AWS FOR MIGRATION

A cloud where your business can grow plus a trusted partner to get you there

Take the guesswork out of AWS migration with Cloudar as your guide

In collaboration with

cloudar

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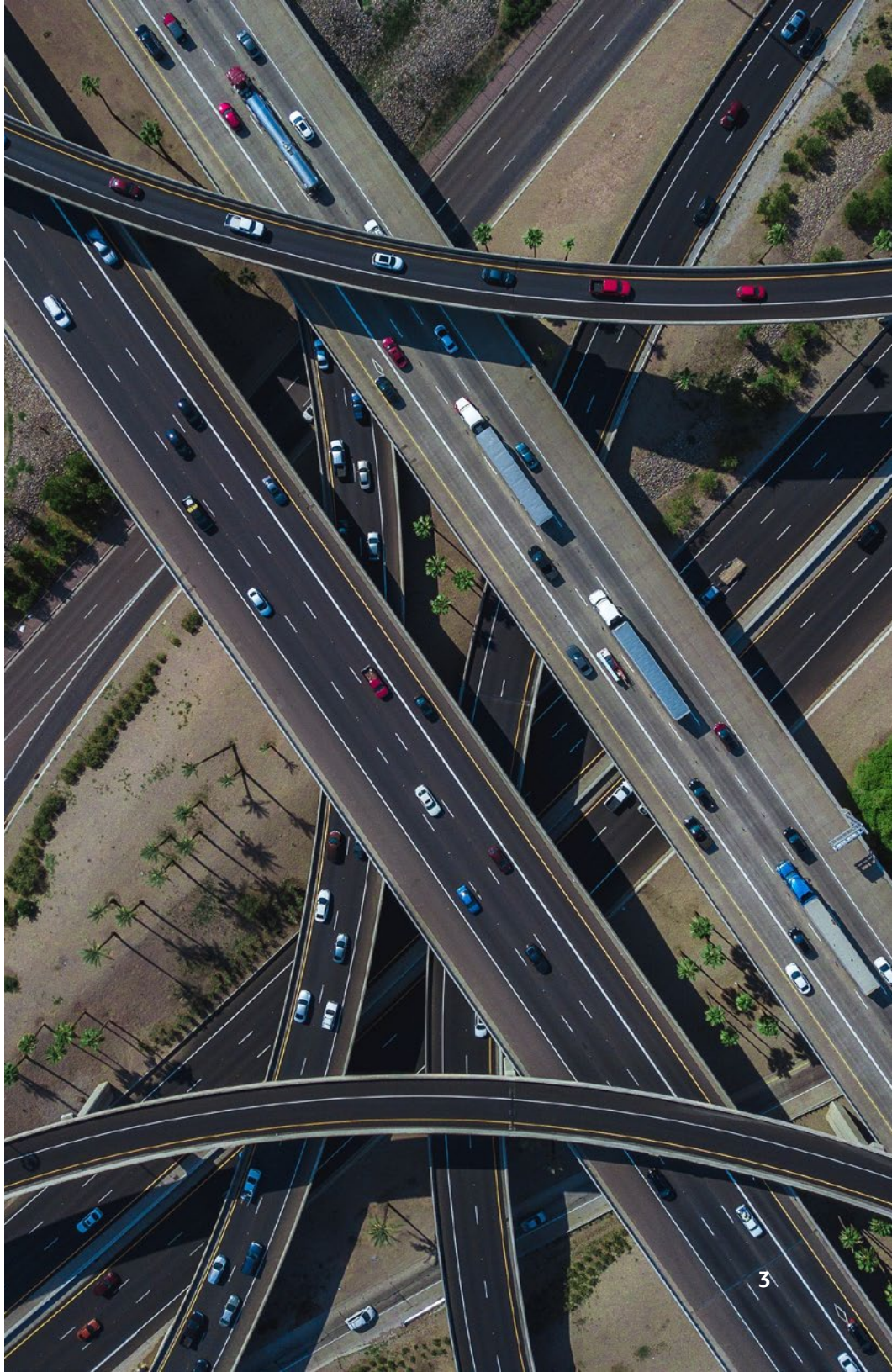
The benefits of a cloud migration

Organizations across every industry want to become more agile so they can innovate and respond to changes faster. Faced with ever-increasing disruption, they must also find ways to differentiate their businesses to stay competitive. For many organizations, moving to the cloud quickly is the best first step to modernization and transformation.

This ebook explores how organizations are migrating and modernizing on Amazon Web Services (AWS) to achieve critical business advantages such as higher productivity, faster time to market, and a stronger bottom line. It also covers key benefits of cloud migration, why now is the best time to migrate, and how your organization can realize the associated benefits of migrating to AWS with solutions from AWS Partner Cloudar.



Why cloud, why now?

Often, the decision to migrate workloads to the cloud starts with a desire to reduce costs. However, customers find that the strategic value of migrating to AWS goes well beyond the cost savings of retiring legacy infrastructure. Leveraging the breadth and depth of its research, AWS has identified eight key business drivers for moving to the cloud. Whether they are migrating some or all of their digital assets to the cloud, organizations can achieve transformational results.

Business drivers for migrating to the cloud

1. **Cost reduction**
2. **Agility and staff productivity**
3. **Improved security and operational resilience**
4. **Hardware/software end-of-life**

5. **Data center consolidation**
6. **Digital transformation**
7. **Going global quickly, mergers and acquisitions**
8. **New technologies (AI/ML and IoT)**

Why migrate to AWS?

To boost innovation, respond quickly to changing demands, and drive business transformation, organizations are migrating their infrastructure and applications to AWS. Modernizing on AWS enables streamlined operational practices that lead to measurable results.

On average, migrating to AWS delivers:

- **20%** average infrastructure cost savings[1]
- **66%** increase in administrator productivity[1]
- **43%** faster time to market for new features[1]
- **29%** increase in staff focus on innovation[1]
- **45%** fewer security-related incidents[1]

While migrating to AWS offers many benefits and opportunities, successful migrations take planning and expertise. Organizations also need to understand the challenges they're likely to face as part of the process.

With an experienced AWS Migration Competency Partner such as Cloudar by their side, businesses can anticipate those challenges and accelerate their cloud journey to achieve benefits faster.

[1] "The Business Value of Migration to Amazon Web Services," The Hackett Group, 2022

Common patterns for migration: The 7 Rs

Creating a detailed strategy that identifies the best pattern for various workloads is essential to accelerating and optimizing the migration journey, as well as achieving desired business objectives. Common migration patterns usually follow one of six basic patterns. But with AWS, organizations have a seventh option, culminating in the 7 Rs.

1 Rehost

In a large-scale migration scenario that demands a quick migration and rapid scaling to meet a business case—such as a data center lease termination—the majority of workloads are rehosted. Also known as lift-and-shift, rehosting can be automated with tools such as AWS Application Migration Service in most cases.

2 Re-platform

Sometimes referred to as lift-tinker-and-shift, re-platforming entails making a few cloud optimizations in order to achieve tangible benefits—but without changing the core architecture of the application. For example, businesses that are managing a messaging broker can easily replace the seven common patterns for migration with Amazon MQ. Amazon MQ is a fully managed service that doesn't require users to rewrite their applications or pay for third-party software licenses. Or, if migrating a Windows-based application that requires file storage, organizations can use the fully managed Amazon FSx for Windows File Server.

Businesses can reduce the amount of time they spend managing database instances by opting for a database-as-a-service offering such as Amazon Relational Database Service (Amazon RDS). When moving from one database source or version to a new platform or software version, AWS Database Migration Service (AWS DMS) keeps the source database fully operational during the migration, enabling near-zero downtime during the cutover.

3 Refactor

Refactoring changes the way an application is architected and developed, and is usually done by employing a data lake, which is cloud native. Typically, refactoring (or rearchitecting) is driven by a strong business need to add features, scale, or improve performance that would otherwise be difficult to achieve in an application's existing environment. If an organization is looking to boost agility or improve business continuity by moving to a service-oriented architecture (SOA), this strategy is a strong—although often most expensive—option.

4 Relocate

Once on AWS, businesses can take advantage of the wide variety and capabilities of AWS services to easily optimize or rearchitect applications. One example is VMware Cloud on AWS, which allows users to quickly relocate hundreds of applications virtualized on vSphere to the AWS Cloud, as well as maintain consistent operations with VMware Cloud Foundation-based environments, in just a few days.

5 Repurchase

Casually referenced as drop and shop, repurchase enables organizations to replace their current environment by moving to a newer version of software or purchasing an entirely new solution. This also applies to businesses that are or are looking for a new software licensing model that allows them more flexibility to match their business needs. In this case, an organization may choose to purchase Amazon Connect to replace its current contact center application.

6 Retain

A company may have portions of its IT portfolio that it is not ready to migrate or believes are best kept on premises. For on-premises workloads, AWS Outposts brings the same APIs, services, management tools, support, operating model to virtually any data center, co-location space, or on-premises facility. With AWS Outposts, businesses have a truly consistent hybrid cloud, allowing them to develop once and deploy across AWS Outposts on premises or on AWS without having to recertify their applications.

When going the retain route, businesses should remember that as more of their portfolio moves to the cloud, allocation of data center expenses across fewer workloads may eventually drive a need to revisit the retained workloads.

7 Retire

The retire route lets organizations decommission or archive unneeded portions of their IT portfolio. When businesses first assess their environments' readiness to migrate, they may come across applications that are no longer being used. By rationalizing their IT portfolios and identifying assets that are no longer useful, organizations can strengthen their business case and direct their team's attention toward maintaining the resources that are more widely used.

A streamlined approach to migration with Cloudar and AWS

To streamline the cloud migration journey, it is important to have the proper support and guidance when you need it. Cloudar, an AWS Migration Competency Partner that holds a long list of AWS certifications, offers end-to-end services to help customers navigate their entire cloud journey.

By aligning to AWS best practice guidance, including the AWS Migration Acceleration Program (MAP), Cloudar can work in tandem with in-house IT teams to ensure a smooth, efficient cloud transition.

The AWS Migration Acceleration Program (MAP) is a complete and proven cloud migration program based upon the experience AWS has with migrating thousands of customers to the cloud. The program packages best practices, tools, expertise, financial incentives, and the expertise and solutions delivered by AWS Partners to make cloud adoption easier and help customers reach their business goals faster.

Following MAP, Cloudar applies a three-phase approach:

1 Assess

The migration readiness assessment identifies gaps along the six dimensions of the AWS Cloud Adoption Framework: business, process, people, platform, operations, and security. This survey enables organizations to identify the capabilities required to migrate and build a total cost of ownership (TCO) model. Cloudar follows AWS suggested best practices to determine how to both migrate infrastructure with the utmost care and handle any unforeseen challenges.

2 Mobilize

The mobilize phase creates an operational foundation for migration, with the goal of fixing the capability gaps that were identified in the assess phase. Cloudar analyzes and identifies financial hurdles, potential blockers, and other skill and knowledge barriers that might need attention before migration. This step accelerates migration decisions by providing clear guidance that improve the success of your migration.

3 Migrate and modernize

In this final phase, organizations execute the migration plan developed during the mobilize phase. Once application testing is complete, Cloudar begins migrating workloads to the AWS Cloud and then optimizes for performance and spend.

Cloudar's AWS migration methodology

Cloudar deployments are based on the six pillars outlined in the AWS Well-Architected Framework, ensuring that every design incorporates the best architectural practices.

Optimization and licensing assessment

To ensure the success of your migration, Cloudar begins with a thorough discovery and inventory of your network through an AWS Optimization and Licensing Assessment (OLA). With this activity, Cloudar collects data on your current installation and provides a recommended optimized environment with right sizing and pricing analysis. You can also choose to skip the OLA assessment at this stage and share the specifications using a template.

Working closely with licensing specialists, Cloudar reviews current license contracts, hardware, and performance data, and compares it against the recommended target environment. From there, Cloudar creates a business case outlining the advantages of migrating to AWS, culminating in a report that includes a multi-year TCO and ROI exercise, along with specific recommendations highlighting the benefits of the migration.

Note that the OLA can be part of the assess phase in MAP.

Cloud migration readiness assessment and business case

Based on the discovery phase, Cloudar creates an offer or project plan, which includes a scope description, AWS resource cost estimate, a business case, and value. After that, Cloudar prepares an operations model, outlining the responsibilities of both the customer and the solution provider. As a certified AWS Managed Services Partner, Cloudar will propose a managed services offering.

Next, Cloudar will help you prepare for cloud governance by performing a migration readiness assessment based on the AWS Cloud Adoption Framework. This assessment evaluates your cloud readiness and identifies strengths and weaknesses in relation to the six perspectives of the framework (business, people, governance, platform, security, and operations).

Through this process, Cloudar will deliver a cloud migration readiness assessment report and a RACI and service matrix. This report and matrix offer a solid business case demonstrating the value of the cloud to your organization.

Cloudar’s AWS migration offering

Mobilize and migration planning

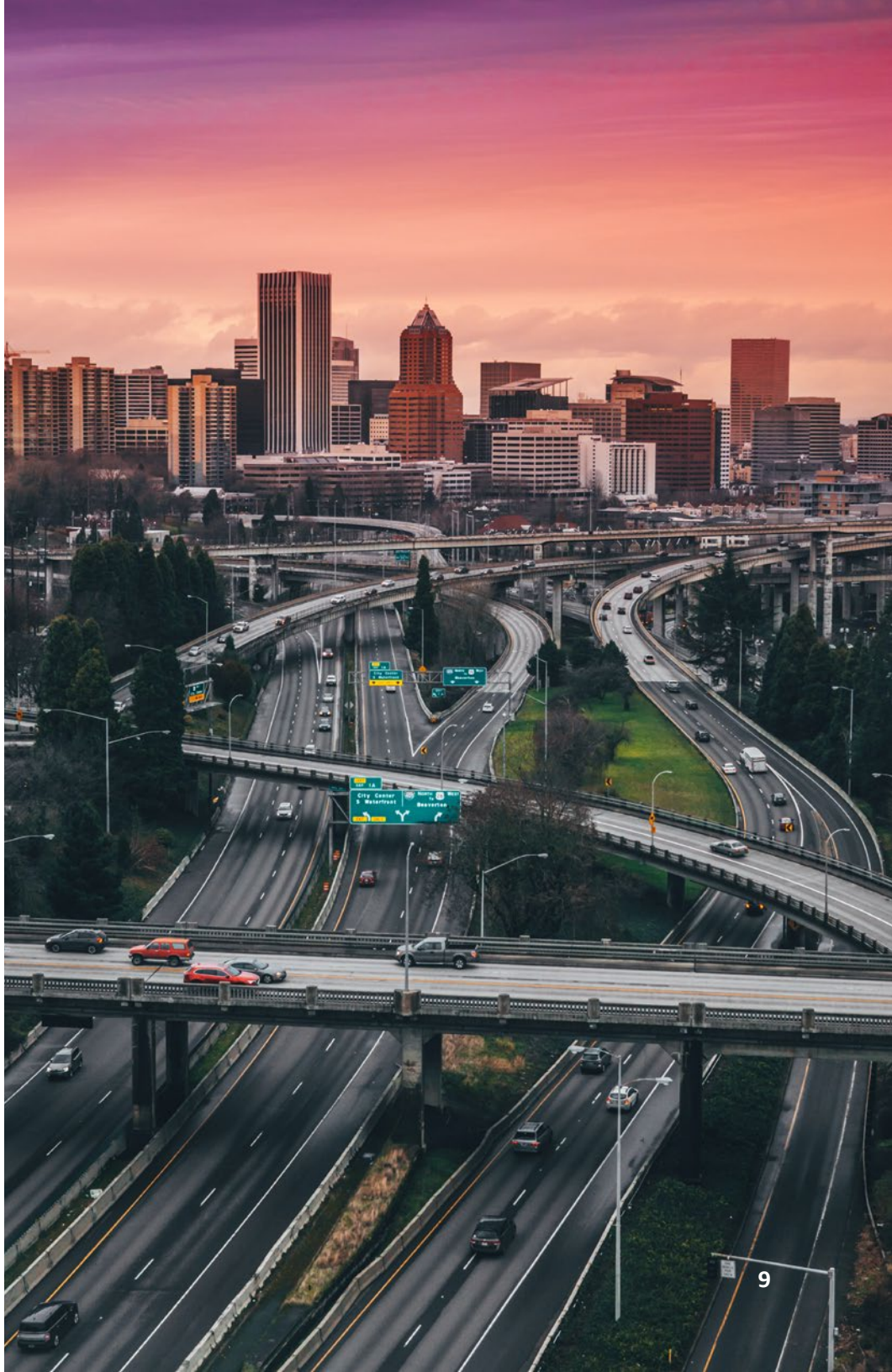
In this step, Cloudar determines your migration strategy using the 7 Rs. The inventory helps to prioritize your migration and deliverables, its listing server and application, and prioritize migration candidates.

To govern the migration steps, Cloudar uses the project plan as a central collaboration tool that is shared with stakeholders. It is a living document and is used in a pragmatic and agile approach, allowing refinement while keeping standards and structure.

Using the requirements collected during the assess phase, Cloudar creates design workshops that follow the AWS Well-Architected Framework. The outcomes of those discussions are evaluated, then design decisions are made and translated to an architecture diagram and design document. In addition, Cloudar facilitates discussions around standards, naming conventions, and tagging strategies.

From the outset, it is imperative to prioritize security. At this stage, Cloudar focuses on establishing a security baseline and ensuring compliance with relevant regulations that align with the unique requirements of the business. Security, risk management, and compliance are integrated components of the comprehensive workflow, establishing a standard level of security that all IT security stakeholders can agree upon.

During the managed services onboarding process, Cloudar outlines IT service management processes, defines SLAs, and addresses high availability planning. For non-managed services customers, Cloudar offers consultation and assistance in designing an operational support plan and cloud governance strategy to prevent operational gaps and ensure a successful transformation.



Cloudar's AWS migration offering

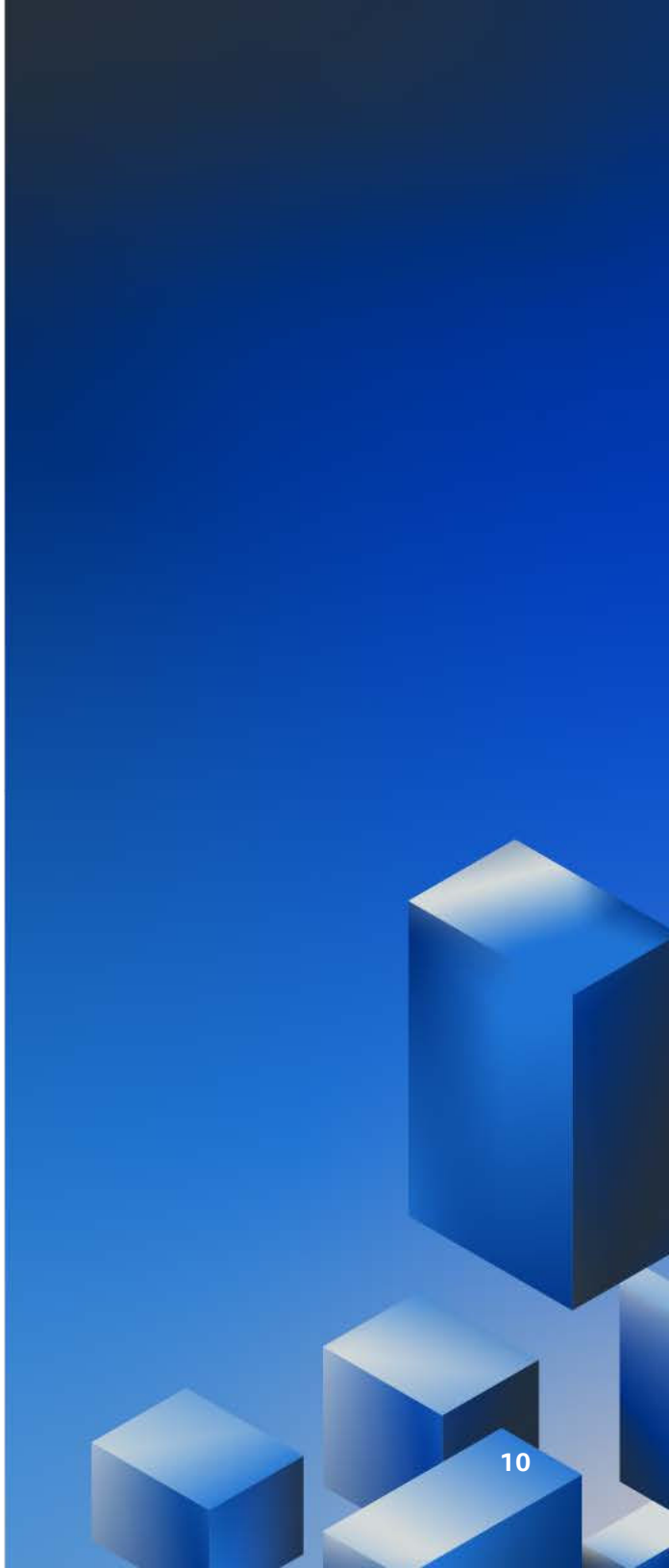
Migration execution

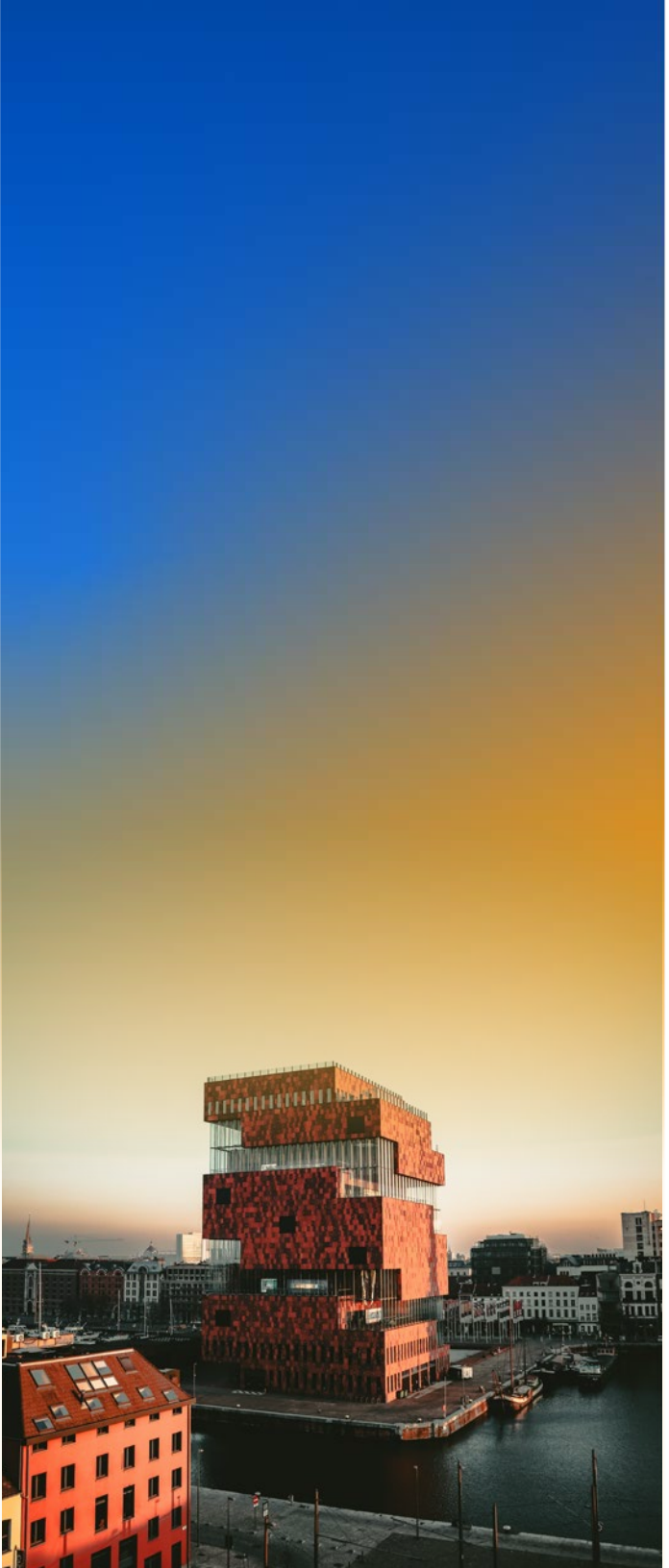
Cloudar's Migration Factory comprises people, tools, and processes that facilitate the migration of large volumes for rehost and re-platform patterns. A factory approach optimizes repeated patterns. Tools and technology are deployed to gain insight into the application portfolio, enhance efficiency, and maximize migration velocity. Cloudar plans migration waves and ramps up resources. Depending on business needs, maximum downtime, cutover window, data transfer size, and constraints, different migration techniques may be utilized or assessed. Cloudar also establishes automated processes and feedback mechanisms within the migration team to manage change and accelerate iteration and follows an iterative and sprint-based approach.

The Migration Factory includes seven stages:

1. The initial discovery is used as input. Additional information is gathered, and the inventory is continually updated to provide a comprehensive view of the application, the application components utilized, and the interdependencies between applications.
2. The initial design is reassessed, re-designed, and optimized where necessary.
3. The infrastructure is deployed in the cloud in accordance with the migration playbooks.
4. Cutover involves connecting applications to the new infrastructure.
5. The server, application, and workloads are integrated into your operations and environment.
6. Functional validation, performance baseline testing, test automation, business and user acceptance, and sign-off are carried out.
7. Go-live: From this point on, the application will operate in production and be supported as such.

After the migration is executed in accordance with the scope, a project closing and evaluation meeting is held. All parties must assess if all agreed-upon activities in the original project scope have been completed. Then a controlled project closure sets the groundwork for productive collaboration and further optimization and reinvention.





d|si Davinsi Labs

CASE STUDY:

Davinsi Labs gains automated pathway to landing zones on AWS

The challenge

Davinsi Labs is a technology company specializing in cybersecurity and intelligence solutions. While the company was using modern principles such as DevOps, infrastructure as code (IaC), and CI/CD to orchestrate and manage environments, it also had a traditional data center setup. As a result, purchasing, ordering, and replacing equipment was cumbersome and slow. Convinced of the automation and self-service capabilities of the cloud, Davinsi Labs made the strategic decision to migrate workloads to AWS.

The solution

Cloudar, acting primarily in a consultancy role, helped Davinsi Labs design and automate a standard landing zone model, according to AWS best practices. Because the company had pre-existing investments in Terraform, it wanted to keep using a Terraform framework for future automations. In addition, due to legal and financial requirements, Davinsi Labs needed the ability to run multiple AWS landing zones. The configuration and deployment of these landing zones had to be completely in sync and aligned, which called for full automation.

The landing zone model that Cloudar helped design includes an AWS organization with a best practice structure for organizational units, a base set of protective service control policies, and a multi-account architecture.

The results

To further deliver results through cloud migration, Cloudar developed a single sign-on capability using AWS IAM Identity Center and federated it with Davinsi Labs' current identity platform. To help Davinsi Labs keep track of costs, Cloudar set up budget monitoring and alerts using AWS Budgets and Amazon Simple Notification Service.

In addition to assisting with the design and workload migration, Cloudar also wrote a modular Terraform base code model so Davinsi Labs could set up the landing zone baseline model in an automated way.

Ensure a smooth AWS migration with Cloudar

AWS is the world's most comprehensive and broadly adopted cloud platform, offering over 200 fully featured services from data centers globally. Millions of customers—including the fastest-growing startups, largest enterprises, and leading government agencies—are using AWS to lower costs, become more agile, and innovate faster.

Together with AWS, Cloudar has created best practices to accelerate and guide migrations to the cloud.

Ready to get started?
Learn more about Cloudar and talk with our AWS migration experts.

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