Modernizing the public sector through the cloud

Progress Update on South Africa

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Background and Introduction

- A report was commissioned by the Microsoft Foundation and the South African Microsoft Office in 2016.
- The report is specifically designed to support development of a cloud policy, strategy and implementation in South Africa.
- Interviews were conducted with Chief Information Officers (CIOs) at national and provincial level and members of the Government Information Technology Council (GITOC).
- Based on these and other insights:
  - The “Why” for cloud computing in the public sector was revealed.
  - Global best practices on use and implementation of cloud in the public sector were identified.
  - The current status and ‘implementation and policy gaps’ were identified.
  - 7 recommendations, pertaining to South Africa’s public sector were therefore developed.
- Today, we follow the progress and state of affairs in South Africa around these recommendations.
The 7 recommendations

- Establish a dedicated Cloud Champion
- Implement and enforce open and interoperable standards to government sector procurement
- Improve the Availability and Quality of Broadband Infrastructure
- Develop and implement a cloud computing policy framework for the SA public sector
- Adopt best practices to develop security framework for cloud computing services
- Expand data classification guidelines to include cloud computing
- Position cloud as a solution to skills shortages

Why ....

- **Global Best Practice**: A designated entity that spearheads all cloud related policy developments
- **Centralised procurement**:
  - Provides **economies of scale**
  - Can be a **viable tool to rationalise ICT spend** in the public sector as per Treasury’s objective
  - Potentially **avoid vendor lock-in and non-interoperable solutions**
- **Broadband**:
  - Promotes **widespread adoption** of cloud computing in government
  - Enables E-government
  - Improves public service delivery
- **Ensures even/consistent adoption** of cloud in South Africa
- **A central security framework** that is applied across all departments ensures consistency of approach to cloud and avoids fragmentation caused by custom requirements and implementation
- **Improves stakeholder confidence** in cloud computing
- **Cloud services** have the potential to bridge some of the skills shortages by providing user-friendly, cost-effective solutions to the current skills deficit.

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Establish a dedicated Cloud Champion

**Proposed Actions**

- SITA will need to
  - **Promote** government wide adoption of cloud computing
  - **Develop, oversee and enforce** standards and vendor certifications
  - **Provide support and resolve** any cross-organizational issues re: cloud
- And in line with this...
  - The champion could be a **special entity** like the G-cloud in the UK
  - SITA **collaborates** with relevant entities such as the DPSA, DTPS, State Security and SITA
  - Adopt and communicate an **official position on cloud computing** in the public sector
  - Government **acts as an anchor tenant** for the public sector

**Overview/Justification**

- **SITA is still defining its role and position** on cloud adoption in the public sector
- **Envisaged role** is for SITA to move from playing in the transactions role to “value add” role
- Has however, **communicated** that SA government will adopt cloud in the public sector the extent to which is not yet clear
### Recommendation

- Implement and enforce open and interoperable standards to government sector procurement

### Proposed Actions

- Centralize cloud procurement, define compliance parameters and procedures
- Expand the current MIOS interoperability framework to cover cloud
- Propagate open standards for procurement
- Appoint dedicated compliance overseer for procurement including CC
- Develop uniform and transparent guidelines for vendor certification and compliance
- Understanding that there is large sunk cost that has been made in existing systems and that the process is gradual starting with integrating non-critical process, as it works towards a hybrid model

### Current Status and Progress in South Africa

**Overall Status**

<table>
<thead>
<tr>
<th>Progress Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No/Very Little Progress</td>
<td>No progress in expanding existing standards (MIOS)</td>
</tr>
<tr>
<td>Notable progress made but more work still needed</td>
<td>No new standards have been defined or implemented for cloud procurement</td>
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<tr>
<td>Significant progress made</td>
<td>However, has entered into partnership with Microsoft to standardize Office 365 across all government departments</td>
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<td></td>
<td>Developing a blue print to govern the deployment and management of cloud applications</td>
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**Overview/Justification**

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Progress Review for South Africa (3/7)

Recommendation

Improve the Availability and Quality of Broadband Infrastructure

Proposed Actions

- **Finalize** the implementation of SA Connect Policy in order to drive the successful adoption of cloud computing services within the public sector
- **Rationalize** state resources to avoid duplication
- **Cooperate** with the private sector and leveraging existing infrastructure to expand BB access
- **Finalise** the allocation of spectrum for the digital dividend in order to facilitate the expansion of LTE mobile broadband services

Current Status and Progress in South Africa

**Overall Status**

- Implementation of SA Broadband Policy implementation is **in progress**
- The proposed deployment of a wireless open access network (WOAN), which it says will be “a public-private sector-owned and -managed consortium” **remains contentious**
- **Allocation of spectrum** for the digital dividend which is critical for the deployment of LTE mobile services **remains in a state of limbo**
- **Sporadic** deployment of cloud enabled e-services being rolled in major cities that already enjoy widespread connectivity

**Overview/Justification**
Develop and implement a cloud computing policy framework for the SA public sector

Recommendation

Proposed Actions

- Develop a dedicated cloud computing policy for the public sector
  - Should include: public information classification for cloud, security standards for provisioning cloud, vendor compliance requirements, prioritising cloud in the national ICT agenda and recognising cloud as the preferred hosting platform
- Adapt the norms and standards framework to include cloud services as a standard
- Finalise the National ICT Policy framework and provide future roadmap and include cloud computing

Current Status and Progress in South Africa

Overall Status

Overview/Justification

- Development of the cloud policy for government is in progress
Security of government data is a key strategic focus for SITA - **Update MISS policy** to include cloud computing

- **Map data security requirements** to the published data classification for cloud to ensure adequate protective measures are in for each category of data in the cloud

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**Current Status and Progress in South Africa**

**Overall Status**

- Existing security standards have not yet been expanded to include cloud computing
Recommendation

Expand data classification guidelines to include cloud computing

Proposed Actions

- **Customize Archiving Act legislation** to also address the context of using cloud computing
- **Assess impact levels for information against three criteria:**
  - Confidentiality – the risk of an information asset getting into the hands of someone it should not.
  - Integrity – the risk of having the ability to modify an information asset that they should not.
  - Availability – the risk of someone, or something, preventing access to an information asset by legitimate users

Current Status and Progress in South Africa

**Overall Status**

- Data classification guidelines have not been expanded to include cloud computing

**Overview/Justification**

- Data classification guidelines have not been expanded to include cloud computing
Consider adopting third party cloud computing services as a solution to the skills issue and source of ready access to other advanced IT skills.
Thank You

Questions/Comments?

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