



Oracle Cloud Adoption Principles

Oracle Customer Success Managers
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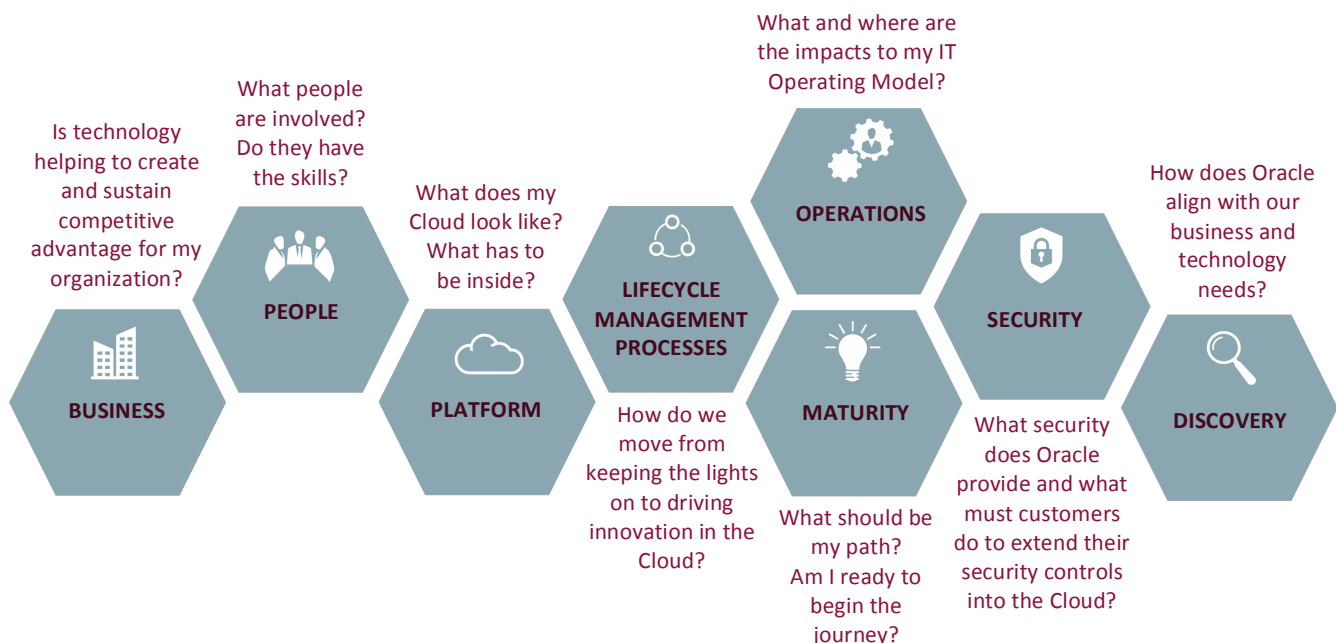
INTRODUCTION TO THE ORACLE CLOUD ADOPTION PRINCIPLES (OCAP)

Cloud computing is now broadly accepted as an economical way to share a pool of configurable computing resources. In order to help customers reduce the cost of developing, testing and deploying applications, Oracle introduced a board portfolio of integrated Cloud services. These subscription-based platform as a service (PaaS) offerings allow companies to develop and deploy nearly any type of application, including enterprise apps, lightweight container apps, web apps, mobile apps, and more.

No one solution works for every business. At Oracle, it is all about choice. That is why we are making every Oracle product available wherever you choose to deploy – traditional on-premises, Oracle Public Cloud, internal Private Cloud, or any combination. Oracle also provides you financial choices to pay for these products.

Flexibility is great, but with so many choices, making the right decisions can often become confusing and overwhelming. The Oracle Customer Success Management team is here to assist in evaluating your options to help you determine the right path for your company.

The Oracle Cloud Adoption Principles will help guide and inform your choices. Completing the high-level questions in each of the eight Focus Areas below will provide the insight to start planning your Cloud journey:



Your Oracle Customer Success Manager will work with you and guide you through each Focus Area.



CHAPTER 1: BUSINESS

I TECHNOLOGY HELPING TO CREAT AND SUSTAIN COMPETITIVE ADVANTAGE FOR MY ORGANIZATION?

SUMMARY

Innovation, business agility, a better customer experience—the potential benefits of Cloud have made it a key component in enterprise IT strategies. However, for technology to provide competitive advantage for an organization, it needs to satisfy two themes. First, the business must configure itself to do something unique and valuable. Second, competitive advantage comes from the full range of the firms' activities. Therefore, when embarking on the journey of Cloud computing, business process redesign needs to be done in tandem with the Cloud adoption – to not only establish an organizations advantage – but to also influence whether the advantage can be sustained.

Although Cloud adoption is an IT project, the smart money lies in evaluating its business value. You need to look at your company's strategic goals and make sure that you implement the best option to support those targets. In the digital economy, technology matters, and you must deploy the capabilities best suited to your company's digital endeavors.

How will the business benefit from lower costs and increased efficiencies? What new scenarios will make the business more responsive to customers, more threatening to competitors or more valuable to shareholders? Only when the business goals are clear can technology fulfill its promise and become a distinctive player in providing sustainable competitive advantage.

Outlined in this section, are the building blocks necessary for IT leaders to address building a cohesive strategy and implementing value realization technique. This approach provides a clear vision and a comprehensive approach in helping businesses seize new opportunities, and imagine new scenarios that will configure and sustain an organization's competitive advantage in unprecedented ways. Below is a brief explanation of each of the building blocks.

STRATEGY

It is key to develop a strategy that has an overarching plan for IT to better support and enable business initiatives through the adoption and evolution of Cloud computing capabilities. It is important to measure performance by a joint optimization of the interest of the shareholders with the interest of the stakeholders. This married approach works best when projects balance near-time

financial performance and what it takes to develop an optimized socio-technical ecosystem for the short and long term.

COST

With Cloud services, the move from CAPEX to OPEX provides the need to consider all costs associated to the delivery of the service. This valuable insight provides a better understanding of the optimized platform for Cloud projects with respect to the value and the firm's strategy.

RISK

Organizations should embed risk management and the overall arching value consideration into each Cloud project. This allows the business to diversify the risk of IT projects by choosing the optimized platform – on-premises, private, either public or a hybrid approach. Focus on delivering complete transparency including what risks the business is willing to tolerate and manage, and not take.





CHAPTER 2: PEOPLE

WHAT PEOPLE ARE INVOLVED? DO WE HAVE THE SKILLS?

SUMMARY

Most on-premises web-based platform products have been in existence for over 15 years. All aspects of deploying, implementing and maintaining these products are well established and well documented. In addition, the employees involved and their functions, roles, skill sets and competencies are well understood and defined. With the shift of platform products to the Cloud, it has become clear that many of the long-standing processes, methodologies, standards and best practices will need to be augmented to adapt for Cloud computing. These fundamental changes have affected the people involved and have driven changes in decision makers, stakeholders, and ownership as well as in job roles and functions.

Each Focus Area will therefore need to identify, list and discuss the **personas** involved, their roles, functions, and required skill sets and competencies. Also documented should be the dynamics and interactions between personas within a Focus Area and across Focus Areas.

YOUR MOST IMPORTANT ASSET AS AN ORGANIZATION

Every organizations most important asset is its people; without employees, no company can be as successful. It is important to understand what your team's capabilities are from a technical and non-technical perspective.

One of the building blocks is continuous education and a set of common language that will allow existing teams, individuals, business partners, and customers to adapt to Cloud capabilities that will continue to evolve. Being open to change and learning on the fly will be imperative, as new roles, process, and ways of measuring success will all change as your organization migrates to Cloud services.

BEGINNING YOUR CLOUD JOURNEY STARTS WITH PEOPLE

Organizations that are just beginning their journey to the Cloud need to evaluate its impacts on its people, from hiring to continued self-development.

- How do you find current employees in your organization with existing skill sets?
- How do you continue to hire talent with these skill sets for your organization?
- What are those skill sets?



CHAPTER 3: PLATFORM

WHA DOES MY CLOUD LOOK LIKE? WHA HAS TO BE INSIDE?

SUMMARY

Cloud reference design and architecture are necessary phases to optimize the benefits of Cloud deployment. Traditional infrastructures resulted in low utilization, inflexibility, and little efficiency. Cloud computing offers elastic capabilities allowing your applications to scale and grow on demand without the need for management and maintenance, and should include public, private or hybrid deployment models.

It is important to address the concerns of key stakeholders by outlining the architecture capabilities and roadmap, and aligning them with the business goals and objectives. It must clearly identify their current and future IT capabilities and should address the following building blocks: Conceptual, Logical, Physical, and Workload Migration, Technical Optimization Building Block.

CONCEPTUAL BUILDING BLOCK

Use the Conceptual Building Block when the business user has limited understanding of IT and its underlying architecture. In this process, the functional requirements are gathered to help generate an effective business model. With the help of different modeling techniques, the business processes are developed in a way that highlights their goals, objectives and requirements, without requiring an understanding of the underlying technology.

LOGICAL BUILDING BLOCK

The Logical Building Block view helps illustrate the key functional components and how they are related to the system without the complex details around the technology or how the system is implemented. To meet the business requirements and objectives, architects must create business models representing a logical view of the business.

PHYSICAL BUILDING BLOCK

This view involves the specifics parts of the system, how they are implemented and their relationship. It is the technology including the hardware, software, networking including all underlying infrastructure in an effort to realize complete systems. Components that are implemented and engineered to work together for maximum performance, is an ideal situation.

A transparent Cloud is the ability to use the same tools, processes, products across private and public Cloud. For the ability to migrate Cloud, workloads between environments or between Clouds there must be common concepts across the board, all the way to the actual standards that enable and facilitate Cloud integrations.

TECHNICAL OPTIMIZATION BUILDING BLOCK

Optimization is the process of monitoring the state of the technology, comparing with the target goals and deciding what changes in the system to meet target goals. Establishing a performance baseline while performing constant reviews against the baseline provides an opportunity to improve the technology continuously. Future enhancement and development is a result of constant feedback and requirements from the users.





CHAPTER 4: LIFECYCLE MANAGEMENT PROCESSES

HOW DO WE MOVE FROM KEEPING THE LIGHTS ON TO DRIVING INNOVATION IN THE CLOUD?

In today's world, the economics of running systems has shifted. As the costs for hardware and facilities continues to fall, the total cost of administering and running the systems then become tied to labor. Those costs can range from 30 to 60 percent of the total cost of running technology platforms. This can range from discovering and monitoring the health of existing software deployments to provisioning new software deployments and maintaining them over a period.

Moving to the Cloud introduces an opportunity to take a fresh approach to the traditional IT lifecycle management process by automating much of the time-consuming tasks related to discovery, initial provisioning and cloning, patching, configuration management, ongoing change management, and compliance management. Shifting these often-laborious tasks to the Cloud can free up valuable IT resources to projects that add business value rather than just keeping the lights on.

To understand where automation opportunities are, take the time to evaluate the following service delivery processes:

- **Discovery** – Identifying hosts and their software deployments, adding them as manageable targets, and monitoring and managing their health.
- **Provisioning** – Repeatable, reliable, automated, unattended and scheduled mass-deployment of software, applications or servers across different platforms, environments, and locations.
- **Patching** – Maintaining the software over a period with bug fixes, enhancements, and latest features offered by the software vendor.
- **Configuration Management** – Discovering, collecting, monitoring, comparing, and customizing configuration data for all managed targets in the enterprise.
- **Compliance Management** – Defining, customizing, and managing compliance frameworks, compliance standards, and compliance standard rules to evaluate compliance of targets and systems as they relate to business best practices for configuration, security, and storage.
- **Change Management** – Consolidating and propagating changes during development, customization, or applications upgrades to ensure compliance across enterprise.
- **Enterprise Data Governance** – Identifying, managing, tracking, and securing sensitive data in the data center and/or Cloud.

-
- **Change Activity Planning** – Planning, managing, and monitoring operations within the data center and/or Cloud. These operations involve dependencies and coordination across teams and business owners, as well as multiple processes.





CHAPTER 5: OPERATIONS

WHY AND WHERE ARE THE IMPACTS TO MY IT OPERATING MODEL?

SUMMARY

The Operations Focus Area focuses on ensuring efficient and controlled Cloud deployments with automation built in where possible. Here we pay special attention to how to evolve your current IT operating model to include Cloud capabilities. The following building blocks constitute the core considerations for realizing a complete operations strategy: Automation, SLA Commitment, Incident and Problem Management, Business Continuity, and Resource Management. Use them as a guide for your Public Cloud adoption plan.

AUTOMATION

Generally speaking, the less manual intervention required to run IT operations – the better. This is because automation tools in the Cloud remove common repetitive tasks and mundane operations. By shifting resources away from infrastructure administration and focusing on application development, companies can improve IT efficiency and value. Areas where automation can drive value include:

- Third party providers / partners from Cloud marketplace
- Orchestrations
- Failed VM recovery
- Cloud tooling

SLA COMMITMENT

Your internal and external customers demand certain levels of availability for their services and, they should feel comfortable conducting their business on your platform. Constant monitoring and improvement of policies will foster trust and establish credibility.

It is important to document and communicate your current service level agreements (SLAs) and plans for improvement. Most Clouds provide opportunity for immediate SLA improvements and these should be explored.

INCIDENT & PROBLEM MANAGEMENT

What happens if you are unable to solve a problem? Alternatively, if you were able to solve it did it take excessively long? Without being able to pinpoint what precipitated the event and determine root cause, you may become vulnerable to a reoccurrence. That is why it is vital to quickly, and proactively, identify an issue and its root cause and determine a path to resolution.

The Cloud creates the opportunity to improve root cause analysis in three ways:

1. Cloud operations are constantly monitoring the health and availability of the platform on your behalf. These experts and built-in diagnostics add to your ability to get to root cause.
2. PaaS services are available that can help you capture and analyze system logs at scale.
3. Most Cloud subscriptions give you access to a live person through a Customer Success Manager (CSM) to help you.

Work with your CSM before you start your journey to the Cloud to understand how the Cloud can integrate with and improve your incident and problem management procedures.

BUSINESS CONTINUITY

Disasters happen. It can begin with something as benign as spilled coffee or something more severe. In either scenario, it is imperative to have a strategy in place rather than leave your business at risk. Maintaining high availability (HA) and disaster recovery (DR) best practices ensures that you are being proactive in avoiding downtime.

In addition, it is important to document and communicate your recovery time and recovery point objective. Periodic DR testing is mandatory in most organizations. Moving to the public Cloud can provide immediate risk management and fault tolerant solutions in a number of scenarios.

RESOURCE MANAGEMENT

Tracking your spending and resource utilization over time will give you greater insight into trends in usage across specific services as well as for your environment as a whole. Data is power and having insight into resource utilization can provide tremendous value.

Some key questions to consider:

- How do I distribute and delegate resource management responsibilities to the resource consumers?
- Can I aggregate, analyze, and report on resource utilization trends?
- Do I have access to configuration history?



CHAPTER 6: MATURITY

WHAT SHOULD BE MY PATH? AM I READY TO BEGIN THE JOURNEY?

SUMMARY

Every IT operating environment is different and is in a constant state of change. Use the Oracle Enterprise Architecture Framework (OEAF) and the Oracle Architecture Development Process (OADP) to establish or refine the long term and midterm technology direction for your organization. Use OCAP to get adoption started now.

The Maturity Focus Area within the OCAP provides a pragmatic, iterative approach to defining a customized Cloud adoption roadmap that works in your environment and delivers the intended business value to your key stakeholders in a compressed timeframe – weeks and months versus years.

Key building blocks within the Maturity Focus Area include Target State Cloud Capabilities, Current Cloud Readiness Assessment, Target Workload and IT Portfolio Analysis, Cloud Adoption Roadmap, and Target State Operations Impact.

TARGET STATE CLOUD CAPABILITIES

Understanding what capabilities you expect your Cloud platform to provide is essential to overall adoption plan. This building block is about going into some depth about defining the “what” and “why” of your Cloud platform in the context of your organization and its competitive environment.

For example, the National Institute of Standards and Technology (NIST) defines Rapid Elasticity as a key characteristic of Cloud computing platforms and suggests that the available capabilities appear unlimited to the end user. Practically speaking though it is important to define what “Rapid Elasticity” really means in your business context and why it is important in order to define the adoption roadmap for the target workloads and IT portfolio components that will move to the Cloud.

CURRENT CLOUD READINESS ASSESSMENT

Most organizations have some level of Cloud adoption today though many are just beginning their journey. In either scenario, it is important to establish a baseline from which the next set of changes toward the target state Cloud capabilities can be assessed.

While the primary focus of this building block is on current state IT Platform capabilities, it is important to assess current governance, risk, and compliance (GRC) and current operational capabilities as well. The goal is capture enough information to inform and develop the Cloud Adoption Roadmap without devolving into “analysis paralysis”.

TARGET WORKLOAD AND IT PORTFOLIO ANALYSIS

Some workloads and IT Portfolio components (e.g. applications, backups, and integrations) are more suited to Cloud deployment than others are. This building block is about rationalizing these workloads and components against the Target State Cloud Capabilities and your organization’s risk / reward profile, GRC requirements, and other factors. The result should be a set of target workloads and IT Portfolio components that establish the initial scope for the Cloud Adoption Road for this iteration.

It is recommended that organizations take a “trust, but verify” approach to leveraging their existing configuration management databases and be prepared to discover undocumented tools and systems that may make sense to include in the roadmap as well.

CLOUD ADOPTION ROADMAP

The Cloud Adoption Roadmap is about defining your specific path to the public Cloud. It takes the all the information collected or made available and lays out a practical approach to adopting the Cloud. The roadmap considers agile development principles to ensure value is quickly and iteratively within established timeframes.

TARGET STATE OPERATIONS IMPACT

Moving to the Cloud requires change. Many organizations adopt change in phases in order to minimize disruption to existing operations while the change is underway. This building block analyzes how the change will be incorporated into existing operations and may recommend new operational procedures. These impacts and recommendations are provided in the context of the agreed-upon Cloud Adoption Roadmap.



CHAPTER 7: SECURITY

WHAT SECURITY DOES ORACLE PROVIDE AND WHAT MUST CUSTOMERS DO TO EXTEND THEIR SECURITY CONTROLS INTO THE CLOUD?

SUMMARY

When customers ask about information security it is important to agree on the security objectives they are trying to achieve. Organizations look for assurances that their information is appropriately safeguarded and that information security policy, standards, and requirements are being met. Confirming these objectives forms is the starting point for the Security Focus Area discussions.

INFORMATION SECURITY OBJECTIVES

The basic objectives for protecting information are described in the classic, and easily understood “CIA Triad”: Confidentiality, Integrity, and Availability.

Confidentiality

In information security, confidentiality “is the property, that information is not made available or disclosed to unauthorized individuals, entities, or processes”.

Integrity

In information security, data integrity means maintaining and assuring the accuracy and completeness of data over its entire life cycle. This means that data cannot be modified in an unauthorized or undetected manner. Information security systems typically provide message integrity in addition to data confidentiality.

Availability

For any information system to serve its purpose, information must be available when needed. This means that the computing systems used to store and process the information, the security controls used to protect it, and the communication channels used to access it must be functioning correctly. High availability systems aim to remain available at all times, preventing service disruptions due to power outages, hardware failures, and system upgrades. Ensuring availability also involves preventing

denial-of-service attacks, such as a flood of incoming messages to the target system essentially forcing it to shut down.

RISK MANAGEMENT

Threats to the CIA objectives can arise from any combination of human error, vandalism, theft, natural or man-made disaster, and more. The risk of loss of information assets can be measured in terms of the consequence of the threat event happening. In other words, what would be the business impact of a breakdown in the ability to guarantee confidentiality of the data? If data were rendered unavailable, what would the consequences be? In order to allocate scarce resources (people, processes, and technology) to controlling these risks, managers add another dimension to their analysis: likelihood. If a high-risk threat has a low-likelihood of occurring it may be prioritized lower than a medium-risk / high-likelihood threat.

SECURITY CONTROLS AND THE CONTROL ENVIRONMENT

As organizations predict or react to threats they develop techniques to prevent, detect, and respond to them. These control techniques are essential to the information security posture of any organization charged with protecting assets. Since the protective measures are only as strong as the controls put in place to protect them, these controls are constantly being evaluated, tested, and improved. Testing extends from the initial design of the control to on-going operational effectiveness. Organizations are often compelled to comply with a variety of regulations that stipulate some details of the risks and controls that should be in place. Compliance, therefore, extends beyond an organization's own security policies, but to the applicable laws. Cloud providers must make the documentation and testing results available to their customers so that customers can gain assurance that the risk universe covers areas they are concerned with and that the control environment has been properly designed and implemented to be consistent with a broad spectrum of compliance mandates.



CHAPTER 8: DISCOVERY

HOW DOES ORACLE ALIGN WITH OUR BUSINESS AND TECHNOLOGY NEEDS?

SUMMARY

The Discovery Focus Area assists in identifying and qualifying high value use cases or pilot projects most suitable for Cloud adoption. In addition, customers gain a better awareness and understanding of the Cloud and its capabilities.

The identified use cases can be tested on a public Cloud in incremental short proof of concepts to gain a good understanding of how workloads will function. This understanding will enable the enterprise to architect the most optimal ways to sequence and migrate workloads to the Cloud.

A key goal is to identify areas that drive business value in short timeframes, generally within 30 days of service activation. Systems Portfolio Analysis, Discover Cloud Capabilities, Cloud Mapping and Cloud Candidate Use Cases are the four building blocks of the Discovery Focus Area.

SYSTEMS PORTFOLIO ANALYSIS

This exercise is led by IT and conducted jointly with business stakeholders. The purpose of this exercise is to enable the enterprise to review the existing corporate IT systems and identify critical relevance of each of them to enterprise vision and their relevant positioning – whether Data Center or Cloud, on the Cloud roadmap. Once all applications or systems are reviewed, it will provide a starting point to identify the potential Cloud candidates with their sequencing based on inter-dependencies between them. Organizations generally track some critical associated elements with these applications, which could determine Cloud candidacy (e.g. Data Center nearing capacity limits, mission critical services or innovative services, to name a few).

DISCOVER CLOUD CAPABILITIES

It is important to gain a solid understanding of the Clouds capabilities and how organizations are using it to solve similar problems. Specifically, this brings awareness of various services available across the Platform-As-A-Service (PaaS) tier and their co-relation to Infrastructure-As-A-Service (IaaS) tier. This provides insight and start the thinking process of how potential candidates identified earlier can be migrated to public Cloud. Some complimentary Oracle services include:

- Oracle Cloud Vision Day

- Onboarding session hosted by your Oracle Customer Success Manager
- OPC trial accounts (limited tenure)

The combination of sessions suggested above would provide awareness for some of the critical Cloud adoption aspects as listed below and provide better understanding to identify suitable candidate systems or components for initial proof-of-concept:

- Next generation Cloud capabilities – Continuous Delivery (DevOps), Elasticity, Rapid Deployment, Standard Reference Architectures
- Workload optimization across Public and Private Clouds
- Integration across SaaS, PaaS and multi-vendor Cloud footprint
- Running non-Oracle workloads in Cloud
- High performance computing

CLOUD MAPPING

This part of the Discovery focus is to review the portfolio of applications and systems listed in previous section – **Systems Portfolio Analysis** with a view to map their current technology to the components of the Cloud. If your organization has been using the Oracle products then there would be direct one-to-one mapping with the Cloud components. For example, a Java based application could map to Database-As-A-Service and Java-Cloud-Service combination. If there are systems, which are non-Oracle, there are multiple options to bring them to Oracle Cloud and this focus activity is directed towards identifying equivalent Oracle Cloud components. The **Oracle Reference Architecture** for Cloud is a great starting point for understanding how various components fit together for a given solution. This is a generic reference architecture, which shows how services are organized and integration occurs between the on-premises and Cloud environments.

CLOUD CANDIDATE USE CASES

At this point, a few iterations may be run to revisit the list of applications or generic workloads to identify certain specific use cases for Cloud adoption. The listed use cases should be prioritized based on criticality or adoption value. These use cases can be broken into mapped components of Oracle Cloud like Database-As-Service or BI-Cloud-Service or others based on the awareness of the Oracle Cloud capabilities. Then depending on the prioritization, draw up initial Cloud project plan for testing these use cases.





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Integrated Cloud Applications & Platform Services

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