E-book

The 2020 Cloud Strategy Workbook

rackspace.

Introduction

In the current business climate, you're hard pressed to find an organization that doesn't put cloud at the center of its IT transformation efforts. But without a holistic cloud strategy in place, transformation can stall, costs can spiral and your organization could face added complexity and risk.

According to the 2019 RightScale State of the Cloud Report from Flexera[1], 84% of respondents have a multi-cloud strategy, and 58% of that group are combining public and private clouds for a hybrid cloud approach. As cloud capabilities mature to support things like big data analytics, the rollout of 5G, machine learning and mission-critical functions, the number of organizations running hybrid cloud solutions is set to grow. The RightScale report also reveals that most organizations are already running a majority of workloads in the cloud, with up to five different cloud platforms currently in use.

As many organizations have found, just lifting and shifting workloads to the cloud doesn't afford you the true benefits of cloud scale and flexibility. That's why laying the foundation for your cloud environment must begin with careful evaluation and documentation of your overall cloud strategy. In addition to the individual platform and technology choices that you'll make, your cloud strategy should cover business considerations like impact to processes, financials, staffing, compliance, security and data sovereignty in order to deliver the solution that's right for your organization today and tomorrow.

So, what does a fundamentally sound cloud strategy encompass, and how does it differ from other IT strategies? The Gartner white paper, "Formulate a Cloud Strategy in the Context of Your Overall Strategy"[2], defines cloud strategy as "a concise point of view on cloud and its role in your enterprise". A cloud strategy is not the same as a data center strategy or adoption/migration/implementation plan." Through years of experience working with customers, we have a deep understanding of the **five critical elements** that define a cloud strategy:

1. Business review

2. Cloud review

3. Foundational principles

4. Roles

5. Financial considerations

In this e-book, you'll learn how to address each of these elements, while gaining access to templates and examples that will guide you on your journey. Record your information for each section, then tie them all together to begin organizing your cloud strategy internally. You can share this information at the beginning of an engagement with a prospective service provider or use it to educate stakeholders on how cloud can help move their broader business goals forward.

Business review

Overview: Begin by summarizing your top-line business strategy and desired business outcomes, as well as any existing business transformation initiatives. Highlight and examine the things that are unique to your organization and what you're looking to accomplish in your industry and around the globe.

To prevent creating a short-sighted or siloed strategy, avoid conducting your business review in a vacuum. Meet with leaders across your business as well as customers and other stakeholders to gain understanding of each group's goals and incorporate them into your cloud plans. Over half of high performers in the 2019 State of DevOps Survey[3] use "Centers of Practice" to create inclusive community structures that drive transformation. This community structure includes multiple disciplines, not just the IT team or the C-suite, making them more sustainable and able to withstand organizational changes. Gaining a consensus across business units and leaders will be instrumental in getting stakeholder buy-in and executive support throughout the entire cloud lifecycle.

Once you've gathered insights and feedback from around your organization, you're ready to evaluate how technology can align with the business to achieve tangible outcomes. You should consider your short-term and long-term goals to formulate a long-term outlook that accounts for technology-driven business process changes, global economic indicators, and industry and market predictions.

Your output:

Business reviews should include:

• Identification of and discussions with stakeholders

• A 3-5-year outlook of business goals and objectives

• Creation of a list of internal business factors and pain points that impact the cloud decision (e.g., process changes, budgets, skill sets)

• A list of industry and other external conditions that can impact your cloud decision (e.g., regulations, customer experience expectations, competition)

3-5 Year Business Goal	Climate/Conditions	Cloud Benefits	Cloud Risks
Cost efficiency	Reduced revenue means reduced IT budget	Reduced costs, less management time	Less control, skills gap
Innovation	Increased competition means we need to release new features faster	Speed to market, competitiveness	Legacy components, learning curve
Re-certify compliance	New compliance regulations going into effect next year	Cloud provider can support new compliance regulations	Shared responsibility model. Customer is responsible for all workload security/compliance
Data center exit	Lease contract up in 14 months	Converting capex to opex, more flexibility	Tight timeframe for migration

Cloud review

Overview: In this stage of building your strategy, you'll focus on reviewing cloud types and delivery models. One of your goals is to eliminate confusion by understanding and agreeing on the terminology and definitions that will be used consistently when talking about the cloud. The output from this effort will populate a training and education plan, which is essential to broadening the discussions around cloud.

Focus on matching your workloads with the appropriate cloud based on your application estate and what you're looking to achieve down the road. For example, if your goal is to invest in containerization to support DevOps, then Azure, Google Cloud or AWS all offer the relevant capabilities, but may not provide the performance, database support and SLAs you need. Don't fall into the trap of limiting your review to what's most popular, what your competitors use or the technologies and vendors you're already familiar with. Just because you've always been a Microsoft shop, doesn't mean that you should automatically select Azure and ignore Google or AWS. And it's important to remember that hybrid cloud solutions allow you to leverage multiple platforms to run workloads where they run best. In addition to education and training, this step is also your opportunity to fully explore the options and capabilities available before making costly, long-term decisions.

Your cloud review should include:

- An education on cloud deployment models

- An education on cloud service models

- A comparison of cloud options based on business goals

- A cloud value statement based on your use cases

Your output: Cloud education content and cloud value-to-business statement

Cloud education material:

What is cloud computing? The official NIST definition of cloud computing[4]: "a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction."

Cloud computing attributes:

- **Abstraction**: infrastructure separated from the customer and delivered as a service

- **Agility**: can provision and re-provision infrastructure resources on demand

- **Reliability**: improves availability with multiple redundant sites

- **Scalability**: accommodates varying loads (scale up, down or out)

- **Elasticity**: copes with loads dynamically

- **Security**: provides a secure infrastructure

- **Performance**: reliable and can be monitored

- **Maintenance**: self-service management for all configurations

- **Multi-tenancy**: hosts multiple tenants

- **Metered usage**: monitored and controlled usage to reduce capital expenditures

Cloud computing delivers:

- System infrastructure components (network, storage, servers, load balancers, etc.)

- Application infrastructure components (services, platforms, applications, etc.)

- Licensing flexibility (bring your own license or purchase from your service provider)

Cloud deployment models:

- **Private cloud**: Cloud infrastructure operated solely for a single organization, whether managed internally or by a third-party, and may be hosted either on-premises or off-premises

- **Public cloud**: Cloud infrastructure made available to the general public or a large industry group and is owned by an organization providing cloud services

- **Hybrid cloud**: The cloud infrastructure is a composition of two or more clouds (private or public) that remain unique entities but are bound together by standardized or proprietary technology that enables data and application portability

Sample cloud value-to-business statement:

Questions to ask as you develop your value statement:

- Do you use off-the-shelf or custom apps? In-house apps offer more control as opposed to waiting on a vendor or provider to adapt to your infrastructure choices.

- How fast is your organization growing? Detail ways that the cloud can support performance, elasticity and reliability to keep pace with your velocity.

- How will you get there? Whether it's lift and shift or re-coding, be realistic about the activities and time lines of migrating infrastructure and applications.

- What security elements are critical? Consider your compliance posture and how you'll protect sensitive data and applications in the cloud.

Sample statement of cloud value:

Cloud computing enables [BUSINESS NAME]'s IT systems to be scalable and elastic. We do not need to determine our exact computing resource requirements upfront. Instead, we provision computing resources as required. Using hybrid cloud computing services, mixing public and private resources, we do not need to own data center infrastructure to launch a capability that reliably serves thousands of concurrent users, but instead can leverage the pay-as-you-go model for provisioning new infrastructure. Using Azure gives us access to infrastructure and services relatively inexpensively and quickly and lets us leverage our existing Microsoft investments.

In our current environment, it takes months to procure and configure comparable resources and significant management oversight to monitor, maintain and upgrade systems. Applying cloud technologies across the business can yield the following benefits to our organization:

• Efficiency improvements will shift resources toward higher-value activities. Software applications and end-user support savings will be used to increase capacity or be reinvested in other alternatives, including customer-facing services and inventing and deploying new product enhancements.

• Services will be more scalable. With a larger pool of resources to draw from, services hosted in the cloud can rapidly scale capacity and avoid service outages. Given appropriate service level agreements and governance to ensure overall capacity is met, cloud computing will make the organization less sensitive to the uncertainty in demand forecasts.

• [Other applicable benefits for your organization]

Foundational cloud principles

Overview: After using the previous steps to assess the current state of your business and your technology options, now you'll determine the future of your environment by defining a high-level framework to guide migration and optimization as you grow. Many companies approach the cloud as just another data center location and not a truly transformational tool. This leads to lift-and-shift moves that aren't designed to take full advantage of the economies of scale and flexibility of the cloud. Establishing foundational principles around cloud usage provides a framework for running workloads where they reap the most benefit — even if it means staying on-premises.

In this step, you'll document your guidelines for consuming cloud services. How will you choose between a pure public cloud, a hybrid cloud or on-premises? This includes who will manage and support these elements, what constitutes a cloud-ready workload based on your organizational characteristics, what security and compliance demands must be considered and the governance activities that will guide your cloud efforts as they grow in size, scale and criticality. Defining your cloud principles also encompasses specifying networking strategies, performance baselines and platform compatibility issues that can cause problems down the line.

Cloud Service Principles include:

• Defining frameworks for your cloud architecture

• Stating a position for when to use the cloud and minimum service levels

• Addressing related security, performance, management and governance implications

Your output: A statement defining your cloud service principles and service preferences. The statement should begin with describing your current stage in cloud maturity and then describe the principles that you'll use to run workloads in the cloud in the future.

Include the answers to these questions in your cloud principles statement:

• What frameworks and methodologies are currently in use and how do they align with cloud?

• Are you building apps in-house, leveraging commercial off-the-shelf (COTS) applications or using SaaS-based applications with APIs?

• How will you select apps to move and match those apps to target infrastructures?

• What security or compliance requirements do you have to consider?

• What kind of SLA and support do you need from a service provider to meet your RTO/RPO objectives?

Cloud roles evaluation

Overview: Deploying, managing and optimizing a cloud environment requires specialized expertise. In some industries like financial services or healthcare, you may need even more specialized security and compliance talent. In this step, you'll assess your internal skillsets and determine your gaps.

According to CompTIA's 2019 Cloud Trends Report[5], respondents stated that these are the top-five skills needed to run cloud environments:

1. Cloud security – 68%

2. App-specific skills – 59%

3. Virtualization – 53%

4. Optimization – 52%

5. Performance analytics – 52%

Keep in mind that compiling this skills list doesn't mean going on a hiring spree. Many existing team members can be retrained into these roles. For example, your existing IT security team already has the foundation to be retrained in the complexities of protecting hybrid cloud environments.

Evaluating cloud roles includes:

• Definition of required cloud roles

• Assessment of current resources and skill sets

• Statement of staffing needs or plans to uptrain existing employees

• Exploration of options to augment staff and/or attain expertise (e.g., consultants, freelancers, service providers)

Your output: A chart of required roles and skills highlighting where there are gaps to fill. Here's a sample table to record your cloud roles, responsibilities and required action.

Required Roles	Function	Resources	Action
Cloud Analyst	Follows and reports consumption and works across the technical components and clouds. This key role provides facts for decision making and enables quick reaction to demand changes	Filled by current staff	None
Cloud Engineer	Combines aggregated services using internal and external technical services and ensures proper integration to needed internal systems.	Need to add two additional to augment current staffing	Recruit FTEs
Integration Manager	Ensures that different clouds and services are integrated to key delivery processes (change, incident management, reporting, etc.).	No existing resources	Recruit consultant

Cloud financial review

Overview: In this step, you'll address the financial implications of various service models. You'll ask: What does your environment look like on this platform? What is the TCO and long-term cost? This step requires a deep dive on cost modeling. It is highly recommended that you consult your accounting or finance team.

When assessing costs, remember it's more than just the server or service cost. Remember to incorporate overhead and operational costs, like bandwidth, egress network traffic, security, storage and ongoing management to avoid sticker shock. You'll also want to factor in how existing data center lease terms impact your overall plans. Though you're ready to jump now, you may be constrained by steep penalties for pulling out of existing contracts. And as you're comparing costs, carefully consider the costs of onsite management like upgrades, troubleshooting daily maintenance and off-hours incident response. You'll also want to quantify soft benefits like improved productivity, better collaboration and enhanced customer experiences.

Cloud financial review includes:

• Understanding available pricing models

• Balancing models against your budget and the organization's financial model

• Preparing a high-level TCO assessment

• Consulting your finance team

Your output: A statement of your financial profile, preferred cloud expense model and a high-level TCO example that crunches a variety of financial metrics. A sample TCO summary might look like this:

Three-year TCO Evaluation (figures in $1,000)			
	Proposed hybrid infrastructure	**Existing on-premises infrastructure**	**Incremental differences**
Total cost of ownership	$14,256	$17,258	$(3,002)
Capital expenses (capex)	$1,219	$707	$511
Operating expenses (opex)	$13,037	$16,550	$(3,513)
Net cash flow	--	--	$2,981
Net present value @8% (NPV)	--	--	$2,365
Internal rate of return (IRR)	--	--	121%
Return on investment (ROI)	--	--	24.9%
Payback period			7 months

Summary

There is no one-size-fits-all cloud environment, and there is no one-size-fits-all cloud strategy. Taking time to explore and document the elements listed here can help you avoid stalled efforts and winding up with more complexity than true cloud benefits. Cloud strategy is an iterative process that you'll revisit as business conditions change. Use the direction here to guide your steps and strengthen your ability to innovate and continually optimize your environment with appropriate tools and technology that can help you achieve your organizational goals. With a solid strategy underpinning your cloud efforts, you should be able to reach your goals faster, avoid common pitfalls and maximize the benefits of your cloud investments.

The cloud strategy that you build today will have a long-lasting impact on your organization. To help ensure that you're making the right decisions, work with an experienced cloud specialist focused on consulting, implementation and managed services. The right cloud provider will deliver expertise, experience and capabilities across a range of next-generation infrastructure models. By understanding your organization and what's possible with technology, a cloud provider can help you develop a realistic cloud strategy that aligns with business goals, technical requirements and stakeholder expectations.

1. https://info.flexerasoftware.com/SLO-WP-State-of-the-Cloud-2019

2. https://www.gartner.com/doc/reprints?id=1-TFX34AJ&ct=190626&st=sb

3. https://services.google.com/fh/files/misc/state-of-devops-2019.pdf

4. https://www.nist.gov/news-events/news/2011/10/final-version-nist-cloud-computing-definition-published

5. https://www.comptia.org/resources/cloud-computing-trends-research

Need help developing your cloud strategy?

Contact our Professional Services team for help with developing strategy, planning, migration and ongoing management of your cloud environment.

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About Rackspace

At Rackspace, we accelerate the value of the cloud during every phase of digital transformation. By managing apps, data, security and multiple clouds, we are the best choice to help customers get to the cloud, innovate with new technologies and maximize their IT investments. As a recognized Gartner Magic Quadrant leader, we are uniquely positioned to close the gap between the complex reality of today and the promise of tomorrow. Passionate about customer success, we provide unbiased expertise, based on proven results, across all the leading technologies. And across every interaction worldwide, we deliver Fanatical Experience™. Rackspace has been honored by Fortune, Forbes, Glassdoor and others as one of the best places to work.

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