Providing IT Networks to the researchers - can we support À la carte?

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Providing IT Networks to the researchers - can we support À la carte?

1. À la carte? - reference to research requests
2. Overview of standard network offerings at QUT
3. Examples of current/recent requests
4. The requests that are coming?

À la carte?

À la carte /ælæˈkɑrt/[1] is a French language loan phrase meaning "according to the menu", and used in

- A reference to a menu of items priced and ordered separately, i.e. the usual operation of restaurants (In contrast to a table d'hôte, at which a menu with limited or no choice is served at a fixed price.)
- To order an item from the menu on its own, e.g. a steak without the potatoes and vegetables is steak à la carte

À la carte network?

- Wireless, without the authentication
- Internet access, without the authentication
- Server provisioning, without the firewall with the user as Administrator

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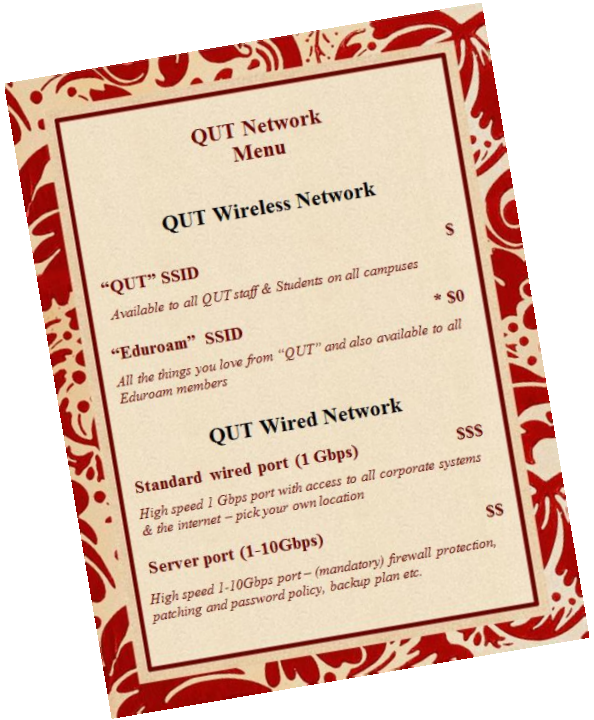
Standard QUT network offering vs À la carte



QUT Network
Menu

QUT Wireless Network

$

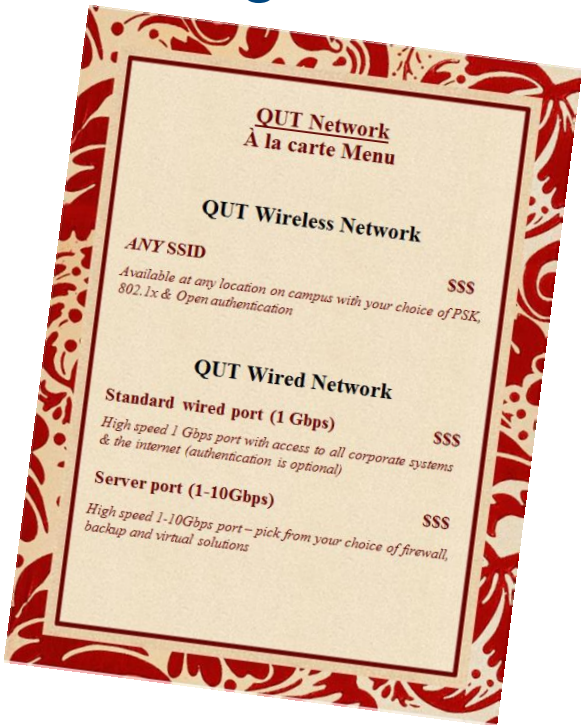
"QUT" SSID
Available to all QUT staff & Students on all campuses
* $0

"Eduroam" SSID
All the things you love from "QUT" and also available to all Eduroam members

QUT Wired Network

Standard wired port (1 Gbps)
High speed 1 Gbps port with access to all corporate systems & the internet – pick your own location
$$$

Server port (1-10Gbps)
High speed 1-10Gbps port – (mandatory) firewall protection, patching and password policy, backup plan etc.
$$



QUT Network
À la carte Menu

QUT Wireless Network

ANY SSID
Available at any location on campus with your choice of PSK, 802.1x & Open authentication
$$$

QUT Wired Network

Standard wired port (1 Gbps)
High speed 1 Gbps port with access to all corporate systems & the internet (authentication is optional)
$$$

Server port (1-10Gbps)
High speed 1-10Gbps port – pick from your choice of firewall, backup and virtual solutions
$$$

How do we approach such requests?

Request further information….

“What are you really trying to achieve?”

“What is the outcome you are looking for?”

Example 1 – Wireless access for robotics

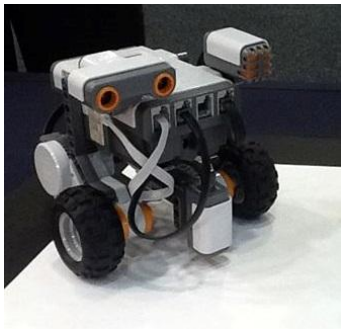
- Requirement
  - Wireless for robots that don't support 802.1x
  - Access required can be specific areas or all of campus
  - Various equipment with specific requirements

Example 1 – Wireless access for robotics

- Possible solutions
  - The obvious – identify alternative devices that support Enterprise authentication
  - Install a specific local wireless network
  - Establish multiple SSID's (per application)

Example 1 – Wireless access for robotics

- Challenges
  - Multiple SSID's (per application)
  - Password policies
  - Support issues arise with unique configurations



Example 2 – Building sensors used in research activities

- Requirement
  - Network connectivity from Building sensors to Corporate Hosts
  - Secure network to protect sensors, yet still connecting to vendor product
  - Scalable solution that can be replicated in other buildings on campus.

Example 2 – Building sensors used in research activities

- Possible solutions
  - Extend the Corporate network from the data centre (e.g. VM solution)
  - Install firewalls in the intended location
  - Just give them an ADSL link like they have always had!

Example 2 – BMS used in research activities

- Challenges
  - Extending the corporate network from the DC introduces many security issues
  - Installing individual firewalls “in the wild”
  - If servers are supported by a research area, concerns around patching policies, backup, maintenance etc.
  - Maintaining redundancy and DR in the solution
  - Outsourced network (e.g. the ADSL link)

A network / service on a researcher's whim!

- "I need wireless access for a short term non QUT user - today"
- "I need to create a web server – oh and I need it on the internet yesterday"
- "We need a high speed link from X location to our space"
- "Your Internet Accounting system needs auth – we have non QUT users?"

The creation of a server/service on demand

- The networking considerations with rapid server/service automation
  - DNS
  - Layer 7 configuration
  - Firewall rules
  - Network segregation

The creation of a server/service on demand

- The server considerations with rapid server/service automation
  - Building a “service” from a server
  - Data Storage
  - User provisioning
  - Identifying the true requirements
  - Monitoring
  - Potential cloud service?

“Can’t we just use the QUT network?”

- Building Management Systems (BMS)
- Digital signage
- Video Conferencing
- Parking System
- Vending machines

Assessing the requests?

How do we go forward?