

## Rackspace Data Centres

*Rackspace® has three of the most highly specified data centres available today, built to exacting, rigorous standards and delivering unparalleled security, power, connectivity and environmental control.*



Rackspace provides the world-class infrastructure necessary to keep your servers up and running uninterrupted around the clock. Rackspace has three Data Centres in London which are all engineered with fully redundant connectivity, power and HVAC to avoid any single point of failure, and staffed 24 x 7 by highly trained technical support staff. Security of your mission critical Internet operations is of paramount importance. Multiple levels of security are employed to ensure that only data centre Operations Engineers are physically allowed near your routers, switches and servers.

Security procedures are as follows:

### **No Public Access**

Public access to Rackspace data centres is strictly forbidden. We do not host equipment that we do not own and manage, which obviates the need for anyone but our highly trained Rackspace Engineers to be allowed into the data centre. Because we manage all equipment and are the only ones allowed in the data centre environment, we are able to provide a higher level of service than anyone else in the industry.

## Video Surveillance

Live video surveillance of each data centre facility is monitored 24 hours per day. All entrances to the building as well as the data centre are monitored to ensure that only authorised personnel enter sensitive areas.

## Onsite Security Personnel

Onsite security personnel monitor each data centre building 24 hours per day, seven days per week. The security team are responsible for making sure that only authorised personnel enter the data centre building. Our security personnel provide the first layer of security for access to the data centre.

## Biometric Security

Biometric hand scanners are used to restrict access to each data centre. The biometric security systems represent the second layer of security for access to the data centre. Within the organisation only Rackspace Engineers are authorised to access restricted areas, ensuring the security of hosted systems.

## Pass Cards

In conjunction with the biometric hand scanners, access to each facility is restricted to those who hold a Rackspace pass card. The pass cards are also required for moving from room to room within the data centre. Our security pass card system represents the third layer of security for the data centre.

## Power systems

Each data centre gets its power from commercial utility underground conduits with a 10 minute battery backup in the event of failure. Additionally, we also have multiple diesel generators with full-load capability, which are on standby to provide long-term power in the event of an emergency. Put simply, if the world were to end, the data centres could still function for another 2 days!

- ❏ **UPS Systems** - The power systems are designed to run uninterrupted even in the unlikely event of a total power outage. All staging and production systems in your hosting environment are fed with conditioned UPS power that will run if utility power fails. Our UPS power subsystem is N+1 redundant with instantaneous failover in case the primary UPS fails.
- ❏ **Diesel Generator Systems** - Our onsite diesel generators will automatically start in the event of a power surge or power system failure. The power subsystems are designed to cut over immediately with no interruption in the event of a power failure. Our power systems and our generator systems are regularly tested to ensure that they will function properly in the event of a power system failure.



## Rackspace Network

The Rackspace network has been engineered from the ground up to accommodate the high availability demands of outsourced solutions. The network capacity is currently at 27,155 Mbps aggregate bandwidth.

## Connectivity

Rackspace provides a fully resilient and redundant network infrastructure on which to base your mission critical Internet based operations. Our entirely switched network employs Cisco 6500 chassis based switches running HSRP (N+1 hot failover) to ensure that data can be routed even in the event of device or link failure. Internet connectivity is provided via multiple links to Tier 1 bandwidth providers which, coupled with our Cisco powered infrastructure, enables us to maintain 100% network availability.

## BGP4 Routing

Rackspace runs the Border Gateway Protocol (BGP4) for best case routing. Each packet is evaluated and sent over the best route possible. Because of our redundant network architecture, packets may be sent via alternative routes even if they are being delivered to the same end user. Should one of our providers fail, packets leaving our network are automatically redirected through another route via a different provider.

## Guaranteed packet delivery

Typical peering arrangements rarely include Service Level Agreements (SLAs) meaning that no one is accountable for lost packets at congested exchange points. To ensure network integrity, Rackspace has put Service Level Agreements in place with our various bandwidth suppliers and this enables us to guarantee that all packets will leave our network at full speed.

## Bandwidth Utilisation

The Rackspace UK Network is running at approximately 20% capacity at peak times, allowing us to accommodate even the largest spikes in traffic. As network utilisation reaches 30% we will automatically add more network capacity to ensure that our customers never experience network degradation, even if one of our providers has an outage.

## Network Providers

- ☑ **AboveNet:** AboveNet has a global optical network of 1.5 million fibre miles and are well know for their service, reliability and performance.



- ☑ **Tiscali:** Tiscali has strong European network coverage as well as being present in most of the major US peering points, in particular Tiscali has excellent and diverse local European ISP connectivity.



- ☑ **Level 3:** Level 3 operate one of the largest and most reliable communications and Internet backbones in the world.



- ☑ **Sprint:** Sprint has a global IP network with an excellent reputation for reliability



- ☑ **Verizon:** Verizon has joined forces with MCI to form Verizon Business, a leading provider of advanced communications services for large businesses, government and international organizations. The vision: To create one truly seamless, local-to-global IP network



- ☑ **Cable and Wireless:** Cable & Wireless is one of the world's leading international communications companies. Network World recently ranked Cable & Wireless as having a top performing ISP network backbone delivering 'picture-perfect availability' with zero downtime and perfect uptime.



- ☑ **KPN:** As a leading European telecommunications player, KPN owns a high-quality data and IP network which spans 50 business and financial centres in 22 European countries.



- ☑ **NTT:** NTT's Global IP Network is designed and built exclusively to provide reliable, high availability, high-speed data transmission. Utilising the full bandwidth of a world-class, Tier-1 global network spanning four continents, NTT delivers the global reach, resilience, performance and service levels your business demands.



- ☑ **LINX:** LINX is the largest exchange point globally measured in terms of its network and the internet routes which are directly accessible from its peering LAN. LINX typically provide more direct and better performing connectivity to the end user. Peering allows Rackspace to directly connect to some of the major ISPs for the direct transfer of traffic without having to use a transit provider across the public Internet.

