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Panel on Information Technology and Broadcasting

Meeting on 14 May 2012

Background brief on development of Government Cloud Platform

Purpose

This paper summarizes previous discussions by Members on the development of the Government Cloud Platform (GovCloud).

Background

2. To maximize the synergy and cost-effectiveness of the information technology (IT) plans of bureaux/departments (B/Ds), and taking account of industry and international developments in IT adoption best practices, the Office of the Government Chief Information Officer (OGCIO) formulated in 2010 a Pan-government IT Strategy[1] (the Strategy). Under the Strategy, the Administration will progressively re-provision the central IT services in Government through adoption of Cloud Computing[2] technology to support a number of common services centrally developed by OGCIO. A GovCloud environment will be established and made available to B/Ds to facilitate them to execute their own IT-enabled change initiatives in a more agile, cost-effective and collaborative manner. This flexible redeployment of IT

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[1] The Strategy has five dimensions, namely, governance on IT investments, IT-enabled business transformation, information and data management, technology architecture and infrastructure, and development of the Government IT profession. It provides the overarching IT direction for reference by B/Ds for fulfillment of their policy objectives and managing their IT portfolios. It also made recommendations on a number of IT initiatives to be implemented centrally.

[2] Cloud Computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. Cloud Computing comprises three layers from a user perspective: Software as a Service, Platform as a Service and Infrastructure as a Service.

resource and workload can also reduce overall carbon footprints and environmental impact. The adoption of the Cloud Computing Model can help meet public demands and community expectations on e-government services and reap the benefits of emerging technologies.

3. The proposed GovCloud environment will comprise the following three elements:

(i) "In-house Private Cloud" owned and operated by the Government;

(ii) "Outsourced Private Cloud" comprising facilities dedicated to the Government in secure data centres operated by contractors; and

(iii) "Public Cloud" provided by contractors offering services for use by the public.

4. According to the Administration, the initial phase of the development of GovCloud will cover infrastructure services over five years supporting the development and hosting of common e-government services, such as electronic information management and e-procurement services, for shared use by all Government B/Ds. The Administration expects that more than 30 B/Ds will join the initial phase. The infrastructure services of GovCloud are expected to be put to production use by the end of 2013. The estimated 5-year total investment of the initiative is about $242 million. The initiative will involve creation of 4 time-limited posts for a period of three years, including 1 Senior Systems Manager, 1 Systems Manager and 2 Analysts/Programmers, to coordinate and manage the initiative and related service procurement and contract management. The Administration will adopt an outsourcing approach for implementing the GovCloud. It will generate demands for various types of IT professional positions and services, including data centre hosting, operation and management, project management, IT system integration, as well as application development, maintenance and support services.

Previous discussions

Panel on Information Technology and Broadcasting

5. At the meeting of the Panel on Information Technology and Broadcasting (ITB Panel) on 13 June 2011, members noted that the Administration had formulated a timetable for the adoption of the cloud computing model in Government. Some members had expressed concerns

about the impact on the funding provision and procurement plans for IT equipment and services for schools and non-government organizations (NGOs).

6.   The Administration advised that the classification of items into capital and operating expenses would remain unchanged under a Cloud Computing Model.   The impact on funding and procurement plan for schools and NGOs would be minimal.   Moreover, the Administration would adopt a progressive approach in adopting the cloud computing model and there would not be any cut-off date for all systems to migrate to the cloud computing model.

7.   Some members were also concerned about the issue of data privacy and security arising from the outsourcing of the hosting infrastructure.   The Administration advised that B\Ds were required to conduct information security and data privacy assessments before outsourcing the hosting infrastructure.   With enhanced data security posture, more hosting infrastructure of Government data could be outsourced.

8.   At the meeting of the ITB Panel on 20 October 2011, some members opined that Hong Kong had lagged behind other countries in the development of cloud computing.   They urged the Administration to expedite the implementation of its GovCloud strategy.   They also enquired if the Administration would cut its IT staff upon implementation of the strategy.

9.   The Administration advised that the Government had already set out a strategy for transition to cloud computing over the next five years.   As many countries that were advanced in IT development had yet to devise a cloud strategy, Hong Kong was by no means lagging behind other countries in developing its own cloud strategy.   The Administration had no plans to cut its IT staff with the implementation of the Strategy.   On the contrary, more IT manpower would be required to undertake new work.   The Government would continue to outsource IT projects and acquire the services of contract IT staff to meet rising demand.

Council meeting

10.   At the Council meeting on 6 July 2011, Hon Andrew LEUNG raised a question on, inter alia, the information security risk of adopting cloud computing by the Government.   The Administration advised that it had established comprehensive security regulations, policies, and guidelines on information security to ensure that when B/Ds launched their IT systems and services, they had the appropriate security risk management in place and they could meet the Government's information security requirements. In adopting cloud computing technology to re-provision Government central IT services, the Administration would ensure compliance with all related regulations,

policies and guidelines.

Recent developments

11.   At the meeting of the ITB Panel on 12 April 2012, the Administration briefed members on a pilot e-Procurement programme. Panel members noted that in order to achieve economy of scale, the wider rollout of e-Procurement would be in the form of a shared service riding on the Government cloud platform, which would support other shared services such as collaborative working and electronic record keeping.

12.   At the special meeting of Finance Committee to examine the Estimates of Expenditure 2011-2012 on 7 March 2012, Hon Andrew LEUNG and Dr Hon Samson TAM raised questions on the financial provision and the implementation of the GovCloud programme. The Administration advised that implementation of the initial phase of the GovCloud was proposed to be funded by the Capital Works Reserve Fund. In 2012-2013, the emolument of civil service staff for the coordination, management and implementation of the programme would be about $3 million.

Latest position

13.   The Administration will brief the Panel on the proposal for implementing the initial phase of GovCloud, prior to presenting a financial proposal to FC in June 2012 for approval.

Relevant papers

Information paper provided by the Administration for the Information Technology and Broadcasting Panel meeting on 13 June 2011
http://www.legco.gov.hk/yr10-11/english/panels/itb/papers/itb0613cb1-2407-3-e.pdf

Background brief prepared by the Legislative Council Secretariat on e-Government programmes for the Information Technology and Broadcasting Panel meeting on 13 June 2011
http://www.legco.gov.hk/yr10-11/english/panels/itb/papers/itb0613cb1-2407-4-e.pdf

Minutes of Information Technology and Broadcasting Panel meeting on 13 June 2011
http://www.legco.gov.hk/yr10-11/english/panels/itb/minutes/itb20110613.pdf

Information paper provided by the Administration for the Information Technology and Broadcasting Panel meeting on 11 July 2011
http://www.legco.gov.hk/yr10-11/english/panels/itb/papers/itb0711cb1-2646-3-e.pdf

Background brief prepared by the Legislative Council Secretariat on e-Government programmes for the Information Technology and Broadcasting Panel meeting on 11 July 2011
http://www.legco.gov.hk/yr10-11/english/panels/itb/papers/itb0711cb1-2646-4-e.pdf

Minutes of Information Technology and Broadcasting Panel meeting on 11 July 2011
http://www.legco.gov.hk/yr10-11/english/panels/itb/minutes/itb20110711.pdf

Information paper provided by the Administration for the Information Technology and Broadcasting Panel meeting on 20 October 2011
http://www.legco.gov.hk/yr11-12/english/panels/itb/papers/itb1020cb1-38-1-e.pdf

Minutes of Information Technology and Broadcasting Panel meeting on 20 October 2011
http://www.legco.gov.hk/yr11-12/english/panels/itb/minutes/itb20111020.pdf

Hon Andrew LEUNG's question on "information security" at the Council meeting on 6 July 2011 and the Administration's reply
http://www.legco.gov.hk/yr10-11/english/counmtg/hansard/cm0706-translate-e.pdf

Special meeting of the Finance Committee to examine the Estimates of Expenditure 2011-12 on 21 March 2011 — Administration's replies to Members initial written question (serial no. 0747)
http://www.legco.gov.hk/yr11-12/english/fc/fc/w_q/cedb-ct-e.pdf

Special meeting of the Finance Committee to examine the Estimates of Expenditure 2011-12 on 21 March 2011 — Administration's replies to Members initial written question (serial no. 0130)
http://www.legco.gov.hk/yr11-12/english/fc/fc/w_q/cedb-ct-e.pdf

Council Business Division 1
Legislative Council Secretariat
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