Azure Landing Zones

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While organisations continue to reap the benefits of cloud computing, they are also confronted with questions and the many challenges associated with Cloud adoption. . To deliver at varied speeds and scale, organisations must use an operating model that is agile, dynamic, and adaptable to both organisational goals, and market demands whilst ensuring that appropriate guardrails are in place . CIOs must focus on creating a secure, scalable, and flexible ecosystem as cloud technology matures.

It takes more than just connecting to the cloud. They must be able to optimise platforms and guarantee that technology and business problems are met while controlling risk. There's no denying that the cloud has increased the potential for both internal and external threats to the organization. However, being proactive with your risk approach can help you safely unlock the benefits of cloud technology. Adopting a "cloud-first" mentality has become key for outpacing competitors.

Today's cloud is much richer and more nuanced than it was at its inception over ten years ago. Cloud consumers now have more native options, stronger security and privacy tools, and enhanced measures for detecting, responding to, and preventing security breaches. As the processes, regulations and knowledge surrounding the cloud continue to improve, these advances have increased customer confidence and eased the burden for IT functions.
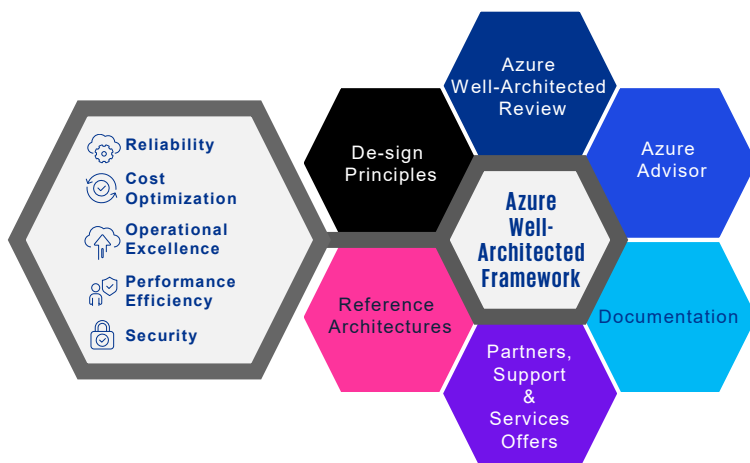
The most technical, time, and resource expensive component of the process can be migrating to the cloud. For the most part, cloud migration has been viewed as a simple matter of managing the transition and 'getting it done' on time and on budget. However, there isn't a one-to-one mapping between on-premises and cloud architecture, and this approach can cause friction when translating needs into cloud capabilities and structure.

As a result, it's critical to understand your company's needs and make vital decisions early on about cloud deployment, security, and governance. It's important to take a holistic and structured approach when moving applications and workloads to the cloud. Your IT and business units should collaborate to understand the cloud journey from the beginning—when cloud is merely a consideration—to the end—when measuring transformation success. You can achieve this shared understanding through robust planning, piloting, and assessments. Taking the right decisions can help you achieve your goals while also maximising the value you would get out of digital technology adoption.

A well architected framework can assist in addressing these challenges and delivering expected outcomes. The Azure Well-Architected Framework is a set of guiding tenets that can be used to improve the quality of a workload. The following are key defining pillars of a well-architected framework:

Incorporating these pillars helps produce a high quality, stable and efficient cloud architecture.

You'll need a scalable and modular method for security, connectivity, governance, and identity within the cloud to create your target architecture based on this well-architected framework. Enter, Landing Zones!

Reliability

Cost Optimization

Operational Excellence

Performance Efficiency

Security

De-sign Principles

Reference Architectures

Azure Well-Architected Framework

Azure Well-Architected Review

Azure Advisor

Documentation

Partners, Support & Services Offers

What is a Landing Zone?

A landing zone is the code-based foundation of your cloud system with uniform security and governance setup to ensure compliance with cloud best practises. An Azure landing zone enables app migration, modernization, and innovation at enterprise-scale. Landing zone is an output of a multi-subscription azure environment that also provides a baseline environment to get started with a multi-account architecture, identity, access, governance, data security, network design, and logging.

Landing zones are the Key to a successful cloud migration and operating model.

Primarily there are two types of Landing Zones and are to be chosen based on specific implementations:

Platform Landing Zones

Where subscriptions are deployed to offer a set of centralised services which are consumed by multiple workloads and applications. These are typically enterprise-wide services such as Identity, Networking, and management services.

Application Landing Zones

Where subscriptions are deployed as an environment for an application or workload. There are modified controls specific to the application or workload and are placed under the 'landing zones' management group structure to ensure correct policy controls are applied.

Benefits of Landing Zones

Landing Zones enable workload migrations, new application development, innovation, and data transformation delivering the following benefits.

01	02	03	04	05	06
Consistency at scale	Trust, Control & Compliance	Organisational Readiness	Operational Efficiency	Identity Management	Cost Optimisation

Top considerations to get SAP right on Azure Landing Zones

There are specific decisions to be made regarding the establishment of Azure Landing Zones to ensure success when preparing for sustained cloud adoption, especially in sophisticated environments such as ones running Production SAP workloads.

Azure Landing Zone Implementation Options

When it comes to implementation options, there are two approaches to implementing landing zones. Choosing the right approach will facilitate the deployment of necessary services to support your cloud adoption plans with minimal overhead:

- **Start Small and expand:** This option will serve as a starting point with minimal subscriptions. It can be quickly implemented for cloud adoption and the security, governance and compliance can be iteratively enhanced to achieve desired target state and operational excellence.

- **Enterprise Scale:** This offers an entire Azure tenant including cloud native operations. Enterprise scale architecture is set up for governance, security and segmentation of duties and includes Azure best practices built in alignment with target state. This is the fastest path to reach a production ready environment, which includes tooling for operations, security, and governance.

Active Directory Tenant

Once you have finalised the implementation option, proper tenant creation, enrolment and Azure active directory tenant association is crucial. Subscriptions exist within the Azure AD tenant and can be relocated into management group hierarchy within that tenant.

Identity and Access Management

This establishes the security perimeter of your cloud environment and serves as the basis for a compliant and secure design. The critical element here is determining the Azure resource boundaries with respect to the SAP Basis administration boundaries. Using the SAP migration to Azure as an opportunity to review dormant user lockout policies, aligning password policies with Azure AD and considering automatic user provision will vastly improve the ease of operations and compliance.

Network Topology and Connectivity

The networking and connectivity decisions are foundational aspect of the cloud architecture and should align with the overall cloud adoption plans. For e.g., if the plans include hybrid or multi cloud dependencies, the design should factor in the expected traffic patterns and incorporate those requirements. Since SAP is a mission critical application, planning for things such as IP addressing, network topology and inbound/outbound connectivity architecture is imperative and should be baked into the overall design from the start.

Resource Organisation

The decisions you make about subscriptions and management groups will directly affect governance and operational efficiency as your cloud environment scales. Implementing a naming and tagging strategy that includes the organisational information needed to identify teams, workloads, applications and environments will help address challenges encountered in reporting and billing operations.

Security

It is a crucial component that needs to be taken into account during the design and implementation. The procedures and controls to safeguard your cloud environment are described here. Recommended tasks include enabling Microsoft defender for cloud, Microsoft Sentinal and SSO. Isolating virtual networks, encrypting data at rest / in transit and hardening of OS are some of the security design recommendations. Monitoring of security can help you collate data from a central location and help with troubleshooting.

Management and Governance

Audit and governance policies need to be established, as it provides visibility, compliance, and ease of operations.

Challenges with Landing Zones/Cloud adoption

Complexity

Cloud transformation never ends. It is an ongoing process that must be continually evaluated and evolved as business priorities themselves shift and move over time. Landing zones need to be managed and maintained through a lifecycle within your cloud operating model. As the use of the cloud expands, it introduces new complications, and your landing zones should adapt to meet the new demands.

Technical Debt

This complexity coupled with enterprises inability to be robust enough in building technically strategic landing zones often results in accumulation of technical debt on cloud in terms of underutilised or over provisioned resources something akin to reinventing a wheel instead of reusing it.

Skill Shortage

A major driver to organisations' inability to capture value from their Cloud transformation is a skills gap within their own organisation. If there is a skill gap in the team, landing zones suffer during implementation and lifespan.

Lack of Experience with Mature Frameworks

Lack of experience for organisations with mature cloud frameworks hinders organisation's ability to execute their vision regarding Landing zones. This results in half-baked implementations which are not fit for purpose.

What is KPMG Connected Azure | Engine for Enterprises?

A delivery platform built on Microsoft and Industry best practices to enable rapid onboarding of workloads to Azure.

KPMG Connected Azure | Engine

- **Accelerates cloud adoption through bespoke industry specific prebaked Azure Landing zones ready for deployment**
- **Designs secure and scalable Azure Landing Zones**
- **Adds value to existing Azure environments**
- **Drives faster business decisions for cloud migration**
- **Creates consistent Azure Landing Zones for repeatability**

How does the Engine benefit your organisation?

It delivers an Enterprise scale Azure architecture built on mature cloud frameworks from KPMG and Microsoft, providing a common standard for all deployments.

It
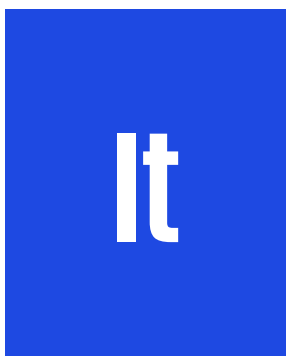
- **Reduces Azure Landing Deployment Costs by 40%**
- **Enables your organisation to get to migration phase faster**
- **Reduces time to develop repeatable Azure patterns for reuse across the organisation**
- **Removes duplication of effort across the organisation via a module catalogue**
- **Removes in house IT skills gap barriers**

If your IT organization is seeking ways to leverage technology to support your Cloud ambitions, KPMG in the UK can help. Need more information on **KPMG Connected Azure | Engine for Enterprises'** capabilities?

Contact our author(s) for assistance

Ashish Joglekar
Cloud Transformation Architect

✉ Ashish.Joglekar@kpmg.co.uk

Ashish is a Cloud Architect with 12+ years' experience in Enterprise and Solution Architecture. He has expertise in Cloud Transformation, Designing Architectures, DevOps Implementations, Disaster Recovery setup and Technical Program delivery. Working from various Client sites, Ashish has managed multi-geographic, multi-cultural teams and has a broad range of experience from Strategy/Concept to Technical implementation. This experience enables him to understand the challenges facing the modern Cloud Architect and develop effective solutions

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