Gartner Peer Insights ‘Lessons Learned’: Implementing Cloud Infrastructure and Platform Services

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Initiatives: Cloud and Edge Infrastructure

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CIPS are public and private cloud offerings that provide highly automated compute resources, along with storage and networking capabilities. I&O leaders seeking to leverage IaaS and PaaS can learn from the implementation experience of their peers shared on Gartner Peer Insights.

Overview

Gartner Peer Insights is a free peer review and ratings platform designed for enterprise software and services decision makers. Reviews go through a strict validation and moderation process to ensure they are authentic.

We analyzed 280 Peer Insights reviews to identify lessons learned while implementing cloud infrastructure and platform services (CIPS). This report focuses on the responses to the questions: “If you could start over, what would your organization do differently?” and “What one piece of advice would you give other prospective customers?” To browse all reviews, see the full list of Cloud Infrastructure and Platform Services reviews on Peer Insights.

Peer Lessons Learned

This edition of “Lessons Learned” summarizes clients’ firsthand experiences with implementing CIPS. The peer advice results both from successful implementation projects and learnings based on what went wrong. This peer perspective, along with the individual detailed reviews, is complementary to expert research and provides a holistic view to the implementation process. Reviewers who submitted their lessons learned represent a cross-section of small- to midsize and large organizations. (See Figure 1.)
Below are some key lessons learned and most cited recommendations by Peer Insights reviewers to help infrastructure and operations (I&O) leaders in the implementation process of their CIPS.

**Lesson 1: Envision Your Cloud Architecture by Gauging the Organization’s Current Infrastructure and Imminent Workload Requirements**

While the peers recommend the I&O leaders to analyze the organization’s service and resource management requirements, they lay emphasis on ensuring a thorough understanding of its dynamic workloads to facilitate maximum efficiency and performance. They further advise factoring the needs of supporting the organization’s current technical landscape by gathering inputs from the tech stakeholders while preparing its cloud architecture.

A peer has recommended the following course of action to discern workload requirements:

> Take the time to understand your internal processes and how data flows through large applications. This way, you know all the touchpoints before you start migrating or utilizing resources.

— *Infrastructure and Operations Professional, Education Sector*
Another peer adds:

Ensure your full requirements and end-to-end technical landscape is understood. Map out your technical roadmap, and architectural vision to be able to achieve and deliver high performance.

— *Infrastructure and Operations Professional, Government or Public Sector*

A peer further remarks on the importance of accounting tech needs in the envisioned cloud architecture:

Secure a detailed understanding of your existing environment by ensuring steady co-development of specifications and requirements from business users and technology stakeholders.

— *Sourcing, Procurement and Vendor Management Professional, Service Sector*

Peer recommendations include:

- Conduct an in-depth analysis of the data center's existing infrastructure. Examine the level of heterogeneous systems support required to be able to successfully deploy the cloud network.

- Scrutinize the workload, visibility and reporting requirements to prioritize critical applications and processes effectively.

- Gather the developer and end-user interface requirements to drive adoption and minimize operating costs later.

- Chart out an infrastructure roadmap by anticipating future business needs, and prepare a robust strategy that also provides for data center disaster recovery to ensure an economical and hassle-free cloud environment.

Recommended reading:

*Build the Right Justification for Moving to the Cloud*

**Lesson 2: Explore the CIPS Domain by Running Trials Based on Your Organization's Specific Use Cases***
The peers encourage I&O leaders to make a strategic provider selection based on their organization’s specific use cases. These use cases may vary for organizations — cloud-native applications, edge computing, extended cloud, analytics and enterprise transformation, which involve deploying DevOps principles and practices to transform the existing infrastructure. They further recommend selecting a vendor by running extensive trials of the suitable vendors.

A peer highlights the relevance of building organization-specific use cases:

Perform a thorough review of the big cloud providers and assure that you keep scoring as accurate as possible based on the use cases that you come up with. Do not go for the use case evaluation criteria that the vendor brings to you. The selection would then only become evident based on the organization’s overall cloud strategy.

— Enterprise Architecture and Technology Innovation Professional, Healthcare Sector

Another peer adds:

Show the vendors your use cases. Make them understand why you want to do what you want to do. Seek their counsel and recommendations as they know their product better than anyone else. Move away from a customer-vendor relationship to a partner-partner model. It will give you back tremendous leverage and goodwill.

— CIO, Transportation Sector

A peer further articulates the importance of ensuring trials and cost estimation:
Do trials with multiple cloud providers, just do not evaluate on paper. Get a conflict-prone smart cloud engineer, a security consultant and someone from legal to ask all the difficult questions to evaluate how the service provider responds under pressure. Also, do your own calculations regarding costs as it is not a straightforward formula. Do not accept estimations from the vendors as they usually underestimate the costs.

— Enterprise Architecture and Technology Innovation Professional, Service Sector

Peer recommendations include:

- Determine the organization's priority regarding storage services, the amount of space and the type of integrations required to shortlist suitable vendors.

- Research the kind of services offered by different cloud providers. Administer subject-matter experts to evaluate their market share, technical expertise and product roadmap.

- Conduct a cost-benefit analysis targeting all the required services based on the organization's specific use cases. Ensure full capacity management assessments with application mapping capabilities to predict costs accurately.

- Run trials to test integration, flow of data, recovery processes and so on. Assess their overall impact on serviceability and ensure they have the competence to support end-to-end platform services.

- Consult with industry leaders to analyze their performance in the market and prepare a detailed service-level agreement to ensure the services are aligned with best practices.

Recommended reading:

Critical Capabilities for Cloud Infrastructure and Platform Services

Lesson 3: Enable Platform Proficiency Among the End Users Through Prior Training Sessions

The peers opine that a prior understanding of the functionalities of the platform among the end users will streamline its implementation. Therefore, they advocate executing training sessions for the end users before the implementation.

In this regard, a peer states:
The effective utilization of the functionalities of CIPS requires training. Our organization would establish an optimum training model in the beginning of the deployment as it could help avoid the time and costs required for people to get acquainted with it afterward.

— Data and Analytics Professional, Service Sector

Another peer emphasizes prior training by sharing their organization’s experience:

We implemented CIPS before conducting the official training, so we had a lot of difficulties while deploying it. After the training, we found out better ways to create many things, such as the network part, that we decided to rebuild. So, if we could start over, I would certainly suggest starting with an official training of the end users.

— Infrastructure and Operations Professional, Energy and Utility Sector

Peer recommendations include:

- Organize a briefing session to introduce the variety of applications and functionalities of the platform to the end users.
- Provide access to the available learning material and e-learning courses, if any.
- Encourage the end users to learn more about the capabilities of the platform by exploring the vendor community forums.
- Schedule specific learning sessions for the developers to ensure seamless integration of applications and processes.

Recommended reading:

The Cloud Infrastructure and Platform Services Skills I&O Teams Require for the Future

Lesson 4: Adopt a Multicloud Strategy; Focus on Your Migration Plan
The peers recommend I&O leaders to pursue a multicloud strategy with a clear understanding of its impact — increasing access to versatile technology options, reducing vendor concentration risks and incorporating multicloud management to mitigate the added architectural complexity. This will also create the need to lay particular emphasis on the migration of applications between on-premises and the multiple cloud providers.

Following is a peer’s statement about the importance of adopting a multicloud strategy:

Opting for multiple clouds in the organization for their wide range of services and features will help in solving many problems. This approach will also help with avoiding vendor lock-ins.

— Application Professional, Healthcare Sector

A peer further articulates about executing a thorough migration plan:

Invest time to review and assess your strategy of the cloud migration. Lift and shift, remediate or rearchitect. You need a knowledgeable cloud architect who is business savvy and can assess your applications to provide end-to-end cost benefit assessment as well as recommend a multicloud architecture.

— Application Professional, Healthcare Sector

Peer recommendations include:

- Leverage the diversified capabilities of multiple cloud providers and maximize discounts by choosing a primary strategic provider. Steer away from a centralized cloud management approach to avoid technology lock-ins and unnecessary additional costs.

- Plan the migration of applications from on-premises to the cloud and in-between clouds, if necessary, by thoroughly assessing the need for the rationalization of applications.

- Employ a cloud architect to select an optimum multicloud architecture that suits the overall business strategy, and a cloud broker to ensure workloads can be shifted between cloud providers.
■ Ensure a coordinated approach to multicloud management and governance by endeavoring to standardize procedures, processes and policies as much as possible. This will also enable the effective optimization of cloud resources, aligned with best practices for reliability and security.

Recommended readings:

Solution Criteria for Cloud Integrated IaaS and PaaS

Decision Point for Choosing a Cloud Migration Strategy for Applications

Lesson 5: Streamline the Implementation by Ensuring Collaboration With Professional Services

The peers guide the I&O leaders to seek implementation assistance from an experienced third-party professional service to ensure optimum deployment. They further encourage organizations to build internal competency in multicloud management by teaming data engineers along with the professionals, during the implementation.

A peer states the following about utilizing professional services:

Work with professional services or a highly qualified partner to ensure a good implementation, especially the network part as it needs to be very well architected to ensure you do not have any difficulties later.

— Infrastructure and Operations Professional, Energy and Utility Sector

A peer further remarks about building internal competency:

Involve experienced data engineers from the team of end users to facilitate the implementation effort and also ensure that there are no delays.

— Data and Analytics Professional, Finance Sector

Peer recommendations include:

■ Hire an experienced third-party professional service to ensure effective integration of applications and their scalability aligned with industry standards.
 Allocate an internal team of data engineers to ally with the team of professional services to not only ensure that there are no delays in the deployment but also learn the specifics of multicloud management.

 Customize database models according to the organization’s specific requirements and segregate data based on regions/country.

 Set roles, permissions, usage limits and billing alarms to ensure that end users do not exceed the recommended thresholds under normal usage conditions. Ensure security controls are properly configured to mitigate potential threats.

Recommended reading:

Innovation Insight for Multicloud Computing

Methodology

Of the Peer Insights survey data considered for this market, only those responses meeting the following criteria were included in this synthesis:

 Reviews less than 12 months old.

 Responses that pertain to the project experience and are not tied to the capabilities of a vendor.

 Reviews were clustered into the top-five most-referenced categories (lessons learned) and then listed in order of relevant phases in the project life cycle.

The results of this synthesis are representative of the respondent base and not necessarily the market as a whole.

“The data used in this report is drawn from reviews on Peer Insights, a crowdsourced enterprise review platform that relies on dynamic data. Key to maintaining the integrity of the site is our ongoing moderation and validation of those reviews. Reviews are examined before publishing to the site and periodically, post-publishing. Due to the dynamic nature of the data, the external Peer Insights site will always have the most updated view of the data in this report.”

Recommended by the Author

Magic Quadrant for Cloud Infrastructure and Platform Services

Cloud and Edge Infrastructure Primer for 2021

IT Leaders’ Strategy Deck: Multicloud and Hybrid Cloud

4 Strategies for I&O Leaders to Attract and Hire Cloud Experts

The Cloud Strategy Cookbook, 2021