LAVA QA Setup

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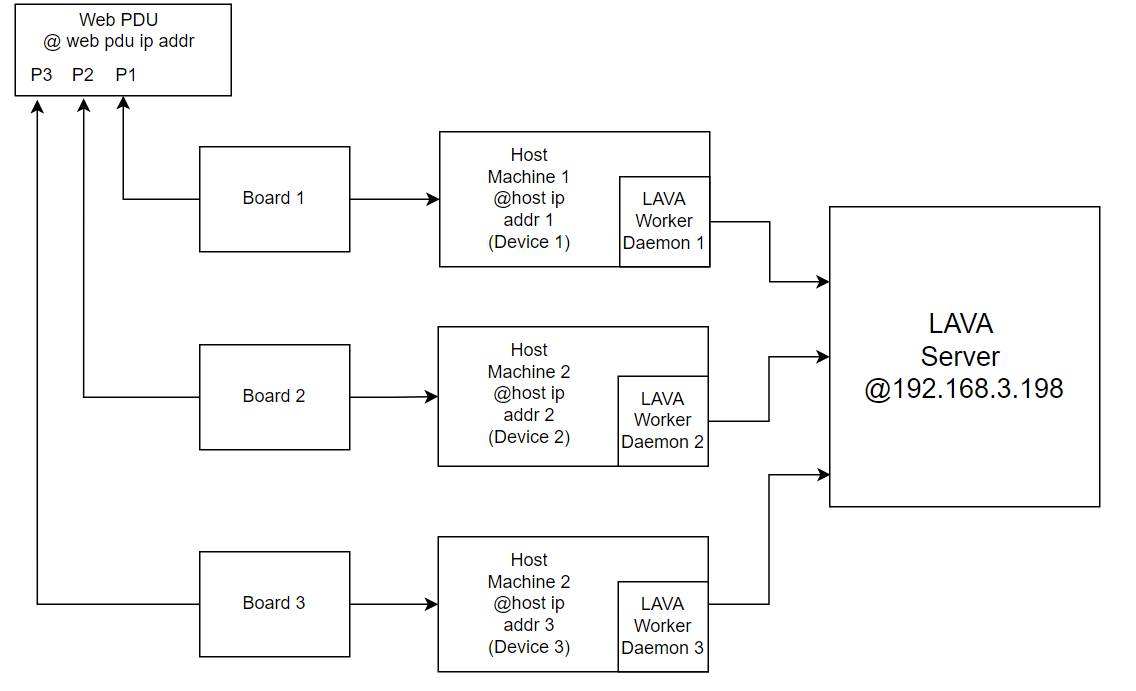
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# Introduction

The LAVA QA setup is intended to be able to qualify a board or a s/w release against a standard set of tests. Apart from running a regression on an existing board, we need to be able to setup and test new boards and hosts quicky.

# LAVA Setup Block Diagram



*Fig 1. Block Diagram of LAVA QA Setup with 3 boards*

# Setup Overview

To set up and test a new board, the overall steps are :-

1. Connect the host machine and the board. Ensure that basic linux bootup is seen on the minicom terminal.
2. Add a LAVA Worker on the LAVA server.
3. Setup required programs and daemons on the host machine.
4. Add a LAVA Device on the LAVA server.
5. Generate/Edit regression YAML file and run the regression on the LAVA Server

# LAVA Worker Add

1. SSH to LAVA server (192.168.3.198)
2. With SU permissions run the lava\_worker\_add.sh script. Need to specify the hostname. Keep the host ip address as the hostname

source lava\_worker\_add.sh 192.168.8.151

1. Save the token that will be printed on the console. The token can also be retrieved with the following command

sudo lava-server manage workers details 192.168.3.151

# Host Machine Setup

1. SSH to the host machine at the specified IP Address
2. With SU permission run the lava\_worker\_setup.sh script. Need to specify the hostname (host ip address) and token (generated in the LAVA Worker Add step.

source lava\_worker\_setup.sh 192.168.8.151 abWjck912332

1. Reboot the Host
2. Ensure that the lava dispatcher and ser2net services are running.

# LAVA Device Add

1. SSH to LAVA server (192.168.3.198)
2. With SU permissions run the lava\_device\_add.sh script. Need to specify the lava specific device name, device type, worker name (same as host ip address) and lava specific tag.
3. The lava specific device name and tag as per agreed on naming conventions.
4. The lava device type is a specific list of device types understood by LAVA. Example is “b0-edgeq-raptor2”. Check with the LAVA admin.

source lava\_device\_add.sh b0-hawk-51 hawk51 192.168.8.151 b0-edgeq-raptor2

1. Setup the jinja2 file and shell scripts required by LAVA with the lava\_device\_jinja2\_setup.sh file. The inputs required are the board type (hawk, titan as of now), board number, web pdu ip addr, web pdu port number.

source lava\_device\_jinja2\_setup.sh hawk 51 192.168.9.247 8

1. Check that the jinja2 files are created and are located in /etc/lava-server/dispatcher-config/devices/
2. Check that the shell scripts used by the jinja2 file are accessible from the LAVA server.
3. Check that the device is listed on the link below and is “online” and health status is “good”

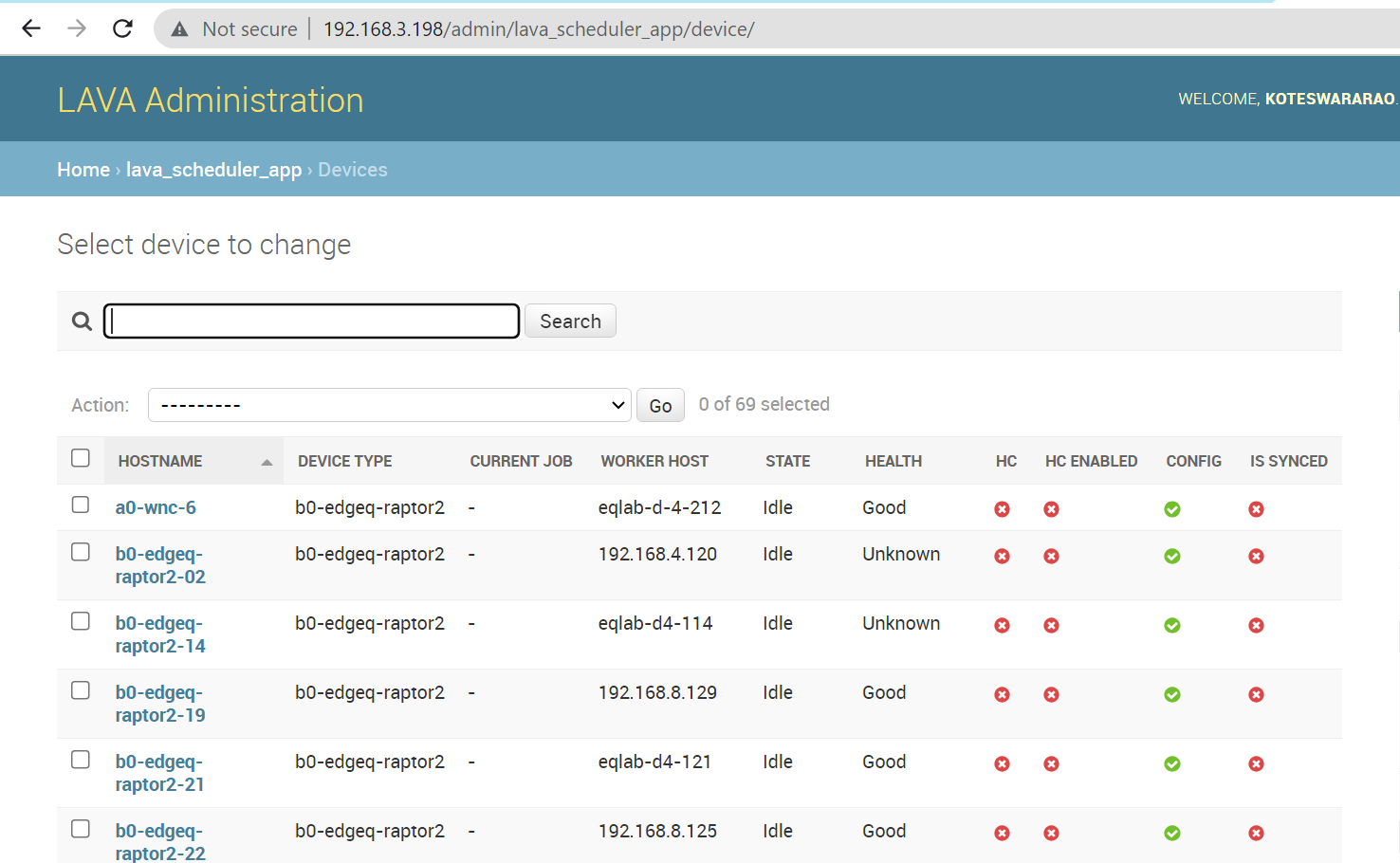
<http://192.168.3.198/scheduler/alldevices>

A screenshot of a computer

Description automatically generated

1. Check the LAVA admin console (username and password is “admin”) and double check that the tags and worker are assigned to the device correctly.

<http://192.168.3.198/admin/lava_scheduler_app/device/>



# Running a Regression

1. Edit the board specific YAML file.
2. Ensure that the tag mentioned matches the tag for the LAVA device (specified in LAVA device add step). Can check this on the LAVA server with the following command also. An example :-

sudo lava-server manage devices details b0-hawk-51

1. Ensure that the MAC ID used in the YAML file matches the board’s MAC ID
2. If you’re using a TFTP server and a firmware release. Check that the server ip addresses and tftp path are correct in the YAML.
3. SSH to LAVA server (192.168.3.198)
4. Run the regression with the following command:-

lavacli --uri <http://admin:es3bkjwhjo04oazzl0zqhl7zfr2n8wf1eg3zl246o9gspyyi2pczdsotmufgyc00yzkjuz6o0pl28mymjz7he980artaysb7hj4h4r5tia1u2f3y3ecf94ys1ye32ns0@192.168.3.198/RPC2/> jobs submit <path to YAML file>

1. Regression Progress can be monitored here –

<http://192.168.3.198/scheduler/alljobs>

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EdgeQ is a company creating world's first software-defined modem (5G) with integrated Artificial Intelligence. With the vision to foster connectivity and intelligence across the next trillion devices, the next billion users, and a connected future, EdgeQ offers connectivity and compute at the edge to enable a frictionless, wire-less operating model for a brand new host of enterprise applications such as IoT, autonomous cars, and AR/VR. By unifying carrier-grade class connectivity, server-grade cloud functionality, and all communications protocols onto a single solution, EdgeQ shifts the pivot point of the cloud closer to the client user.

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