

January 29, 2015

Cloud Computing Audit

Background

Cloud computing can be described as the ability to access a pool of computing resources owned and maintained by a third party via the internet. It is a way of delivering computing resources based on existing technologies such as server virtualisation. The 'cloud' as such is composed of hardware, storage, networks, interfaces and services that provide the means through which infrastructure, computing power, applications and services are accessed by the user on-demand and independent of location. Cloud computing usually involves the transfer, storage and processing of information on the provider's infrastructure which is outside the control of the customer.

Cloud computing services can often be set up quickly, are flexible and scalable, and relatively commitment-free. Common cloud-based activities include storing photos and videos online, using online applications such as Google's Office suite or Microsoft Office Live, using webmail like Gmail or Hotmail, storing computer files online or backing up files online using services such as Google Drive.

Scope

The audit objectives were to evaluate the City's efforts to adopt cloud computing technologies and to review any existing cloud provider contracts for compliance with applicable standards. Furthermore, the objective was to ensure best practices are met and standards are established to protect the City's data. Work included:

- Review of existing cloud provider contract(s);
- Review adopted standards\best practices;
- Working with key departments to identify relevant roles related to cloud computing;
- Identify inventory of cloud services; and
- Provide guidance in establishing a cloud strategy\framework.

Conclusion

Cloud computing is an emerging technology and will expand going forward, departments at the City, led by IT, are proactively working together on a strategy and framework for cloud computing. The audit found that management is using proper standards that will lead the City to proper and safe cloud computing.

The more significant findings and recommendations were:

- **Continue establishing a Cloud Computing Framework and Strategy:** IT has taken the initiative of ensuring alignment of a cloud strategy with business needs to ensure a cloud computing framework and strategy is set up and continually updated as this

emerging solution is applied at the City. The CIO is assembling a group to set up a framework and next steps to ensure a coherent cloud strategy is in place that aligns with business needs.

- **Educate business units on cloud solutions and privacy requirements:** There is a need to educate business units on how to deal with cloud solutions. To ensure departments employ a consistent and comprehensive approach in considering cloud solutions, the CIO should send a communication to City employees with step-by-step instructions on what to do when considering a cloud solution. The communication should include a general approach as well as incorporation of existing City of Vancouver documents.

Management has agreed to work on strategies to address concerns around security and privacy and education of business units on cloud computing.