

# South Carolina Cloud Services Welcome Packet



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# Welcome to the South Carolina Cloud Services!

The South Carolina Department of Administration (Admin) has developed a Cloud Services offering to effectively and efficiently provision and manage cloud-based resources. Cloud Services are an extension to the existing IT Shared Services portfolio and is in alignment with the South Carolina Statewide Strategic Information Technology (IT) Plan.

Cloud Services leverage a standard approach for cloud management in the public cloud. Cloud providers such as Microsoft and Amazon offer agencies the ability to rapidly provision cloud resources such as servers, storage and databases.

Cloud processes are streamlined through the ServiceNow Cloud Management Platform (CMP). ServiceNow orchestrates a variety of cloud tools, providing management capabilities such as security compliance monitoring, cost analytics, asset management, software deployment and more.

The adoption of cloud computing will be at the discretion of each agency and the Department of Administration. The state of South Carolina is not mandating the adoption of Cloud Services.

This document provides an introduction to South Carolina Cloud Services. This includes the benefits of leveraging the cloud, a summary of available cloud services, and other key information to help you begin your agency's cloud journey.

On behalf of the South Carolina Department of Administration, we are excited to bring these new Cloud Services to the state. We are looking forward to partnering with each agency, should they choose to adopt these innovative technologies.

Sincerely,

Office of Technology and Information Services  
South Carolina Department of Administration



# Cloud Summary

## What is the Cloud?

Cloud computing is the on-demand delivery of computing resources such as servers, software, storage and databases over the internet managed by a third-party provider.

Below, please find links to additional information on the various types of service offerings:

- [Software as a Service \(SaaS\)](#)
- [Platform as a Service \(PaaS\)](#)
- [Infrastructure as a Service \(IaaS\)](#)

## Why are South Carolina Cloud Services relevant to my agency?



### Cost Savings:

Efficiencies of scale can lead to lower base infrastructure costs when using the cloud. After factoring in hardware, utilities, software licenses and labor, public cloud computing costs are typically lower than what can be achieved on-premises.

Applications that are built for the cloud can take advantage of high-density consolidation, elastic scaling, and discounted pricing through reserved instances and “spot instance” auctions. Cloud services are typically billed on a per-second, per-hour or per-month basis, allowing for fair and granular meters.

South Carolina Cloud Services are designed to drive cost savings by consolidating redundant services, curating cost-effective solutions and minimizing operational overhead. Its focus is to provide guidance on reserved instances and savings plans for long-term efficiency.



### Scalability and Elasticity:

The public cloud provides access to near-limitless scalability of compute, network and storage assets. Also, by moving to the cloud, users do not need to forecast their capacity needs. Instead, the cloud allows the platform’s services to be quickly scaled up and down to meet changes in demand in computing power and data storage.



### Increased Speed and Agility:

South Carolina Cloud Services aim to provide faster time-to-market for compute and storage. The public cloud provides immediate self-service access to integrated infrastructure, platform and software solutions. Whereas Admin’s current turnaround for VMware compute and managed-storage requests is usually measured in days, public cloud solutions can be provisioned and de-provisioned within minutes.



## Flexibility and Collaboration:

Cloud computing offers business flexibility by allowing users to access files anywhere and at any time by using web-enabled devices such as smartphones, laptops and other devices. The cloud also allows users to access the same files simultaneously as their co-workers allowing for real-time collaboration.



## Resiliency/Disaster Recovery:

Cloud services are built with business continuity in mind. In the case of a natural disaster or a power failure, critical data is stored in multiple locations for protection, minimizing downtime and loss of productivity.



## Reduced Operational Complexity:

Based on individual agency needs and capabilities, Admin will either own or support the deployment, management and monitoring of cloud assets. The system will regularly be updated with the latest technology so you will always have the most up-to-date versions of software. Agencies who elect to have their cloud account managed by Admin will not have to worry about keeping track of updates and performing them manually, freeing up their time and resources for other tasks.



## Security and Privacy:

South Carolina Cloud Services facilitate existing state security standards and augments them with additional controls to align with the FedRAMP Moderate baseline. Additionally, the shared responsibility models allows customer agencies to inherit security controls from the cloud providers and Admin to support compliance within a wide variety of security frameworks.



# Services Summary

## What are South Carolina Cloud Services?

South Carolina Cloud Services are an extension to the state's existing IT Shared Services portfolio. Below are the six services being offered as part of Cloud Services starting in 2021. These services will continue to grow as Admin continues to identify, evaluate and distribute new capabilities.

### 1 Cloud Account/Subscription

Cloud Accounts and Subscriptions are the building blocks for agency cloud consumption, allowing agencies to access the public cloud. Each resource, such as a virtual machine or database, resides in a single account/subscription. IT Shared Services agencies share a networking hub for secure connectivity to the MetroNet and internet. Self-Managed agencies will maintain their own networking hubs.

### 2 Enterprise Storage

Enterprise Storage is a cloud-based storage account for object-based storage which can support multiple redundancy levels, including global replication and availability across many regions. Enterprise Storage allows agencies to tier their data to determine which objects need to be readily available at a moment's notice and which data can be retrieved at a slower pace. Each tier has a different cost and data accessibility associated with it.

### 3 External Firewall Rule

Cloud network constructs are locked down by default. Agencies may request firewall exceptions to support traffic to the internet, MetroNet or between cloud segments.

### 4 Relational Database

A Relational Database is a cloud-based database such as Microsoft SQL Server, MySQL, Oracle or PostgreSQL. Agencies have the ability to choose the type of database instance they would like to launch, appropriately sized to best fit their needs.

### 5 Virtual Server

Leveraging the state cloud management platform, agencies can provision virtual servers (e.g., AWS EC2 instances). These servers come in a variety of sizes, each with different pricing models to accommodate diverse use cases and applications. IT Shared Services agencies select from a selection of VM images with hardened Windows Server or Red Hat Enterprise Linux operating systems and required agent software pre-installed. Self-Managed agencies have the option of reusing managed VM images or providing their own.

# Process Overview

## How does my agency request to enroll in Cloud Services?



### Step 1: Outreach

Agency IT leadership will reach out directly to their Agency Relationship Management (ARM) representative. The ARM representative will schedule a working session with the agency to cover the following:

1. South Carolina Cloud Services overview and FAQs
2. Cloud Services governance models
3. Onboarding questionnaire
4. Next steps in the onboarding process



### Step 2: Discover

Once the agency has reached out and vocalized interest in South Carolina Cloud Services, the ARM representative will work to identify all agency-specific requirements and use cases, identify which cloud services will be leveraged, review the pricing and invoicing process, and perform all tasks on the Agency Onboarding Checklist. A Statement of Work (SOW) will then be composed and executed to initiate a project to create cloud accounts/subscriptions for that agency.



### Step 3: Configure

Agencies will work with Admin to begin the technical onboarding process (depending on the complexity of the agency environment, a project manager may be assigned). This will include, but is not limited to:

- Identity integration
- Networking integration
- Logging and monitoring integration
- Security integration
- Financial integration
- Service integration



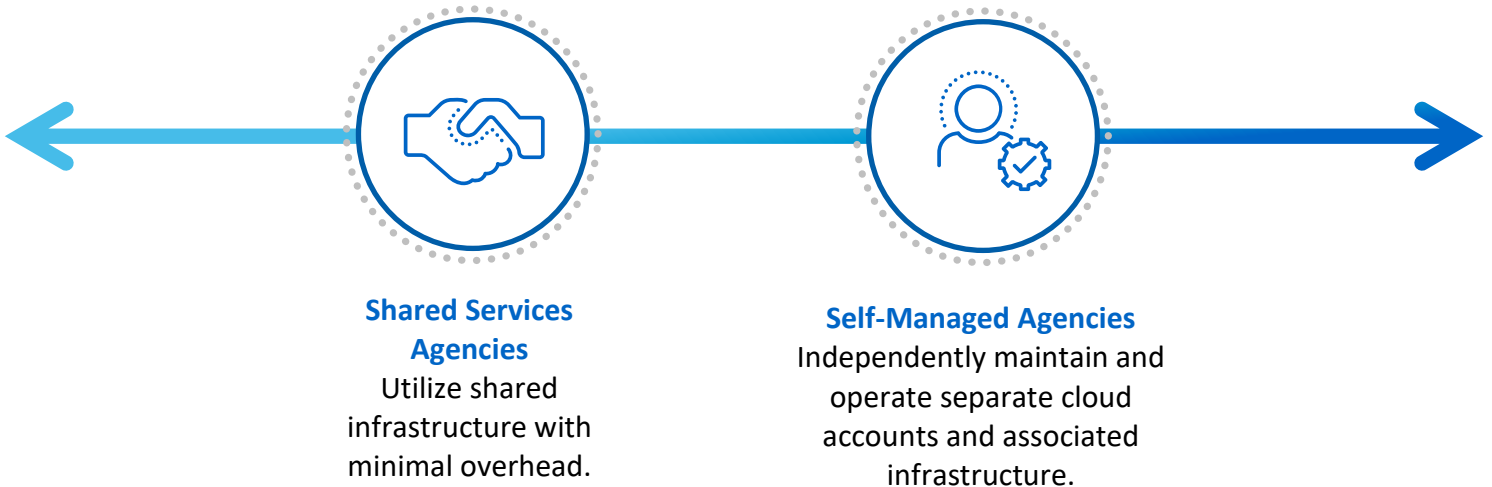
### Step 4: Operate

Agencies begin their journey with Cloud Services, coordinating with Admin as needed for operations and maintenance activities. Support mediums include:

- Training curriculum
- Job aids
- Service desk
- Cloud architecture consulting service

## Deciding Governance of Agency Services

Agency IT leadership and their ARM representative will discuss which governance model best fits the agency's needs. Agencies can be classified into one of two categories:





Shared Services and Self-Managed agencies will deploy Shared Services Accounts or Self-Managed Accounts, respectively. However, it is possible for a single agency to have a mix of accounts spanning both types. In general, Shared Services agencies have a smaller IT staff, while Self-Managed agencies have a larger IT staff.

Please note, identifying the agency type is usually completed in the second onboarding step (Discover).

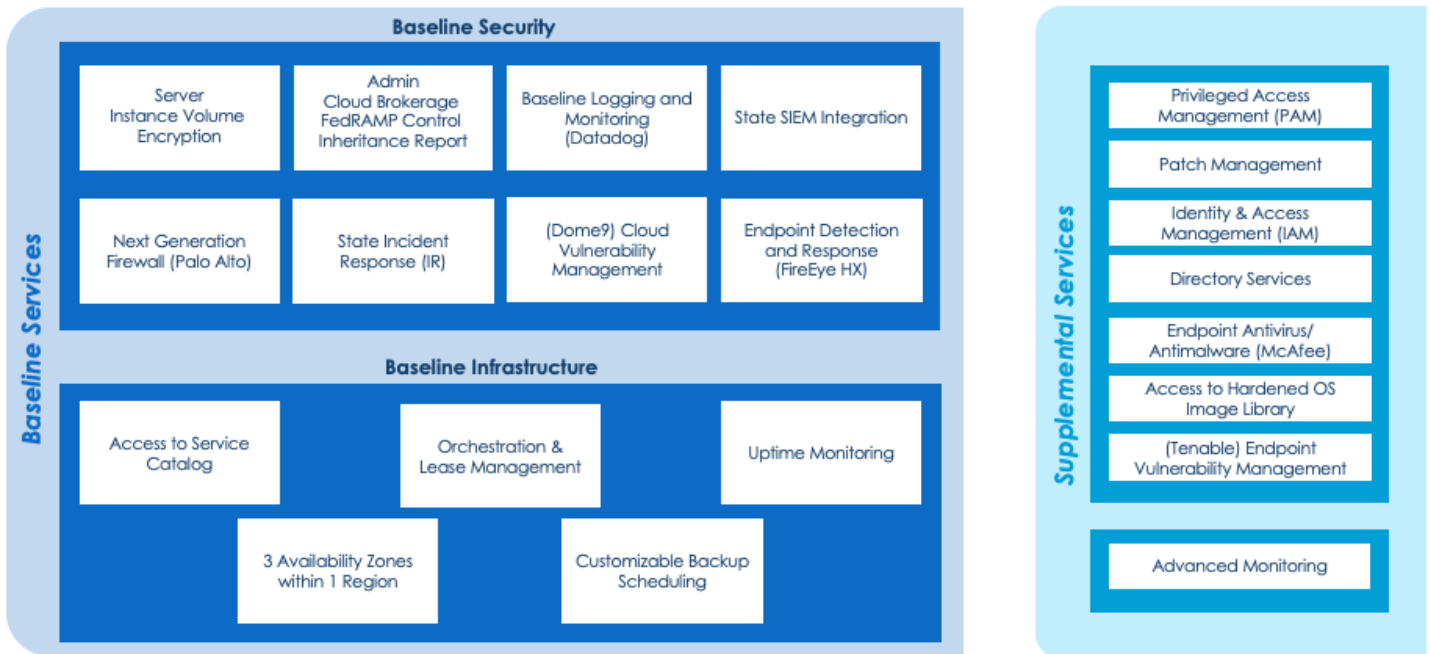




Key differences between Shared Services and Self-Managed accounts/subscriptions are outlined below:

	 <b>Shared Services</b>  <b>Self Managed</b>	
	<i>Utilize shared infrastructure with minimal overhead</i>	<i>Independently maintained and operated</i>
Baseline Infrastructure Services*	✓	✓
Baseline Security Services*	✓	✓
Admin-provided Networking (routing, switching, address space)	✓	✗
Admin-provided Privileged Access Management (PAM)	✓	\$
Admin-provided Patch Management	✓	\$
Admin-provided Endpoint Antivirus/Malware (McAfee)	✓	\$
Admin-provided Identity and Access Management	✓	\$
Admin-provided Directory Services	✓	\$
Admin-provided Endpoint Vulnerability Management (Tenable)	✓	\$
Admin-provided Monitoring Infrastructure	✓	\$
Admin-provided state-wide hardened OS "golden images" library	✓	\$

All agencies participating in the South Carolina Cloud Services will automatically receive a mandatory set of baseline services. A total of eight supplemental services will also be available. These services are listed below.



## How does billing work for Cloud Services?

Admin will be using a chargeback model which is intended to fairly and predictably allocate costs of the South Carolina Cloud Services across the state agencies based on usage. An agency will be charged based on specific cloud costs incurred within their accounts or subscriptions, augmented by a shared services fee covering platform tooling and labor costs.

Invoices are provided monthly to each agency.

Please note that agencies will work with their ARM representative to determine their agency specific-billing requirements during the second step of onboarding (Discover).

## Next Steps

To begin your agency's cloud journey, please complete the following steps:

### 1 Overview Video

Review the [Cloud Services Program Overview Video](#). This video will ensure that you, and other key agency stakeholders, have an understanding of what to expect throughout the onboarding process.

### 2 Information Gathering

Compile the following information in preparation for initial Cloud Services meetings with your ARM representative.

- A. **Architecture diagrams** for any workloads being considered for the cloud.
- B. **List of any relevant servers and/or databases.**
- C. **List of agency contacts** for Cloud Onboarding Team roles. Please include contact name, email and phone number for each.
  1. Onboarding lead
  2. Cloud lead
  3. Network lead
  4. Security lead
  5. Privacy lead
  6. Service management lead
  7. Financial lead (e.g., budgeting, billing, etc.)
  8. Additional team members
- D. **Outlines of financial information** (e.g., budget, target cost savings, etc.)
- E. **Privacy Assessment**
  1. Agency privacy liaison access to Privacy Assessment Tool (PAT).
  2. Privacy Threshold Analysis (PTA) for, in-scope, business processes.
  3. Privacy Impact Assessment (PIA) if PTA determines PII is involved in the business process.

3

## Agency Contact

Once the above steps have been completed, please contact Admin's Program Management Office ([pmo@admin.sc.gov](mailto:pmo@admin.sc.gov)) or your ARM representative directly to schedule an initial meeting. From there, your ARM representative will guide you through the rest of the onboarding process.