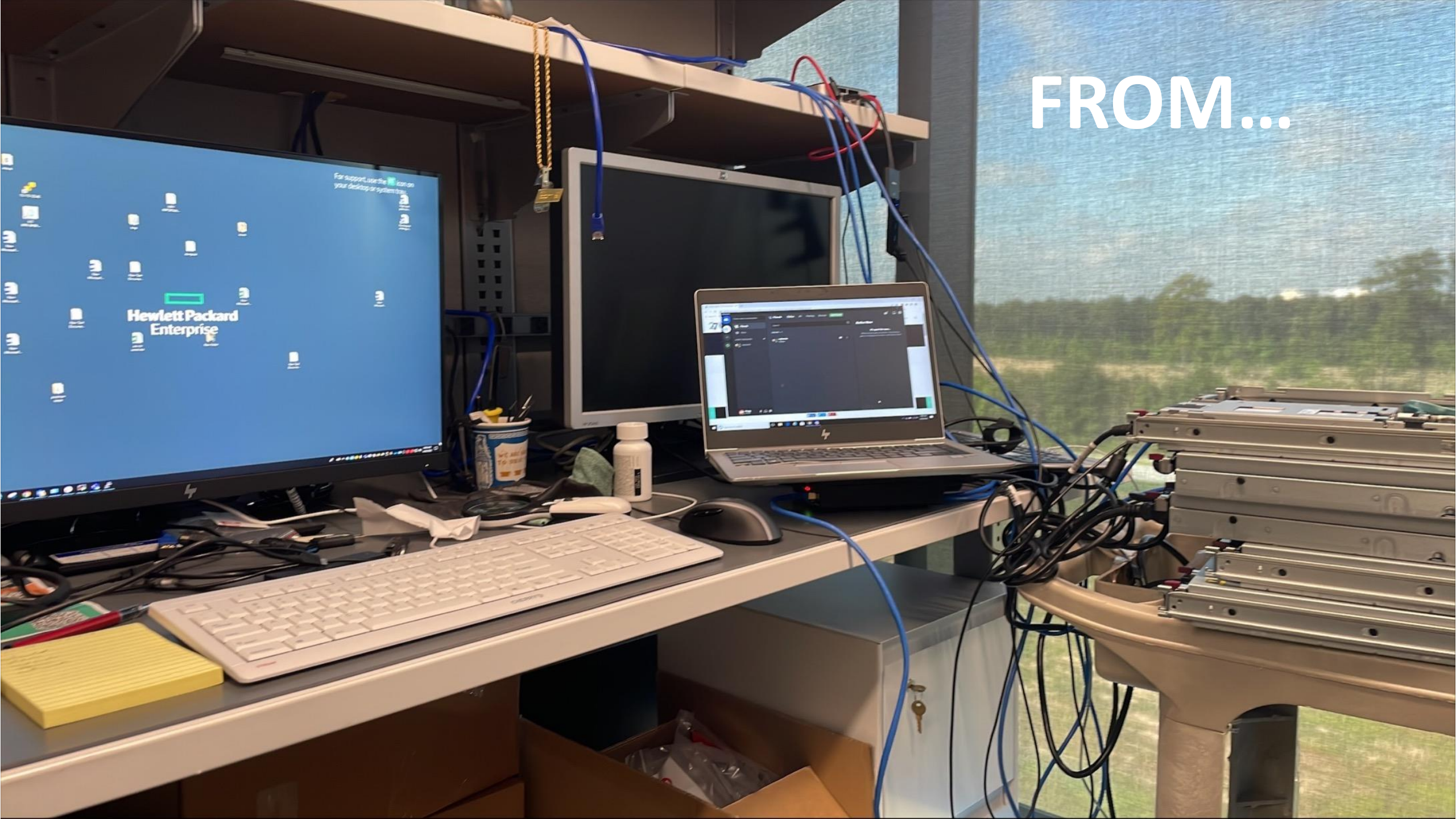
OSFCI: 2022 updates

Jean-Marie Verdun

Arun Darlie Koshy

Connect. Collaborate. Accelerate.

OPEN Compute Project®


FROM...
Hewlett Packard
Enterprise

…TO

- The pandemic hit hard
  - Firmware development had to become fully remote
- Dual security model
  - Open-source with customer control
  - Proprietary with supplier liability
- Enable adoption of open framework at scale

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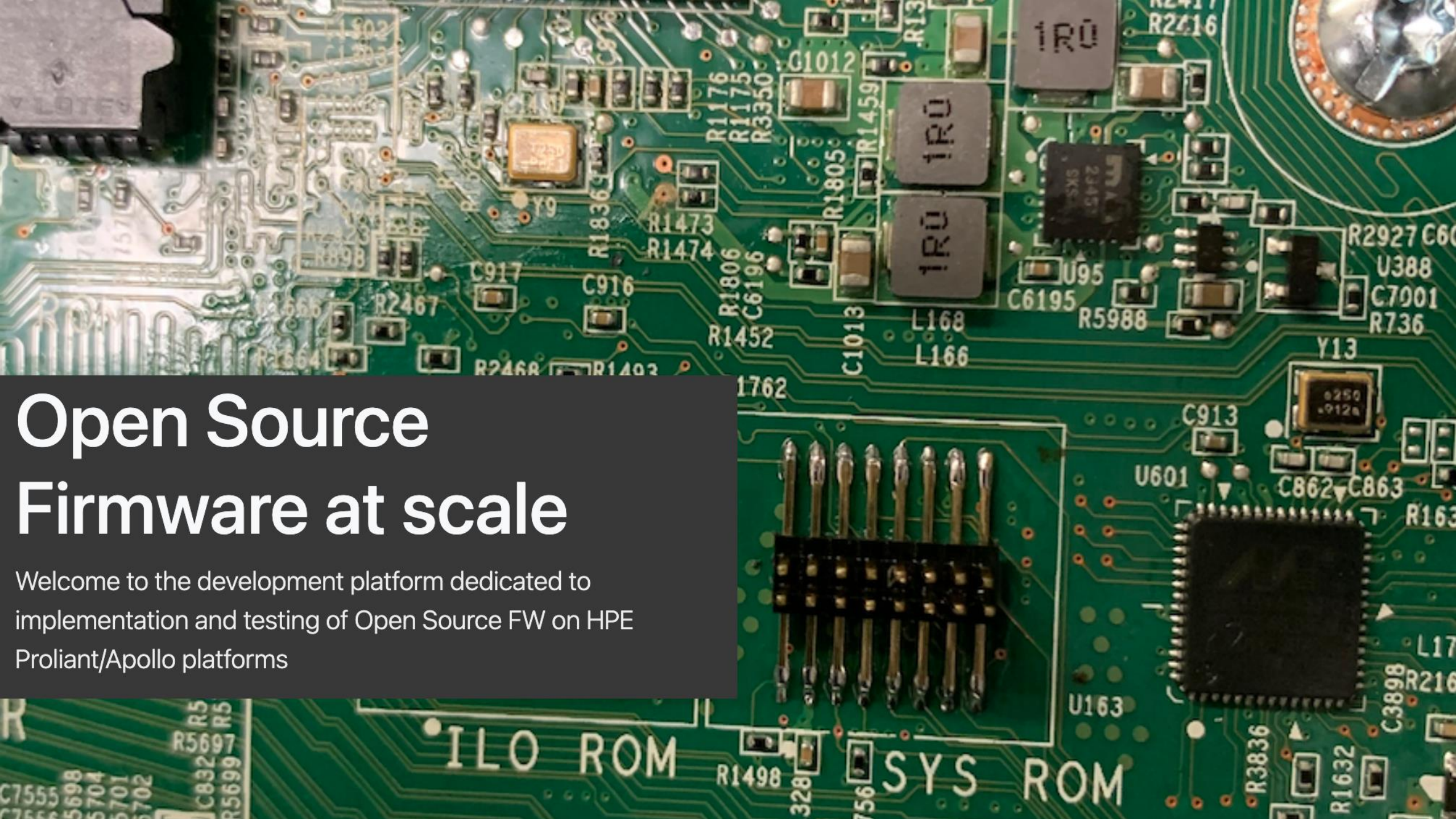
GOALS

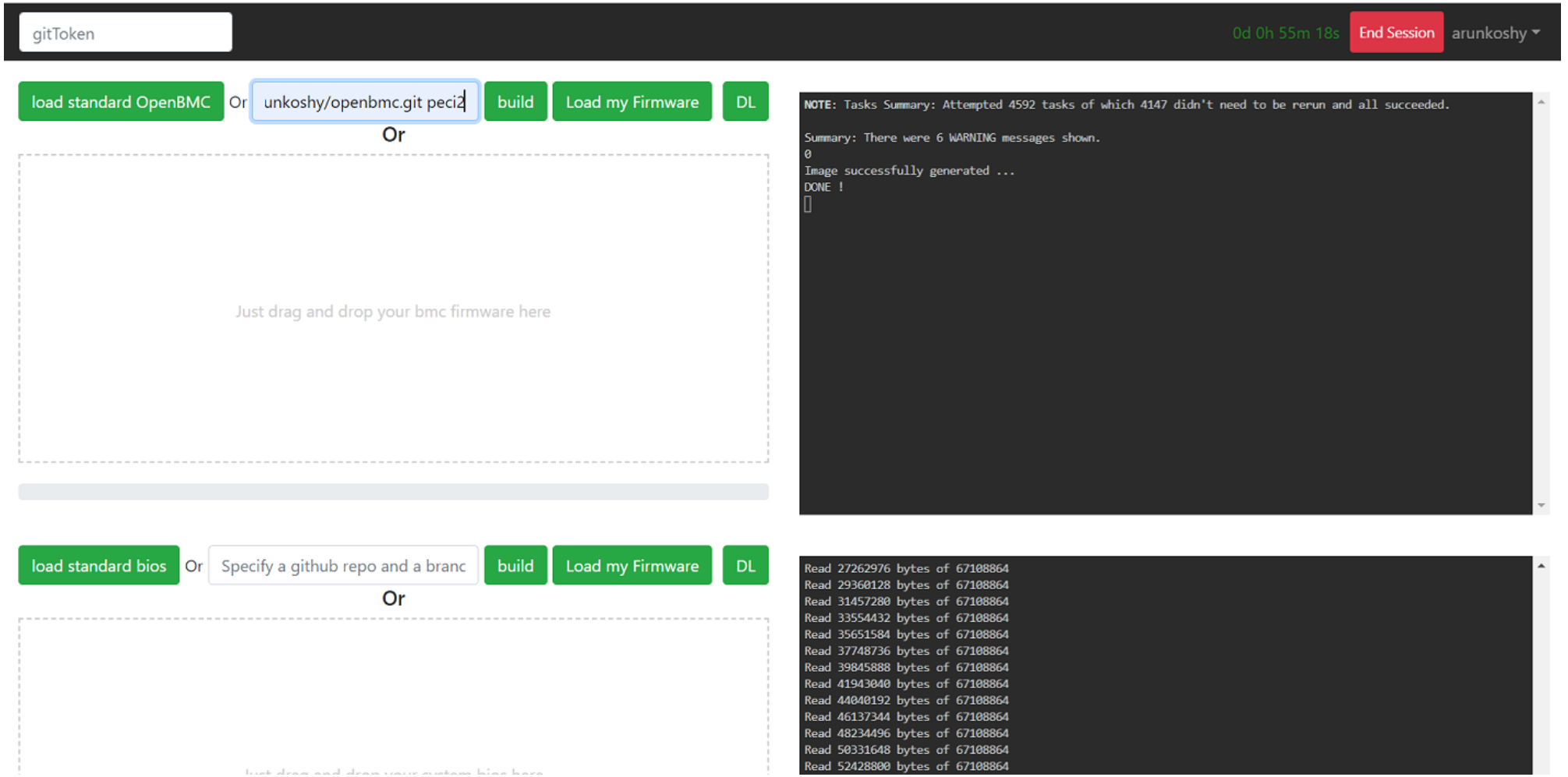
- Automatize remote build, testing and release management of BMC and ROM firmware
- Validate on target that Open-Source Firmware works as expected (OpenBMC and LinuxBoot)
- Have specially provisioned instances for customers, public and OCP
- Make it fully open source and encourage community adoption



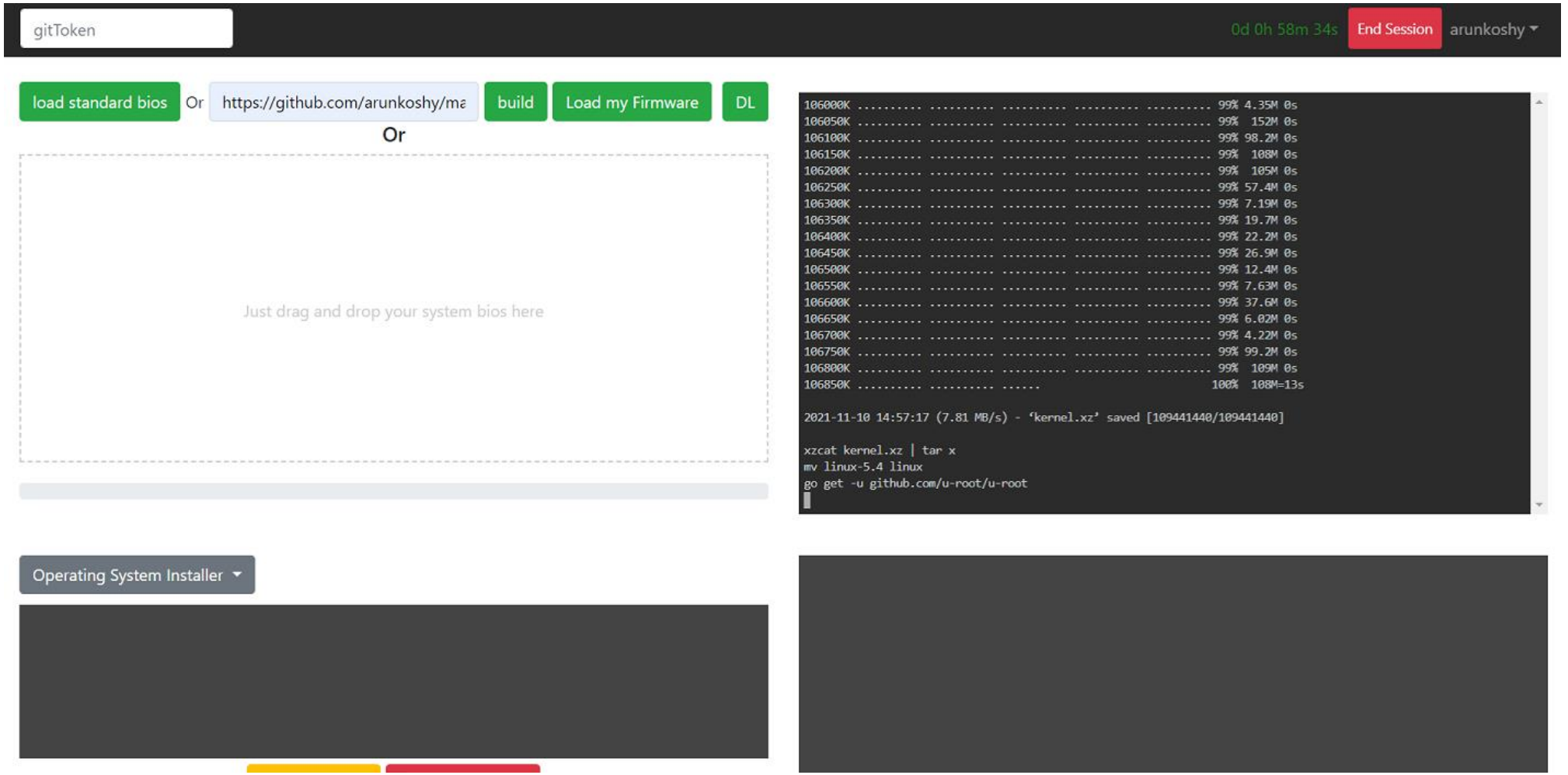
Open Source Firmware at scale

Welcome to the development platform dedicated to implementation and testing of Open Source FW on HPE Proliant/Apollo platforms

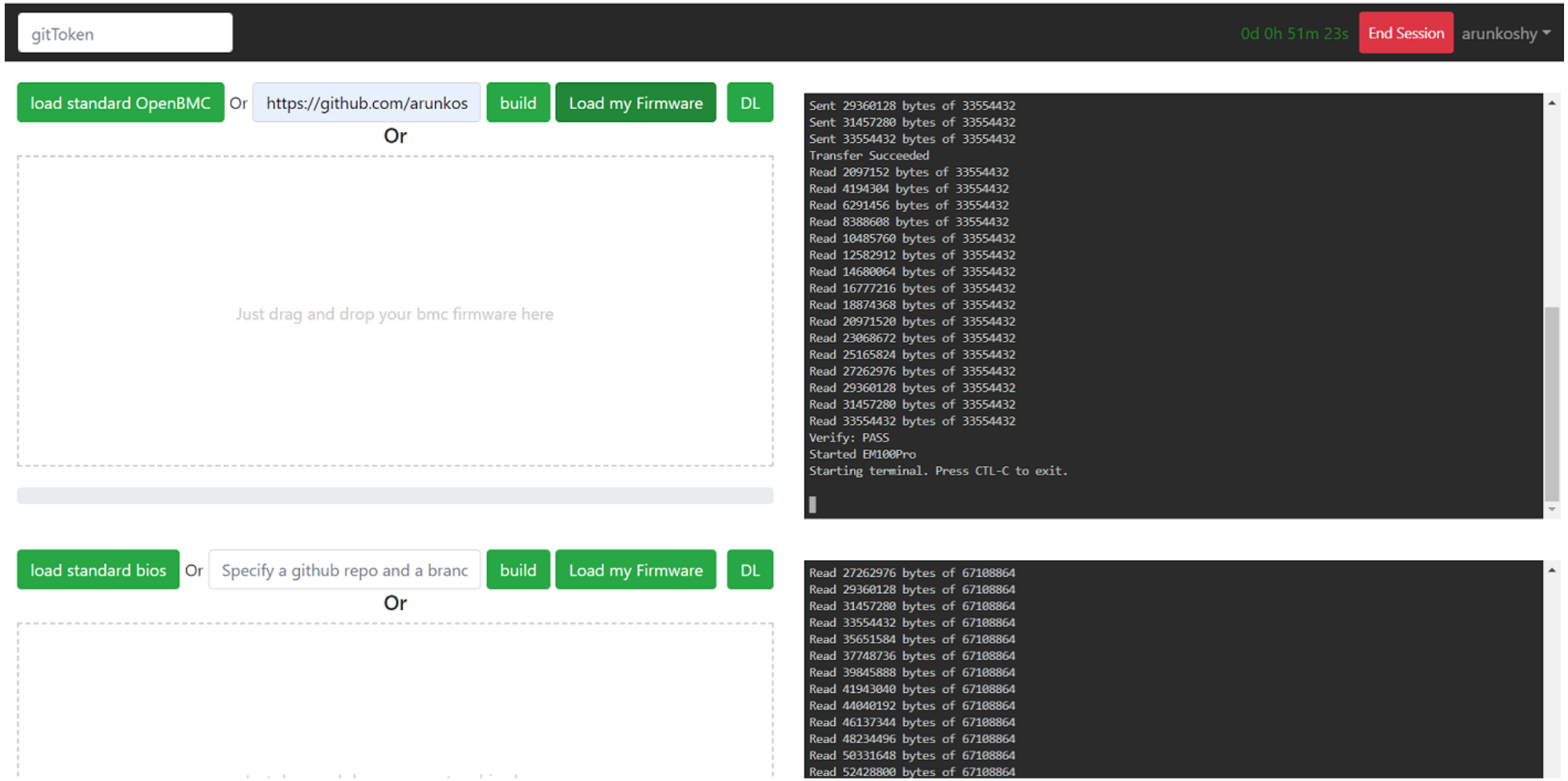
DEMO – BUILD OPENBMC



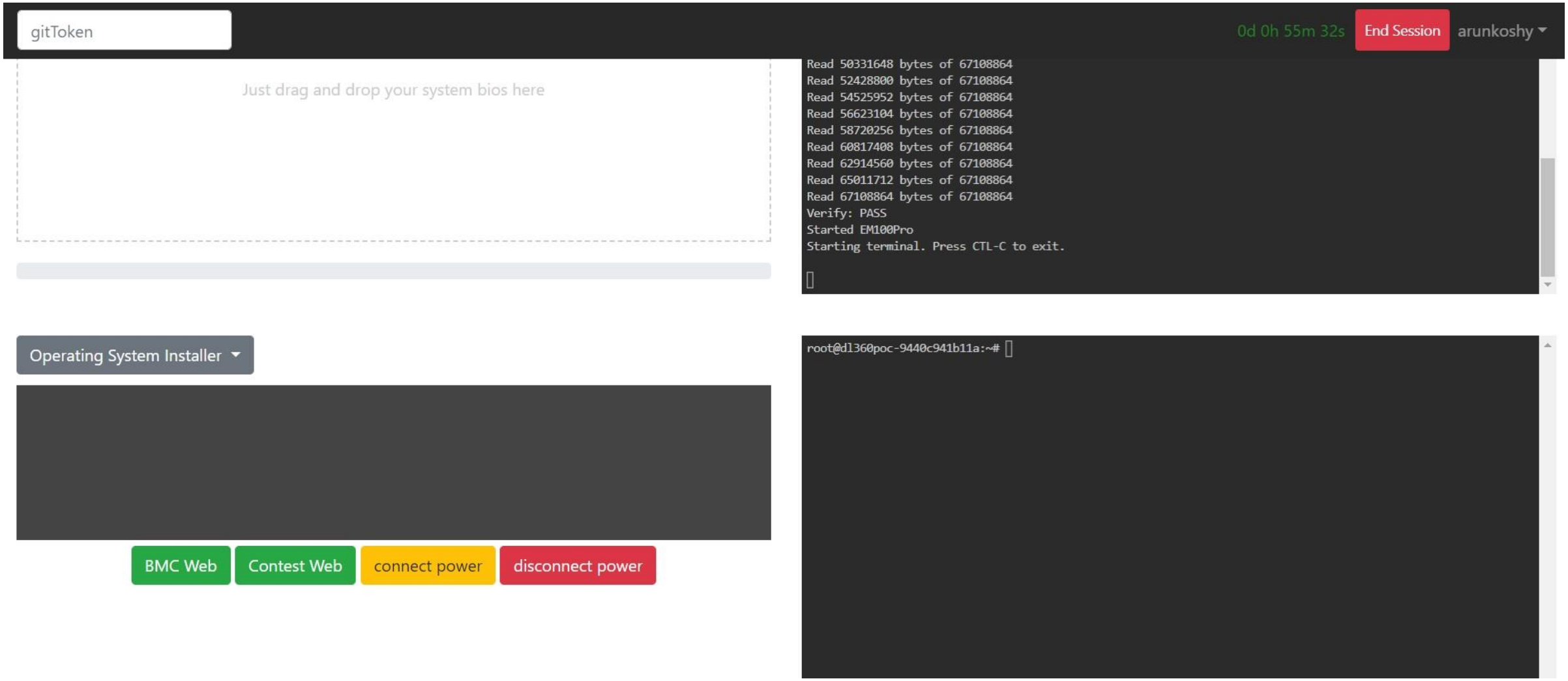
DEMO – BUILD LINUXBOOT



DEMO – LOAD


gitToken
0d 0h 51m 23s
End Session
arunkoshy
load standard OpenBMC
Or
https://github.com/arunkos
build
Load my Firmware
DL
Or
Just drag and drop your bmc firmware here
Sent 29360128 bytes of 33554432
Sent 31457280 bytes of 33554432
Sent 33554432 bytes of 33554432
Transfer Succeeded
Read 2097152 bytes of 33554432
Read 4194304 bytes of 33554432
Read 6291456 bytes of 33554432
Read 8388608 bytes of 33554432
Read 10485760 bytes of 33554432
Read 12582912 bytes of 33554432
Read 14680064 bytes of 33554432
Read 16777216 bytes of 33554432
Read 18874368 bytes of 33554432
Read 20971520 bytes of 33554432
Read 23068672 bytes of 33554432
Read 25165824 bytes of 33554432
Read 27262976 bytes of 33554432
Read 29360128 bytes of 33554432
Read 31457280 bytes of 33554432
Read 33554432 bytes of 33554432
Verify: PASS
Started EM100Pro
Starting terminal. Press CTL-C to exit.
load standard bios
Or
Specify a github repo and a branc
build
Load my Firmware
DL
Or
Read 27262976 bytes of 67108864
Read 29360128 bytes of 67108864
Read 31457280 bytes of 67108864
Read 33554432 bytes of 67108864
Read 35651584 bytes of 67108864
Read 37748736 bytes of 67108864
Read 39845888 bytes of 67108864
Read 41943040 bytes of 67108864
Read 44040192 bytes of 67108864
Read 46137344 bytes of 67108864
Read 48234496 bytes of 67108864
Read 50331648 bytes of 67108864
Read 52428800 bytes of 67108864

DEMO – POWER ON

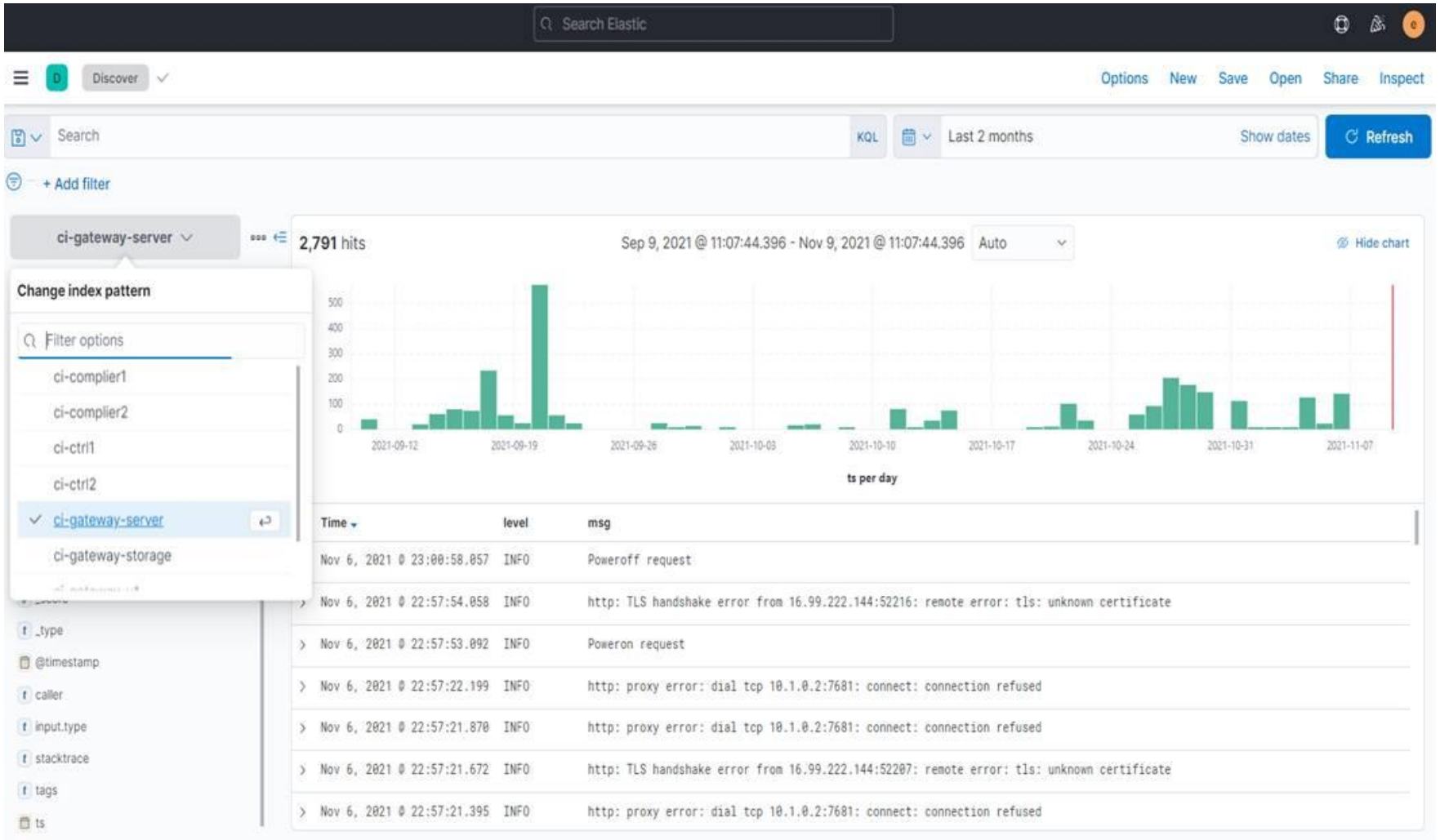


DEMO – CONTEST INTEGRATION

WHY IS THIS CRITICAL?

- Leverage community of hyper-scalers via OCP's emerging test frameworks and standards
- Easier developer workflow around build, debug and observability on real hardware
- Manual firmware development and validation has been disrupted by hybrid / remote-work model
- Production hardware safety and continuity

ADMIN ANALYTICS - ELK



ARCHITECTURE

- Modular architecture and configurable
- Written in Go

- API endpoints supporting:
  - Automation including external frameworks like Contest
  - Non-interactive mode
  - Build and load firmware, log retrieval, power operations
  - Examples: https://github.com/opencomputeproject/OSF-OSFCI/tree/master/api

- Enhanced analytics and logging
- Fully open-source under MIT license

OUTCOMES

- In use externally and internally
  - For both proprietary and open-source development
- Seed community efforts around a common set of tests
- Combine innovations from community members
- Accepted by OCP

THANK YOU

Questions?

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