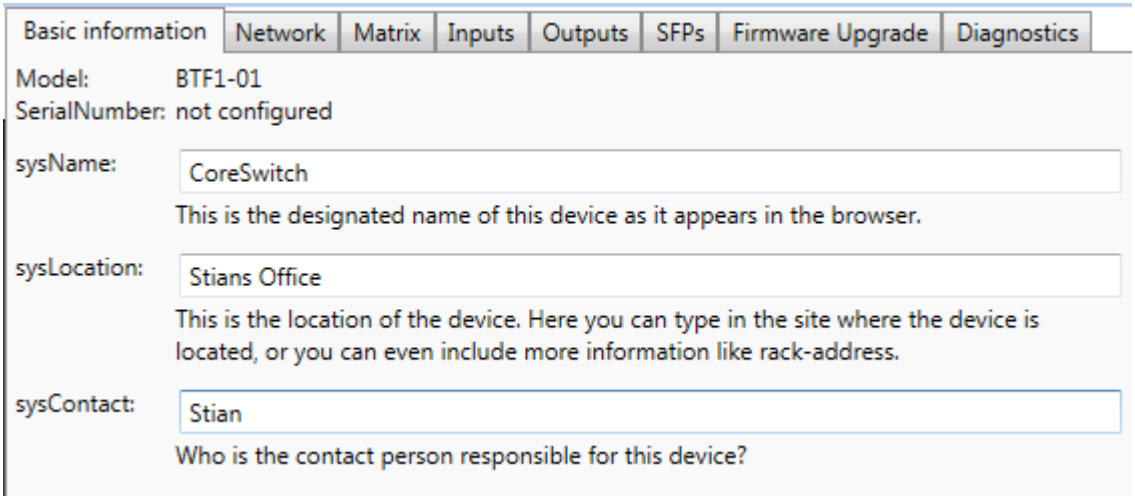
Basic information:



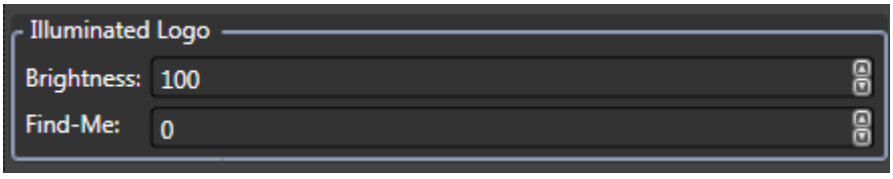
$ snmpwalk -v 2c -c private -O f -m SNMPv2-MIB 127.0.0.1 iso.org.dod.internet.mgmt.mib-2
.iso.org.dod.internet.mgmt.mib-2.system.sysContact.0 = STRING: Stian
.iso.org.dod.internet.mgmt.mib-2.system.sysName.0 = STRING: CoreSwitch
.iso.org.dod.internet.mgmt.mib-2.system.sysLocation.0 = STRING: Stians Office

sysContact, sysName and sysLocation are standard SNMPv2 variables that all snmp-enabled equipment maintain.

$ snmpget -v 2c -c private -O f -m BARNFIND-MIB 127.0.0.1 firmwareSerialNumber firmwareModel
.iso.org.dod.internet.private.enterprises.barnfind.firmware.firmwareSerialNumber = STRING: not configured
.iso.org.dod.internet.private.enterprises.barnfind.firmware.firmwareModel = STRING: BTF1-01

Please note that the *firmwareModel* and *firmwareSerialNumber* **does not** have the normal snmp scalar .0 suffix. This is for historical reasons.

Logo and FindMe

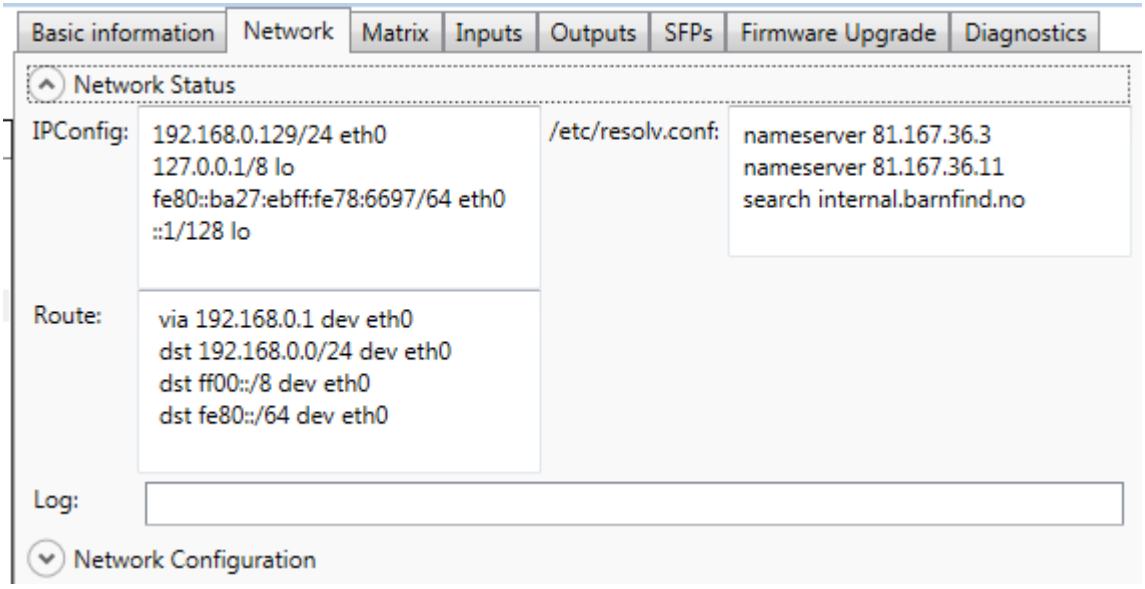


$ snmpget -v 2c -c private -m BARNFIND-MIB 127.0.0.1 .logoFindMe.0 logoBrightness.0
BARNFIND-MIB::logoFindMe.0 = INTEGER: 0
BARNFIND-MIB::logoBrightness.0 = INTEGER: 100

In recent versions of the frame, there is a illuminated logo visible on the front. The light behind this logo can be controlled. The brightness can be set in %, and if FindMe is set to a non-negative number, it represents the number of seconds the logo should blink, making it easier to locate in a rack.

Network

Initial versions of our firmwares did not have network status and configuration available in SNMP. Only via a proprietary protocol we internally named EmNeMa (Embedded Network Manager). We are currently implementing SNMP control for this; this will the later be available after an software upgrade in the BarnFrames.



$ snmpwalk -v 2c -c private -s f -m BARNFIND-MIB 127.0.0.1 emnemaStatusIp
#.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaStatusIPTable.emnemaStatusIPEntry
 # .1.3.6.1.4.1.41113.7.1.1
BARNFIND-MIB::emnemaStatusIPRowStatus.1 = INTEGER: active(1)
BARNFIND-MIB::emnemaStatusIPRowStatus.3 = INTEGER: active(1)
BARNFIND-MIB::emnemaStatusIPRowStatus.4 = INTEGER: active(1)
BARNFIND-MIB::emnemaStatusIPRowStatus.5 = INTEGER: active(1)
BARNFIND-MIB::emnemaStatusIPAddressType.1 = INTEGER: ipv4(1)
BARNFIND-MIB::emnemaStatusIPAddressType.3 = INTEGER: ipv6(2)
BARNFIND-MIB::emnemaStatusIPAddressType.4 = INTEGER: ipv6(2)
BARNFIND-MIB::emnemaStatusIPAddressType.5 = INTEGER: ipv4(1)
BARNFIND-MIB::emnemaStatusIPAddress.1 = Hex-STRING: 7F 00 00 01
BARNFIND-MIB::emnemaStatusIPAddress.3 = Hex-STRING: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 01
BARNFIND-MIB::emnemaStatusIPAddress.4 = Hex-STRING: FE 80 00 00 00 00 00 00 BA 27 EB FF FE 78 66 97
BARNFIND-MIB::emnemaStatusIPAddress.5 = Hex-STRING: C0 A8 00 81
BARNFIND-MIB::emnemaStatusIPNetmask.1 = Gauge32: 8
BARNFIND-MIB::emnemaStatusIPNetmask.3 = Gauge32: 128
BARNFIND-MIB::emnemaStatusIPNetmask.4 = Gauge32: 64
BARNFIND-MIB::emnemaStatusIPNetmask.5 = Gauge32: 24
BARNFIND-MIB::emnemaStatusIPDevice.1 = STRING: lo
BARNFIND-MIB::emnemaStatusIPDevice.3 = STRING: lo
BARNFIND-MIB::emnemaStatusIPDevice.4 = STRING: eth0
BARNFIND-MIB::emnemaStatusIPDevice.5 = STRING: eth0

This is the base for the IPConfig. We use the numeric writing method for netmask, so IPv4 255.0.0.0 becomes /8

$ snmpwalk -v 2c -c private -m BARNFIND-MIB 127.0.0.1 emnemaStatusRouteTable
#.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaStatusRouteTable.emnemaStatusRouteEntry
#.1.3.6.1.4.1.41113.7.2.1
BARNFIND-MIB::emnemaStatusRouteRowStatus.3 = INTEGER: active(1)
BARNFIND-MIB::emnemaStatusRouteRowStatus.4 = INTEGER: active(1)
BARNFIND-MIB::emnemaStatusRouteRowStatus.5 = INTEGER: active(1)
BARNFIND-MIB::emnemaStatusRouteRowStatus.6 = INTEGER: active(1)
BARNFIND-MIB::emnemaStatusRouteDevice.3 = STRING: eth0
BARNFIND-MIB::emnemaStatusRouteDevice.4 = STRING: eth0
BARNFIND-MIB::emnemaStatusRouteDevice.5 = STRING: eth0
BARNFIND-MIB::emnemaStatusRouteDevice.6 = STRING: eth0
BARNFIND-MIB::emnemaStatusRouteAddressType.3 = INTEGER: ipv6(2)
BARNFIND-MIB::emnemaStatusRouteAddressType.4 = INTEGER: ipv6(2)
BARNFIND-MIB::emnemaStatusRouteAddressType.5 = INTEGER: ipv4(1)
BARNFIND-MIB::emnemaStatusRouteAddressType.6 = INTEGER: ipv4(1)
BARNFIND-MIB::emnemaStatusRouteSourceAddress.3 = Hex-STRING: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

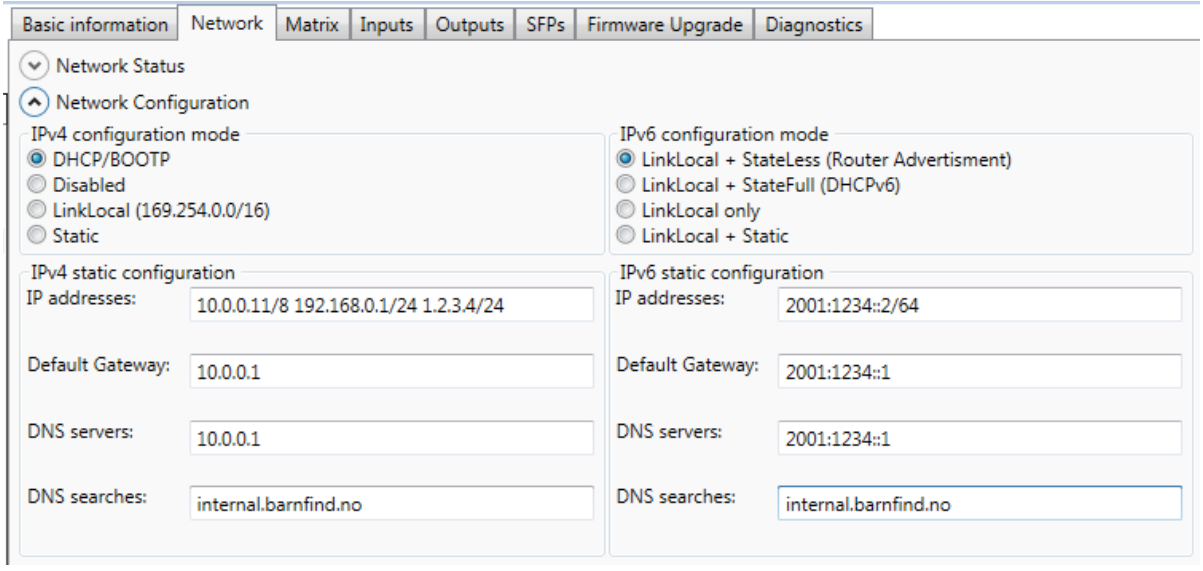
BARNFIND-MIB::emnemaStatusRouteSourceAddress.4 = Hex-STRING: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
BARNFIND-MIB::emnemaStatusRouteSourceAddress.5 = Hex-STRING: 00 00 00 00
BARNFIND-MIB::emnemaStatusRouteSourceAddress.6 = Hex-STRING: 00 00 00 00
BARNFIND-MIB::emnemaStatusSourceNetmask.3 = Gauge32: 64
BARNFIND-MIB::emnemaStatusSourceNetmask.4 = Gauge32: 8
BARNFIND-MIB::emnemaStatusSourceNetmask.5 = Gauge32: 24
BARNFIND-MIB::emnemaStatusSourceNetmask.6 = Gauge32: 0
BARNFIND-MIB::emnemaStatusRouteDestinationAddress.3 = Hex-STRING: FE 80 00 00 00 00 00 00 00 00 00 00 00 00 00 00
BARNFIND-MIB::emnemaStatusRouteDestinationAddress.4 = Hex-STRING: FF 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
BARNFIND-MIB::emnemaStatusRouteDestinationAddress.5 = Hex-STRING: C0 A8 00 00
BARNFIND-MIB::emnemaStatusRouteDestinationAddress.6 = Hex-STRING: 00 00 00 00
BARNFIND-MIB::emnemaStatusRouteDestinationNetmask.3 = Gauge32: 0
BARNFIND-MIB::emnemaStatusRouteDestinationNetmask.4 = Gauge32: 0
BARNFIND-MIB::emnemaStatusRouteDestinationNetmask.5 = Gauge32: 0
BARNFIND-MIB::emnemaStatusRouteDestinationNetmask.6 = Gauge32: 0
BARNFIND-MIB::emnemaStatusRouteGateway.3 = Hex-STRING: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
BARNFIND-MIB::emnemaStatusRouteGateway.4 = Hex-STRING: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
BARNFIND-MIB::emnemaStatusRouteGateway.5 = Hex-STRING: 00 00 00 00
BARNFIND-MIB::emnemaStatusRouteGateway.6 = Hex-STRING: C0 A8 00 01
BARNFIND-MIB::emnemaStatusRoutePriority.3 = INTEGER: 0
BARNFIND-MIB::emnemaStatusRoutePriority.4 = INTEGER: 0
BARNFIND-MIB::emnemaStatusRoutePriority.5 = INTEGER: 0
BARNFIND-MIB::emnemaStatusRoutePriority.6 = INTEGER: 0

This is the base for the Route. Currently, source routing and priority is not used in our devices, but it is present here in the status for future use.

$ snmpget -v 2c -c private -m BARNFIND-MIB.txt 127.0.0.1 emnemaStatusResolvConf.0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaStatusResolvConf.0 = STRING: nameserver 81.167.36.3
nameserver 81.167.36.11
search internal.barnfind.no

This is the current /etc/resolv.conf. It is retrieved as a single multiline text field.

The log support is not implement in BarnStudio yet. More information about that will come later

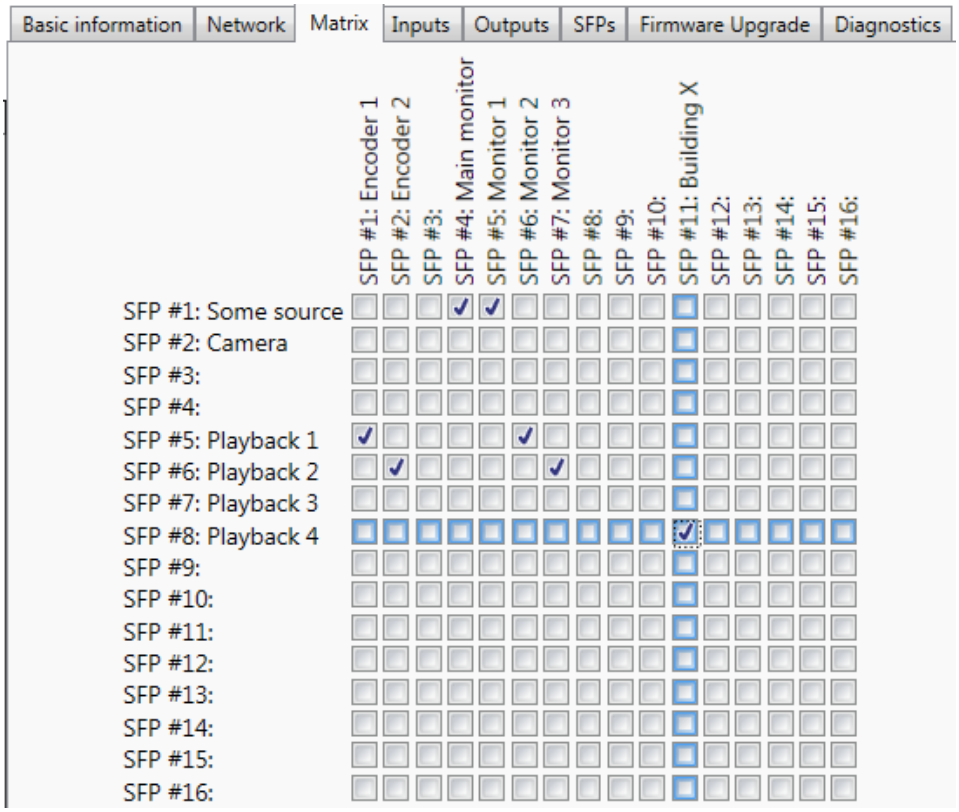


$ snmpwalk -v 2c -c private -s f -O f -m BARNFIND-MIB 127.0.0.1 emnemaConfigV0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0ModeIPv4.0 = INTEGER: dhcp(2)
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV4Address.0 = STRING: 10.0.0.11
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV4Address.1 = STRING: 192.168.0.1
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV4Address.2 = STRING: 1.2.3.4
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV4Address.3 = STRING: 0.0.0.0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV4Netmask.0 = Gauge32: 8
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV4Netmask.1 = Gauge32: 24
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV4Netmask.2 = Gauge32: 24
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV4Netmask.3 = Gauge32: 0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV4DefaultGateway.0 = STRING: 10.0.0.1
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv4DNSServer.0 = STRING: 10.0.0.1
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv4DNSServer.1 = STRING: 0.0.0.0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv4DNSServer.2 = STRING: 0.0.0.0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv4DNSSearch.0 = STRING: internal.barnfind.no
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv4DNSSearch.1 = STRING:

.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv4DNSSearch.2 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv4DNSSearch.3 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0ModeIPv6.0 = INTEGER: linklocalAndRouterAnnouncement(4)
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV6Address.0 = STRING: 2001:1234:0:0:0:0:0:2
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV6Address.1 = STRING: 0:0:0:0:0:0:0:0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV6Address.2 = STRING: 0:0:0:0:0:0:0:0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV6Address.3 = STRING: 0:0:0:0:0:0:0:0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV6Netmask.0 = Gauge32: 64
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV6Netmask.1 = Gauge32: 0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV6Netmask.2 = Gauge32: 0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV6Netmask.3 = Gauge32: 0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPV6DefaultGateway.0 = STRING: 2001:1234:0:0:0:0:0:1
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv6DNSServer.0 = STRING: 2001:1234:0:0:0:0:0:1
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv6DNSServer.1 = STRING: 0:0:0:0:0:0:0:0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv6DNSServer.2 = STRING: 0:0:0:0:0:0:0:0
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv6DNSSearch.0 = STRING: internal.barnfind.no
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv6DNSSearch.1 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv6DNSSearch.2 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.emnema.emnemaConfigV0.emnemaConfigV0StaticIPv6DNSSearch.3 = STRING:

Here we have available the configuration currently active. Keep in mind that all changes here are live, so if it is recommended to send all changes in the same request. Also after every change, it is recommended to redownload the configuration, since the internal engine might change the order of cells, due to compatability with the proprietary protocol. The IP-addresses here appear as strings, but they are actually 4 bytes binary octet string for ipv4 addresses and 16 bytes for IPv6. The net-snmp tools uses the display-hints in the MIB files to print out more userfriendly text strings. Gauge32 is actually an unsigned integer, which is resolved from InetAddressPrefixLength.

Matrix



$ snmpwalk -v 2c -c private -O f -m BARNFIND-MIB 127.0.0.1 matrixInputPortName
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.1 = STRING: SFP #1
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.2 = STRING: SFP #2
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.3 = STRING: SFP #3
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.4 = STRING: SFP #4
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.5 = STRING: SFP #5
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.6 = STRING: SFP #6
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.7 = STRING: SFP #7
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.8 = STRING: SFP #8
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.9 = STRING: SFP #9
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.10 = STRING: SFP #10
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.11 = STRING: SFP #11

.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.12 = STRING: SFP #12
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.13 = STRING: SFP #13
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.14 = STRING: SFP #14
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.15 = STRING: SFP #15
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortName.16 = STRING: SFP #16

$ snmpwalk -v 2c -c private -O f -m BARNFIND-MIB 127.0.0.1 matrixInputPortNameUser
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.1 = STRING: Some camera
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.2 = STRING: Camera
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.3 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.4 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.5 = STRING: Playback 1
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.6 = STRING: Playback 2
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.7 = STRING: Playback 3
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.8 = STRING: Playback 4
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.9 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.10 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.11 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.12 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.13 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.14 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.15 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixInputPortTable.matrixInputPortEntry.matrixInputPortNameUser.16 = STRING:

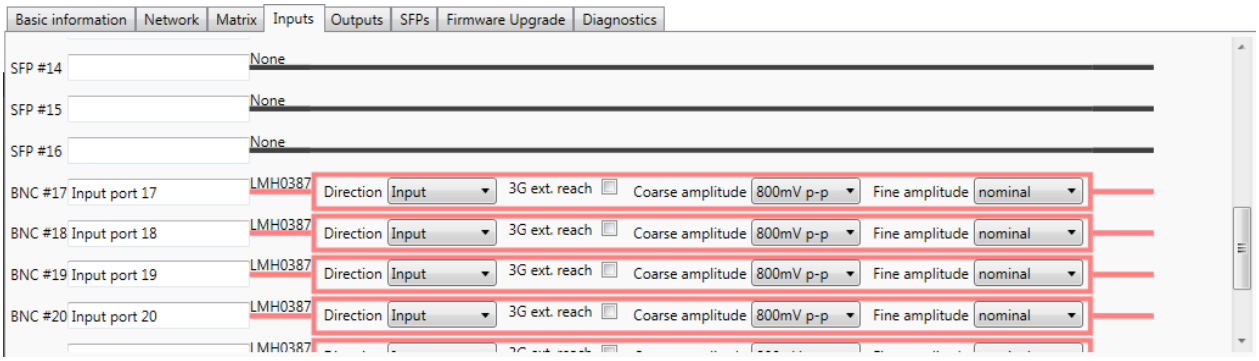
$ snmpwalk -v 2c -c private -O f -m BARNFIND-MIB 127.0.0.1 matrixOutputPortName
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1025 = STRING: SFP #1
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1026 = STRING: SFP #2
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1027 = STRING: SFP #3
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1028 = STRING: SFP #4
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1029 = STRING: SFP #5
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1030 = STRING: SFP #6
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1031 = STRING: SFP #7
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1032 = STRING: SFP #8
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1033 = STRING: SFP #9
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1034 = STRING: SFP #10
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1035 = STRING: SFP #11
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1036 = STRING: SFP #12
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1037 = STRING: SFP #13
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1038 = STRING: SFP #14
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1039 = STRING: SFP #15
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortName.1040 = STRING: SFP #16

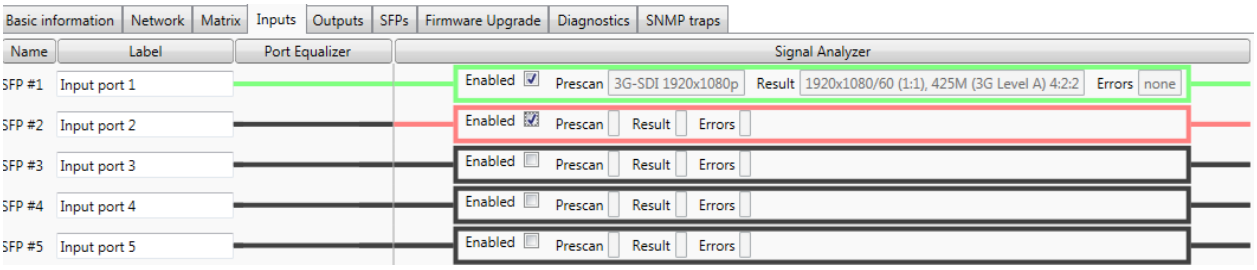
$ snmpwalk -v 2c -c private -O f -m BARNFIND-MIB 127.0.0.1 matrixOutputPortNameUser
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1025 = STRING: Encoder 1
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1026 = STRING: Encoder 2
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1027 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1028 = STRING: Main monitor
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1029 = STRING: Monitor 1
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1030 = STRING: Monitor 2
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1031 = STRING: Monitor 3
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1032 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1033 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1034 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1035 = STRING: Building X
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1036 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1037 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1038 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1039 = STRING:
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortNameUser.1040 = STRING:

$ snmpwalk -v 2c -c private -O f -m BARNFIND-MIB 127.0.0.1 matrixOutputPortInputPort
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1025 = INTEGER: 5
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1026 = INTEGER: 6
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1027 = INTEGER: 0
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1028 = INTEGER: 1
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1029 = INTEGER: 1
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1030 = INTEGER: 5
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1031 = INTEGER: 6
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1032 = INTEGER: 0
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1033 = INTEGER: 0
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1034 = INTEGER: 0
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1035 = INTEGER: 8
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1036 = INTEGER: 0
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1037 = INTEGER: 0
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1038 = INTEGER: 0
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1039 = INTEGER: 0
.iso.org.dod.internet.private.enterprises.barnfind.matrix.matrixOutputPortTable.matrixOutputPortEntry.matrixOutputPortInputPort.1040 = INTEGER: 0

To build up the matrix view, we actually pull some data from both the source table (to get the labels) and the destination table (to get the labels, and the selected source for each port). matrixInputPortNameUser.* matrixOutputPortNameUser.* and matrixOutputPortInputPort.* are all writable.

Inputs





$ snmpwalk -v 2c -c private -s f -m BARNFIND-MIB 127.0.0.1 matrixInputPortTable|grep '\.14\ \|\.15\ \|\.16\ \|\.17\ \|\.18\ \|\.19\ \|\.20\ '
BARNFIND-MIB::matrixInputPortName.14 = STRING: SFP #14
BARNFIND-MIB::matrixInputPortName.15 = STRING: SFP #15
BARNFIND-MIB::matrixInputPortName.16 = STRING: SFP #16
BARNFIND-MIB::matrixInputPortName.17 = STRING: BNC #17
BARNFIND-MIB::matrixInputPortName.18 = STRING: BNC #18
BARNFIND-MIB::matrixInputPortName.19 = STRING: BNC #19
BARNFIND-MIB::matrixInputPortName.20 = STRING: BNC #20
BARNFIND-MIB::matrixInputPortNameUser.14 = STRING: Input port 14
BARNFIND-MIB::matrixInputPortNameUser.15 = STRING: Input port 15
BARNFIND-MIB::matrixInputPortNameUser.16 = STRING: Input port 16
BARNFIND-MIB::matrixInputPortNameUser.17 = STRING: Input port 17
BARNFIND-MIB::matrixInputPortNameUser.18 = STRING: Input port 18
BARNFIND-MIB::matrixInputPortNameUser.19 = STRING: Input port 19
BARNFIND-MIB::matrixInputPortNameUser.20 = STRING: Input port 20
BARNFIND-MIB::matrixInputPortLogoUser.14 = ""
BARNFIND-MIB::matrixInputPortLogoUser.15 = ""
BARNFIND-MIB::matrixInputPortLogoUser.16 = ""
BARNFIND-MIB::matrixInputPortLogoUser.17 = ""
BARNFIND-MIB::matrixInputPortLogoUser.18 = ""
BARNFIND-MIB::matrixInputPortLogoUser.19 = ""
BARNFIND-MIB::matrixInputPortLogoUser.20 = ""
BARNFIND-MIB::matrixInputPortExtEqualizerType.14 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortExtEqualizerType.15 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortExtEqualizerType.16 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortExtEqualizerType.17 = INTEGER: eqLMH0387(8)
BARNFIND-MIB::matrixInputPortExtEqualizerType.18 = INTEGER: eqLMH0387(8)
BARNFIND-MIB::matrixInputPortExtEqualizerType.19 = INTEGER: eqLMH0387(8)
BARNFIND-MIB::matrixInputPortExtEqualizerType.20 = INTEGER: eqLMH0387(8)
BARNFIND-MIB::matrixInputPortExtEqualizerParameters.14 = STRING:
BARNFIND-MIB::matrixInputPortExtEqualizerParameters.15 = STRING:
BARNFIND-MIB::matrixInputPortExtEqualizerParameters.16 = STRING:
BARNFIND-MIB::matrixInputPortExtEqualizerParameters.17 = STRING: 1;2;0
BARNFIND-MIB::matrixInputPortExtEqualizerParameters.18 = STRING: 1;2;0
BARNFIND-MIB::matrixInputPortExtEqualizerParameters.19 = STRING: 0;2;0
BARNFIND-MIB::matrixInputPortExtEqualizerParameters.20 = STRING: 0;2;0
BARNFIND-MIB::matrixInputPortExtEqualizerSignalDetected.14 = INTEGER: 0
BARNFIND-MIB::matrixInputPortExtEqualizerSignalDetected.15 = INTEGER: 0
BARNFIND-MIB::matrixInputPortExtEqualizerSignalDetected.16 = INTEGER: true(1)
BARNFIND-MIB::matrixInputPortExtEqualizerSignalDetected.17 = INTEGER: 0
BARNFIND-MIB::matrixInputPortExtEqualizerSignalDetected.18 = INTEGER: 0
BARNFIND-MIB::matrixInputPortExtEqualizerSignalDetected.19 = INTEGER: true(1)
BARNFIND-MIB::matrixInputPortExtEqualizerSignalDetected.20 = INTEGER: false(2)
BARNFIND-MIB::matrixInputPortExtReclockerType.14 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortExtReclockerType.15 = INTEGER: none(1)

BARNFIND-MIB::matrixInputPortExtReclockerType.16 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortExtReclockerType.17 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortExtReclockerType.18 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortExtReclockerType.19 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortExtReclockerType.20 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortExtReclockerParameters.14 = STRING:
BARNFIND-MIB::matrixInputPortExtReclockerParameters.15 = STRING:
BARNFIND-MIB::matrixInputPortExtReclockerParameters.16 = STRING:
BARNFIND-MIB::matrixInputPortExtReclockerParameters.17 = STRING:
BARNFIND-MIB::matrixInputPortExtReclockerParameters.18 = STRING:
BARNFIND-MIB::matrixInputPortExtReclockerParameters.19 = STRING:
BARNFIND-MIB::matrixInputPortExtReclockerParameters.20 = STRING:
BARNFIND-MIB::matrixInputPortExtReclockerLock.14 = STRING: 0;0
BARNFIND-MIB::matrixInputPortExtReclockerLock.15 = STRING: 0;0
BARNFIND-MIB::matrixInputPortExtReclockerLock.16 = STRING: 0;0
BARNFIND-MIB::matrixInputPortExtReclockerLock.17 = STRING: 0;0
BARNFIND-MIB::matrixInputPortExtReclockerLock.18 = STRING: 0;0
BARNFIND-MIB::matrixInputPortExtReclockerLock.19 = STRING: 0;0
BARNFIND-MIB::matrixInputPortExtReclockerLock.20 = STRING: 0;0
BARNFIND-MIB::matrixInputPortExtReclockerSignalDetected.14 = INTEGER: 0
BARNFIND-MIB::matrixInputPortExtReclockerSignalDetected.15 = INTEGER: 0
BARNFIND-MIB::matrixInputPortExtReclockerSignalDetected.16 = INTEGER: true(1)
BARNFIND-MIB::matrixInputPortExtReclockerSignalDetected.17 = INTEGER: 0
BARNFIND-MIB::matrixInputPortExtReclockerSignalDetected.18 = INTEGER: 0
BARNFIND-MIB::matrixInputPortExtReclockerSignalDetected.19 = INTEGER: true(1)
BARNFIND-MIB::matrixInputPortExtReclockerSignalDetected.20 = INTEGER: false(2)
BARNFIND-MIB::matrixInputPortIntEqualizerType.14 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntEqualizerType.15 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntEqualizerType.16 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntEqualizerType.17 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntEqualizerType.18 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntEqualizerType.19 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntEqualizerType.20 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntEqualizerParameters.14 = STRING:
BARNFIND-MIB::matrixInputPortIntEqualizerParameters.15 = STRING:
BARNFIND-MIB::matrixInputPortIntEqualizerParameters.16 = STRING:
BARNFIND-MIB::matrixInputPortIntEqualizerParameters.17 = STRING:
BARNFIND-MIB::matrixInputPortIntEqualizerParameters.18 = STRING:
BARNFIND-MIB::matrixInputPortIntEqualizerParameters.19 = STRING:
BARNFIND-MIB::matrixInputPortIntEqualizerParameters.20 = STRING:
BARNFIND-MIB::matrixInputPortIntEqualizerSignalDetected.14 = INTEGER: 0
BARNFIND-MIB::matrixInputPortIntEqualizerSignalDetected.15 = INTEGER: 0
BARNFIND-MIB::matrixInputPortIntEqualizerSignalDetected.16 = INTEGER: true(1)
BARNFIND-MIB::matrixInputPortIntEqualizerSignalDetected.17 = INTEGER: 0
BARNFIND-MIB::matrixInputPortIntEqualizerSignalDetected.18 = INTEGER: 0
BARNFIND-MIB::matrixInputPortIntEqualizerSignalDetected.19 = INTEGER: true(1)
BARNFIND-MIB::matrixInputPortIntEqualizerSignalDetected.20 = INTEGER: false(2)
BARNFIND-MIB::matrixInputPortIntReclockerType.14 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntReclockerType.15 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntReclockerType.16 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntReclockerType.17 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntReclockerType.18 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntReclockerType.19 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntReclockerType.20 = INTEGER: none(1)
BARNFIND-MIB::matrixInputPortIntReclockerParameters.14 = STRING:
BARNFIND-MIB::matrixInputPortIntReclockerParameters.15 = STRING:
BARNFIND-MIB::matrixInputPortIntReclockerParameters.16 = STRING:
BARNFIND-MIB::matrixInputPortIntReclockerParameters.17 = STRING:
BARNFIND-MIB::matrixInputPortIntReclockerParameters.18 = STRING:
BARNFIND-MIB::matrixInputPortIntReclockerParameters.19 = STRING:
BARNFIND-MIB::matrixInputPortIntReclockerParameters.20 = STRING:
BARNFIND-MIB::matrixInputPortIntReclockerLock.14 = STRING: 0;0
BARNFIND-MIB::matrixInputPortIntReclockerLock.15 = STRING: 0;0
BARNFIND-MIB::matrixInputPortIntReclockerLock.16 = STRING: 0;0
BARNFIND-MIB::matrixInputPortIntReclockerLock.17 = STRING: 0;0
BARNFIND-MIB::matrixInputPortIntReclockerLock.18 = STRING: 0;0
BARNFIND-MIB::matrixInputPortIntReclockerLock.19 = STRING: 0;0
BARNFIND-MIB::matrixInputPortIntReclockerLock.20 = STRING: 0;0
BARNFIND-MIB::matrixInputPortIntReclockerSignalDetected.14 = INTEGER: 0
BARNFIND-MIB::matrixInputPortIntReclockerSignalDetected.15 = INTEGER: 0
BARNFIND-MIB::matrixInputPortIntReclockerSignalDetected.16 = INTEGER: true(1)
BARNFIND-MIB::matrixInputPortIntReclockerSignalDetected.17 = INTEGER: 0
BARNFIND-MIB::matrixInputPortIntReclockerSignalDetected.18 = INTEGER: 0
BARNFIND-MIB::matrixInputPortIntReclockerSignalDetected.19 = INTEGER: true(1)
BARNFIND-MIB::matrixInputPortIntReclockerSignalDetected.20 = INTEGER: false(2)
BARNFIND-MIB::matrixInputPortAnalyzerType.14 = INTEGER: analyzerSDIOnly(10)
BARNFIND-MIB::matrixInputPortAnalyzerType.15 = INTEGER: analyzerSDIOnly(10)
BARNFIND-MIB::matrixInputPortAnalyzerType.16 = INTEGER: analyzerSDIOnly(10)
BARNFIND-MIB::matrixInputPortAnalyzerType.17 = INTEGER: analyzerSDIOnly(10)
BARNFIND-MIB::matrixInputPortAnalyzerType.18 = INTEGER: analyzerSDIOnly(10)
BARNFIND-MIB::matrixInputPortAnalyzerType.19 = INTEGER: analyzerSDIOnly(10)
BARNFIND-MIB::matrixInputPortAnalyzerType.20 = INTEGER: analyzerSDIOnly(10)
BARNFIND-MIB::matrixInputPortAnalyzerParameters.14 = STRING: 2;;;
BARNFIND-MIB::matrixInputPortAnalyzerParameters.15 = STRING: 2;;;

BARNFIND-MIB::matrixInputPortAnalyzerParameters.16 = STRING: 1;3G-SDI 1920x1080p;1920x1080/60 (1:1), 425M (3G Level A) 4:2:2;none
BARNFIND-MIB::matrixInputPortAnalyzerParameters.17 = STRING: 2;;;
BARNFIND-MIB::matrixInputPortAnalyzerParameters.18 = STRING: 2;;;
BARNFIND-MIB::matrixInputPortAnalyzerParameters.19 = STRING: 1;3G-SDI 1920x1080p;1920x1080/60 (1:1), 425M (3G Level A) 4:2:2;none
BARNFIND-MIB::matrixInputPortAnalyzerParameters.20 = STRING: 1;unknown;Unknown HD;NOSIGNAL
BARNFIND-MIB::matrixInputPortAnalyzerSignalDetected.14 = INTEGER: 0
BARNFIND-MIB::matrixInputPortAnalyzerSignalDetected.15 = INTEGER: 0
BARNFIND-MIB::matrixInputPortAnalyzerSignalDetected.16 = INTEGER: true(1)
BARNFIND-MIB::matrixInputPortAnalyzerSignalDetected.17 = INTEGER: 0
BARNFIND-MIB::matrixInputPortAnalyzerSignalDetected.18 = INTEGER: 0
BARNFIND-MIB::matrixInputPortAnalyzerSignalDetected.19 = INTEGER: true(1)
BARNFIND-MIB::matrixInputPortAnalyzerSignalDetected.20 = INTEGER: false(2)

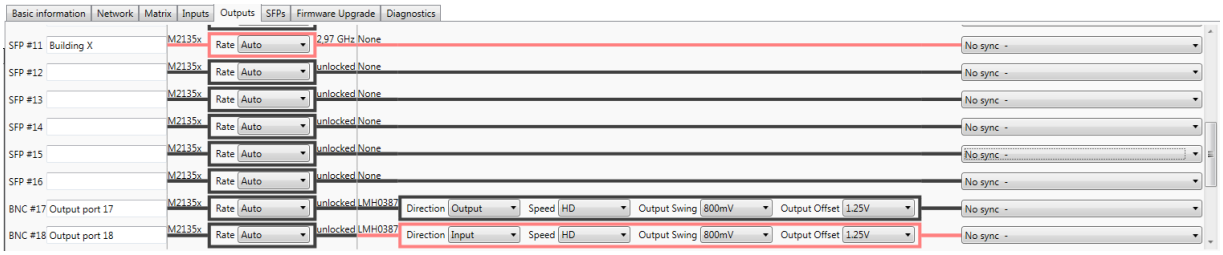
$ snmpwalk -v 2c -c private -s f -m BARNFIND-MIB 127.0.0.1 hardwareTypeTable
BARNFIND-MIB::hardwareTypeName.none = STRING: None
BARNFIND-MIB::hardwareTypeName.rcM2135x = STRING: M2135x
BARNFIND-MIB::hardwareTypeName.eqLMH0387 = STRING: LMH0387
BARNFIND-MIB::hardwareTypeName.cdLMH0387 = STRING: LMH0387
BARNFIND-MIB::hardwareTypeName.analyzerSDIOnly = STRING: SDIAnalyzer

$ snmpwalk -v 2c -O n -c private -s f -m BARNFIND-MIB 127.0.0.1 hardwareTypeTable
.1.3.6.1.4.1.41113.2.1.1.2.1 = STRING: None
.1.3.6.1.4.1.41113.2.1.1.2.2 = STRING: M2135x
.1.3.6.1.4.1.41113.2.1.1.2.8 = STRING: LMH0387
.1.3.6.1.4.1.41113.2.1.1.2.9 = STRING: LMH0387
.1.3.6.1.4.1.41113.2.1.1.2.10 = STRING: SDIAnalyzer

$ snmpwalk -v 2c -c private -s f -m BARNFIND-MIB 127.0.0.1 hardwareTypeParameterTable|grep 'eqLMH0387\|analyzerSDIOnly'
BARNFIND-MIB::hardwareTypeParameterName.eqLMH0387.0 = STRING: Direction
BARNFIND-MIB::hardwareTypeParameterName.eqLMH0387.1 = STRING: 3G ext. reach
BARNFIND-MIB::hardwareTypeParameterName.eqLMH0387.2 = STRING: Coarse amplitude
BARNFIND-MIB::hardwareTypeParameterName.analyzerSDIOnly.0 = STRING: Enabled
BARNFIND-MIB::hardwareTypeParameterName.analyzerSDIOnly.1 = STRING: Prescan
BARNFIND-MIB::hardwareTypeParameterName.analyzerSDIOnly.2 = STRING: Result
BARNFIND-MIB::hardwareTypeParameterName.analyzerSDIOnly.3 = STRING: Errors
BARNFIND-MIB::hardwareTypeParameterSyntax.eqLMH0387.0 = STRING: wE;0=Input;1=Output
BARNFIND-MIB::hardwareTypeParameterSyntax.eqLMH0387.1 = STRING: wB
BARNFIND-MIB::hardwareTypeParameterSyntax.eqLMH0387.2 = STRING: wE;0=800mV p-p;1=400mV p-p
BARNFIND-MIB::hardwareTypeParameterSyntax.analyzerSDIOnly.0 = STRING: wB
BARNFIND-MIB::hardwareTypeParameterSyntax.analyzerSDIOnly.1 = STRING: rS
BARNFIND-MIB::hardwareTypeParameterSyntax.analyzerSDIOnly.2 = STRING: rS
BARNFIND-MIB::hardwareTypeParameterSyntax.analyzerSDIOnly.3 = STRING: rS

All input ports can have 5 hardware blocks assigned in their line: two equalizers and two reclockers. Currently, only BNC enabled barnframes uses one of the equalizer blocks. All others are assigned to hardwareType none(1) (and in the text block above they are greyed out). This is to make it possible in the future to add other new hardware configurations without needing to change the protocol, and to make it possible to have the SNMP interface somewhat dynamic. How these hardware blocks appear in our UI is downloaded from the hardwareTypeTable and hardwareTypeParameterTable. We here see that eqLMH0387 have a total of 3 parameters. Three enumerations and one boolean. These parameters then appear like this example: *BARNFIND-MIB::matrixInputPortExtEqualizerParameters.17 = STRING: 0;2;0* . The SignalPresent fields we use to decide what color we draw the signal with in that block:
0 (unset) - black - not able to detect (eg. SFP without diagnostics) / channel is ignored
1 (true) - green - carrier detected
2 (false) - red - carrier not detected
The SignalPresent is just a forward from the SFP LOS and BNC equalizer hardware LOS detection.

Outputs



$ snmpwalk -v 2c -c private -s f -m BARNFIND-MIB 127.0.0.1 matrixOutputPortTable|grep '\.1035\ \|\.1036\ \|\.1041\ \|\.1042\ '
BARNFIND-MIB::matrixOutputPortName.1035 = STRING: SFP #11
BARNFIND-MIB::matrixOutputPortName.1036 = STRING: SFP #12
BARNFIND-MIB::matrixOutputPortName.1041 = STRING: BNC #17
BARNFIND-MIB::matrixOutputPortName.1042 = STRING: BNC #18
BARNFIND-MIB::matrixOutputPortNameUser.1035 = STRING: Building X
BARNFIND-MIB::matrixOutputPortNameUser.1036 = STRING: .
BARNFIND-MIB::matrixOutputPortNameUser.1041 = STRING: Output port 17
BARNFIND-MIB::matrixOutputPortNameUser.1042 = STRING: Output port 18
BARNFIND-MIB::matrixOutputPortLogoUser.1035 = ""
BARNFIND-MIB::matrixOutputPortLogoUser.1036 = ""
BARNFIND-MIB::matrixOutputPortLogoUser.1041 = ""
BARNFIND-MIB::matrixOutputPortLogoUser.1042 = ""
BARNFIND-MIB::matrixOutputPortInputPort.1035 = INTEGER: 8
BARNFIND-MIB::matrixOutputPortInputPort.1036 = INTEGER: 0
BARNFIND-MIB::matrixOutputPortInputPort.1041 = INTEGER: 0
BARNFIND-MIB::matrixOutputPortInputPort.1042 = INTEGER: 0
BARNFIND-MIB::matrixOutputPortIntReclockerType.1035 = INTEGER: none(1)
BARNFIND-MIB::matrixOutputPortIntReclockerType.1036 = INTEGER: none(1)
BARNFIND-MIB::matrixOutputPortIntReclockerType.1041 = INTEGER: none(1)
BARNFIND-MIB::matrixOutputPortIntReclockerType.1042 = INTEGER: none(1)
BARNFIND-MIB::matrixOutputPortIntReclockerParameters.XX = ignored
BARNFIND-MIB::matrixOutputPortIntReclockerLock.XX = ignored
BARNFIND-MIB::matrixOutputPortIntReclockerSignalDetected.XX = ignored
BARNFIND-MIB::matrixOutputPortIntCableDriverType.1035 = INTEGER: none(1)
BARNFIND-MIB::matrixOutputPortIntCableDriverType.1036 = INTEGER: none(1)
BARNFIND-MIB::matrixOutputPortIntCableDriverType.1041 = INTEGER: none(1)
BARNFIND-MIB::matrixOutputPortIntCableDriverType.1042 = INTEGER: none(1)
BARNFIND-MIB::matrixOutputPortIntCableDriverParameters.XX = ignored
BARNFIND-MIB::matrixOutputPortIntCableDriverSignalDetected.XX = ignored
BARNFIND-MIB::matrixOutputPortExtReclockerType.1035 = INTEGER: rcM2135x(2)
BARNFIND-MIB::matrixOutputPortExtReclockerType.1036 = INTEGER: rcM2135x(2)
BARNFIND-MIB::matrixOutputPortExtReclockerType.1041 = INTEGER: rcM2135x(2)
BARNFIND-MIB::matrixOutputPortExtReclockerType.1042 = INTEGER: rcM2135x(2)
BARNFIND-MIB::matrixOutputPortExtReclockerParameters.1035 = STRING: 0
BARNFIND-MIB::matrixOutputPortExtReclockerParameters.1036 = STRING: 0
BARNFIND-MIB::matrixOutputPortExtReclockerParameters.1041 = STRING: 0
BARNFIND-MIB::matrixOutputPortExtReclockerParameters.1042 = STRING: 0
BARNFIND-MIB::matrixOutputPortExtReclockerLock.1035 = STRING: 1;2970000
BARNFIND-MIB::matrixOutputPortExtReclockerLock.1036 = STRING: 0;0
BARNFIND-MIB::matrixOutputPortExtReclockerLock.1041 = STRING: 0;0
BARNFIND-MIB::matrixOutputPortExtReclockerLock.1042 = STRING: 0;0
BARNFIND-MIB::matrixOutputPortExtReclockerSignalDetected.1035 = INTEGER: false(2)
BARNFIND-MIB::matrixOutputPortExtReclockerSignalDetected.1036 = INTEGER: 0
BARNFIND-MIB::matrixOutputPortExtReclockerSignalDetected.1041 = INTEGER: 0
BARNFIND-MIB::matrixOutputPortExtReclockerSignalDetected.1042 = INTEGER: 0
BARNFIND-MIB::matrixOutputPortExtCableDriverType.1035 = INTEGER: none(1)
BARNFIND-MIB::matrixOutputPortExtCableDriverType.1036 = INTEGER: none(1)
BARNFIND-MIB::matrixOutputPortExtCableDriverType.1041 = INTEGER: cdLMH0387(7)
BARNFIND-MIB::matrixOutputPortExtCableDriverType.1042 = INTEGER: cdLMH0387(7)
BARNFIND-MIB::matrixOutputPortExtCableDriverParameters.1035 = STRING:
BARNFIND-MIB::matrixOutputPortExtCableDriverParameters.1036 = STRING:
BARNFIND-MIB::matrixOutputPortExtCableDriverParameters.1041 = STRING: 1;0;4;1
BARNFIND-MIB::matrixOutputPortExtCableDriverParameters.1042 = STRING: 0;0;4;1
BARNFIND-MIB::matrixOutputPortExtCableDriverSignalDetected.1035 = INTEGER: false(2)
BARNFIND-MIB::matrixOutputPortExtCableDriverSignalDetected.1036 = INTEGER: 0
BARNFIND-MIB::matrixOutputPortExtCableDriverSignalDetected.1041 = INTEGER: 0
BARNFIND-MIB::matrixOutputPortExtCableDriverSignalDetected.1042 = INTEGER: false(2)
BARNFIND-MIB::matrixOutputPortSyncSource.1035 = INTEGER: 65535
BARNFIND-MIB::matrixOutputPortSyncSource.1036 = INTEGER: 65535
BARNFIND-MIB::matrixOutputPortSyncSource.1041 = INTEGER: 65535
BARNFIND-MIB::matrixOutputPortSyncSource.1042 = INTEGER: 65535

$ snmpwalk -v 2c -c private -s f -m BARNFIND-MIB 127.0.0.1 hardwareTypeParameterTable|grep rcM2135x
BARNFIND-MIB::hardwareTypeParameterName.rcM2135x.0 = STRING: Rate

BARNFIND-MIB::hardwareTypeParameterSyntax.rcM2135x.0 = STRING: wE;0=Auto;1=Powered Down;2=Bypassed;4=SD;8=HD;12=3G

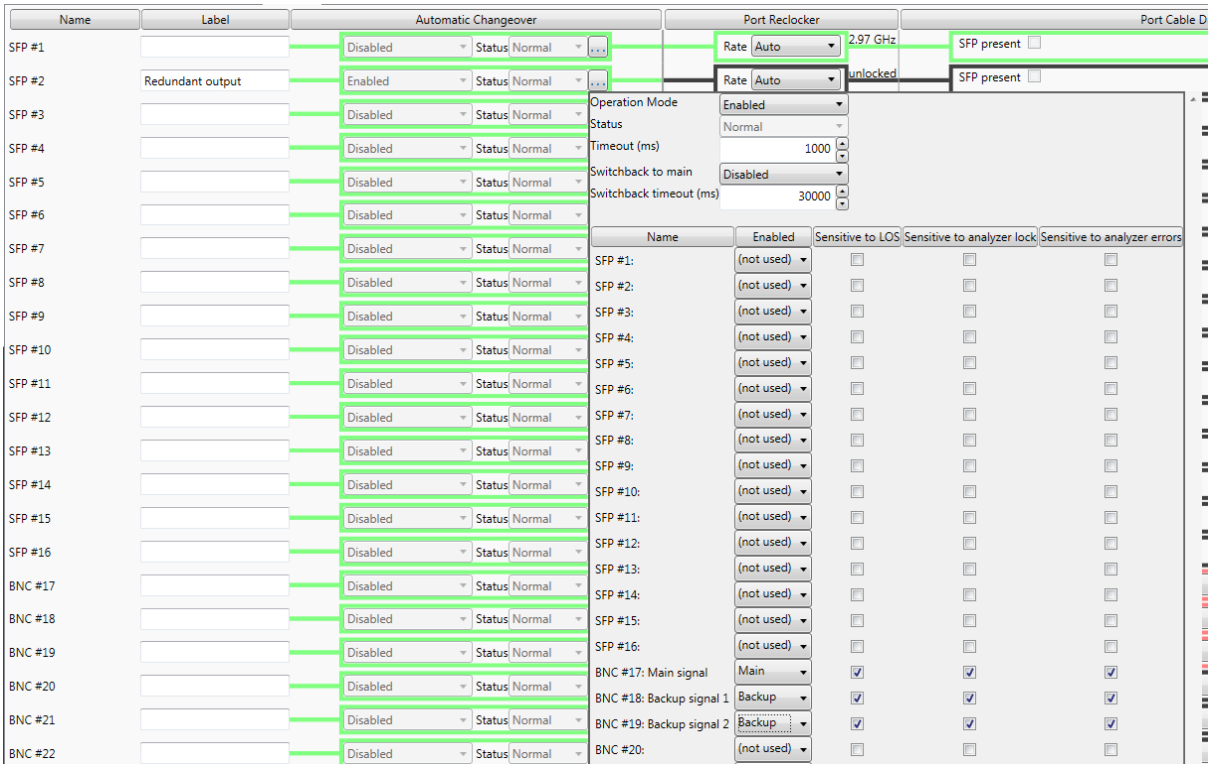
$ snmpwalk -v 2c -c private -s f -m BARNFIND-MIB 127.0.0.1 hardwareTypeParameterTable|grep cdLMH0387
BARNFIND-MIB::hardwareTypeParameterName.cdLMH0387.0 = STRING: Direction
BARNFIND-MIB::hardwareTypeParameterName.cdLMH0387.1 = STRING: Speed
BARNFIND-MIB::hardwareTypeParameterName.cdLMH0387.2 = STRING: Output Swing
BARNFIND-MIB::hardwareTypeParameterName.cdLMH0387.3 = STRING: Output Offset
BARNFIND-MIB::hardwareTypeParameterSyntax.cdLMH0387.0 = STRING: wE;0=Input;1=Output
BARNFIND-MIB::hardwareTypeParameterSyntax.cdLMH0387.1 = STRING: wE;0=HD;1=SD
BARNFIND-MIB::hardwareTypeParameterSyntax.cdLMH0387.2 = STRING: wE;0=400mV;1=500mV;2=600mV;3=700mV;4=800mV
BARNFIND-MIB::hardwareTypeParameterSyntax.cdLMH0387.3 = STRING: wE;0=1.05V;1=1.25V;2=1.45V;3=1.65V;4=1.85V;5=2.1V

Outputs have a lot in common with the inputs. Currently, all of our models features a reclocker on all of the output ports. The reclocker also provides readback if it is locked, and possible an estimation about what clock rate is has locked to in KHz. The current reclocker chip used does not indicate the exact rate, but only indicates SD, HD or 3G. In the example above, output 11 is locked to 3G, but with signal not detected. The reason for this is that we have inserted a HDMI to SDI SFP. This SFP generates a test image if no signal is detected, hence the reclocker is able to lock to this signal.

Here we also can select the input source, but we do not show that in the GUI here, since we provide the Matrix tab for this. Also different from the input table is that we can select the sync source.

Redundancy Switch

New from version 0.2.9 of the firmware, is that the frame offers automatic redundancy switch per output port. In BarnStudio it is presented like this:



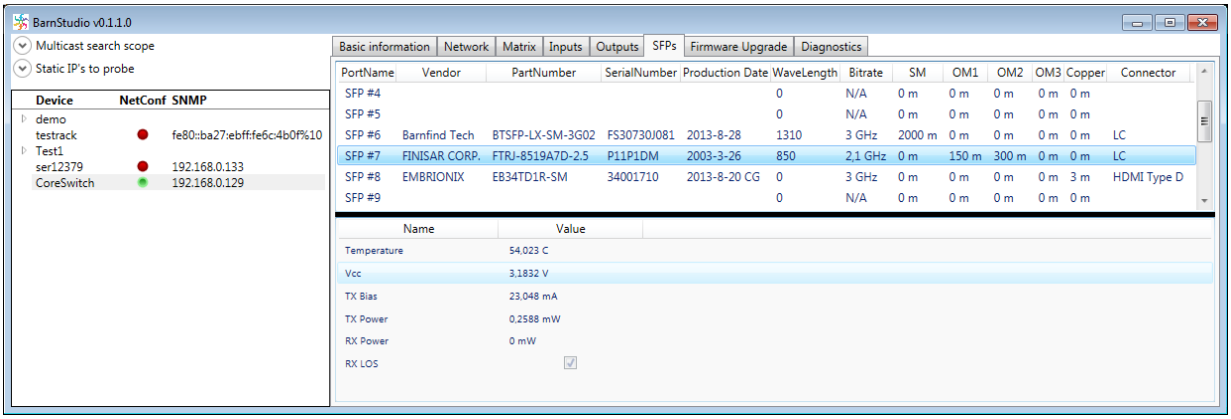
Here we can observe that each output can select any number of inputs as possible main and backup signal sources, and what should trigger these inputs to be evaluated as a valid sources. In SNMP, this hardware block is constructed like most other hardware blocks: by using a hardware specifier and a parameter string. The only special detail about this hardware block is the mask selecting the input ports being specified as type=autosource-mask-v1. This string is expected to be 4 series of digits split by a - sign. Each digit matches a valid input port from the *matrixInputPort* table. The first group is the “Enabled” column (0 = not used, 1 = main and 2= backup), the second group “Sensitive to LOS” column (0 = not set and 1 = set), the third group column “Sensitive to analyzer lock” and the fourth group “Sensitive to analyzer errors” column.

$ snmpwalk -v 2c -c private -s f -m BARNFIND-MIB 127.0.0.1 hardwareTypeParameterTable|grep automaticChangeOverV1
BARNFIND-MIB::hardwareTypeParameterName.automaticChangeOverV1.0 = STRING: Status
BARNFIND-MIB::hardwareTypeParameterName.automaticChangeOverV1.1 = STRING: Operation Mode

BARNFIND-MIB::hardwareTypeParameterName.automaticChangeOverV1.2 = STRING: Timeout
BARNFIND-MIB::hardwareTypeParameterName.automaticChangeOverV1.3 = STRING: Switch-back to Main
BARNFIND-MIB::hardwareTypeParameterName.automaticChangeOverV1.4 = STRING: Switch-back timeout
BARNFIND-MIB::hardwareTypeParameterName.automaticChangeOverV1.5 = STRING: Mask
BARNFIND-MIB::hardwareTypeParameterSyntax.automaticChangeOverV1.0 = STRING: rE;0=Normal;1=Degraded;2=Failed
BARNFIND-MIB::hardwareTypeParameterSyntax.automaticChangeOverV1.1 = STRING: wE;0=Disabled;1=Enabled;2=Temporary Disabled
BARNFIND-MIB::hardwareTypeParameterSyntax.automaticChangeOverV1.2 = STRING: wI;min=1;max=60000
BARNFIND-MIB::hardwareTypeParameterSyntax.automaticChangeOverV1.3 = STRING: wB
BARNFIND-MIB::hardwareTypeParameterSyntax.automaticChangeOverV1.4 = STRING: wI;min=1;max=120000
BARNFIND-MIB::hardwareTypeParameterSyntax.automaticChangeOverV1.5 = STRING: wS;type=autosource-mask-v1

*$ snmpwalk -v 2c -c private -s f -m BARNFIND-MIB 127.0.0.1 matrixOutputPort|grep AutoSource.*1026*
BARNFIND-MIB::matrixOutputPortAutoChangeOverType.1026 = INTEGER: automaticChangeOverV1(11)
BARNFIND-MIB::matrixOutputPortAutoChangeOverParameters.1026 = STRING:
0;0;1000;2;30000;00000000000000001220000-00000000000000001110000-00000000000000001110000-00000000000000001110000

SFPs



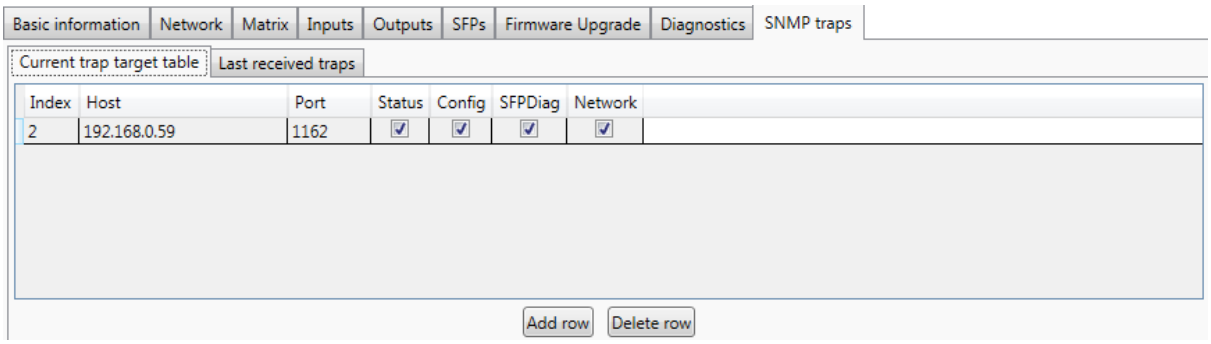
$ snmpwalk -v 2c -c private -m BARNFIND-MIB 127.0.0.1 sfpCommonInfoTable | grep '\.4\ \|\.5\ \|\.6\ \|\.7\ '
BARNFIND-MIB::sfpCommonInfoPortName.4 = STRING: SFP #5
BARNFIND-MIB::sfpCommonInfoPortName.5 = STRING: SFP #6
BARNFIND-MIB::sfpCommonInfoPortName.6 = STRING: SFP #7
BARNFIND-MIB::sfpCommonInfoPortName.7 = STRING: SFP #8
BARNFIND-MIB::sfpCommonInfoPresent.4 = INTEGER: false(2)
BARNFIND-MIB::sfpCommonInfoPresent.5 = INTEGER: true(1)
BARNFIND-MIB::sfpCommonInfoPresent.6 = INTEGER: true(1)
BARNFIND-MIB::sfpCommonInfoPresent.7 = INTEGER: true(1)
BARNFIND-MIB::sfpCommonInfoConnector.4 = STRING:
BARNFIND-MIB::sfpCommonInfoConnector.5 = STRING: LC
BARNFIND-MIB::sfpCommonInfoConnector.6 = STRING: LC
BARNFIND-MIB::sfpCommonInfoConnector.7 = STRING: HDMI Type D
BARNFIND-MIB::sfpCommonInfoLengths.4 = STRING: 0;0;0;0;0
BARNFIND-MIB::sfpCommonInfoLengths.5 = STRING: 2000;0;0;0;0
BARNFIND-MIB::sfpCommonInfoLengths.6 = STRING: 0;150;300;0;0
BARNFIND-MIB::sfpCommonInfoLengths.7 = STRING: 0;0;0;0;3
BARNFIND-MIB::sfpCommonInfoVendorName.4 = STRING:
BARNFIND-MIB::sfpCommonInfoVendorName.5 = STRING: Barnfind Tech
BARNFIND-MIB::sfpCommonInfoVendorName.6 = STRING: FINISAR CORP.
BARNFIND-MIB::sfpCommonInfoVendorName.7 = STRING: EMBRIONIX
BARNFIND-MIB::sfpCommonInfoPartNumber.4 = STRING:
BARNFIND-MIB::sfpCommonInfoPartNumber.5 = STRING: BTSFP-LX-SM-3G02
BARNFIND-MIB::sfpCommonInfoPartNumber.6 = STRING: FTRJ-8519A7D-2.5
BARNFIND-MIB::sfpCommonInfoPartNumber.7 = STRING: EB34TD1R-SM
BARNFIND-MIB::sfpCommonInfoSerialNumber.4 = STRING:
BARNFIND-MIB::sfpCommonInfoSerialNumber.5 = STRING: FS30730J081
BARNFIND-MIB::sfpCommonInfoSerialNumber.6 = STRING: P11P1DM
BARNFIND-MIB::sfpCommonInfoSerialNumber.7 = STRING: 34001710
BARNFIND-MIB::sfpCommonInfoProductionDate.4 = INTEGER: 0
BARNFIND-MIB::sfpCommonInfoProductionDate.5 = INTEGER: 20130828
BARNFIND-MIB::sfpCommonInfoProductionDate.6 = INTEGER: 20030326
BARNFIND-MIB::sfpCommonInfoProductionDate.7 = INTEGER: 20130820
BARNFIND-MIB::sfpCommonInfoProductionLot.4 = STRING:
BARNFIND-MIB::sfpCommonInfoProductionLot.5 = STRING:
BARNFIND-MIB::sfpCommonInfoProductionLot.6 = STRING:
BARNFIND-MIB::sfpCommonInfoProductionLot.7 = STRING: CG
BARNFIND-MIB::sfpCommonInfoRevision.4 = STRING:
BARNFIND-MIB::sfpCommonInfoRevision.5 = STRING: 1.0
BARNFIND-MIB::sfpCommonInfoRevision.6 = STRING:
BARNFIND-MIB::sfpCommonInfoRevision.7 = STRING: 3B23

```
BARNFIND-MIB::sfpCommonInfoWaveLengthNm.4 = INTEGER: 0
BARNFIND-MIB::sfpCommonInfoWaveLengthNm.5 = INTEGER: 1310
BARNFIND-MIB::sfpCommonInfoWaveLengthNm.6 = INTEGER: 850
BARNFIND-MIB::sfpCommonInfoWaveLengthNm.7 = INTEGER: 0
BARNFIND-MIB::sfpCommonInfoBitRate.4 = STRING:
BARNFIND-MIB::sfpCommonInfoBitRate.5 = STRING: 3000000;3000000;3000000
BARNFIND-MIB::sfpCommonInfoBitRate.6 = STRING: 2100000;2100000;2100000
BARNFIND-MIB::sfpCommonInfoBitRate.7 = STRING: 3000000;3000000;3000000

$ snmpwalk -v 2c -c private -m BARNFIND-MIB 127.0.0.1 sfpSmartInfoTable|grep '\.6\.'
BARNFIND-MIB::sfpSmartInfoName.6.1 = STRING: Temperature
BARNFIND-MIB::sfpSmartInfoName.6.2 = STRING: Vcc
BARNFIND-MIB::sfpSmartInfoName.6.3 = STRING: TX Bias
BARNFIND-MIB::sfpSmartInfoName.6.4 = STRING: TX Power
BARNFIND-MIB::sfpSmartInfoName.6.5 = STRING: RX Power
BARNFIND-MIB::sfpSmartInfoName.6.7 = STRING: RX LOS
BARNFIND-MIB::sfpSmartInfoValueSyntax.6.1 = STRING: rI;scale=0.00390625;suffix=C;min=-32768;max=32767;wmin=-12800;wmax=25600;amin=-12800;amax=25600
BARNFIND-MIB::sfpSmartInfoValueSyntax.6.2 = STRING: rI;scale=0.0001;suffix=V;min=0;max=65536;wmin=0;wmax=50000;amin=0;amax=50000
BARNFIND-MIB::sfpSmartInfoValueSyntax.6.3 = STRING: rI;scale=0.002;suffix=mA;min=0;max=65536;wmin=0;wmax=50000;amin=0;amax=50000
BARNFIND-MIB::sfpSmartInfoValueSyntax.6.4 = STRING: rI;scale=0.0001;suffix=mW;min=0;max=65536;wmin=0;wmax=50000;amin=0;amax=50000
BARNFIND-MIB::sfpSmartInfoValueSyntax.6.5 = STRING: rI;scale=0.0001;suffix=mW;min=0;max=65536;wmin=0;wmax=50000;amin=0;amax=50000
BARNFIND-MIB::sfpSmartInfoValueSyntax.6.7 = STRING: rB
BARNFIND-MIB::sfpSmartInfoValue.6.1 = STRING: 14380
BARNFIND-MIB::sfpSmartInfoValue.6.2 = STRING: 31824
BARNFIND-MIB::sfpSmartInfoValue.6.3 = STRING: 11908
BARNFIND-MIB::sfpSmartInfoValue.6.4 = STRING: 2618
BARNFIND-MIB::sfpSmartInfoValue.6.5 = STRING: 0
BARNFIND-MIB::sfpSmartInfoValue.6.7 = STRING: 1
BARNFIND-MIB::sfpSmartInfoRowStatus.6.1 = INTEGER: active(1)
BARNFIND-MIB::sfpSmartInfoRowStatus.6.2 = INTEGER: active(1)
BARNFIND-MIB::sfpSmartInfoRowStatus.6.3 = INTEGER: active(1)
BARNFIND-MIB::sfpSmartInfoRowStatus.6.4 = INTEGER: active(1)
BARNFIND-MIB::sfpSmartInfoRowStatus.6.5 = INTEGER: active(1)
BARNFIND-MIB::sfpSmartInfoRowStatus.6.7 = INTEGER: active(1)
```

To build the information visible in the screenshot, we lookup information from two tables. For the topview we use the sfpCommonInfoTable. In the output we have only selected some few of the modules. For the bottomview we do a filtering of the information available from the sfpSmartInfoTable. This table has two indexes. First index is the same index as the sfpCommonInfoTable, while the second index is describing which parameter. Please note that these numbers might not be a complete series (example 1,2,3,10,11,12,13,54). Please note that the values are transmitted at strings, since we have support for paremeters being both numbers, text, ip-addresses. The “LOS” field visible here is the source for the SignalPresent in the input/output tables; not all SFPs provide this information.

SNMP traps configuration

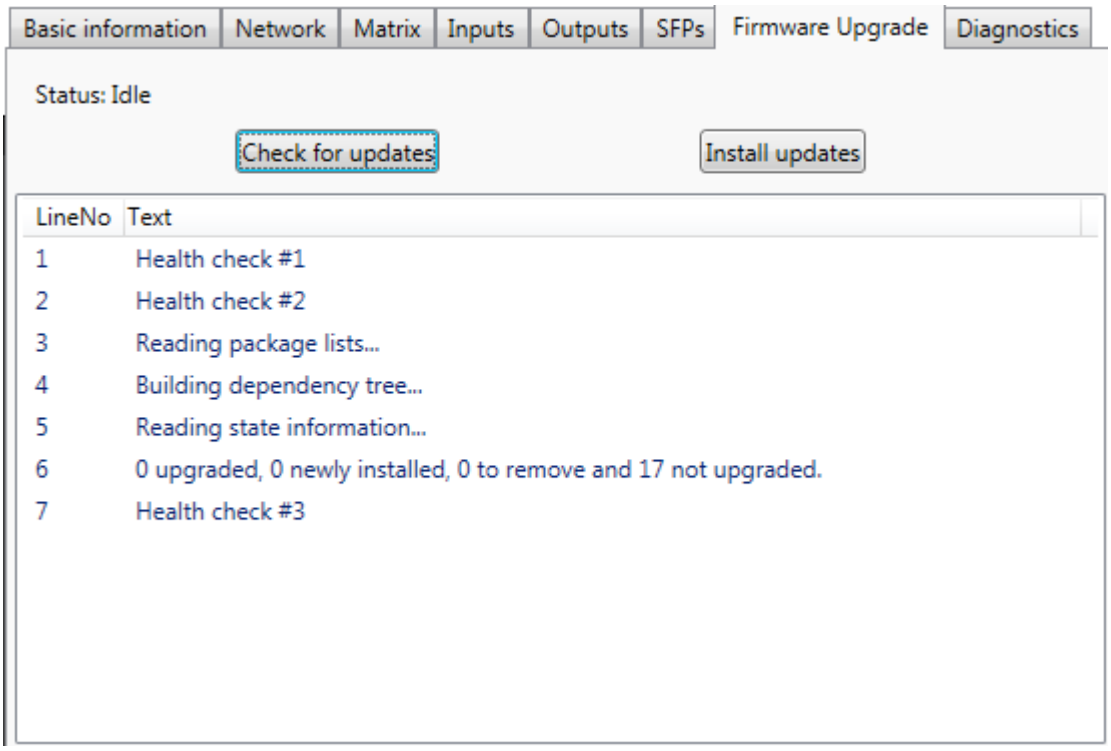


$ snmpwalk -v 2c -c private -m BARNFIND-MIB 127.0.0.1 trapsTargetTable
BARNFIND-MIB::trapsTargetRowStatus.2 = INTEGER: active(1)
BARNFIND-MIB::trapsTargetType.2 = INTEGER: trapv2c(2)
BARNFIND-MIB::trapsTargetHostType.2 = INTEGER: ipv4(1)
BARNFIND-MIB::trapsTargetHost.2 = Hex-STRING: C0 A8 00 3B
BARNFIND-MIB::trapsTargetPort.2 = INTEGER: 1162
BARNFIND-MIB::trapsTargetStatus.2 = INTEGER: true(1)
BARNFIND-MIB::trapsTargetConfig.2 = INTEGER: true(1)
BARNFIND-MIB::trapsTargetSFPDiag.2 = INTEGER: true(1)
BARNFIND-MIB::trapsTargetEmnema.2 = INTEGER: true(1)

To build up the information in the screenshot, we lookup information in one table, *trapsTargetTable*. The column *trapsTargetRowStatus*, is the column used to add and delete rows. Set this value to 6 (delete) to remove the entire row, or set it to 4 (createAndGo) in an unused row to add a row (in the above example you can use any row expect 2 for this. example : set *BARNFIND-MIB::trapsTargetRowStatus.4* to *INTEGER(6)*).

There are four groups of traps on the BTF1:
* Status which are most of the read-only elements.
* Config which are most of the read-write elements.
* SFPDiag which covers the *sfpSmartInfoTable* table.
*Network which covers all the network tables

Firmware Upgrade

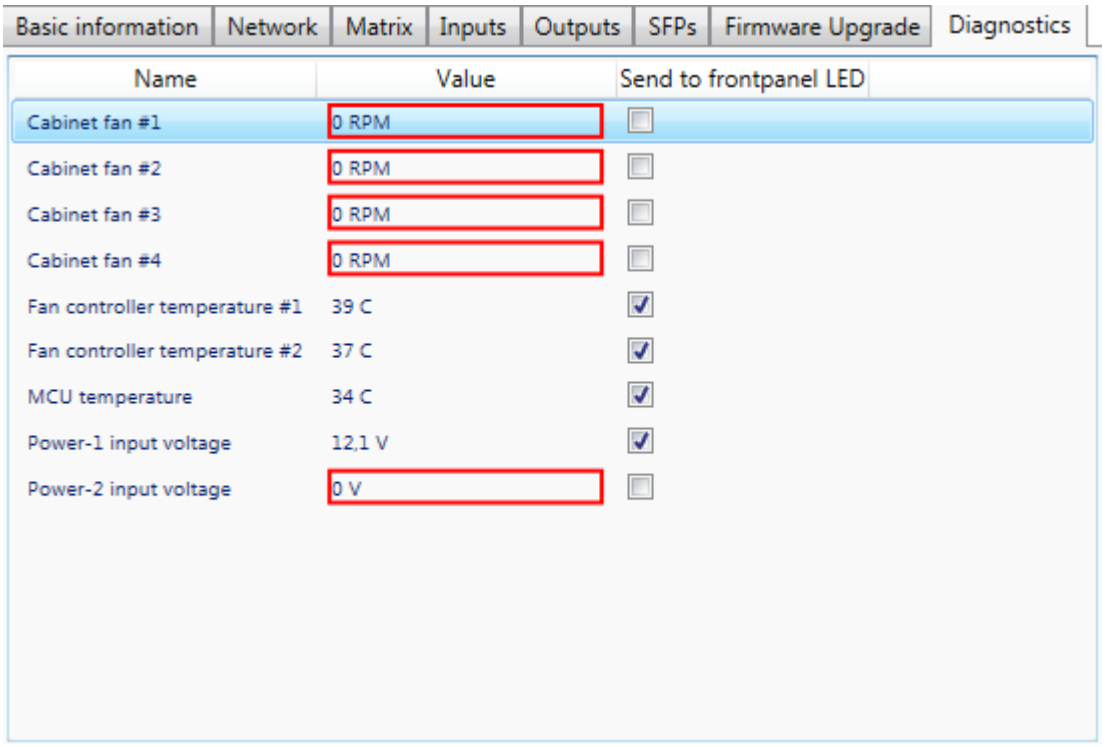


$ snmpget -v 2c -c private -O f -m BARNFIND-MIB 127.0.0.1 firmwareUpgradeState firmwareUpgradeTriggerCheck firmwareUpgradeTriggerUpgrade
.iso.org.dod.internet.private.enterprises.barnfind.firmware.firmwareUpgrade.firmwareUpgradeState = INTEGER: idle(1)
.iso.org.dod.internet.private.enterprises.barnfind.firmware.firmwareUpgrade.firmwareUpgradeTriggerCheck = INTEGER: 0
.iso.org.dod.internet.private.enterprises.barnfind.firmware.firmwareUpgrade.firmwareUpgradeTriggerUpgrade = INTEGER: 0

$ snmpwalk -v 2c -c private -m BARNFIND-MIB 127.0.0.1 firmwareUpgradeLastLog
BARNFIND-MIB::firmwareUpgradeLastLogLine.1 = STRING: Health check #1
BARNFIND-MIB::firmwareUpgradeLastLogLine.2 = STRING: Health check #2
BARNFIND-MIB::firmwareUpgradeLastLogLine.3 = STRING: Reading package lists...
BARNFIND-MIB::firmwareUpgradeLastLogLine.4 = STRING: Building dependency tree...
BARNFIND-MIB::firmwareUpgradeLastLogLine.5 = STRING: Reading state information...
BARNFIND-MIB::firmwareUpgradeLastLogLine.6 = STRING: 0 upgraded, 0 newly installed, 0 to remove and 17 not upgraded.
BARNFIND-MIB::firmwareUpgradeLastLogLine.7 = STRING: Health check #3
BARNFIND-MIB::firmwareUpgradeLastLogRowStatus.1 = INTEGER: active(1)
BARNFIND-MIB::firmwareUpgradeLastLogRowStatus.2 = INTEGER: active(1)
BARNFIND-MIB::firmwareUpgradeLastLogRowStatus.3 = INTEGER: active(1)
BARNFIND-MIB::firmwareUpgradeLastLogRowStatus.4 = INTEGER: active(1)
BARNFIND-MIB::firmwareUpgradeLastLogRowStatus.5 = INTEGER: active(1)
BARNFIND-MIB::firmwareUpgradeLastLogRowStatus.6 = INTEGER: active(1)
BARNFIND-MIB::firmwareUpgradeLastLogRowStatus.7 = INTEGER: active(1)

Please note that the *firmwareUpgradeState*, *firmwareUpgradeTriggerCheck* and *firmwareUpgrade.firmwareUpgradeTriggerUpgrade* **does not** have the normal snmp scalar .0 suffix. This is for historical reasons.

Diagnostics

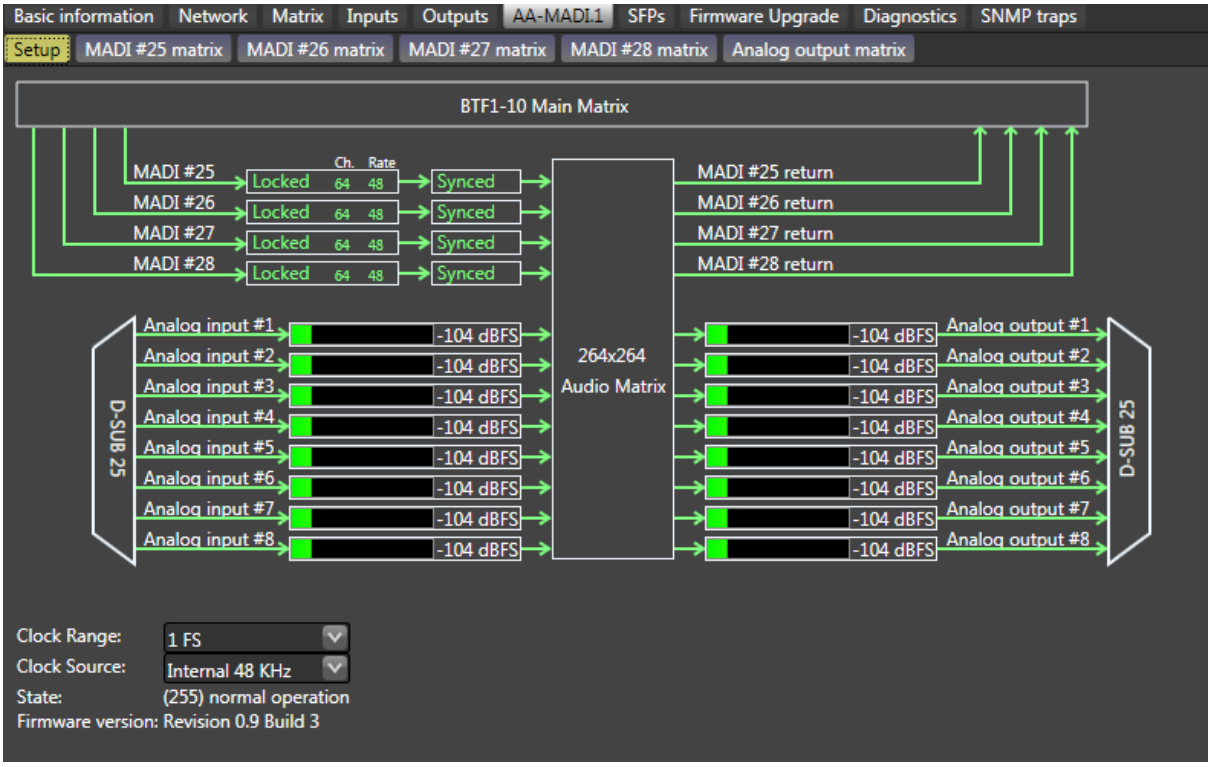


$ snmpwalk -v 2c -c private -m BARNFIND-MIB 127.0.0.1 diagnosticsTable
BARNFIND-MIB::diagnosticsName.1 = STRING: Cabinet fan #1
BARNFIND-MIB::diagnosticsName.2 = STRING: Cabinet fan #2
BARNFIND-MIB::diagnosticsName.3 = STRING: Cabinet fan #3
BARNFIND-MIB::diagnosticsName.4 = STRING: Cabinet fan #4
BARNFIND-MIB::diagnosticsName.8 = STRING: Fan controller temperature #1
BARNFIND-MIB::diagnosticsName.9 = STRING: Fan controller temperature #2
BARNFIND-MIB::diagnosticsName.16 = STRING: MCU temperature
BARNFIND-MIB::diagnosticsName.32 = STRING: Power-1 input voltage
BARNFIND-MIB::diagnosticsName.33 = STRING: Power-2 input voltage
BARNFIND-MIB::diagnosticsSyntax.1 = STRING: rl;wmin=1000;emin=500;suffix=RPM
BARNFIND-MIB::diagnosticsSyntax.2 = STRING: rl;wmin=1000;emin=500;suffix=RPM
BARNFIND-MIB::diagnosticsSyntax.3 = STRING: rl;wmin=1000;emin=500;suffix=RPM
BARNFIND-MIB::diagnosticsSyntax.4 = STRING: rl;wmin=1000;emin=500;suffix=RPM
BARNFIND-MIB::diagnosticsSyntax.8 = STRING: rl;wmax=65;emax=75;suffix=C
BARNFIND-MIB::diagnosticsSyntax.9 = STRING: rl;wmax=65;emax=75;suffix=C
BARNFIND-MIB::diagnosticsSyntax.16 = STRING: rl;wmax=65;emax=75;suffix=C
BARNFIND-MIB::diagnosticsSyntax.32 = STRING: rl;wmin=112;wmax=130;emin=110;emax=132;suffix=V;scale=0.1
BARNFIND-MIB::diagnosticsSyntax.33 = STRING: rl;wmin=112;wmax=130;emin=110;emax=132;suffix=V;scale=0.1
BARNFIND-MIB::diagnosticsValue.1 = STRING: 0
BARNFIND-MIB::diagnosticsValue.2 = STRING: 0
BARNFIND-MIB::diagnosticsValue.3 = STRING: 0
BARNFIND-MIB::diagnosticsValue.4 = STRING: 0
BARNFIND-MIB::diagnosticsValue.8 = STRING: 39
BARNFIND-MIB::diagnosticsValue.9 = STRING: 38
BARNFIND-MIB::diagnosticsValue.16 = STRING: 34
BARNFIND-MIB::diagnosticsValue.32 = STRING: 121
BARNFIND-MIB::diagnosticsValue.33 = STRING: 0
BARNFIND-MIB::diagnosticsSendToLED.1 = INTEGER: false(2)
BARNFIND-MIB::diagnosticsSendToLED.2 = INTEGER: false(2)
BARNFIND-MIB::diagnosticsSendToLED.3 = INTEGER: false(2)
BARNFIND-MIB::diagnosticsSendToLED.4 = INTEGER: false(2)
BARNFIND-MIB::diagnosticsSendToLED.8 = INTEGER: true(1)
BARNFIND-MIB::diagnosticsSendToLED.9 = INTEGER: true(1)
BARNFIND-MIB::diagnosticsSendToLED.16 = INTEGER: true(1)
BARNFIND-MIB::diagnosticsSendToLED.32 = INTEGER: true(1)
BARNFIND-MIB::diagnosticsSendToLED.33 = INTEGER: false(2)

In this test device, the fans are not mounted, and hence does not spin. Calculating if values should make the sensor level indicate error/warning is performed by the client reading out the value levels..

Analog Audio <-> MADI (BTF1-10-AA-MADI)

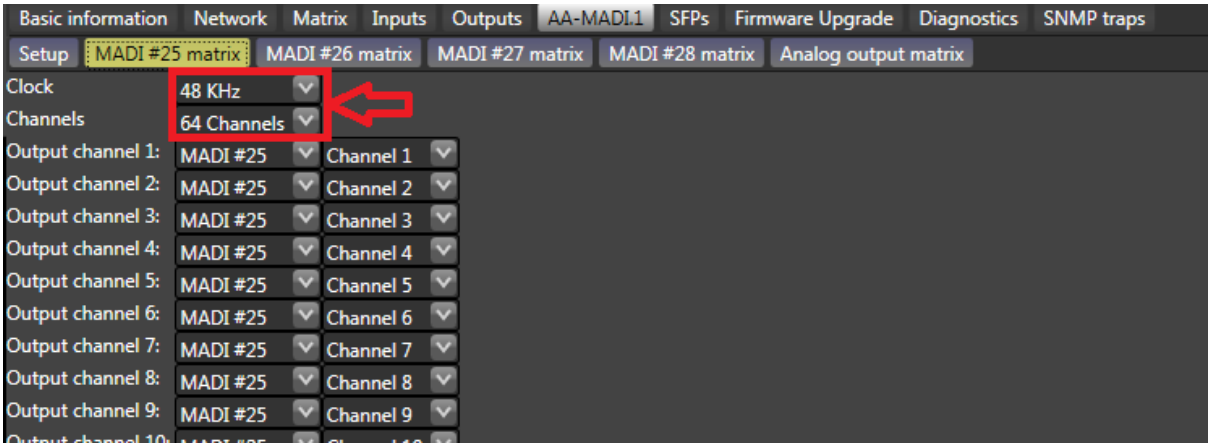
This frame contains an add-on card that contains 4 MADI inputs, 4 MADI outputs, 8 analog input and 8 analog outputs. All these channels are routable within a dedicated matrix present on this card. In BarnStudio, the status view of the card looks like this.



$ snmpwalk -v 2c -c private -m BARNFIND-MIB 127.0.0.1 aaMadiTable|grep -v aaMadiOutputMatrix|grep -v aaMadiOutputChannels|grep -v aaMadiOutputRate
BARNFIND-MIB::aaMadiAPIVersion.1 = INTEGER: 1
BARNFIND-MIB::aaMadiFirmwareVersion.1 = STRING: Revision 0.9 Build 3
BARNFIND-MIB::aaMadiState.1 = INTEGER: 255
BARNFIND-MIB::aaMadiStateHelp.1 = STRING: normal operation
BARNFIND-MIB::aaMadiPorts.1 = STRING: 25;26;27;28
BARNFIND-MIB::aaMadiClockRange.1 = INTEGER: range1FS(1)
BARNFIND-MIB::aaMadiClockSource.1 = INTEGER: internal48K(2)
BARNFIND-MIB::aaMadiInputLocked.1.0 = INTEGER: true(1)
BARNFIND-MIB::aaMadiInputLocked.1.1 = INTEGER: true(1)
BARNFIND-MIB::aaMadiInputLocked.1.2 = INTEGER: true(1)
BARNFIND-MIB::aaMadiInputLocked.1.3 = INTEGER: true(1)
BARNFIND-MIB::aaMadiInputChannels.1.0 = INTEGER: channels64(64)
BARNFIND-MIB::aaMadiInputChannels.1.1 = INTEGER: channels64(64)
BARNFIND-MIB::aaMadiInputChannels.1.2 = INTEGER: channels64(64)
BARNFIND-MIB::aaMadiInputChannels.1.3 = INTEGER: channels64(64)
BARNFIND-MIB::aaMadiInputRate.1.0 = INTEGER: clock48K(48)
BARNFIND-MIB::aaMadiInputRate.1.1 = INTEGER: clock48K(48)
BARNFIND-MIB::aaMadiInputRate.1.2 = INTEGER: clock48K(48)
BARNFIND-MIB::aaMadiInputRate.1.3 = INTEGER: clock48K(48)
BARNFIND-MIB::aaMadiInputSynced.1.0 = INTEGER: true(1)
BARNFIND-MIB::aaMadiInputSynced.1.1 = INTEGER: true(1)
BARNFIND-MIB::aaMadiInputSynced.1.2 = INTEGER: true(1)
BARNFIND-MIB::aaMadiInputSynced.1.3 = INTEGER: true(1)
BARNFIND-MIB::aaMadiAnalogInputLevel.1.0 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogInputLevel.1.1 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogInputLevel.1.2 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogInputLevel.1.3 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogInputLevel.1.4 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogInputLevel.1.5 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogInputLevel.1.6 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogInputLevel.1.7 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogOutputLevel.1.0 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogOutputLevel.1.1 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogOutputLevel.1.2 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogOutputLevel.1.3 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogOutputLevel.1.4 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogOutputLevel.1.5 = INTEGER: -104

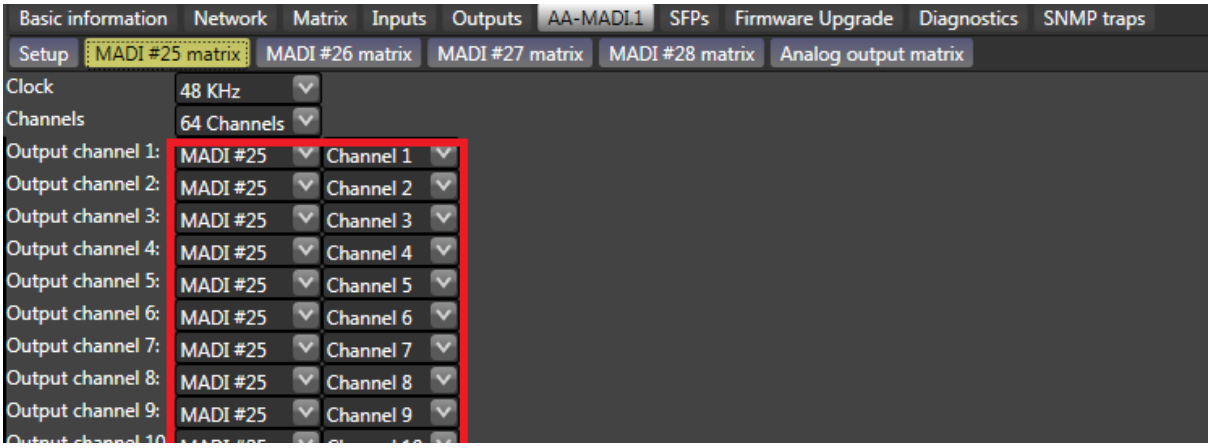
BARNFIND-MIB::aaMadiAnalogOutputLevel.1.6 = INTEGER: -104
BARNFIND-MIB::aaMadiAnalogOutputLevel.1.7 = INTEGER: -104

The aaMadiPorts.1 tells us which ports from the matrixInputPortTable to extract names and signal status from. The rest of the entries in this list should be quite self-explaining.



$ snmpwalk -v 2c -c private -m BARNFIND-MIB 127.0.0.1 aaMadiTable|grep 'aaMadiOutputChannels\|aaMadiOutputRate'
BARNFIND-MIB::aaMadiOutputRate.1.0 = INTEGER: clock48K(48)
BARNFIND-MIB::aaMadiOutputRate.1.1 = INTEGER: clock48K(48)
BARNFIND-MIB::aaMadiOutputRate.1.2 = INTEGER: clock48K(48)
BARNFIND-MIB::aaMadiOutputRate.1.3 = INTEGER: clock48K(48)
BARNFIND-MIB::aaMadiOutputChannels.1.0 = INTEGER: channels64(64)
BARNFIND-MIB::aaMadiOutputChannels.1.1 = INTEGER: channels64(64)
BARNFIND-MIB::aaMadiOutputChannels.1.2 = INTEGER: channels64(64)
BARNFIND-MIB::aaMadiOutputChannels.1.3 = INTEGER: channels64(64)

For the 4 MADI outputs, the OutputRate and OutputChannels can be configured using the table entries given above



$ snmpwalk -v 2c -c private -m BARNFIND-MIB 127.0.0.1 aaMadiTable|grep aaMadiOutputMatrix
BARNFIND-MIB::aaMadiOutputMatrix.1.0.0 = STRING: 0;0
BARNFIND-MIB::aaMadiOutputMatrix.1.0.1 = STRING: 0;1
BARNFIND-MIB::aaMadiOutputMatrix.1.0.2 = STRING: 0;2
BARNFIND-MIB::aaMadiOutputMatrix.1.0.3 = STRING: 0;3
BARNFIND-MIB::aaMadiOutputMatrix.1.0.4 = STRING: 0;4
BARNFIND-MIB::aaMadiOutputMatrix.1.0.5 = STRING: 0;5
BARNFIND-MIB::aaMadiOutputMatrix.1.0.6 = STRING: 0;6
BARNFIND-MIB::aaMadiOutputMatrix.1.0.7 = STRING: 0;7
BARNFIND-MIB::aaMadiOutputMatrix.1.0.8 = STRING: 0;8
BARNFIND-MIB::aaMadiOutputMatrix.1.0.9 = STRING: 0;9
BARNFIND-MIB::aaMadiOutputMatrix.1.0.10 = STRING: 0;10
BARNFIND-MIB::aaMadiOutputMatrix.1.0.11 = STRING: 0;11
BARNFIND-MIB::aaMadiOutputMatrix.1.0.12 = STRING: 0;12

….
BARNFIND-MIB::aaMadiOutputMatrix.1.3.60 = STRING: 3;60
BARNFIND-MIB::aaMadiOutputMatrix.1.3.61 = STRING: 3;61
BARNFIND-MIB::aaMadiOutputMatrix.1.3.62 = STRING: 3;62
BARNFIND-MIB::aaMadiOutputMatrix.1.3.63 = STRING: 3;63
BARNFIND-MIB::aaMadiOutputMatrix.1.4.0 = STRING: 4;0
BARNFIND-MIB::aaMadiOutputMatrix.1.4.1 = STRING: 4;1
BARNFIND-MIB::aaMadiOutputMatrix.1.4.2 = STRING: 4;2
BARNFIND-MIB::aaMadiOutputMatrix.1.4.3 = STRING: 4;3
BARNFIND-MIB::aaMadiOutputMatrix.1.4.4 = STRING: 4;4
BARNFIND-MIB::aaMadiOutputMatrix.1.4.5 = STRING: 4;5
BARNFIND-MIB::aaMadiOutputMatrix.1.4.6 = STRING: 4;6
BARNFIND-MIB::aaMadiOutputMatrix.1.4.7 = STRING: 4;7

For audio matrix, there is 64 channels per MADI output and 8 channels of analog output that can be configured. Each of this has its own entry in the table as visible above. Each entry has a string in this format “1;2”. The first number says which SourceBlock to use, while the second tells which channel within that block (counted from zero).