**25/10 – CISCO Network Academy**

**Role Description:**

**Cisco:**

* Takes up the bulk of time
* Has been here for 20years – since the start of the CISCO academy
* Cisco academy trains all the CISCO instructors in NZ
* All Upskill sessions/new tutors come onsite to Ara to train
* On global advisory group for CISCO training
  + Involves a conference call with people from all over the world
  + Ideas suggested get picked up
  + Change how the content is delivered as a result of these conversations
* Expensive to run the CISCO
  + $35-40k per year required from Ara finance
  + Careful planning is needed to get this funding
  + Need to build a use case each year for funding
  + Need to demonstrate Return on investment for the stakeholders (students)
  + Business case developed each year is a one page document
* Lots of background work goes on to keep things running
  + Need to build new equipment each year
* CISCO department is designed to make money for Ara
* The academy runs its own network
  + Doesn’t run on the Ara network
  + Can do things on the tech labs network that would not be ok on the Ara network (due to security)
    - Look after their own security
    - Penetration test done annually (as is Ara, but separately)
    - 50 page security report is generated that needs to be actioned
* Expensive switches and routers are needed
  + Ara network equipment is recycled into tech labs when it is replaced

**VMWARE – Virtualised Computer Servers**

* Net lab allows students to remotely access on-site hardware
  + Not simulated access – it is actual machines that can be accessed from anywhere
* Virtualised machines
  + Sustainable networking
  + Each server runs 100’s of machines
  + Gives the department a sustainability tick

**Putty:**

* Terminal emulator
* Used to configure networks

Likes to play with new toys – keep the job interesting

* Research is hugely important
  + Internet of things, software networking, security
  + Use a lot of the equipment when not teaching to experiment and reaseach

**Security:**

* An external firm looks after security
* Annual probe to test security of the network
* Report shows an vulnerabilities in the network
* Have to fix any errors, and report back on the fix
* Ara Security team look after the Ara network security

**Questions:**

**What is your vision for the department in the next three years?**

* Would like to attract more networking students
* About to get a big marketing injection
  + Have access to the CISCO marketing tool kit
  + Will share the marketing cost between Ara and cisco
* Need more physical space to accommodate students/equipment
  + Moving to S/N block over the next five years to get more space
* Have to convince Ara that the money should be spent in networking
  + Have to prove return on investment
    - What benefit will additional equipment have for students
    - Better equipment attracts more students to the course
* Looking to move away from purchasing hardware, to cloud based networks
  + Virtualised devices

**What issues are caused by having two networks?**

* If students on the tech lab network want to access any content on the Ara network they have to get out onto the internet and come back
  + The separation of the two networks is important for security

**How much reliance on Physical Hardware is there – where does the virtual hardware come in?**

* 300 virtual machines can be supported by six hardware servers
* Some of these physical servers are reaching the end of their lie
* Trying to scale down the physical hardware
  + Can replace those machines with either one big server, or get more smaller ones again
  + Networking needs the actual hardware onsite

**Why does the hardware need to be onsite?**

* Net lab storage is on the main server
  + Can be put onto a smaller server (too big)
  + Cant separate the virtual machines from the storage on the main server, as this causes too much lag time
  + Because the rest of the lab is hardware, there’s a lag for the connection to the virtual machines
* CISCO labs need to be on actual hardware
  + Unavoidable
  + Needs to be stored onsite & cooled
* Selling the CISCO courses internationally
  + Hardware on-site will service students in another country remote accessing the machines
  + Will be able to use Skype ect to talk to students
  + Have to justify the cost to the network

**What is needed in the networking department?**

* Industry connections are solid in networking
  + Could be bolstered across other departments
* Keep in better touch with ex-students
  + This keeps connections going across industry
  + All about the relationships with staff and students
  + Need to teach students how to make connections – success is not just learning the geeky stuff, but learning professionalism, how to create relationships and how you get to spend money

**What is needed to set up the international courses?**

* Courses will be set up as training schemes – individual courses offered rather than an overall qualification
* Will profit from one student per scheme
* Scaling:
  + If more students will need more hardware
  + Need to generate the income to keep buying equipment
* Wouldn’t let the needs of these students interfere with the quality offered to students on-site
* More than 15 extra international students accessing courses remotely would mean that more equipment is required
  + No idea how many will register
  + Can unlock courses from diplomas
  + Extra work is involved in screening candidates
  + Aimed at industry looking to up-skill (no set times)

**What, in your opinion, is the Vision of Ara?**

* To teach remotely really well
* To deiver blended courses
* To deliver remote courses
* Nothing is too hard for remote courses
* Remote delivery needs to be flexible, and done well
  + Need to adapt to the new ways that students are learning.