IBM CANADA LEADERSHIP
DATA CENTRE

Location: Barrie, Ontario – 100 Kilometers from Toronto

With the explosion of data, and the rise of cloud, analytics, mobile and social computing, IT infrastructure has become an engine of innovation – fundamental for delivering the IT services the business and clients demand. No matter what your delivery model, it must be based on a scalable, secure, resilient, optimized IT infrastructure.

As part of IBM Canada’s continued investment in new data centre capacity across Canada, the IBM Canada Leadership Data Centre, our flagship investment in IT infrastructure, offers flexible, comprehensive access to data centre capacity with the resiliency, cost efficiencies and services that are vital for innovation and growth.

This fact sheet provides an overview of the data centre design, features, and service offerings.

Service Delivery Built on Global Best Practices
Whatever the delivery choice – in-house, managed, outsourced, and/or cloud – IBM is well-positioned to be the IT infrastructure partner of choice. IBM manages over 430 data centres, comprising more than 7.4 million square feet of space around the world, including 11 fully managed data centres and 300,000+ square feet in Canada.

Service Offerings
- This facility is designed to provide clients with the efficient, flexible, resilient data centre capabilities they need to innovate and grow through strategic outsourcing partnerships, covering a full range of legacy and new applications and solutions.
- Provides business continuity and recovery services, including synchronous replication, and facilities for work area recovery.
- The IBM Canada Leadership Data Centre serves as a proof of concept of our world-class capabilities in data centre design, which clients can leverage for their own facilities.

Highlights:
- Secure, resilient infrastructure leveraging IBM’s global best practices in data centre design
- Scalable up to 100,000 sq ft of raised floor capacity, in modules, to support clients’ business growth
- Site selected for synchronous replication (within 100 km radius) for mission-critical applications
- LEED Gold certification
- Uses 60% less energy than traditional data centre designs
- Provides flexibility to support higher density servers and virtualized environments
- Dedicated raised floor space for Business Continuity and Recovery Services, and facilities for Work Area Recovery
- Provides the infrastructure required to leverage cloud, big data, social and mobile

Let’s Build A Smarter Planet.
Data Centre Infrastructure Specifications

**Energy-efficient IT approach**
- PUE (Power Usage Efficiency) of the data centre is designed to be approximately 1.29 at full load
- Modular data centre design, expandable without interruption to support future growth
- LEED Gold Certification

**Raised Floor**
- 25,000 sq ft designed to support 3.75 mw of power to the IT load
- Expandable to 100,000 sq ft and 15 mw of power
- Supports high density racks and equipment and provisioned to support water cooled IT equipment

**Security**
- Building and raised floor access restricted to authorized personnel only, secured by an electronic card access system and monitored 7 x 24 x 365 by onsite security guards
- All major entrance ways and the building exterior are monitored via CCTV equipment, including raised floor

**Building Control System**
- Controls and alarms for HVAC and power, security, water detection, fire and smoke detection/protection
- 7 x 24 x 365 monitoring by onsite Facilities Operations Engineers

**Water and Fire Protection**
- Very early smoke detection apparatus (VESDA) smoke detectors
- Water only released in the event of a fire to area where sprinkler head activated
- Leak detection below the raised floor

**Data Centre Design Features**

**At a Glance**
- High availability with N+1 redundancy in all critical electrical/mechanical elements, for continuous operations and confidence in running critical applications
- Designed to support today’s workloads and provide flexibility to support higher density computing and virtualized environments in the future
- Scalable up to 100,000 sq ft of raised floor capacity, in modules, to support your business growth
- Low-risk location ensures resiliency in running mission-critical and multi-site operations
- Infrastructure maintenance can be carried out without any impact to data centre operations
- Physical access to the infrastructure is highly restricted and for selected personnel only
- Designed for high levels of energy efficiency
- Infrastructure specifically designed for cloud, big data, social and mobile technologies

**Power**
- High reliability level: IBM Level 3 / full redundancy (N+1)
- Utility - dual 44 KV feeds with (2) 25.5 MVA transformers
- Generators – (3) - 2.5 MW standby; 48 hours of on-site diesel fuel capacity, can be refueled while operating; 7 x 24 delivery contract in place
- UPS: (4) 800 KVA UPS modules at N+1; wet cell battery backup 15 minutes
- Dual power feeds to server cabinets
- Scalable for future expansion

**Cooling**
- Full redundancy (N+1)
- (2) 560 ton chillers (N+1) and associated closed circuit cooling towers with Water Side Economizer providing 210 days per year free cooling operations at design temperatures
- 50 ton Computer Room Air Handling units

**Networking**
- Dual, diverse conduit paths from two separate service providers (Bell & Rogers) that feed Point of Presence (POP) rooms (A+B)
- Each POP room subdivided to support multiple service providers (Telus, Hydro One, Cogeco and Allstream currently installed in addition to Bell & Rogers)

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**For more information**
You are invited to take a guided tour of the IBM Canada Leadership Data Centre. For more information, please contact your IBM sales representative or visit: www.ibm.com/smarterdatacentre/ca