

City of Winnipeg – Hardware and Software Standards

City of Winnipeg Data Centre Standards

Server Hardware/Operating System

The City uses HP/Intel Windows 2012 Server platforms (with most servers virtualized with VMware) and employs CA Nimsoft to monitor and manage the server environment.

Storage

The City has a SAN environment consisting of HDS Storage Subsystems (AMS2500, HUS150) and Brocade switches to support data storage requirements for the production and development database tiers. IBM's TSM Backup/Archive and Veeam are used for backup and recovery services

Database

The City uses Oracle 11g/12c Standard Edition and Microsoft SQL Server 2008/2012 Standard Edition. The City has implemented a functional database environment that fulfills all application system functional requirements, provides full online back-up, recovery and reorganization facilities including database transaction logging and up-to-the-minute forward recovery, plus timely automated reporting of actual or potential errors or problems. The City conducts database performance measurement and tuning as necessary.

Network

The City of Winnipeg Backbone Network Infrastructure allows TCP/IP data communications between all City departments. This allows approximately 5,000 devices connected through the Backbone Network to be able to communicate with each other, the Internet and with central servers at two corporate data centers. Over 150 remote Sites are connected to the City's Backbone Network at speeds ranging from 100/1000BaseT fiber optic connectivity for large LANs, 10 Mbps for medium sized LANs and 2 Mbps connections for small LANs. Cisco routers and switches are used in the WAN and LAN as well as for VPN remote access. Checkpoint firewall products provide network security.

GIS

The City of Winnipeg's enterprise GIS framework is based on Hexagon's (Intergraph) GeoMedia product suite and Oracle (Standard –Locator) for data storage. The city's Business and Technology division and Data and Application Service's division are responsible for the hosting and management of the Spatial Data Infrastructure (SDI); an enterprise database that acts as the central hub for internet and intranet use by the departments to share spatial data. The city has recently developed the "Winnipeg Map API" which provides a wrapper on the Google Maps API. This API allows departments to develop applications to display data stored within the SDI in a consistent manner and render them graphically using the Google Maps API.

Water And Waste Department Standards

Workstation Configuration

Workstations used throughout the offices of the Water and Waste Department, typically conform to the following standards:

- Workstations:
 - HP ProDesk 600 G3 SFF
 - Intel Core i5 processor
 - HP Z240 workstation
 - Intel Core i7 processor
 - HP ProBook 650 G2 laptop
 - Intel Core i5 processor
- Memory: varies 8GB to 32GB
- Windows 7 or Windows 10
- Microsoft Internet Explorer 11
- Microsoft Office 2010 – Standard Edition

Plant Systems

Currently at the three treatment plants we are running Bailey/ABB Process Control View (PCV) version 5.4. Over the next several years all of the control systems at the plants will be upgraded to Citect SCADA systems, utilizing a Wonderware Historian.

For the collections system we are currently running ClearSCADA 2013 R2.

Lab System

The City is in the process of implementing Thermo Scientific™ SampleManager LIMS™ as its Laboratory Information Management System (go-live target is Q1 2018).