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The Essential Guide to Creating a Cloud Center of Excellence

As more enterprises move to the cloud, leading cloud service providers like Amazon Web Services, Microsoft Azure, and Google Cloud Platform have introduced cloud migration tools and services aimed at large-scale environments. You've surely heard about the broad benefits of moving to the cloud for time savings, cost, and flexibility. It's not the whole story. As modern enterprise IT continues to evolve alongside cloud solutions, the list of reasons to switch has grown substantially. But moving to the cloud is a more than a swap in some hardware and software - it means becoming a different kind of organization.

Momentous Transformation Requires Excellence

For many companies today, switching to the cloud represents a path to advanced innovation. Cloud platforms give you access to near-limitless computing power and cutting-edge tech, from managed infrastructure to an ever-developing ecosystem of services. Choosing to go to the cloud is easy; the challenge is selecting the right provider and the right migration plan to reduce the pains of making the transition.

Going to the cloud represents a significant transformation for your IT, security, and development teams. The move means new financial, security, skill, and culture challenges that require governance across your organization. Note the use of the word "govern" instead of "control;" as stressed by Gartner

"It is vital for the Cloud Center of Excellence to be focused on governance rather than on control. Organizations who remain focused on control are less likely to deliver effective self-service, or fully unlock key cloud benefits such as agility, flexibility, and access to innovation."

You need a dedicated team who can direct and own the migration process - something that takes time to complete, requires buy-in from different disciplines, and needs to stay on schedule. It's too important a transition to get wrong. With all of that said, a Cloud Center of Excellence (CCoE) is a modern enterprise necessity.

What is a Cloud Center of Excellence? To put it simply, a CCoE is a task force within your company that is dedicated to foreseeing and addressing the challenges associated with moving to the cloud. Since cloud migration poses a myriad of complex changes that will affect every part of your organization, a CCoE is essential to keeping the process on schedule and on budget, while ensuring a smooth migration.

Your CCoE will help your organization plan out a solid strategy backed by a clear vision to ensure the cloud migration project ticks all of the boxes. In addition to overseeing the actual hardware and software changes, a CCoE will drive the adoption agenda by coordinating with stakeholders and providing structured, accurate information to all those who require it.

The clear pathway that the CCoE will carve out will ensure that your company can avoid the common pitfalls and get the most out of your cloud adoption initiative. So, what does it take to build a CCoE team and put them on the path to planning, acting, and overcoming? In this guide, we will walk you through the process of the CCoE concept, which remains fairly new in the world of enterprise IT.

What is a Cloud Center of Excellence (CCoE)?

What Does a Center of Excellence Do?

Whenever an organization looks to introduce new capabilities, it may choose to form a dedicated Cloud Center of Excellence (CCoE). The CCoE consists of executives from the organization who will lead allover adoption, typically consisting of new technology, work practices, services, or skills.

CCoEs accelerate the uptake of new technologies and optimize core capabilities with higher efficiency and lower costs.

The CCoE is responsible for championing the process as the organization undergoes transformation, ensuring that every team member and the department has the guidance, training, and support they need to be successful. The CCoE is responsible for setting frameworks, standardizing processes, and overcoming challenges, all while measuring efficiency, objectives, revenue, and outcome.

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Who Should Be Part of a CCoE Team?

Since this team will be responsible for the initiative throughout the whole process - from the research and planning to adoption - it's important that team members have a range of backgrounds in IT.

The individuals on the team may maintain a day-to-day role within your organization or they may be hired temporarily and solely for the CCoE team. Additionally, you may only need to bring certain individuals onto the team for short periods of time. However, Gartner stresses of the CCoE team "while some roles can be filled by temporary consultant, the majority of the team should be FTEs with longterm interests of the cloud deployment in mind"

Depending on the size of your organization and your timeline for migration, you may identify overlap in some of the roles below. When assembling your team, aim to select five individuals with each one holding a different role off this list by first determining which roles are most pertinent to your organization's transformation needs.

Typically, a CCoE team consists of up to five people who hold the day-to-day responsibilities of the cloud. Typical roles include:

IT Manager

IT Financial Manager

Operations Manager

Systems Architect

Application Developer

Systems Administrator

Database Administrator

Network Engineer

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What Will You Need in a CCoE?

Key Points of Research
One of the first things your team needs to familiarize itself with is the new approaches taken to security and application architecture, as well as cost and cost optimization strategies. Your IT financial manager will need to understand the challenges associated with switching from CAPEX to OPEX.

Once the team has determined that migrating to the cloud is within budget and a smart move, the next step is working with the IT department and company leaders to identify the best candidates for cloud migration. The first things to be migrated are generally new applications that require little to no integration with the company's existing applications. Additionally, applications that have fluctuating workloads are also good candidates for migration since they can allow you to take advantage of the scalability of the cloud.

Next, the team will need to break off and research the various cloud vendors, looking at feature requirements, SLAs, pricing, compatibility, and so on. In this stage, the team will discuss whether they should adopt a hybrid, single-cloud, or multi-cloud approach. Additionally, they need to understand if existing applications should be re-hosted or re-architected.

The Preliminary Research Phase
Once you have assembled your CCoE team, the first thing they will need to do is delve into the detailed research and planning phase. As a whole, the team must understand the implications of moving from your current on-premise solution to the pay-as-you-go, dynamic environment offered by the cloud.

Look Ahead
As said before, one of the biggest benefits of moving to the cloud is the ability to take advantage of new and emerging technologies, like containerized applications and serverless computing. Therefore, it's essential that your CCoE team takes the time to discuss and explore these new solutions and determines if any of them will be beneficial to the company.

Additionally, the team is responsible for establishing requirements for the company's identity and security management needs. In this area, the team must weigh the benefits of fully-managed solutions vs. self-service solutions. Fully managed solutions provide rapid deployment and low maintenance offerings, while self-service provides greater flexibility and solution tailoring. This will play a key role in helping you compare cloud vendors.

Aim for Skills Diversity
Try and get as much cloud experience on the team as you can. Since the cloud is multi-disciplinary by nature, a team with a broad range of different skills is required. The fast-paced development of cloud technology necessitates personnel that will be able to understand, evaluate, and adopt emerging technologies as they come available. The resiliency of your CCoE - and therefore, your cloud - requires an understanding of the continuous release product models of cloud tools.

Seek Out Team Players
When choosing who will be on your CCoE team, ensure you choose individuals who showcase good communication, collaboration, and boardroom skills as regular team meetings will play a crucial role in successful cloud adoption.

Consider Cloud Adversaries
Many organizations prioritize individuals who are proponents of cloud adoption, but it is beneficial to choose at least one skeptic and bring them onto the CCoE team. This individual will soon embrace the change and may eventually help you convince others in the organization who held similar reservations.

The “Big Three” Cloud Vendors

Among the most sophisticated vendors in the world of cloud infrastructure, the “Big Three” platforms are Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP). These all feature rich capabilities and modern, mature solutions that can fit the needs of virtually any enterprise IT team. With that said, each vendor has its strong and weak points.

For example, if you have a lot of planning applications that will be “born” in the cloud and you intend to use a lot of emerging technologies (like mobile, DevOps, and IoT tools), Amazon Web Services is a particularly fitting choice. Meanwhile, the hybrid capabilities of Microsoft Azure are ideal for enterprises who plan to keep some on-premises infrastructure. Lastly, Google Cloud offers a fully-managed Kubernetes service, which is appealing for containerized development.

Ultimately, your CCoE team will need to consider the pros and cons of each platform, being certain to take a deep dive into each platform’s feature set and offerings to see which one is most applicable for your organization. You need to consider the service delivery approach of each platform, since AWS and GCP are more self-service while Azure is more hands-on, with a large and active network of sales and support reps.

The CCoE Team’s Challenges and Duties

Following the initial research and planning phase, your CCoE team can move on to the detailed logistics of creating your cloud infrastructure, preparing your workforce, and establishing new processes and procedures for infrastructure migration and management. The team will ultimately have to complete all of the following areas for a successful migration and cloud adoption process.

Failover and Recovery

When servers go down, your company needs a way to minimize the impact it has on your business and its users. This requires a well-planned environment complete with a disaster recovery plan that will enable you to get back up and running quickly. The plan needs to balance the cost of the backup infrastructure with the availability requirements, which can be a tough equation to figure out.

Resource Provisioning

When a user requires a stable, compliant, and secure environment for an application, you need to make it easy for them to provide that infrastructure.

Infrastructure-as-code (IAC) tools will provide consistency and allow complex environments to be more easily set up. These same tools increase the portability of your workloads and can make monitoring performance more straightforward across your entire organization.

However, you can’t simply opt for an IAC tool, like Chef or Puppet, and take away users’ freedom to use the cloud when and how they choose. This freedom is important and provides flexibility and independence to your users. You just need to put the right “guardrails” in place, first.

Application Development
The cloud holds incredible potential for cost reduction and increased security, but only if you use it correctly. To realize these benefits in full, you need to approach the application design process using the cloud's distributed architecture in the right way. This means loosely coupling microservices, which will add new layers of isolation and, thereby, add security to every application you create. This approach will also let you scale components of an application independently, which will give you better control of your resource consumption and resulting costs.

Cloud Training
Staff cannot be expected to just "find their way around" the new cloud environment. One of the most expensive and time-consuming parts of moving to the cloud is training staff in all of the new technologies associated with it. Educating your teams on how the cloud is different from your traditional infrastructure will build interest, and nurturing that interest is important to developing their knowledge and ensuring best practices are upheld.

All of the "Big Three" cloud vendors offer training and certification programs. Opting for a managed cloud service provider can help you further equip your teams with the skills they require to operate efficiently in the cloud. On-the-job training is even available to help your staff improve their practical cloud skills and start putting them into action.

Security
When it comes to securing your cloud, the CCoE must factor security considerations into each step and decision. Migrating infrastructures, applications or services to the cloud without expanding the attack surface or increasing security overhead requires careful preparation. This starts by understanding that any cloud-based deployment, (whether it's infrastructure or a new application), requires clear communication between lines of business, IT, and security teams. Without agreements about business needs and objectives and a candid discussion of related threats, organizations open themselves to an array of new risks.

Far too many organizations own security architecture built around isolated security devices, decentralized management, and an inconsistent application of security policies.

Your organization will need to treat identities as the new perimeter. You will need to start by getting control of your security sprawl and imposing a central security strategy.

Asset Management
Asset management is a crucial part of cloud infrastructure management and optimization. After all, you can't manage it if you don't know that you have it. Therefore, the first essential step in asset management is to gain complete visibility into all of your assets and identities that are distributed across the cloud so you can monitor them accordingly.

A Cloud Infrastructure Entitlement Management (CIEM) platform should be implemented from the get-go, allowing you to track who owns access to what resources. The right monitoring tools will also help prevent "cloud sprawl," which is the unmanaged or under-controlled growth in consumption of cloud resources that will drive up costs and make your infrastructure more vulnerable.

Cost Optimization
In addition to asset management, which helps you ensure only utilized applications are consuming resources, cost optimization is the process of monitoring your active cloud resources to ensure they're correctly balanced for performance and cost.

Cost optimization also requires you to analyze cost-saving opportunities, like consolidated billing programs, which can help you gain discounts on high-capacity consumption and exploit usage thresholds for different tiered billing options. AWS Reserved Instances is just one example of a cost optimization strategy if you identify a high and consistent need for cloud resources as an AWS user.

Change Management
When it comes to your organization's cloud transformation process and agenda, the CCoE team is going to be the driving force behind it. Your CCoE team will not only plan and manage the agenda but regularly check-in and make sure that each team is executing the plan correctly and staying on track to timely implementation.

This requires the CCoE team to work with senior management so they can gain insight into strategic initiatives and further develop, manage, and implement them across the organization. The CCoE also needs to act as an intermediary between departments, promoting transparency and ensuring smooth collaboration as they align the actions of various teams to ensure everyone's on track to achieving the organization's overall objectives.

Prepare for a Successful Cloud Journey

As you begin forming your CCoE, it's important to delegate the many duties associated with cloud adoption and maintain clear communication lines amongst teams and departments. From there, you can begin to see your cloud migration plan come to life.

As with any major operational change, be sure to break big tasks down into small tasks to create simpler assignments. Moreover, build the confidence of colleagues and day-to-day proficiency by prioritizing practical understanding and skills relating to the cloud. Lastly, make sure you're giving everyone the tools they need to be secure, compliant, and cost-effective throughout the move to cloud infrastructure. Ultimately, while moving to the cloud is by no means a simple process, with the right CCoE team to drive the process, your organization can enjoy the flexibility, scalability, and emerging capabilities associated with cloud migration without the risk.

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Learn More

Sonrai Security offers a demo for organizations and brings you that much closer to data security and compliance. See how we identify holes such as excessive privilege, escalations, separation of duty, and potential risks that may arise from the identities, permissions, and data exchange within and across clouds.

Request a demo today!

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