



Summary of Principles



Part 8 of 8 – Application Hosting and Cloud Strategy



This is part 8 of an introductory series of documents intended to assist your organisation in defining your Application Hosting and Cloud Strategy. Your organisation may already have such a strategy, in which case these documents will hopefully confirm you are on the right track or they may identify challenges your organisation faces.

Summary of Principles

The table below provides a summary of all the Application Hosting and Cloud Strategy principles established throughout this document. Links are shown to following 5 generic CTO principles:

1. Take out Cost;
2. Reduce the number of moving parts;
3. Think like a user;
4. Make the business great (and sustainable!);
5. Be Cyber resilient.

	Take out Cost	Reduce the number of moving parts	Think like a user	Makes the business great (and sustainable!)	Be Cyber resilient
The sustainability credentials of cloud service providers will be considered as part of the selection criteria for new Services.				✓	
Public Cloud services from Hyperscale providers will be preferred as these services consistently exceed SLAs.				✓	
Service Levels and associated penalty and credits will be considered as part of the selection criteria for new Services.	✓			✓	
Your organisation will use Microsoft Azure, AWS, IBM Cloud etc as the primary platform for PaaS & IaaS Public Cloud deployments		✓			
Your organisation will develop and maintain an “exit plan” that will detail how services could be migrated in the event that your existing Hyperscale provider’s pricing becomes uncompetitive or services are scaled back.	✓			✓	
Infrastructure as code principles will be adopted to aid deployment and portability.		✓		✓	
Reference architectures for cloud deployments will include how to correctly secure services.					✓
Your organisation will govern and scrutinise the security of cloud based solutions, it will not be assumed that by deploying in the Public Cloud a service is automatically secure.					✓
New Public Cloud (e.g. Azure, IBM Cloud) based solutions will consider bandwidth requirements and will drive scaling up the private connection between datacentres			✓	✓	

	Take out Cost	Reduce the number of moving parts	Think like a user	Makes the business great (and sustainable!)	Be Cyber resilient
and infrastructure (e.g. ExpressRoute) to ensure existing solutions are not affected by increasing demand.					
Where service assurance and performance of a system is “mission critical” to your organisation’s operations, on-premise deployment in a physically segregated environment will be preferred.				✓	
Public Cloud deployment is suitable for services that have high availability requirements.				✓	
Suitability for a service to be deployed in the Public Cloud will not be judged on individual component level SLAs but will be based on an aggregated view of components in high availability configurations.				✓	
Deployment patterns that leverage Public Cloud based failover for on-premise solutions (or individual components of solutions) and vice versa will be explored.				✓	
Cloud deployment will be preferred to better manage the security and supportability risks associated with obsolete Infrastructure.					✓
Your organisation will consume database PaaS services in the Public Cloud when re-platforming to reduce the database (e.g. SQL Server) licensing and support overhead.	✓	✓			
All infrastructure replacement/refresh projects will consider the application implications and will include application remediation in scope.		✓			
Your organisation will continue to drive out physical deployments, preferring virtual/Private Cloud deployment.	✓	✓			
Your organisation will scale back strategic data centres through Public Cloud deployments to ease capacity issues.				✓	
Your organisation will not consider IaaS Only models of application deployment in the Public Cloud (as benefits are more difficult to derive) but will consider IaaS deployment where PaaS services (e.g. Storage, Database) are consumed alongside to consolidate and simplify the application stack.		✓		✓	
Your organisation will define and deploy a “virtual data centre” in the Public Cloud (comprising of virtual network, monitoring and security frameworks) to host IaaS components and integrate with on-premise.				✓	
Your organisation will measure the maturity of SaaS offerings during selection to ensure the way they are deployed and consumed best leverages cloud benefits.			✓		

	Take out Cost	Reduce the number of moving parts	Think like a user	Makes the business great (and sustainable!)	Be Cyber resilient
Whenever an application requires remediation to address infrastructure component obsolescence, re-platform Cloud migration options will be considered alongside in-situ on-premise remediation. Where effort is comparable Cloud deployment will be preferred.		✓			
Deployment patterns (or reference architectures) for applications will be developed and will form part of the design governance process, these will cover on-premise, Private Cloud, Public Cloud and Cloud Native models		✓		✓	✓
An on-premise testing facility will be required for the foreseeable future to accommodate pre-production environments for on-premise applications and to provide end-user and edge device presence.			✓	✓	
Common services to be used by Cloud-Native applications will be defined and governed through the CTO.		✓			
Principles and reference architectures will govern the creation of new Cloud-Native services.		✓		✓	✓
Your organisation will retain the most critical systems on-premise for the medium term while confidence in Public Cloud deployments (and your organisation's experience of managing them) is built.				✓	
Your organisation will continue to segregate the most critical on-premise systems from non-critical systems to facilitate change and protect critical systems from unexpected issues originating from non-critical changes.				✓	
A decision matrix will be used to aid selecting the most appropriate hosting location for an application or solution, this will consider the 8 key variables defined in the Application Hosting & Cloud strategy.			✓	✓	
Your organisation will not create multiple environments for legacy and Private Cloud, preferring instead to create a single "stack" that can support both.	✓	✓			
When changes to any on-premise application are planned, migration of that application to the Public or Private Cloud will be considered alongside and if the uplift in effort is not significantly increased then the application should be re-platformed.		✓		✓	

Benefits and Challenges Impact Matrices

	Benefit to user	Benefit to business	Ability to control (IT)
Increased Agility	High	High	Medium
Consumption based delivery	Medium	High	High
Elasticity	High	High	Medium
TCO and OpEx smoothing	Medium	Medium	Medium
Accessibility	Medium	Medium	Medium
Innovation and Currency	Medium	High	Low
Sustainability	Low	High	Low
Visible and contractual SLAs	Low	Medium	Low
Portability	Medium	Medium	Low

	User challenge	Business challenge	Difficulty to address
IT Business transformation	High	High	Medium
Security and Compliance	Low	Medium	Low
Service assurance	Medium	Medium	Low
Performance	Low	Medium	Low
Financial	Low	Low	Medium
Integration	Low	Medium	Medium
Vendor lock-in	Low	Low	Medium

SaaS Maturity Criteria

Red flags denote where this answer to the assessment question would indicate an immature Cloud service model, or a managed service environment being marketed as a Cloud service.

Question	Ideal	Red flags
What is the charging model?	Usage based	Fixed
How is integration approached?	Web services based, built on a logically separated integration layer	Bespoke API development, no logically separated integration layer
How does scaling out work?	Usage based, automatic and very quickly provisioned on request (minutes/hours)	No automatic options, relatively low provisioning time (weeks)
What level of scalability is possible?	Infinite, not constrained by underlying infrastructure	Limited, uplift of infrastructure required, possible contract/charging changes
How quickly can the service be provisioned?	Hours, offerings are standard	Weeks, offerings are bespoke for every customer
What is the underlying platform that the application is built on?	Based on a platform, sometimes PaaS offerings available too	Completely bespoke
How is customisation viewed?	Configuration based customisation only	Bespoke development
What metering is available?	Accessible online, seen as an essential part of service provision	Only on request, no tools available
Requirements at user/client end?	Any modern browser	Additional non-web technology components required/thick clients
How are tenants separated?	Logically at platform level	Physically
Approach to upgrades?	These are included and automatic (customer is informed of upgrade programme but has little control), customer may have options to hold back on a later version but only for a short period	As and when required by each customer, not mandated and usually charged

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