

LEARNFLEX™ DATA CENTRE



LearnFlex™
▷ is the perfect fit for Learning Management

OVERVIEW

Operitel operates a world-class data centre that guarantees a 99.997% uptime. The Data Centre focuses primarily on Disaster Continuance (DC) and in cases of Force Majeure, on Disaster Recovery (DR) in order to ensure that all LearnFlex instances and associated tools remain available even in extremely unfavorable conditions.

IT INFRASTRUCTURE

Our Data Centre boasts 2 redundant Fiber Optic internet links that are delivered at diverse local carrier entry points and continue through to diverse geographical Backbone Carriers and their respective points of presence.

Each link is guaranteed 50Mb through put with the ability to burst to 100 Mb with little intervention and carrier capacity to expand to several gigabits to accommodate increases in demand.

Each link is connected to separate physical router and firewall infrastructures that are configured for stateful failover ensuring that any and all connections established in the hosted environment continue uninterrupted in the event of link or hardware failure.

The following technologies are currently deployed across the Data Centre:

- 100% Redundant Cisco core switching equipment ensuring that no less than half of our entire network core can fail with zero impact to LearnFlex environments.
- Redundant Cisco Adaptive Security Appliances with intrusion prevention systems (IPS) preserve all LearnFlex sessions even when a complete hardware failure is experienced
- Current high capacity host servers are connected via redundant Gigabit connections and redundant Fiber SAN connections for complete front and back end failover.
- LearnFlex environmental systems are completely clustered to ensure even catastrophic server hardware failure does not interrupt users.

- Multi-Layer logging and monitoring allow for immediate notification of abnormalities with additional trend analysis to help predict and prevent issues for each environment.
- Multi-element environmental monitoring and alerting ensures temperature, airflow, humidity, power and other key indicators stay within optimal parameters.

All Hosting equipment is covered under manufacture direct 4-hour Platinum level complete replacement warranties to ensure failed redundant components are replaced and redundancy is restored expediently.



POWER

A centralized UPS system with in-built power conditioning and monitoring helps ensure the Hosting Centre is not affected by irregularities in grid power delivery and helps maintain a consistency during power outages.

Our datacenter is provided backup power by a primary diesel generator that starts within 4 seconds of loss of grid service, with generation taking place after 30 seconds, and carrying on for a period of 25 minute after return of service. The generating facility keeps enough fuel circulating on site to maintain 100% generator load for 40 hours with a 4 hour delivery contract ensuring availability of replacement fuel.

In the unlikely event that the primary diesel generator sustains a failure or diesel fuel supply is interrupted beyond our effective run window, a backup Natural Gas generator is in place to deliver the same power delivery to our Hosting Centre to ensure continued operation.

COOLING

Five independent air-conditioning systems are used to cool the static free and humidity-controlled server room (40% +/- 5%) in a 3-on/2-off redundant configuration, and keeps the Data Centre running at 68 degrees F (+/- 2 degrees F) to ensure maximum server reliability, while ensuring plenty of backup air conditioning in the event of cooler failure.

DATA AND DISASTER RECOVER

Full daily client-content database backups and 15 minute Transactional backups mean that data can be recovered with a granularity level measured in as little as seconds without data loss.

Backups are copied to tape sets and sent via bonded courier in locked and numbered containers each day with a minimum offsite storage timeframe of 30 days to ensure at least two copies of Disaster Recovery backups are available in the event of a disaster.

The undisclosed bonded offsite storage is a certified Fire Safe Storage facility that is specifically designed for magnetic storage media.

PHYSICAL SECURITY

The Data Centre is located in a 100% access controlled facility that requires data centre staff to have, as a minimum, Canadian Government Enhanced Security Clearance. As well, the server room is enclosed in a steel reinforced 6 inch thick concrete enclosure. A minimum of two electronically controlled ingress points separate the interior space of the Data Center from public access

Ingress and Egress video surveillance offers 100% positive coverage and is recorded for reference.

A Security system complete with motion sensing, fire and forced entry alarm components remains armed and connected to a central monitoring agency 24 hours a day.



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