



DPC/G3.1

ACROSS GOVERNMENT POLICY

Cloud Services Information Sheet

Introduction

Cloud services present many opportunities, including the potential to reduce electronic storage and internal ICT capital investment requirements.

For any business transformation project, standard considerations and processes apply. These include project planning, technical specifications, budget, risk, etc.

For cloud services, there are additional considerations. This series of Cloud Services Guidelines articulates those considerations. Consider these Guidelines alongside your normal processes.

Definition

There are many definitions of cloud services. Much of the information in these Guidelines is taken from the US Government's [National Institute of Standards and Technology](#) (NIST).

The South Australian Government's definition of cloud services as per the [Cloud Services Policy](#) is:

“A cloud service allows users of ICT to access a service through a network without the need to acquire, own, and operate dedicated infrastructure, software and facilities.”

Characteristics

According to NIST, the five key characteristics of cloud services are:

- *On-demand self-service* – where capabilities can be provisioned automatically without human intervention
- *Broad network access* – as capabilities are available and able to be accessed across different platforms such as desktops, laptops, tablets and mobile phones
- *Resource pooling* – where providers pool their physical and virtual computing resources dynamically across multiple customers
- *Rapid elasticity* – as capabilities can be provisioned and released elastically, providing the ability to scale upward or downward with demand
- *Measured service* – where the use of resources at various levels (including customer) can be controlled and measured.

Service Models

There are three cloud service models:

- *Software as a Service (SaaS)* – providers' applications running on cloud infrastructure are accessed through thin-client (eg web browser) or program interfaces
- *Platform as a Service (PaaS)* – customer-created or purchased applications are deployed onto a provider's cloud infrastructure
- *Infrastructure as a Service (IaaS)* – computer infrastructure (processing, storage, networks etc) are provided to the customer, to deploy their own software applications.

Deployment Models

There are typically four ways that cloud models are deployed:

- *Private cloud* – cloud infrastructure is provisioned for exclusive use by a single organisation comprising many consumers
- *Community cloud* – cloud infrastructure is provisioned for exclusive use by a community of consumers
- *Public cloud* – cloud infrastructure is provisioned for open use by the general public
- *Hybrid cloud* – cloud infrastructure is a composition of two or more distinct cloud infrastructures.

References, Links & Additional Information

There are many resources that provide additional information, checklists and advice on cloud computing. Appendix A provides a selection of these resources and subject areas that they address.

Document control

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Appendix A – Additional References

The following resources provide information, checklists and advice (primarily) in the subject areas indicated.

	Overview	Security	Business	Data	Procurement	Finance	Legal	Risk	Network	Information & Records Management
NIST Definition of Cloud Computing	✓									
Cloud Computing Security Considerations , [ACSC] – risk-based approach to assessment of the viability of using cloud services	✓	✓	✓	✓				✓		
Cloud Computing Security for Tenants , [ACSC] - risk-based approach to assessment		✓		✓				✓		
ASD Certified Cloud Services , (ACSC) – list of Australian Government certified cloud service providers					✓					
Negotiating the Cloud – Legal Issues in Cloud Computing Agreements , Australian Government Department of Finance			✓				✓			
Security and Resilience in Governmental Clouds , [ENISA] - decision-making model to drive identification of most suitable architectural solution		✓	✓				✓		✓	
Cloud Computing Risk Assessment , [ENISA].- risks assessment on cloud computing business model and technologies		✓					✓	✓		
Advice on managing the record-keeping risks associated with cloud computing , Australasian Digital Recordkeeping Initiative [ADRI]										✓
Cloud Computing and Information Management , National Archives of Australia										✓