

Government Private Cloud Overview

Introduction

The Ministry of Information and Communications Technology (MoICT) operates the Private Cloud at the National Information Technology Center (NITC) and it is a part of the Secure Government Network (SGN) which provides it with more secure and reliable environment to run and operates on.

Cloud computing is a general term for the delivery of hosted services over the network, enable the data center to evolve from a fixed environment, where applications run on dedicated servers, toward an environment that is dynamic and automated.

The government of Jordan decided to build consolidated data center that is powered by cloud computing Technology, and is linked to over 100 government entities via a Secure Government Network.

Benefits:

Cloud computing boasts several benefits for government entities:

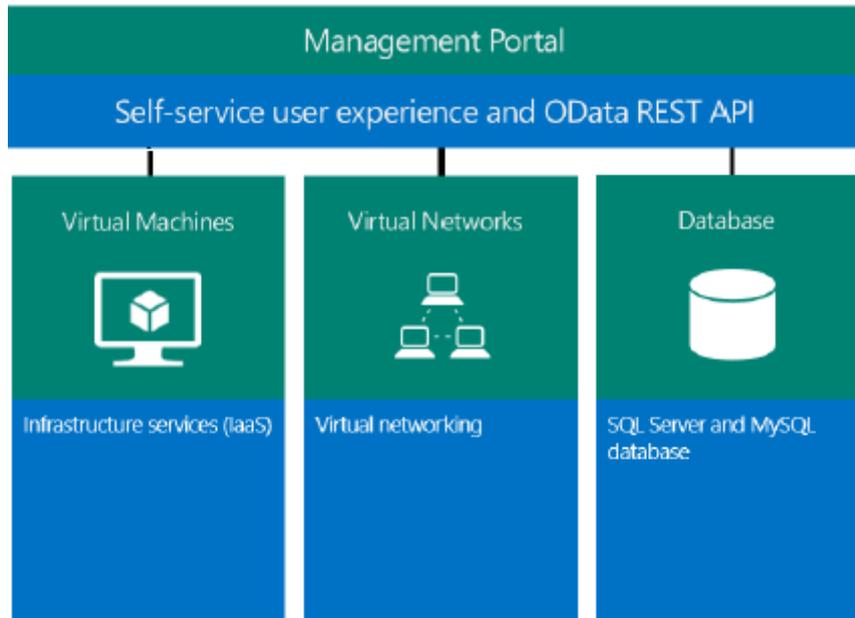
1. Build Virtualized data center within one hour. This will eliminate the procurement process to build Data center
2. Can scale up as computing needs. This eliminates the need for massive investments in local infrastructure and not use
3. Less of a requirement for capital expenditure, and operation cost
4. Speed-up the e-government implementation, because it will provide the infrastructure needed to develop e-services.

The GPC serve all SGN entities with the following services:

- 1- Ready services with covered licenses:
 - Virtual Machines as a Service:
 - Windows Server 2012 R2
 - Windows Server 2008 R2
 - Databases as a Service:
 - SQL Server 2012

- SQL Server 2014
- MySQL 5.1
- Virtual Network as a Service

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The Private Cloud stack is based on Microsoft Windows Azure Pack (WAP), including the following technologies:

- Windows Server 2012 R2 Hyper-V
- Hyper-V inbox Network Virtualization Gateway
- System Center 2012 R2 Virtual Machine Manager
- System Center 2012 R2 Operations Manager
- System Center 2012 R2 Orchestrator
- System Center 2012 R2 Data Protection Manager
- Windows Azure Pack with resource providers for Virtual Machines, Databases, Virtual Networks.

These technologies in alignment with the virtualization layer (Hyper-V), provides the following functionalities on the Private Cloud:

- Manage the cloud's compute, network, and storage resources (Virtual Machine Manager) by allowing datacenter administrators to define the shared pooled resources, and configuring their re-usable artefacts (such as VM templates, VM networks, IP pools, etc...).
- End-to-end monitoring the cloud's resources (Operations Manager) for health and performance information. Performance Resource and Optimization (PRO) ties specific SCOM alerts to remediation actions in VMM.
- Backup and Restore resources on the cloud (Data Protection Manager).
- Offer Self-Service access for internal tenants to consume the cloud's services by subscribing to plans (Windows Azure Pack and Orchestrator).
- Allow authentication of the Self-Service Portal by user accounts residing in the existing AD DS domain.