

# Dolphin Network on KAGRA

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L-K Joint CDS Meeting  
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# KAGRA's History of Dolphin Network

## **iKAGRA (2015)**

3 computers (k1ioo, k1imc, k1bs)

2 switches

## **bKAGRA phase1 (2017)**

4 computers (k1ioo, k1imc, k1bs, k1lsc)

2 switches

## **Current situation**

13 computers

3 switches

## **For O3**

14~16 computers

3 switches

## **Other Informations**

We use Gen1 Dolphin.

Link width is x4

# dxadmin

Only 2 switches seem to be connected on the dxadmin interface.  
But Dolphin communication seems to work well on all models.

The screenshot shows the dxadmin interface with a network topology diagram and a node status panel. The topology diagram displays three switch complexes connected to a central cloud. The leftmost switch complex has four nodes: k1lpc0, k1lbc0, k1lbs, and k1liol. The middle switch complex has four nodes: k1loo, k1lmc0, k1lprm, and k1lrm. The rightmost switch complex has four nodes: k1lsr2, k1lsr3, and two nodes labeled 'CUT OF RANGE SLOTS NOT AVAILABLE'. A blue circle highlights the k1lmc0 node, and a blue arrow points from the text 'Cable is unplugged yet.' to it. An orange circle highlights the top-left nodes of the first switch complex, with an orange arrow pointing to the text 'Some nodes appear to overlap.'

Cluster Status

Fabric 0 status:	REDUCED
Interval Admin (sec.):	60
Interval Network Manager (sec.):	5
Trigger Interval for unstable state (min):	10
Topology	Switch Complex (auto)

Settings

Node Status

k1lsc0

Adapter C	Adapter 1
Serial number:	ad012810144
Adapter Type:	DX-4510
Node Id:	8
LINK WIDTH (lanes)	4

Port 0	Port 1
PORT 0	Active
PARTNER Serial number:	0xad052808C12
PARTNER Adapter number:	0
PARTNER Port number:	1
PARTNER Adapter Type:	DXS 410 Switch

Cable is unplugged yet.

Some nodes appear to overlap.

Feb 26 12:31:31 Fabric 0 status is reduced: 1 node(s) are not reachable by ethernet.

# Questions

How can we do for managing 3 switches on dxadmin?

Is the setting on /etc/dis/networkmanager.conf related with this issue?

```
controls@k1boot /etc/dis $ grep -v '^$|^#|^$' networkmanager.conf
-dimensionX 2;
-dimensionY 0;
-dimensionZ 0;
-auto;
-configure;
-l /var/log/scinetworkmanager.log;
-distribute;
-managerinterval 5;
-admininterval 60;
-session;
-sctt 4;
```

*LIGO*

LIGO-T1300518-v6

```
-dimensionX 5;
```

```
# Number of nodes in Y Dimension.
```

```
#
```

```
-dimensionY 0;
```

```
# Number of nodes in Z Dimension. This only applies to 3D
# should specify 0
```

```
-dimensionZ 0;
```

How many node can we use on one Dolphin Network?

When we used "64" as Node Id, "-1" was displayed on dxadmin.