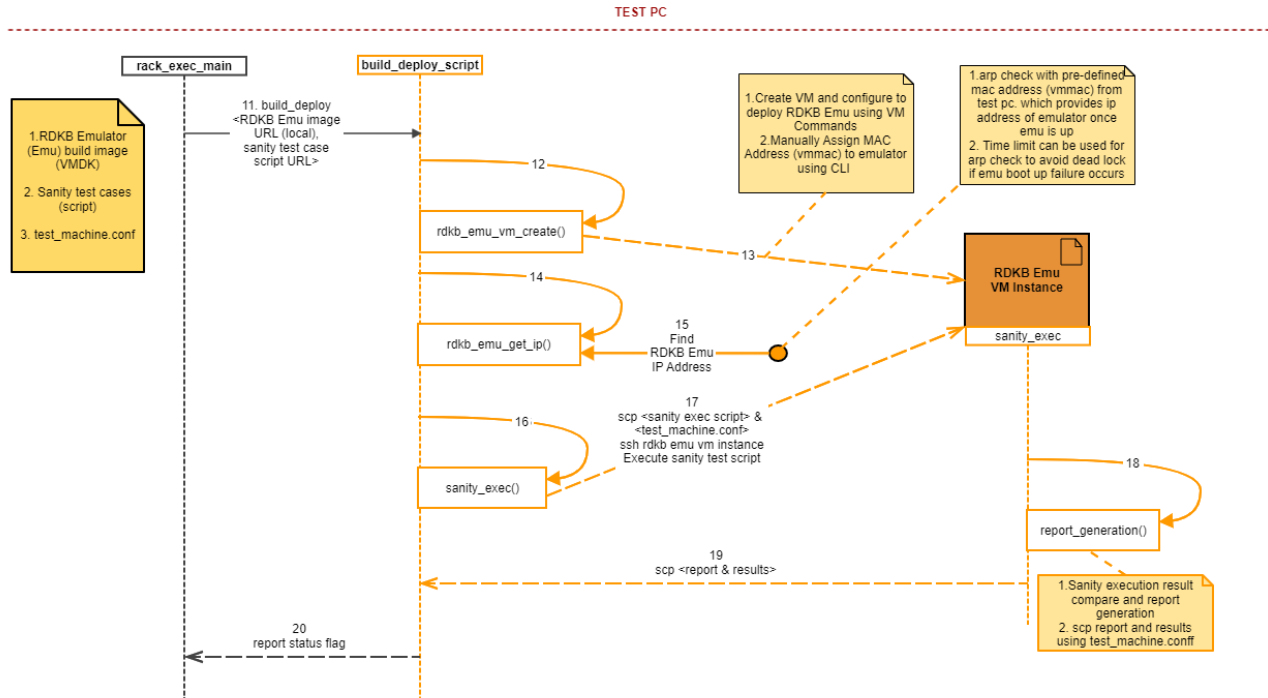## 1.4. **Sequence Diagram and Interfaces (Input/Output files or data sets)**

1.4.1. Build Trigger and Generation

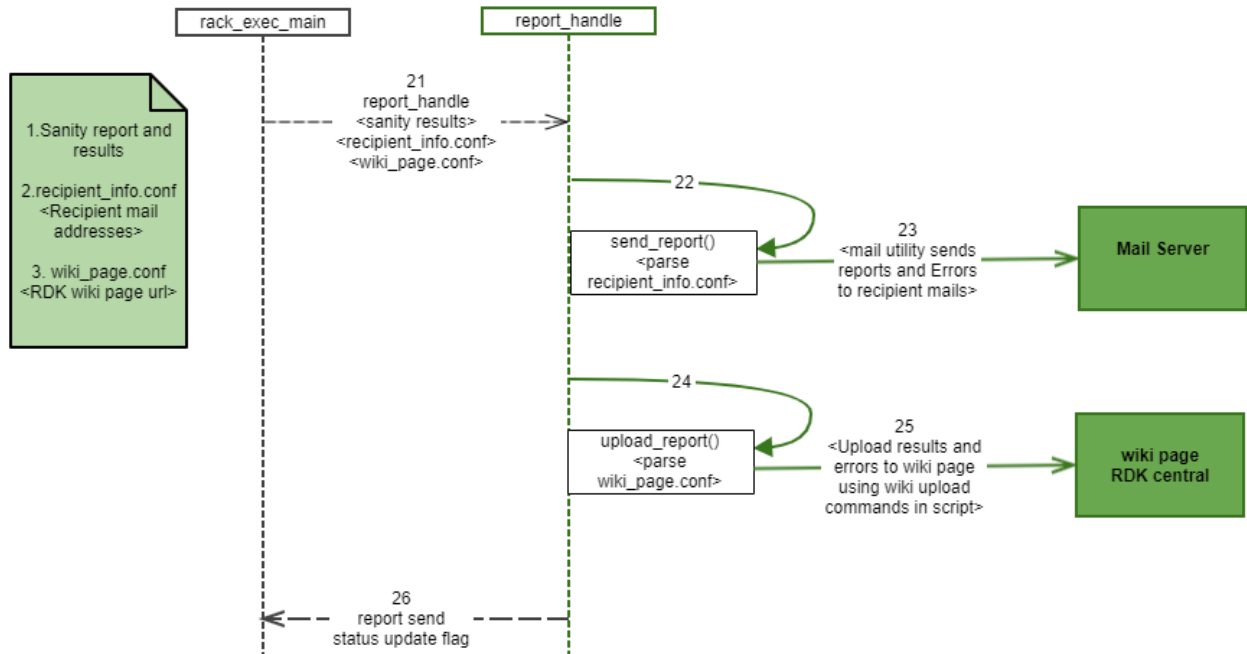**Build Trigger and Generation Sequence Diagram**

1.4.2. Build VM Deploy and Sanity Test Execution

TEST PC

rack_exec_main

build_deploy_script

1.RDKB Emulator
(Emu) build image
(VMDK)

2. Sanity test cases
(script)

3. test_machine.conf

11. build_deploy
<RDKB Emu image
URL (local),
sanity test case
script URL>

12

rdkb_emu_vm_create()

1.Create VM and configure to
deploy RDKB Emu using VM
Commands
2 Manually Assign MAC
Address (vmmac) to emulator
using CLI

1.arp check with pre-defined
mac address (vmmac) from
test pc. which provides ip
address of emulator once
emu is up
2. Time limit can be used for
arp check to avoid dead lock
if emu boot up failure occurs

13

RDKB Emu
VM Instance

14

rdkb_emu_get_ip()

15
Find
RDKB Emu
IP Address

sanity_exec

17
scp <sanity exec script> &
<test_machine.conf>
ssh rdkb emu vm instance
Execute sanity test script

16

18

sanity_exec()

report_generation()

19
scp <report & results>

1.Sanity execution result
compare and report
generation
2. scp report and results
using test_machine.conff

20
report status flag

1.4.3. Report Management

rack_exec_main

report_handle

1.Sanity report and
results

2.recipient_info.conf
<Recipient mail
addresses>

3. wiki_page.conf
<RDK wiki page url>

21
report_handle
<sanity results>
<recipient_info.conf>
<wiki_page.conf>

22

send_report()
<parse
recipient_info.conf>

23
<mail utility sends
reports and Errors
to recipient mails>

Mail Server

24

upload_report()
<parse
wiki_page.conf>

25
<Upload results and
errors to wiki page
using wiki upload
commands in script>

wiki page
RDK central

26
report send
status update flag

< Identify input interfaces, function call protocol, and the nature of the data structures passed across the interface between the sub-
modules>

< Identify output interfaces, function call protocol, and the nature of the data structures passed across the interface. >

1.5. **Data Model**

<Provide a description of the data model>

1.6. **Limitations**

< Describe the cases that are identified as problem but unable to report to it due to various factors. Describe the factors >

1.7. **Future Enhancements**

< Describe how the current design is suitable for future enhancement without completely modifying existing design . >