DON’T TRY TO DO IT ALL YOURSELF.
REDUCE YOUR COSTS AND BOOST YOUR PEACE OF MIND WITH NTT ICT COLOCATION SERVICES.

Colocation makes exceptional business sense. These days, the economies of scale achieved in a purpose built data centre far outweigh the benefits of trying to keep it all under your own roof. At NTT Communications ICT Solutions (NTT ICT), our state-of-the-art, carrier neutral data centres offer significant cost savings and exceptional reliability and security.

CONVENIENT LOCATION
NTT ICT data centres are located just outside of their major metropolitan CBD areas. They are easily accessible by a range of transport options.

MORE OPTIONS FOR YOUR BUSINESS
NTT ICT colocation services come in a flexible range of power and cooling options to support anything from one rack unit devices to the most powerful blade server or storage enclosures. Optional additional services in the data centre include remote hands and feet, managed infrastructure and utility (cloud) services.

NTT ICT DATA CENTRES
Our purpose built data centres and managed colocation services offer significant operational advantages over keeping it in-house. They also offer a lower, fixed cost of ownership.

AVAILABILITY
Many organisations simply grind to a halt when their IT infrastructure is struck by power outages. When your IT operations are collocated within our data centre, it’s business as usual. NTT ICT data centres are built to the highest levels of availability and reliability.

SECURITY
We are ISO27001 certified. ISO27001 certification is a rigorously tested certification for security controls in establishing, implementing, maintaining and continuously improving Information Security Management Systems (ISMS). This means that you are hosting your mission critical system with a data centre provider that you can trust and provide you with peace of mind that your systems are secure. NTT ICT data centres have multiple layers of security including CCTV coverage, 24 x 365 security guards, pre-authorisation ID, electronic swipe card access and locked cages / racks; while giving you and your technology partners the secure access you need.

CONNECTIVITY
NTT ICT data centres have embedded private network and public Internet PoPs, allowing you to seamlessly connect to our award-winning global network infrastructure. Using our facilities offers you significant cost savings on connectivity – you can expect to save 20–40% on the cost of a circuit delivered to our data centre versus an office-based facility.

POWER DENSITY
Modern IT equipment like blade servers and storage are hungry for lots of power in a small space. Yet many IT environments are not built to cope. All NTT ICT data centres are built for power-hungry IT environments. Our data centres can power and cool equipment in measures of up to 12 kW in single rack without operational risk.

ENERGY EFFICIENCY
Our data centres are purpose-built for energy efficiency, and are typically 20–40% more efficient than office-based facilities. This is due to our efficient internal distribution systems, and our connection to the national grid via high voltage cable.
### FACILITY SYDNEY WEST

**Performance Availability**
- **Tier 3 equivalent with uptime target of 99.982%, fault tolerant and concurrently maintainable**
- **From 2 kW to 12 kW in 1 kW increments**
- **16 degrees C to 28 degrees C**
- **30% to 70% humidity**

**Power systems**
- **Electrical authority supply**
  - Redundant 33 kV feeds from national grid and redundant 33/11 kV transformers
  - Redundant, parallel 11 kV cabling reticulated to transformers on each level
  - Redundant A+B supply distributed at 415V Busbar
- **Internal supply**
  - 22 x 2 MVA – 2.5 MVA Diesel Rotary UPS (DRUPS)
- **UPS and standby power**
  - N+1 or N+N
  - A minimum of 24 hours fuel capacity onsite with 24 x 365 fuel supply contract
- **UPS configurations**
  - N+1 or N+N
- **Fuel supply**
  - 22 x 2 MVA – 2.5 MVA Diesel Rotary UPS (DRUPS)

**Security and access**
- **Entrance**
  - Entrance barriers control vehicle entry
  - Revolving access doors with personnel security trap
  - Door access controls on all technical area
- **Access request**
  - Full coverage of exterior, entryways, lifts, stairs and site interior
  - 28-day digital system access with fully staffed security control room
  - Proximity access control system for entrance, exit and lifts
- **CCTV monitoring**
  - Intrusion detection on all doors, glass breakage sensors and motion detectors for CCTV
- **Alarm systems**
  - Articulated truck access to delivery zone.
  - Loading bay, goods lift to all technical floors
  - Secure storage area, staging area
  - Individual pin lockable racks as standard. Biometric also available
- **Building access delivery**
  - Online self-service portal based system
  - Full coverage of exterior, entryways, lifts, stairs and site interior
  - 28-day digital system access with fully staffed security control room
  - Proximity access control system for entrance, exit and lifts
  - Intrusion detection on all doors, glass breakage sensors and motion detectors for CCTV
  - Articulated truck access to delivery zone.
  - Loading bay, goods lift to all technical floors
  - Secure storage area, staging area
  - Individual pin lockable racks as standard. Biometric also available

**Cooling**
- **Design**
  - Condensed water cooling system
- **Distribution**
  - Redundant cooling tower water supply feeds with capacity for 12 hours of operation
  - Redundant condensed water distribution pipe work (ring main type)
- **Cooling tower water supply**
  - Chillers provided with continuous power from diesel-backed rotary UPS system
  - Conventional wet pipe sprinkler system to the ancillary areas
- **Chiller power supply**
  - Fire extinguishers throughout with CO2 extinguishers on the technical floors
- **Control**
  - Three stage multi-point aspirated smoke detection system
  - VESDA in technical space and plant area
  - Multiple connections to each suite and cable tray to all risers
  - Available for satellite and antenna equipment

**Fire detection and suppression**
- **Design**
  - Three stage multi-point aspirated smoke detection system
  - VESDA in technical space and plant area
  - Addressable point type smoke detectors in the ancillary areas
  - Inergen gas distribution
  - Double interlocked pre-action sprinkler system to the technical areas
  - Conventional wet pipe sprinkler system to the ancillary areas
  - Fire extinguishers throughout with CO2 extinguishers on the technical floors
- **Detection**
  - Multi-point aspirated smoke detection system to the technical area and sub floor
  - Addressable point type smoke detectors in the ancillary areas
- **Smoke detection**
  - Inergen gas distribution
  - Double interlocked pre-action sprinkler system to the technical areas
  - Conventional wet pipe sprinkler system to the ancillary areas
  - Fire extinguishers throughout with CO2 extinguishers on the technical floors
- **Gas**
  - Multi-point aspirated smoke detection system to the technical area and sub floor
  - Addressable point type smoke detectors in the ancillary areas
- **Fire extinguishers**
  - Multi-point aspirated smoke detection system to the technical area and sub floor
  - Addressable point type smoke detectors in the ancillary areas
  - Inergen gas distribution
  - Double interlocked pre-action sprinkler system to the technical areas
  - Conventional wet pipe sprinkler system to the ancillary areas
- **Fire extinguishers**
  - Fire extinguishers throughout with CO2 extinguishers on the technical floors

**Telecommunications**
- **Meet Me Rooms**
  - Two diverse, North and South Meet Me Rooms
  - 30+ WAN, Internet and Telephony providers at time of printing
  - Multiple connections to each suite and cable tray to all risers
  - Available for satellite and antenna equipment
- **Carriers**
  - 30+ WAN, Internet and Telephony providers at time of printing
  - Multiple connections to each suite and cable tray to all risers
  - Available for satellite and antenna equipment
- **Cabling**
  - Multiple connections to each suite and cable tray to all risers
  - Available for satellite and antenna equipment
- **Roof space**
  - Multiple connections to each suite and cable tray to all risers
  - Available for satellite and antenna equipment

**Building**
- **Gross area**
  - 41,575 m²
  - 22,043 m² (approximately 10,000 racks)
  - From 3m to 5m from raised floor to ceiling
  - Steel frame with concrete floors and metal faced cladding and glazing
  - Can accommodate 600 mm clear depth access flooring throughout technical areas
  - Typical loading of 7.5 kN/m²
- **Technical area**
  - 22,043 m² (approximately 10,000 racks)
  - From 3m to 5m from raised floor to ceiling
  - Steel frame with concrete floors and metal faced cladding and glazing
  - Can accommodate 600 mm clear depth access flooring throughout technical areas
  - Typical loading of 7.5 kN/m²
- **Technical height**
  - Steel frame with concrete floors and metal faced cladding and glazing
  - Can accommodate 600 mm clear depth access flooring throughout technical areas
  - Typical loading of 7.5 kN/m²
- **Access Flooring**
  - Steel frame with concrete floors and metal faced cladding and glazing
  - Can accommodate 600 mm clear depth access flooring throughout technical areas
  - Typical loading of 7.5 kN/m²
- **Floor loading**
  - Steel frame with concrete floors and metal faced cladding and glazing
  - Can accommodate 600 mm clear depth access flooring throughout technical areas
  - Typical loading of 7.5 kN/m²
- **Passenger lifts**
  - Steel frame with concrete floors and metal faced cladding and glazing
  - Can accommodate 600 mm clear depth access flooring throughout technical areas
  - Typical loading of 7.5 kN/m²
- **Good lifts**
  - Steel frame with concrete floors and metal faced cladding and glazing
  - Can accommodate 600 mm clear depth access flooring throughout technical areas
  - Typical loading of 7.5 kN/m²
- **Parking**
  - Steel frame with concrete floors and metal faced cladding and glazing
  - Can accommodate 600 mm clear depth access flooring throughout technical areas
  - Typical loading of 7.5 kN/m²
- **Public transport**
  - Steel frame with concrete floors and metal faced cladding and glazing
  - Can accommodate 600 mm clear depth access flooring throughout technical areas
  - Typical loading of 7.5 kN/m²

**Building management system**
- **Staffing**
  - Dedicated 24 x 365 facilities management team
  - Monitors all building processes

**Data centre services**
- **Utility services**
  - On-demand storage, backup, virtual machines and networking
  - Operating system or hardware level management for servers, networking and storage
  - Access to highly skilled engineers to provide assistance on site 24x7
  - Public and Private Network connectivity, as well as cloud provider interconnects (e.g. AWS)
- **Managed infrastructure**
  - On-demand storage, backup, virtual machines and networking
  - Operating system or hardware level management for servers, networking and storage
  - Access to highly skilled engineers to provide assistance on site 24x7
  - Public and Private Network connectivity, as well as cloud provider interconnects (e.g. AWS)
- **Remote hands**
  - On-demand storage, backup, virtual machines and networking
  - Operating system or hardware level management for servers, networking and storage
  - Access to highly skilled engineers to provide assistance on site 24x7
  - Public and Private Network connectivity, as well as cloud provider interconnects (e.g. AWS)
- **Tape management**
  - On-demand storage, backup, virtual machines and networking
  - Operating system or hardware level management for servers, networking and storage
  - Access to highly skilled engineers to provide assistance on site 24x7
  - Public and Private Network connectivity, as well as cloud provider interconnects (e.g. AWS)
- **Network services**
  - On-demand storage, backup, virtual machines and networking
  - Operating system or hardware level management for servers, networking and storage
  - Access to highly skilled engineers to provide assistance on site 24x7
  - Public and Private Network connectivity, as well as cloud provider interconnects (e.g. AWS)
- **Cloud services**
  - On-demand storage, backup, virtual machines and networking
  - Operating system or hardware level management for servers, networking and storage
  - Access to highly skilled engineers to provide assistance on site 24x7
  - Public and Private Network connectivity, as well as cloud provider interconnects (e.g. AWS)

**BENEFITS**
- **HIGHLY AVAILABLE**
  - Redundant systems
  - UPS back up power
- **SECURE**
  - Stringent security
  - ISO27001 certified
  - Secure, simple user access
- **CONNECTED**
  - Multiple carriers
  - Diverse meet me rooms
- **HIGH POWER DENSITY**
  - From 2.0 kW per rack
  - Up to 12 kW per rack
- **ENERGY EFFICIENT**
  - Greener power

*NTT ICT Australian Data Centres can have slightly different specifications depending upon location. Our Sales team will be happy to provide accurate specifications on an individual location if needed.*
**FACILITY**

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>SYDNEY EAST</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENERGY EFFICIENT</strong></td>
<td>Tier 3 equivalent with uptime target of 99.982%, fault tolerant and concurrently maintainable</td>
</tr>
<tr>
<td><strong>HIGH POWER DENSITY</strong></td>
<td>From 2 kW to 12 kW in 1 kW increments</td>
</tr>
<tr>
<td><strong>SECURE</strong></td>
<td>Redundant 33 kV feeds via diverse path</td>
</tr>
<tr>
<td><strong>CONNECTED</strong></td>
<td>20 diesel generators in N+2 configuration able to support 32.5 MW of power with 21,375 MW dedicated to IT load</td>
</tr>
<tr>
<td><strong>BENEFITS</strong></td>
<td>On-site diesel tanks to support 24 hours at full capacity with 24 x 365 fuel delivery</td>
</tr>
</tbody>
</table>

| Performance  | Availability  | Tier 3 equivalent with uptime target of 99.982%, fault tolerant and concurrently maintainable |
| Rack power  | Temperature  | From 2 kW to 12 kW in 1 kW increments |
| Humidity  | 16 degrees C to 28 degrees C |
| 30% to 70% humidity  | |

| Power systems  | Electrical authority supply  | Redundant 33 kV feeds via diverse path |
| Internal reticulation  | 11kV via PDU’s  | |
| Internal supply  | 20 diesel generators in N+2 configuration able to support 32.5 MW of power with 21,375 MW dedicated to IT load |
| UPS and standby power  | On-site diesel tanks to support 24 hours at full capacity with 24 x 365 fuel delivery |
| Fuel supply  | |

| Security and access  | Entrance  | Entrance barriers control vehicle entry |
| Access request  | Revolving access doors with personnel security trap |
| CCTV monitoring  | Door access controls on all technical area |
| Alarm systems  | Online self-service portal based system |
| Access request  | Full coverage of exterior, entryways, lifts, stairs and site interior |
| CCTV monitoring  | 28-day digital system access with fully staffed security control room |
| Building access delivery  | Proximity access control system for entrance, exit and lifts |
| Rack  | Intrusion detection on all doors, glass breakage sensors and motion detectors for CCTV |
| Rack  | Articulated truck access to delivery zone |
| Rack  | Loading bay, goods lift to all technical floors |
| Rack  | Secure storage area, staging area |
| Rack  | Individual pin lockable racks as standard. Biometric also available |

| Cooling  | Design  | Analogue addressable fire detection system in all areas with aspirating smoke detection system |
| Distribution  | Analogue addressable fire detection system in all areas |
| Chiller power supply  | Multi-point aspirated smoke detection system to the technical area and sub floor |
| Cooling water distribution  | Addressable point type smoke detectors in the ancillary areas |
| Control  | Inergen gas suppression system in technical areas |
| Fire extinguishers  | Double interlocked pre-action sprinkler system to the technical areas |
| Fire extinguishers  | Conventional wet pipe sprinkler system to the ancillary areas |
| Fire extinguishers  | Fire extinguishers throughout with CO2 extinguishers on the technical floors |

| Telecommunications  | Meet Me Rooms  | Two diverse, North and South Meet Me Rooms |
| Carrier  | Access to existing WAN, Internet and Telephony providers with established POPs in Global Switch Sydney West with capacity for new providers to setup POPs |
| Cabling  | Underground ducts, building service risers and cable trays |
| Roof space  | Minimum of two fibre entry points into Meet Me rooms |
| Roof space  | Multiple riser points to each floor |
| Roof space  | Strict cable management systems |
| Roof space  | Satellite and antennae roof space |

| Building  | Gross area  | 26,000 sqm of gross space |
| Technical area - Suite Height  | Minimum from raised floor: 3.6 m clear height to underside of deepest beam |
| Technical Area - Access Flooring  | 5 m slab to slab height |
| Floor loading  | Can accommodate 600 mm clear depth access flooring throughout technical areas |
| Passenger lifts  | Steel frame with concrete floors and metal faced cladding and glazing |
| Good lifts  | 1 passenger lift |
| Parking  | 1 goods lift |
| Public transport  | Multiple options available in close proximity |
| Building management system  | Facility is 2 km from the financial district and the city centre |
| Staffing System  | Local railway station and tram station is located within walking distance |
| Staffing System  | Bus access is readily available from Harris street |

| Data centre services  | Utility services  | On-demand storage, backup, virtual machines and networking |
| Managed infrastructure  | Operating system or hardware level management for servers, networking and storage |
| Remote hands  | Access to skilled technical resources to provide basic remote hands service on a 24 x 365 basis |
| Tape management  | Tape management including tape rotation service and offsite tape vaulting |
| Network services  | Public and Private Network connectivity, as well as cloud provider interconnects (e.g. AWS) |
| Cloud services  | On-demand public and private cloud services available |

**NTT ICT Australian Data Centres can have slightly different specifications depending on location. Our sales team will be happy to provide accurate specifications on an individual location if needed.**
### FACILITY

<table>
<thead>
<tr>
<th>Availability</th>
<th>Melbourne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uptime target of 99.982% - Tier 3 equivalent fault tolerant and concurrently maintainable</td>
<td></td>
</tr>
<tr>
<td>From 2 kW to 12 kW in 1 kW increments</td>
<td></td>
</tr>
<tr>
<td>Constant 22 degrees Celsius +/- 2 degrees Celsius.</td>
<td></td>
</tr>
<tr>
<td>Relative humidity 50% +/- 15% at control instruments</td>
<td></td>
</tr>
</tbody>
</table>

### Power systems

| Electrical authority supply | Redundant 12.5 kVA cables from switching station and internal 12.5 kVA transformers |
| Internal supply | Redundant A+B supply distributed at 415V Busbar |
| UPS and standby power | Isolated Parallel Bus |
| UPS configurations | N+1 or N+N Diesel Rotary UPS |
| Generator back up | 13 x 1.75 MVA diesel generators |
| Generator fuel capacity | 24 hours minimum fuel capacity onsite 24 x 365 fuel delivery callout |

### Security and access

| Entrance | Secure access gate to on-site car park |
| Access request | Revolving access doors with personnel security trap |
| CCTV monitoring | Online self service portal based system |
| Alarm systems | Full coverage of exterior, entryways, lifts, stairs and site interior |
| Building access delivery | 28-day digital system access with fully staffed security control room |
| Rack | Intrusion detection on all doors, glass breakage sensors and motion detectors for CCTV |

### Cooling

| Design | Redundant, N+1, direct expansion cooling system |
| Distribution | Perimeter and in-row cooling |
| Free cooling | 4 free cooling stacks supplying datacentre floor |
| Control | Close control units provide air conditioned air to technical space |

### Fire detection and suppression

| Design | Analogue addressable fire detection system in all areas |
| Smoke detection | VESDA in technical space and plant area |
| Gas | Proinert IG55 gas distribution |
| Fire extinguishers | Fire extinguishers throughout with CO2 extinguishers on the technical floors |

### Telecommunications

| Meet Me Rooms | Two diverse Meet Me Rooms |
| Carriers | 21 Carriers |
| Cabling | Multiple connections to each suite and cable tray to all risers |
| Roof space | Available for satellite and antenna equipment |

### Building

| Gross area | 17,500 sqm |
| Technical area | 6,000 sqm with 3,000 rack spaces |
| Technical height | 5.8 m from raised floor to ceiling |
| Structure | Concrete tilt slab with dual membrane roof paneling |
| Access Flooring | Can accommodate 900 mm clear depth access flooring in technical areas |
| Floor loading | Typical loading of 14.4 kPa |
| Good lifts | 2 x 8 tonnes |
| Parking | On-site parking for up to 20 vehicles and additional local parking |
| Public transport | Local bus route |

### Building management system

| Staffing System | Dedicated 24 x 365 facilities management team |
| System | Monitors all building processes |

### Data centre services

| Utility services | On-demand storage, backup, virtual machines and networking |
| Managed infrastructure | Operating system or hardware level management for servers, networking and storage |
| Remote hands | Access to highly skilled engineers to provide assistance on site 24x7 |
| Tape management | Option of tape management including rotation and offsite storage |
| Network services | Public and Private Network connectivity, as well as cloud provider interconnects (e.g. AWS) |
| Cloud services | On-demand compute resources from our Enterprise cloud and Sydney cloud |

**BENEFITS**

- HIGHLY AVAILABLE
  - Redundant systems
  - UPS back up power
- SECURE
  - Stringent security
  - ISO27001 certified
  - Secure, simple user access
- CONNECTED
  - Multiple carriers
  - Diverse meet me rooms
- HIGH POWER DENSITY
  - From 2 kW per rack
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