QUESTnet 2010

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Team Leader and Network Specialist

... the Network Makes Contact

Network & Communication Services

The Network Makes Contact?

What does this mean to me?

The Network is hosting more services and gaining intelligence

The Network is providing more “always on” services

These “always on” services can be utilised in some interesting ways

We’ve been doing some work around Clocks, Digital Signage and in the Data Centre

Master Clocks

We’ve all seen these around

Usually installed when the building was built

Over 20 years ago?

Master Clocks

Attractive aren't they?

Require a separate single purpose copper infrastructure

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This copper has been in place for a long time

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This copper has been in place for a long time

How well is it maintained?

Master Clocks

Risks of under ground copper

Master Clocks

Risks of under ground copper

Lightning strike!

In our case, about 75% of the master clocks on campus out for two months

Master Clocks

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We found out, there were plans to install up to 8 GPS receivers, including antennas and LMR-400 cable to support the Master Clocks

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Wait, the network has an accurate time source (NTP)

We were able to find a solution that used the network as a time source

Clocks

What do we do about new installations?

Clocks

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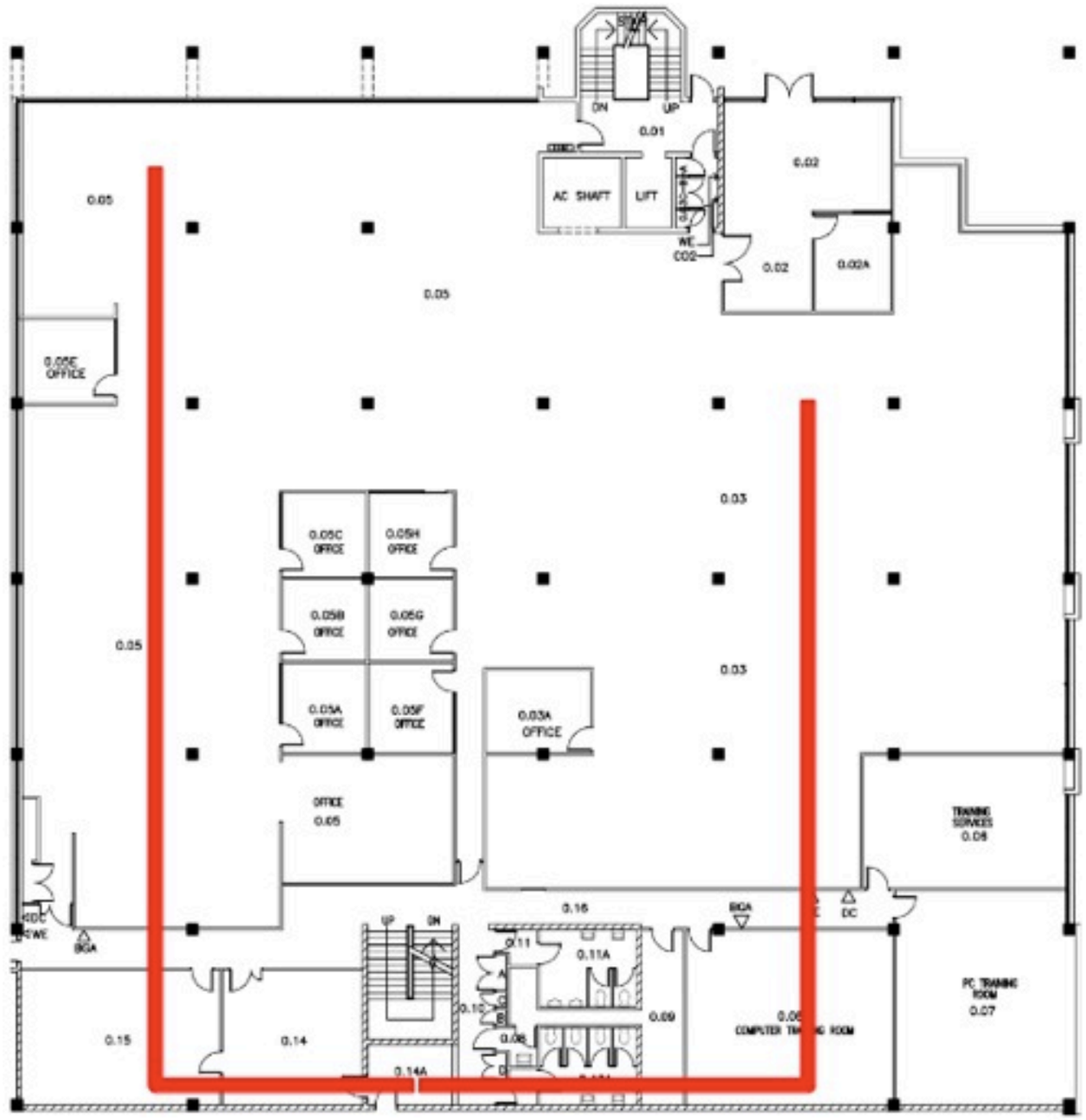
We've already covered the separate, single purpose copper cable infrastructure



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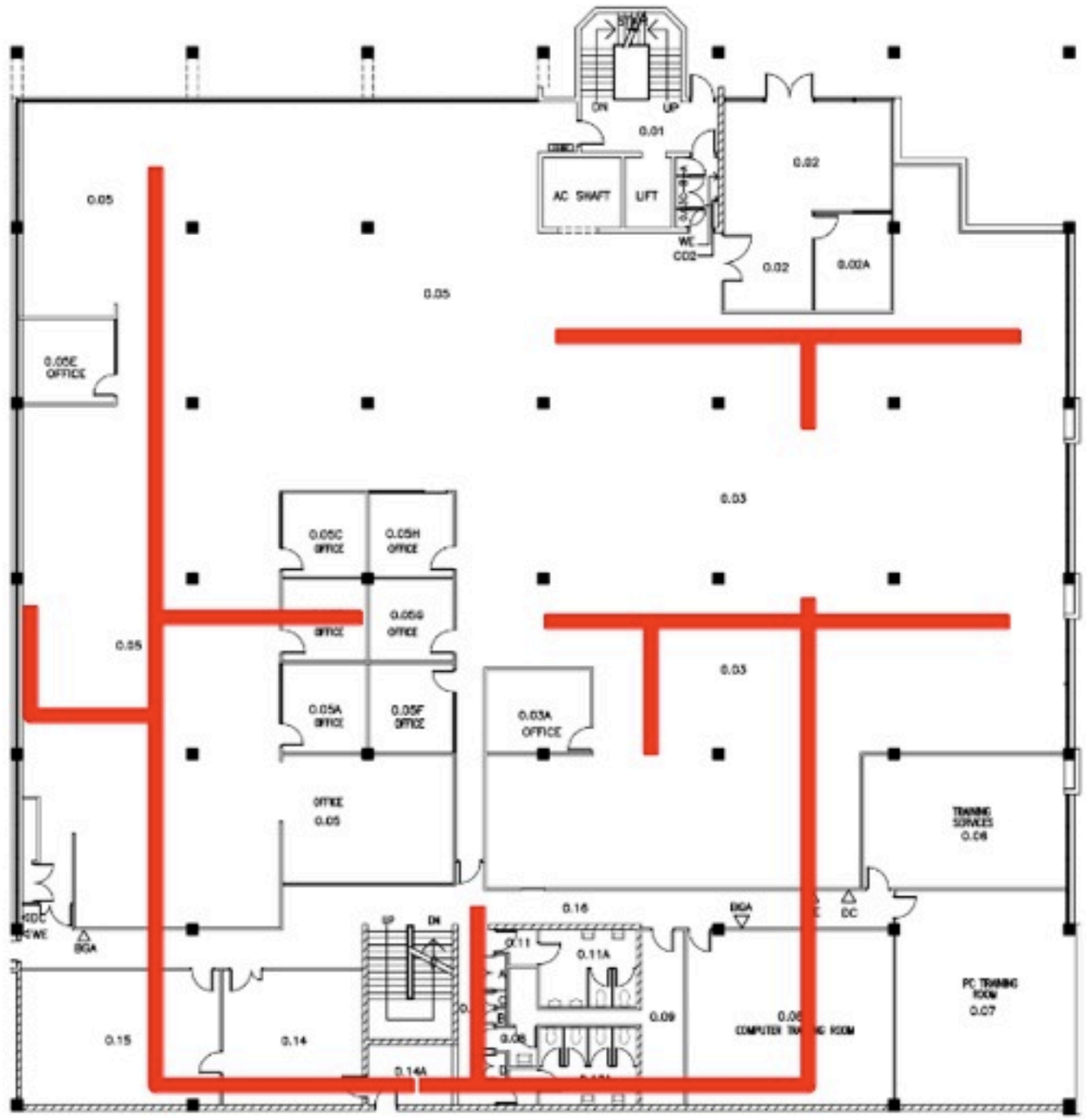
Refurbishments
Additions
Removals



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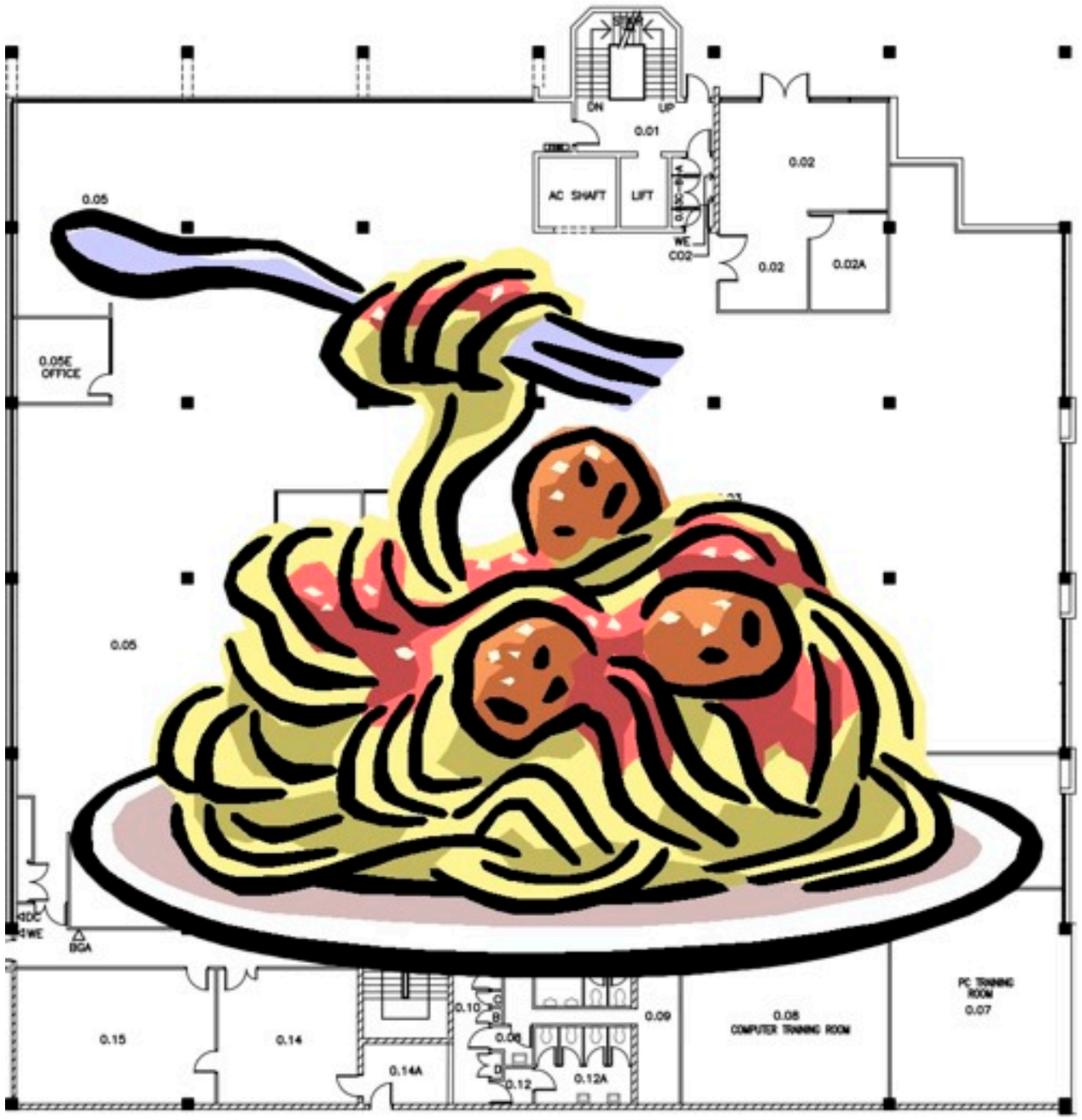
The inevitable happens ...



Clocks

How can the Network help here?

Clocks

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UTP

Provides a single well maintained integrated cabling system

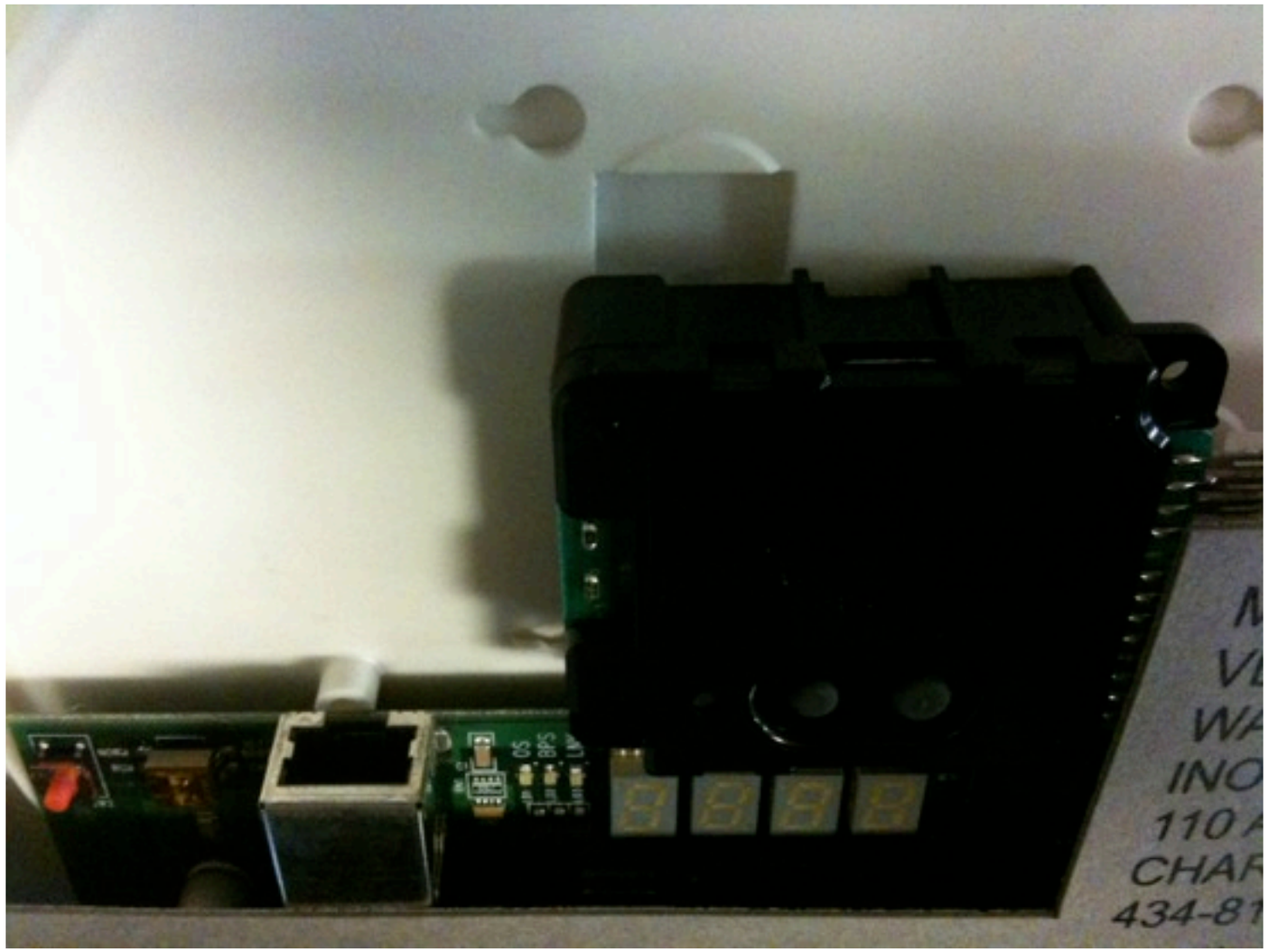
Clocks

How can the Network help here?

802.3af

Provides power to devices

Power Injectors work too if no PoE switches are available

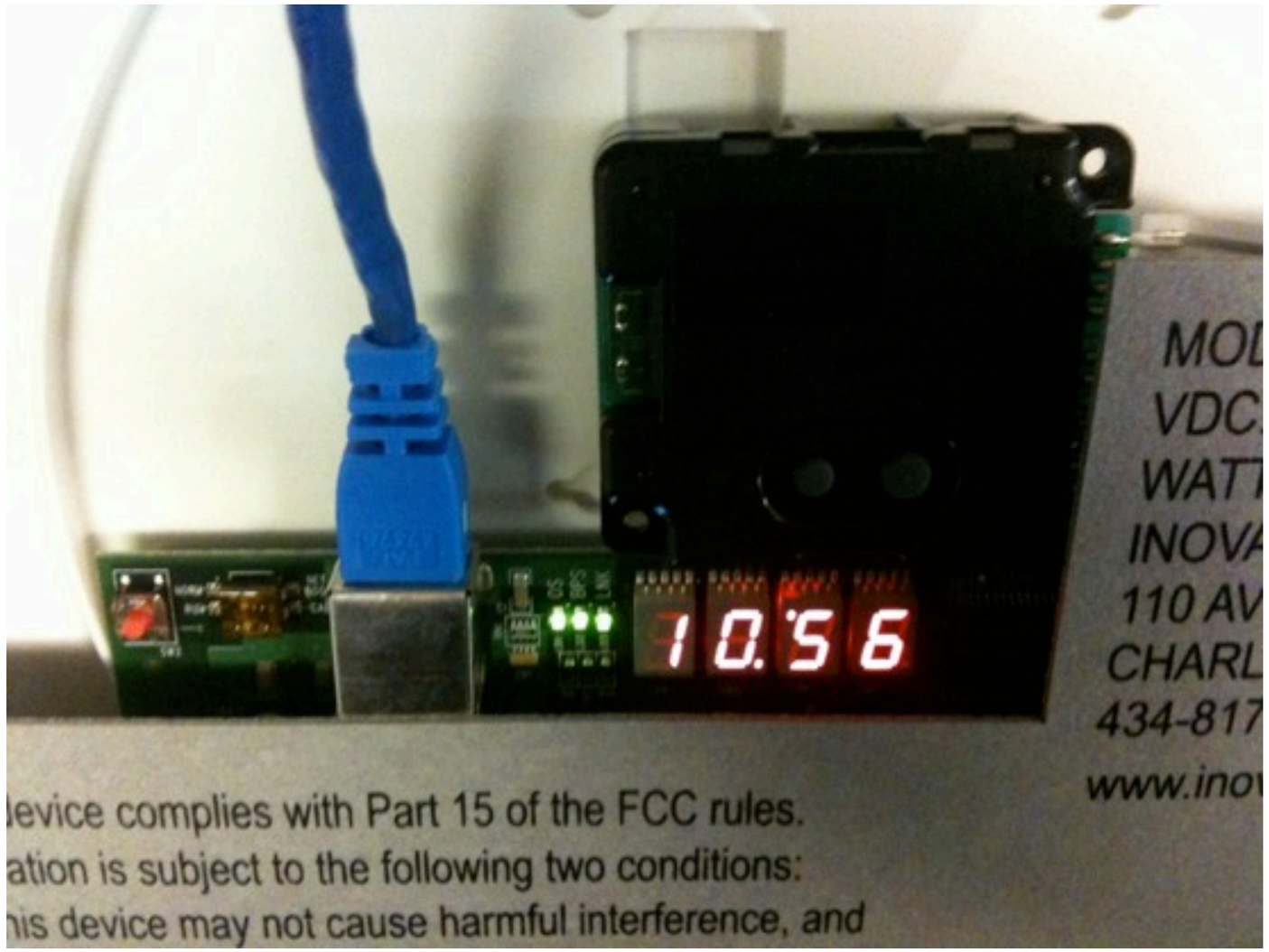


Clocks

How can the Network help here?

IP
DHCP
SNTP

Provides a means for for the clock to receive the current time



Digital Signage

Why the Network?

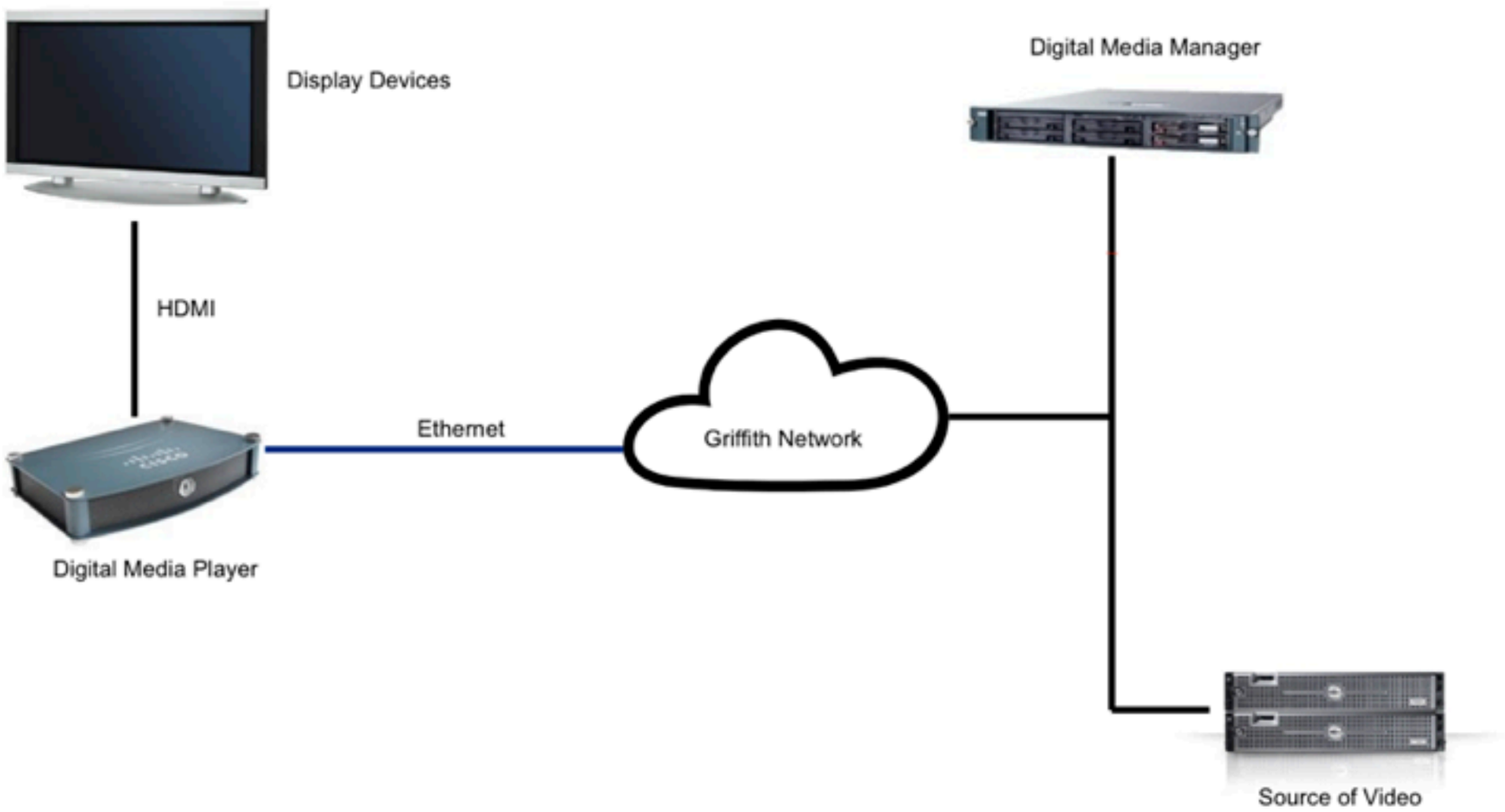
The Network team seems to be in a unique position, in that it is visible to many other groups within the University

Members of the Network team often meet with members from all areas of the university community and are open to discuss ideas

The Network Projects team meet regularly with the Planning Construction and Design group and are aware of most works, capital, refurbishment or minor

Digital Signage

Why the Network?



Digital Signage

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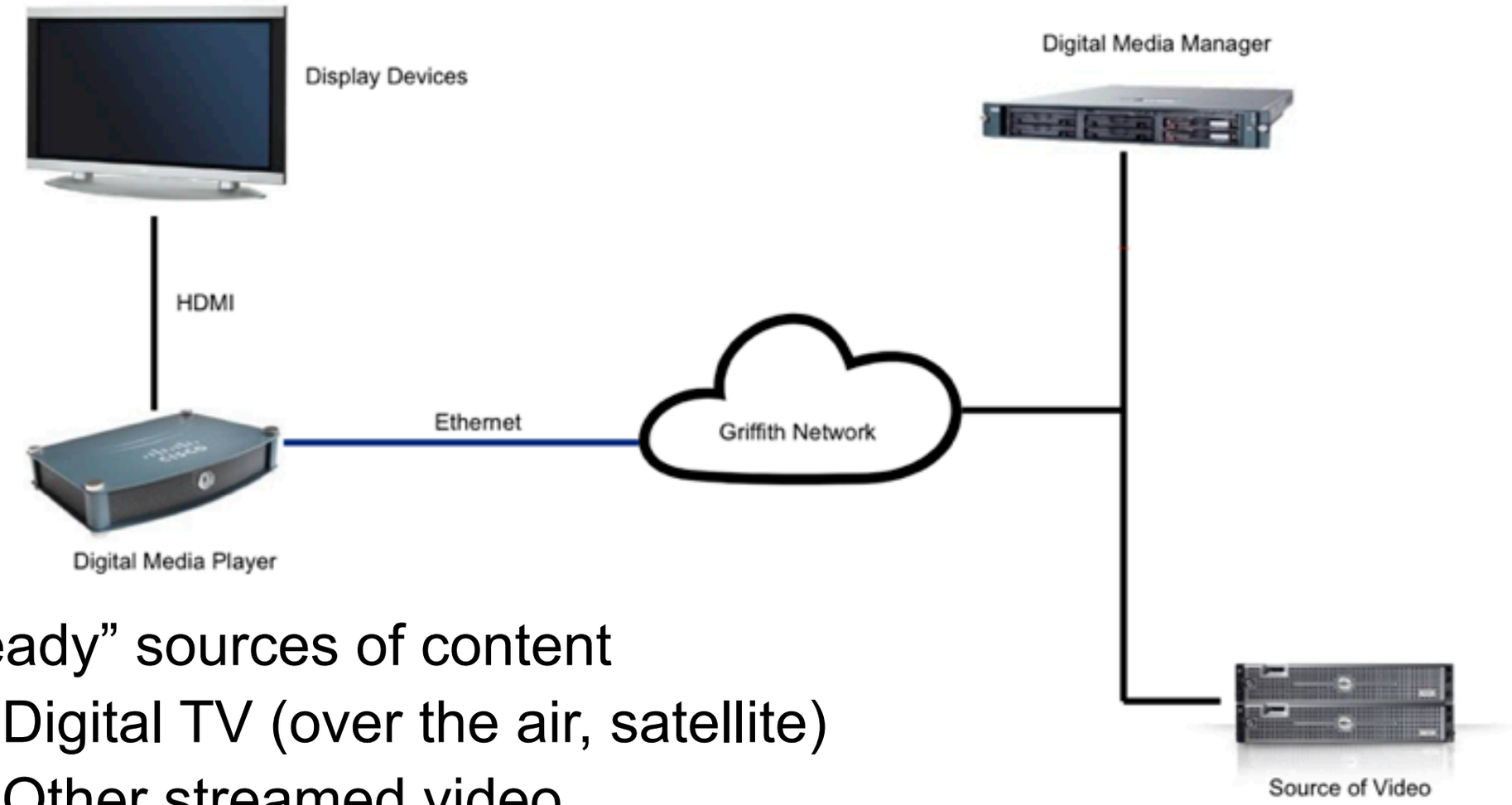


"Ready" sources of content

- Digital TV (over the air, satellite)
- Other streamed video
- Web content

Digital Signage

Found that several groups were investigating signage

Digital Signage

None of them aware of anyone else doing any investigation

Language Institute

Campus Life

Information Services

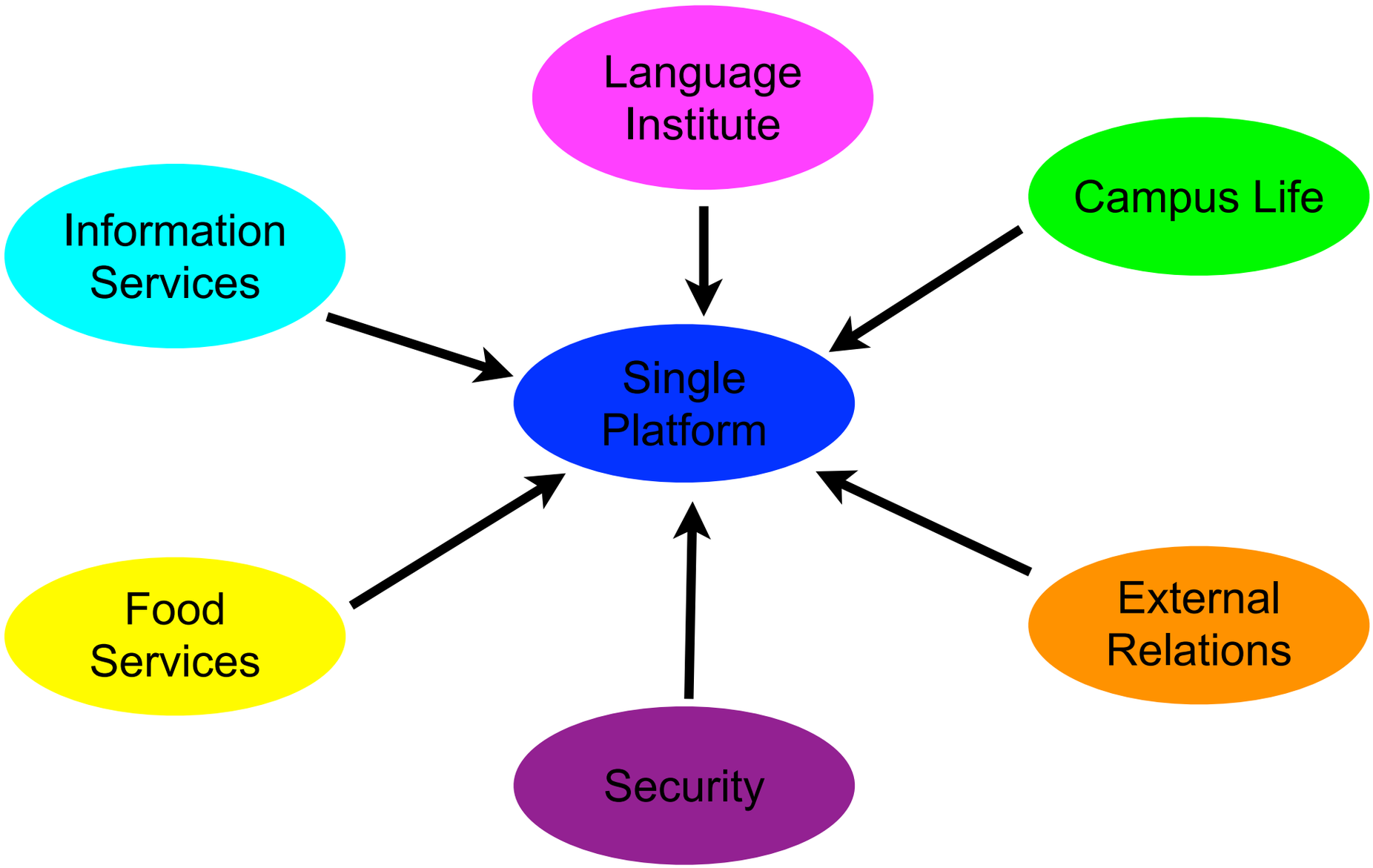
Food Services

External Relations

Security

Digital Signage

Find a suitable platform that is usable by all groups



Digital Signage

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Chose the Cisco Digital Media System
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- College of Art, a screen playing work from the Film School
- Gold Coast Library, a screen displaying information slides
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Worked with vendors to choose a quality display
- LG LED model
- Agreement to provide an extended 5 year warranty

Digital Signage

What have we done so far?

Developing an installation guide for clients
- Installing a screen
- Installing a power point and network outlet
- Purchase of a Media Player

Network Services is not going to take on all of the work
- Electrical work and installation of a screen is still by facilities

Developed a subscription model so that users will help pay for the system
- $x / screen / year

Digital Signage

What's left to do?

Completion of the guide

Content development and design

Training and assistance

Digital Signage

Network & Communication Services

Data Centre Ethernet and Storage

2 x NX-5010

10 x NX-2148T

NX-5010

20 ports
- » 8 x 1/10G and 12 x 10G

10 gigabit data centre ethernet (DCE)
- » ethernet, redesigned to enable storage protocols
- » low latency, guaranteed delivery, quality of service, no drops

single expansion slot
- » more 10G ports or fibre-channel ports

NX-OS
- » descended from SAN-OS (MDS series “directors”)

NX-2148T

48 x 1G ethernet ports

» 1G only, no 10/100 in this model

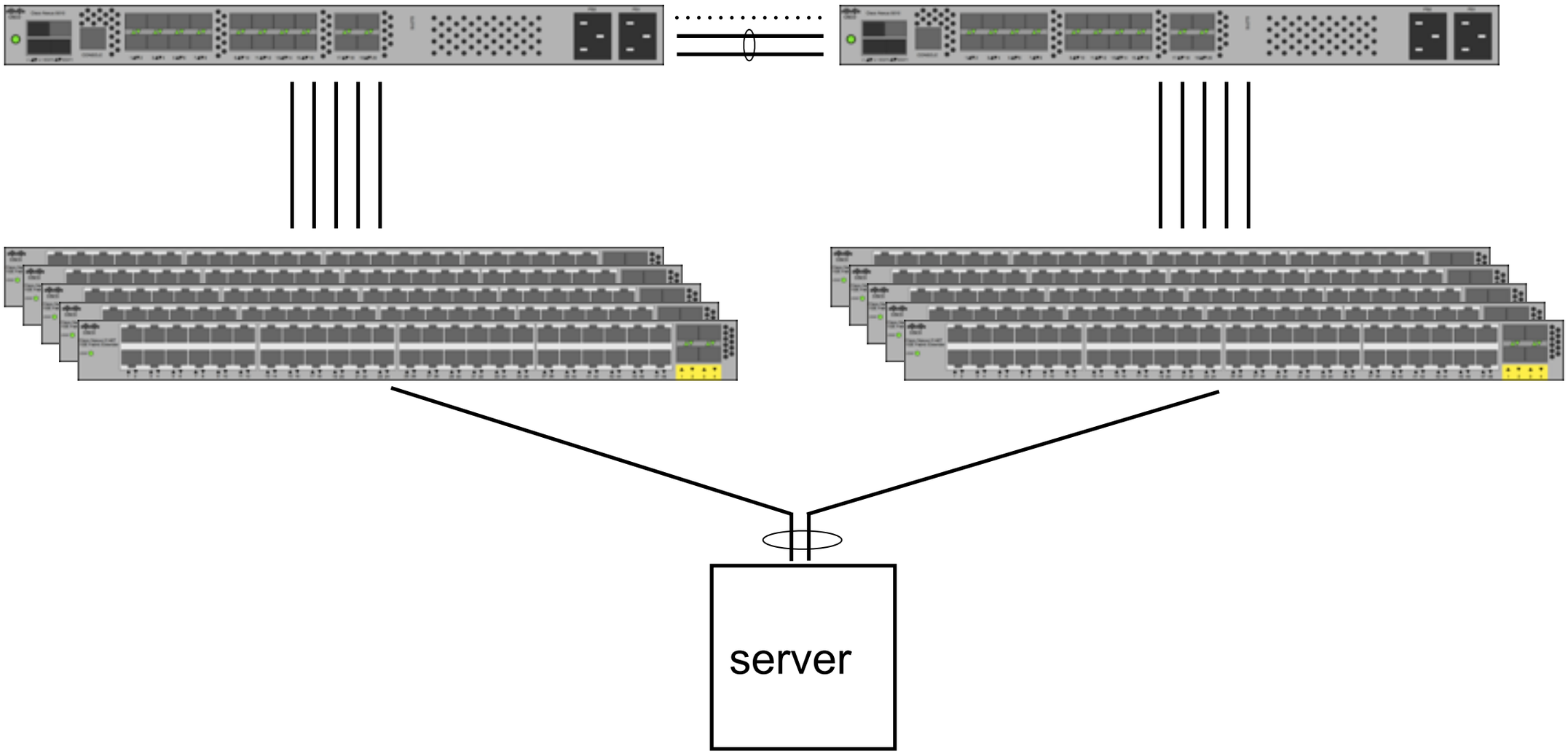
4 x 10G uplink ports

» SFP+

Extension to the 5000 series system

» No operating system

How they are put together



Data Centre Ethernet and Storage

What are we waiting for?

Servers with CNAs (Converged Network Adapters) on board

10GBase-T

Wrapping Up

The Network is providing more services

- IP
- DHCP
- DNS
- NTP
- multicast

Wrapping Up

The Network is providing more services

More services are moving or can be moved on to the network

- Building management systems
- Security systems
- Video surveillance

Wrapping Up

The Network is providing more services

More services are moving or can be moved on to the network

What is already available that can be provided “for free”?

Configuration management
Time
Digital TV

Wrapping Up

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More services are moving or can be moved on to the network

What is already available that can be provided “for free”?

People networks are important too

- Facilities Management, Planning Construction and Design
- External Relations

Thank You

... and questions?