

192.168.1.201	192.168.1.129	192.168.1.130	169.254.1.140	192.168.1.205	192.168.1.134	192.168.1.135	192.168.1.23
switchfb453d	switch0fb1e3	switch537642	Coveloz-BACH...6C-5C	C1:PGM 1	Merging Tech...0310)	Merging Tech...0858)	Merging Tech...0

Media Network Monitoring Services

Easy media network monitoring and debugging

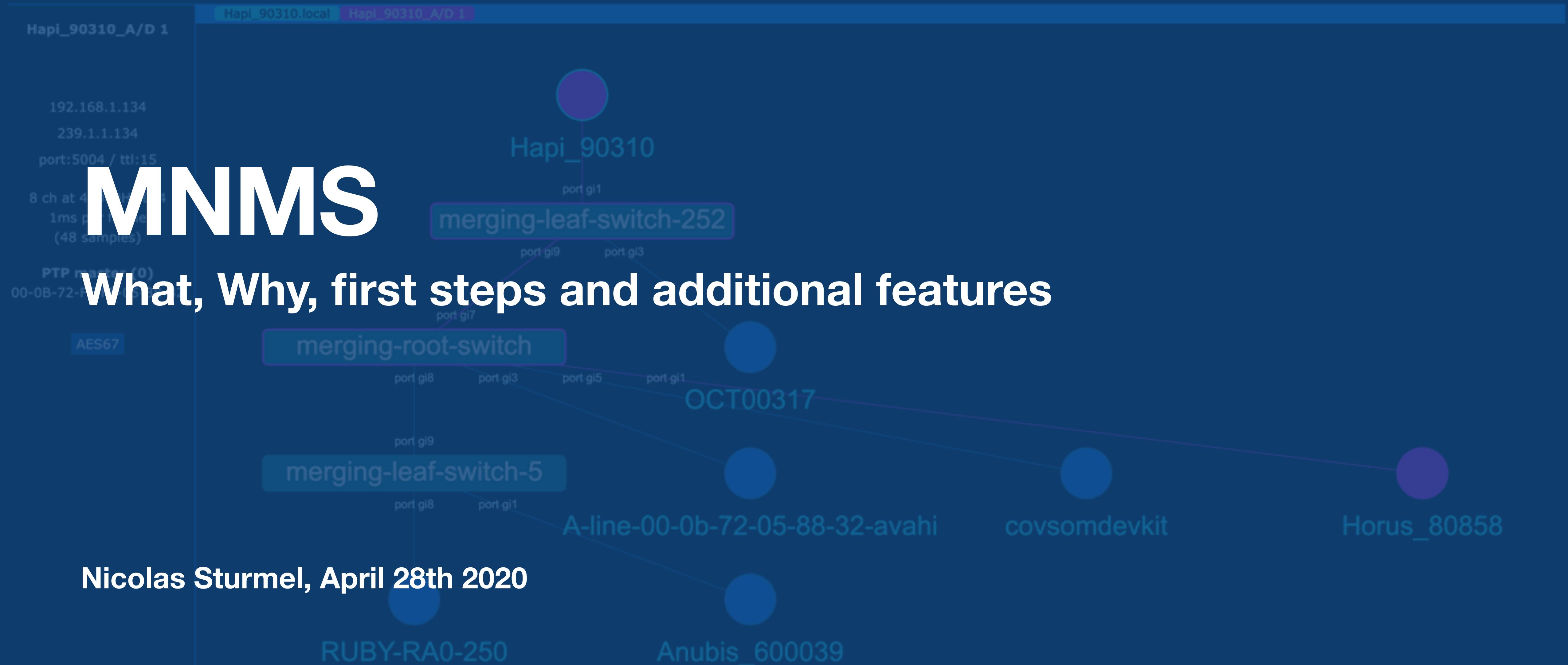
Get MnMs, it's plug'n'play and free

For RAVENNA, AES67, SMPTE ST2110, SMPTE 2022-7... even Dante

Hapi_90310

RUBY-RA0-250

Anubis_600039



MNMS: why?

- Media Networks are very specific type of networks (bandwidth, multicast)
 - Heterogenous network with many brands of switches and endpoints
 - Debugging is complex as it can be from the sender, switch, receiver
 - Needing a centralized and unified view of the network

From this

- many windows
- different UXs
- High screen real estate needed

The collage illustrates the complexity of managing modern networking infrastructure through multiple windows and different user interfaces:

- Top Row (Left):** Shows two separate windows for ArTEL switches, each displaying a list of ports (gi1-gi10) and their status.
- Top Row (Middle):** Shows a window for an ARG Quarra 1G switch displaying Queuing Counters for 10 ports across 8 queues (Q0-Q7).
- Top Row (Right):** Shows a window for a Cisco SG350-10 10-Port Gigabit Managed Switch showing Port Settings and a Port Settings Table.
- Bottom Row (Left):** Shows a window for an Anubis_600039 device showing Session sources and Session sinks configuration.
- Bottom Row (Right):** Shows a detailed network topology diagram with nodes labeled with IP addresses like 192.168.1.134, 192.168.1.135, and 192.168.1.136, and components like LAWO, Merging Technologies, and Horus.

To this

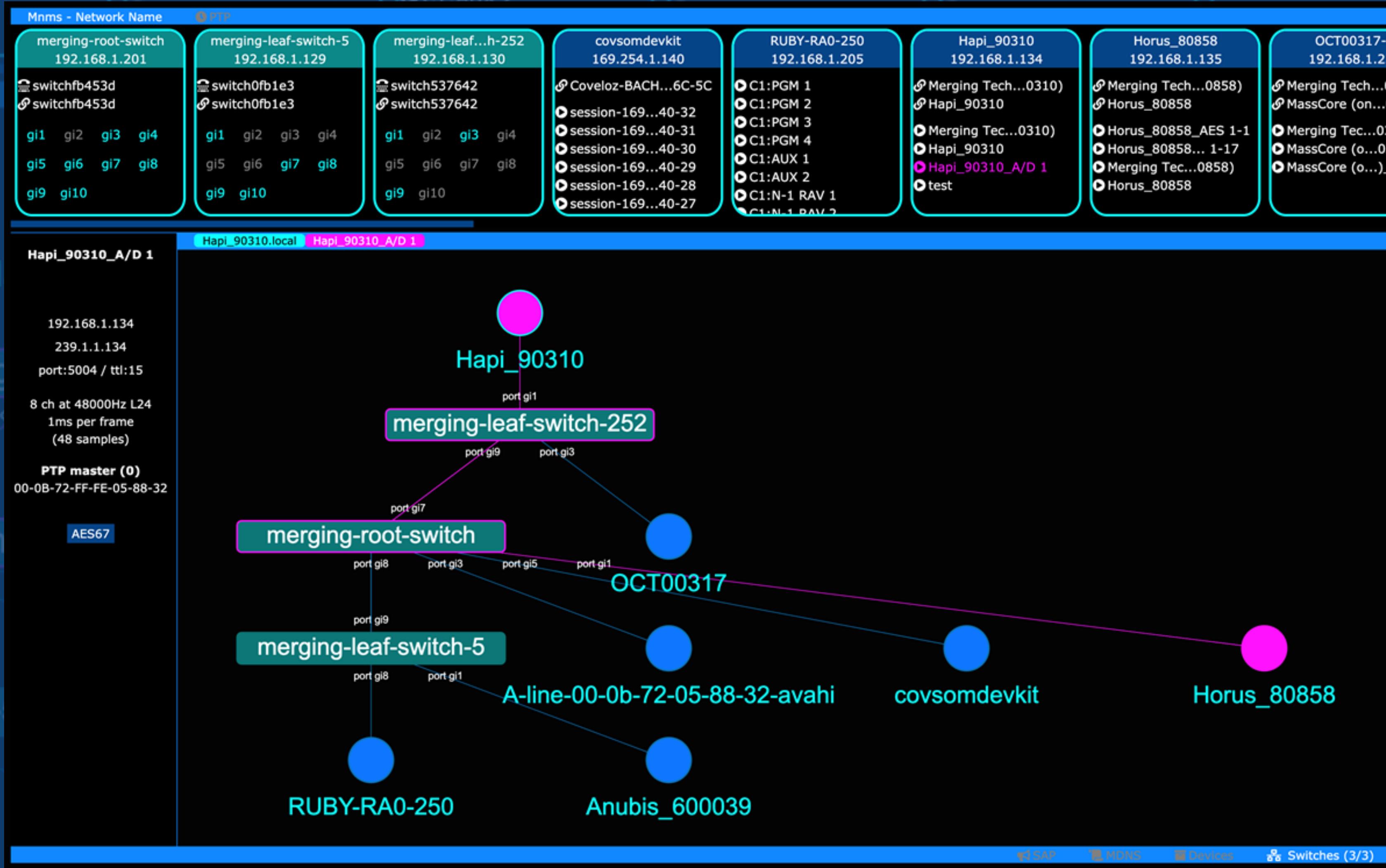
- # • Simple screen

- # • Topology

- Quick view of basic info

- Quick reach of interface for advanced config

→ the ANEMAN of the network debugging



192.168.1.201

192.168.1.129

192.168.1.130

169.254.1.140

192.168.1.205

192.168.1.134

192.168.1.135

192.168.1.23

MNMS: what is it?



- A free software (as in free to use, free to modify, free to ...)

192.168.1.134

239.1.1.134
port:5004 / tu:15

8 ch at 48000Hz L24
1ms per frame
(48 samples)

PTP master (0)

00-0B-72-FF-FE-05-88-32

AES67

merging-root-switch

port gi8

port gi3

port gi5

port gi1

OCT00317

port gi9

merging-leaf-switch-5

A-line-00-0b-72-05-88-32-avahi

covsomdevkit

Horus_80858

A modular webservice framework to monitor your media network

RUBY-RA0-250

Anubis_600039

192.168.1.201

192.168.1.129

192.168.1.130

169.254.1.140

192.168.1.205

192.168.1.134

192.168.1.135

192.168.1.23

MNMS: what is it NOT ?

Hapi_90310_A/D 1

Hapi_90310.local Hapi_90310_A/D 1

192.168.1.134

239.1.1.131
port:5004 / ttl:158 ch at 48000Hz L24
1ms per frame
(48 samples)PTP master (0)
00-0B-72-FF-FE-05-88-32

AES67

merging-root-switch

port gi7

merging-leaf-switch-5

port gi9

RUBY-RA0-250

Anubis_600039



- A replacement for advanced debugging (PTP Track Hound, EBU LIST)
- A configuration tool (for the moment, MNMS is read only)
- A universal magical solution: many work to do !

covsomdevkit

Horus_80858

192.168.1.201

192.168.1.129

switchfb453d
switchfb453d
gi1 gi2 gi3 gi4
gi5 gi6 gi7 gi8
gi9 gi10

switch0fb1e3
switch0fb1e3
gi1 gi2 gi3 gi4
gi5 gi6 gi7 gi8
gi9 gi10

Hapi_90310_A/D 1

Hapi_90310.local Hapi_9

192.168.1.134

239.1.1.134

port:5004 / ttl:15

8 ch at 48000Hz L24
1ms per frame
(48 samples)

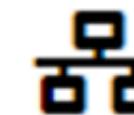
PTP master (0)
00-0B-72-FF-FE-05-88-32

AES67

merging

merging-

Your media network at a glance



On what port are my devices plugged ?

See what is connected and on which switch, which port. See a port status and bandwidth usage, and see information about the connected nodes.



Track multicast flows on the network

Choose a stream to see its details and the network segments where the multicast flow is distributed.



Get notified when something changes

Get notification on network change: new device, bandwidth too high, stream addition or removal. (work in progress)

From a standalone app to a full cloud suite

Scalable at will

The software is a collection of services for monitoring, analysis and (eventually) configurations of the devices on the network. Each service is independent and communicates to the so-called mission-control via a secure web socket.

MnMs-desktop is a light version, embedding everything that is needed to try and operate MnMs, but you can also download the whole git repository and do your own MnMs system !

Based on the latest web technology, MnMs is scalable at will.

Horus_80858

Get it now, free and open source

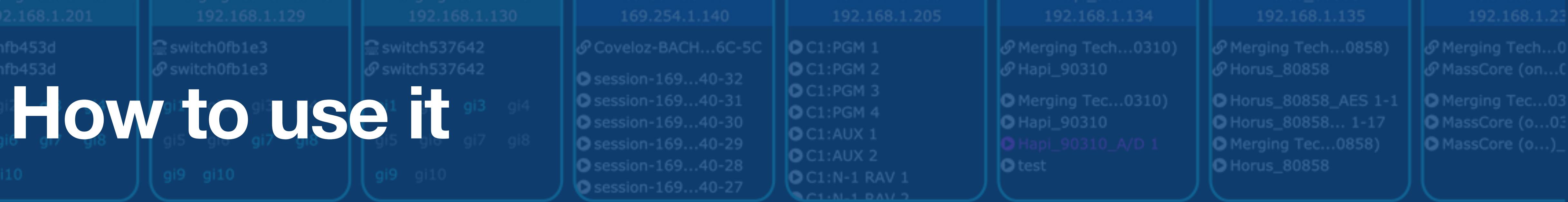
[Get the desktop app \(stable\)](#)
for Windows

[Get the desktop app \(nightly build\)](#)
for Windows (experimental)

[Play with the online simulation](#)
Coming soon...

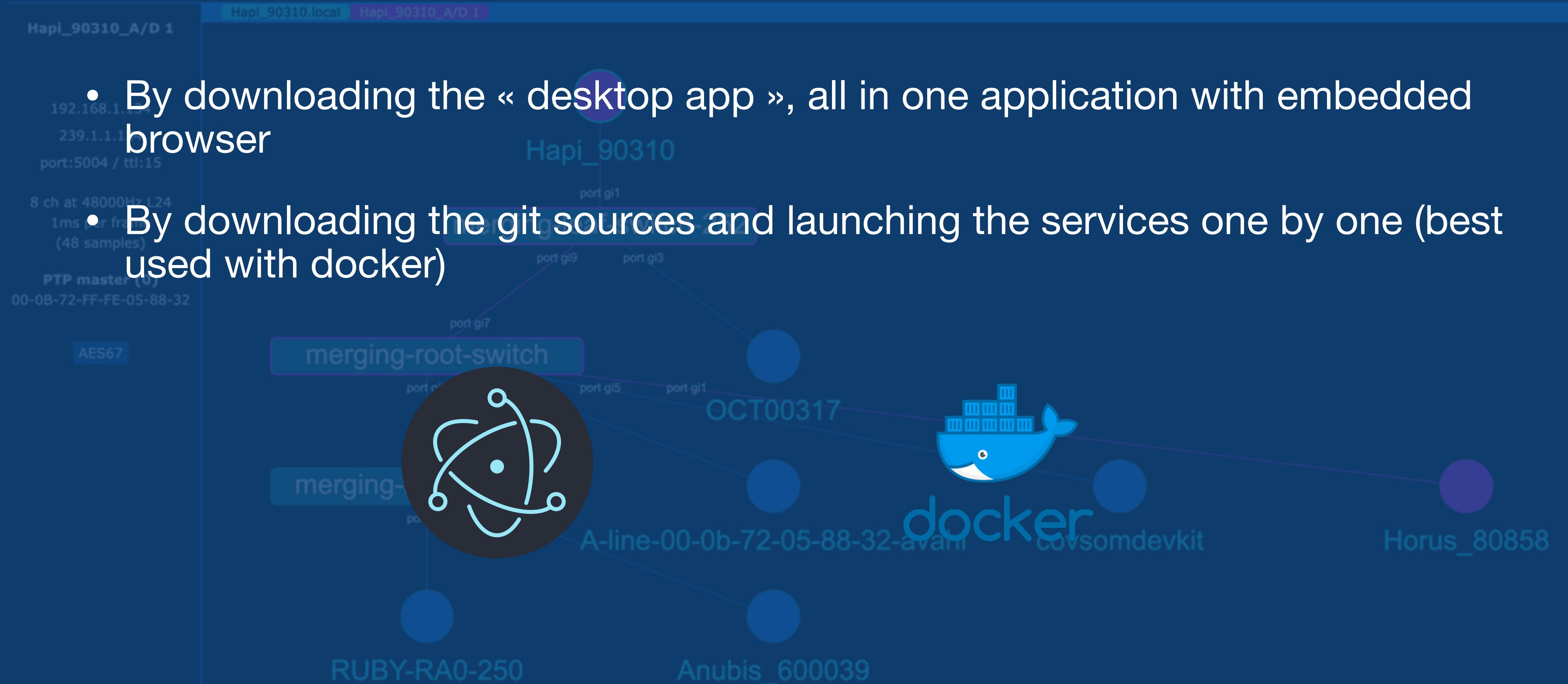
RUBY-RA0-250

Anubis_600039



How to use it

- By downloading the « desktop app », all in one application with embedded browser
- By downloading the git sources and launching the services one by one (best used with docker)



192.168.1.201

192.168.1.129

192.168.1.130

169.254.1.140

192.168.1.205

192.168.1.134

192.168.1.135

192.168.1.23

Using the desktop App

MNMS 0.98 - Media Network Monitoring Services

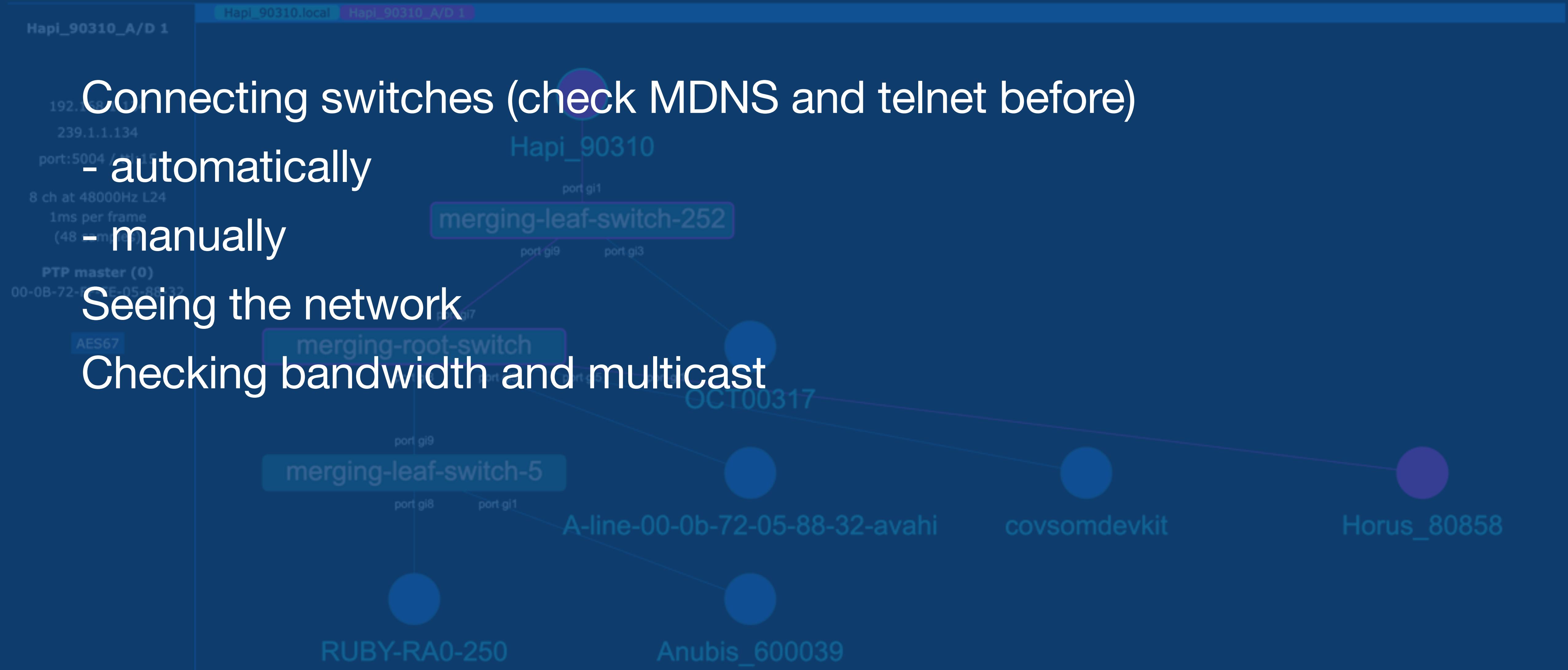
Connecting switches (check MDNS and telnet before)

- automatically

- manually

Seeing the network

Checking bandwidth and multicast



192.168.1.201

192.168.1.129

192.168.1.130

169.254.1.140

192.168.1.205

192.168.1.134

192.168.1.135

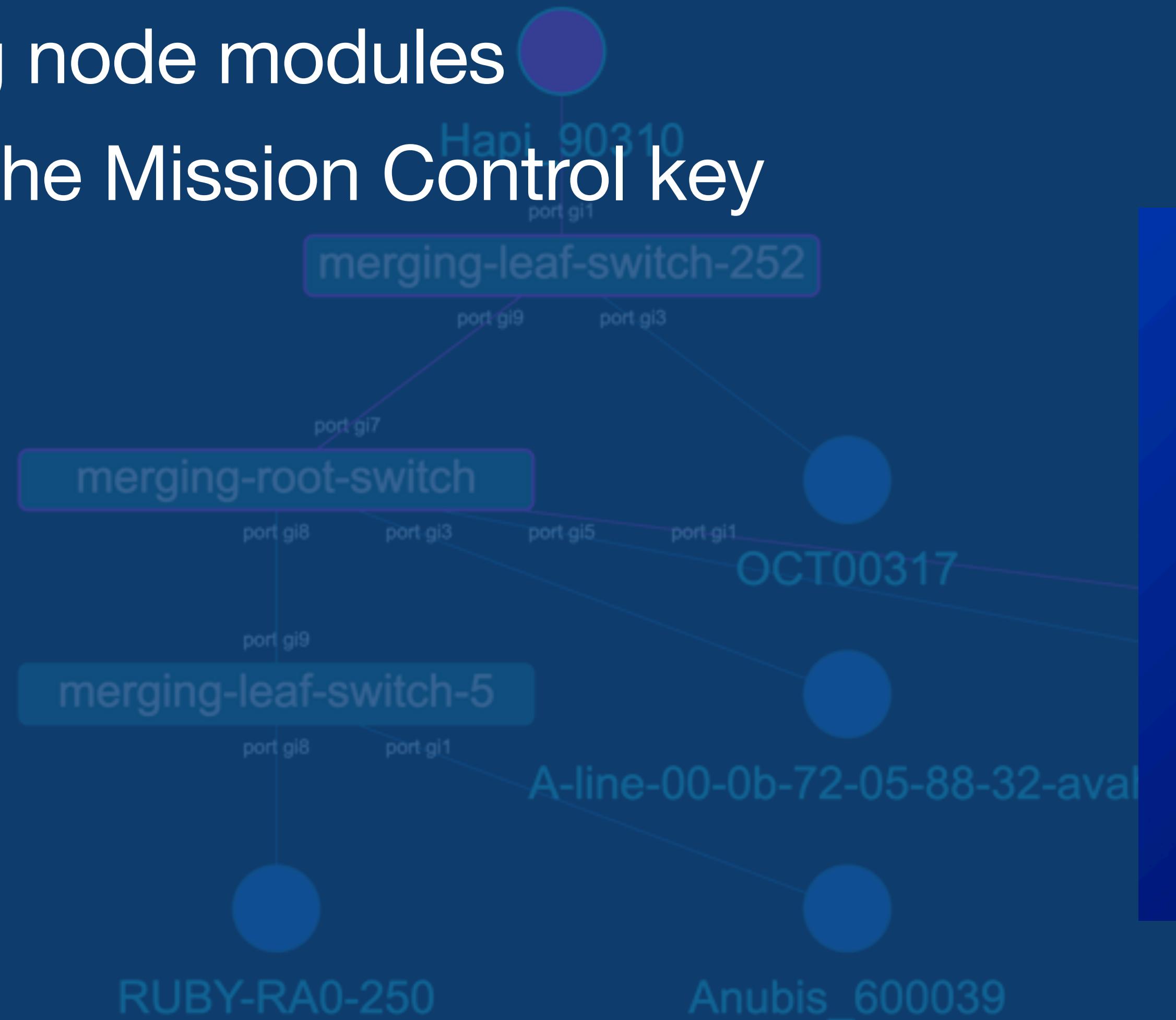
192.168.1.23

Launching each service separately

Hapi_90310.local Hapi_90310_A/D 1

Installing node modules

Getting the Mission Control key



192.168.1.201

192.168.1.129

192.168.1.130

169.254.1.140

192.168.1.205

192.168.1.134

192.168.1.135

192.168.1.23

```
switchfb453d
switchfb453d
gi1  gi2  gi3  gi4
gi5  gi6  gi7  gi8
gi9  gi10
```

```
switch0fb1e3
switch0fb1e3
gi1  gi2  gi3  gi4
gi5  gi6  gi7  gi8
gi9  gi10
```

```
switch537642
switch537642
session-169...40-32
session-169...40-31
session-169...40-30
session-169...40-29
session-169...40-28
session-169...40-27
```

```
Coveloz-BACH...6C-5C
C1:PGM 1
C1:PGM 2
C1:PGM 3
C1:PGM 4
C1:AUX 1
C1:AUX 2
C1:N-1 RAV 1
C1:N-1 RAV 2
```

```
Merging Tech...0310)
Hapi_90310
Merging Tec...0310)
Hapi_90310
Hapi_90310_A/D 1
Hapi_90310_A/D 2
test
```

```
Merging Tech...0858)
Horus_80858
Horus_80858_AES 1-1
Horus_80858... 1-17
Merging Tec...0858)
MassCore (o...)_
Horus_80858
```

```
Merging Tech...03
MassCore (on...)
Merging Tec...03
MassCore (o...03
MassCore (o...)_
Horus_80858
```

The PTP module

- Getting feedback on PTP on the network

