

**Data Centre**

**Hosting Agreement**

Contents

[1. Introduction 3](#_Toc378673981)

[2. Scope 3](#_Toc378673982)

[3. Provisioning Services 3](#_Toc378673983)

[3.1 Air- Conditioning 3](#_Toc378673984)

[3.2 Connection to Power 4](#_Toc378673985)

[3.3 Rack Capacity and Equipment Size Considerations 5](#_Toc378673986)

[3.4 Free Standing Equipment 5](#_Toc378673987)

[3.5 Fibre requirements 5](#_Toc378673988)

[3.6 Twisted pair Ethernet connections 5](#_Toc378673989)

[4. Provisioning Process 6](#_Toc378673990)

[4.1 Lead Times 7](#_Toc378673991)

[4.2 Costs 7](#_Toc378673992)

[4.3 Cabling Srandard Rack Layout 8](#_Toc378673993)

[4.4 Power Management Options 9](#_Toc378673994)

[4.5 Server position and clearences 10](#_Toc378673995)

[5. Service Availability Targets 11](#_Toc378673996)

[6. Equipment Standards 11](#_Toc378673997)

[7. Conditions 12](#_Toc378673998)

[8. Responsibilities 13](#_Toc378673999)

[9. Agreement 14](#_Toc378674000)

[10. Schedule of Equipment 15](#_Toc378674001)

**Document Control**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Person** | **Change** | **Revision** |
| 24 July 2009 | Stuart Fillmore | Draft finalised | Draft 1.0 |
| 13 Jan 2014 | Mike Stuart | Document revision in progress | Draft 1.1 |

**Document Approval**

|  |  |  |
| --- | --- | --- |
| **Date** | **Person** | **Position** |
| 1/03/2014 | Daniel Pirrotta | ISTS Manager: Network Services |

## Introduction

Information Strategy and Technology Services (ISTS) have established high class data centres at the Mawson Lakes and City West campuses and encourage Divisions and Units within the University to consider hosting their equipment in one or both of these data centres.

Each data centre provides redundant power, air-conditioning and network connectivity along with a sophisticated fire detection and suppression system. The data centres are connected via a redundant, high speed network.

The following sections serve to provide details around the service being offered.

## Scope

The scope of this service includes the following:

* Mason Lakes Data Centre (E1-16).
* City West Data Centre (DP 1-27).
* Floor space (per room matrix) or Rack space (per RU).
* Power supply supported Uninterruptible Power Supplies (UPS) units with redundancy of n+1 and a single backup generator at each location.
* UPS power delivery to individual racks based on equipment requirements and capacity.
* Computer Room Air Conditioning (CRAC) systems with redundancy of n+1 at each location.
* Network connectivity to each rack (or rack pair) with top-of-rack switches at each location.
* Provision for fibre channel for server management and communications.
* Fire detection based on Very Early Smoke Detection Apparatus (VESDA).
* Fire suppression based on FM200 gaseous fire suppression system.
* Management of the underlying network connecting the data centres to each other and the rest of the University.
* ISTS controls access permissions via CARDAX with the pre-requisite that the person has signed the “ISTS Data Centre Access Policy” and completed the “Data Centre induction”.
* Security and all mechanical services are monitored, maintained and administered by ISTS and the Facilities Management Unit (FMU).

In order to ensure efficient and effective management and allocation of the finite data centre resources, requests for equipment hosting must outline the reasons why the equipment is required to be hosted in the data centre and be approved by ISTS.

## Provisioning Services

Scope of Data Centre Services:

# **3.1** **Ai**r- Conditioning

* The output temperature of the CRAC units is set to maintain an operating room temperature of 25deg C. Under certain conditions and areas within the room, temperature may vary between 18deg C and 38deg C on the return.
* Please consider the operational temperature range of the proposed equipment and if in doubt, discuss with Network Services.

# 3.2 Connection to Power

Power connections (plugs) must be compatible with our existing infrastructure and Australian standards.

The Data Centre’s standard is;

* (In rack) low powered equipment is IEC-C13 power sockets (Equipment plug type IEC-C14) with a maximum individual load of 1.2KW per connection.

Other options can be accommodated, but consultation with Network Services will be required in advance and additional costs may be passed on to the client.

* (In rack) medium powered equipment is IEC-C20 power socket (Equipment plug type IEC-C19) which can deliver a maximum individual load of 1.8KW per connection.

|  |  |
| --- | --- |
| IEC-C13_socket | IEC-C20_socket |

Higher powered equipment may require a direct under floor connection; this will require an Australian standard plug type, or the retro fitting of one prior to installation, the connection options is as follows;

* Standard for single phase power under floor at CW is a Clipsal 56C332 Socket (requires a 56p332 plug) with a breaker range between 20 and 32Amps.
* Standard for single phase power under floor at ML is a Clipsal Australian standard 15AMP 3 Pin Socket with a 20 Amp breaker.
* Standard for 3 phase power at CW and ML is a Clipsal 56C532 Socket (requires a 56p532 plug) with a breaker range between 20 and 32Amps.

|  |  |
| --- | --- |
| http://i.ebayimg.com/t/Clipsal-32A-3-Pin-single-phase-socket-56C330-Industrial-outlet-/00/s/MTYwMFgxMjAw/z/XfcAAMXQ82FRF4e1/$%28KGrHqN,%21hcFERqQ,s%28-BRF4e1O9tQ%7E%7E60_57.JPG | http://i.ebayimg.com/00/s/MTIwMFgxNjAw/z/Xr4AAOxy4dNSyK80/$_57.JPG |

# 3.3 Rack Capacity and Equipment Size Considerations

When ordering equipment, please take into consideration Data Centre rack dimensions. If they do not comply please consult with Network Services.

See standard rack information below;

* The standard Data Centre racks are Hallum model HRC4510080,
* They are a standard 19” rail width with a total cabinet width of 800mm.
* Server height is specified in Rack Units to a maximum of 45RU
* The total depth of the rack is 1000mm, but the server will require some free space front and back for cables and clearance from the doors. See section 4.5 “Server position and clearances”

# 3.4 Free Standing Equipment

Some equipment may not be compatible with the data centres standard racking; for example, a self-contained storage array, oversized rack mounted equipment or some other specialized device.

Floor space is at a premium in both Data Centre’s, so discussion with Network Services will be required well in advance to determine if floor space is available and arrange connectivity to existing services.

# 3.5 Fibre requirements

ISTS Data Centres have high levels of fibre connectivity, but in some cases the existing infrastructure may not have sufficient capacity or be suitable. Fibre requirements should be discuss well in advance with Network Services and if additional installation is required, this may be subject to cost recovery.

# 3.6 Twisted pair Ethernet connections

ISTS Data Centres have in rack switching with provision for two or more network connection per server. Network connectivity is supplied by Network Services, but the client will need to communicate their requirements well in advance, so that the required services are in place prior to installation.

## Provisioning Process

The process for requesting hosting services is as follows:



The Data Centre Hosting Request form can be found at <http://www.unisa.edu.au/ists/staff/applicationforms/DCHost4.pdf>

# 4.1 Lead Times

The lead times for provisioning of services can vary due to the need to engage external contractors for some work. Lead time targets are as follows:

* Customer Supplied free standing equipment: 10 working days
* Shared Rack Space (equipment meets standards outlined in section 6): 5 working days
* Shared Rack Space (non-standard equipment): 15 working days

ISTS will endeavour to always provision services as quickly as possible, however the above lead times should be considered the minimum expected times to provision a service.

# 4.2 Costs

* ISTS will bear the costs of establishing and maintaining the data centres and providing shared rack space for a standard in-rack installation.
* Any departure from a standard in-rack installation with two UPS power distributions with a minimum of 8 IEC C13 (10AMP per sockets each) will be borne by the customer.
* Network Services representation and advise will be required for non-standard installations.
* All costs associated with external, non UNISA hosting will be subject to formal Management hosting agreements.

# 4.3 Cabling Srandard Rack Layout

All equipment installed in the data centre must be patched using the ISTS cabling conventions.



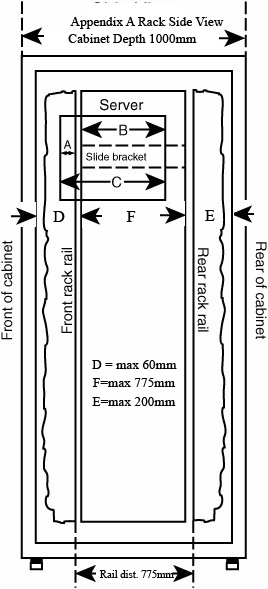
# 4.4 Power Management Options

Please consult with Network Services to verify power requirements and available options.



# 4.5 Server position and clearences

Data Centre rack configuration.



## Equipment Standards

In order to provide the best level of availability, ensure capacity requirements are balanced and hosted equipment poses no safety risk, the following minimum equipment standards must be met by the customer:

* Each device is electrically tested and correctly tagged prior to installation.
* Each device has two power supplies.
* Each device meets Australian safety standards.
* Each device has two RJ 45 100/1000 Mbps Ethernet (or SFP+) ports or and is capable of supporting connectivity to two network switches.
* Each device is rack mountable.
* Each device must fit into the racks provided with adequate room front and back and NOT inhibit the doors from being closed and secured.
* Each device has a blue plate and hostname attached and is clearly visible when the equipment is installed.

If there is a need to host equipment that does not meet the above standards then this need will be reviewed by Network Services on a case by case basis.

## Conditions

In order to provide a trouble free and safe environment ISTS reserves the right to:

* Use audio-visual equipment to monitor and record activities in the data centres.
* Revoke access rights to staff that misuse their access or interfere with equipment other than their own.
* Disconnect equipment (without consultation if absolutely necessary) if the equipment causes disruption to the University environment.
* Request equipment is removed from the data centres if the equipment is deemed to be unsafe.

The customer shall submit requests via the ISTS Help desk for all removal and installation of equipment.

All customers and third party providers requiring access to the data centres must have completed an induction, signed the “Data Centre Access Policy” and be registered with ISTS.

## Responsibilities

The table below outlines the responsibilities of ISTS and the customer.

|  |  |  |
| --- | --- | --- |
| **Element** | **Customer** | **ISTS** |
| Management of all aspects of data centre capacity |  |  |
| Incorporate hosted equipment in ISTS management processes (RFC’s etc) |  |  |
| Communication to equipment owners regarding impact of any work being carried out within the data centres |  |  |
| Hosting request completed and submitted |  |  |
| Hosted equipment hardware support (maintenance and warranty) |  |  |
| Ensure hosted equipment meets the minimum standards |  |  |
| Supply all consumables, rack mount hardware and cables |  |  |
| Unpack equipment before moving it into the Data Centre, do not introduce dust contamination or leave packing or unused components or devices in the Data Centre. |  |  |
| Coordinate the installation/removal or modification of hosted equipment |  |  |
| Provide information for the “Asset Management” |  |  |
| Update “Asset Management Spreadsheet” |  |  |
| Adhere to ISTS cabling standards |  |  |
| Maintenance, security and availability of software installed on hosted equipment |  |  |
| Disaster recovery plan supplied to ISTS |  |  |
| Arrange initial and annual staff data centre access training |  |  |
| Submit requests for installation/removal or other non-administrative work in the data centres |  |  |
| Supervision of customer third party providers in the data centres |  |  |

## Agreement

**The customer:**

Agrees to abide by this agreement and ensure the processes, standards and responsibilities are adhered to.

Confirms the Schedule of Equipment is a true and accurate account of the equipment being hosted as at the date shown below.

**Information Strategy and Technology Services:**

Agrees to provide the services in the manner described by this agreement.

**General**

In the event of a dispute, both parties agree to enter discussions in order to resolve the dispute at the earliest opportunity and in a manner consistent with good conduct. Should discussions fail to reach a satisfactory outcome for both parties the matter shall be referred to the next level of management.

|  |  |
| --- | --- |
| **Division or School** |  |
| **Head of Division or School** |  |
| **Signature** |  |
| **Date** |  |

|  |  |
| --- | --- |
| **Director ISTS (or delegate)** |  |
| **Signature** |  |
| **Date** |  |

## Schedule of Equipment

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Blue Plate** | **Make** | **Model** | **FQDN** | **Primary IP Address** | **Installation Date** | **Data Centre+Rack Ref.** | **Purpose** | **Contact Name** | **Contact Number** |
| *e.g.  Itu123456* | *Cisco* | *C3750G* | *wan-ml-q12.unisa.edu.au* | *10.10.104.251* | *3/2/2010* | *MLDC Q12* | *Wan services switch* | *Daniel Pirrotta* | *X23253* |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |