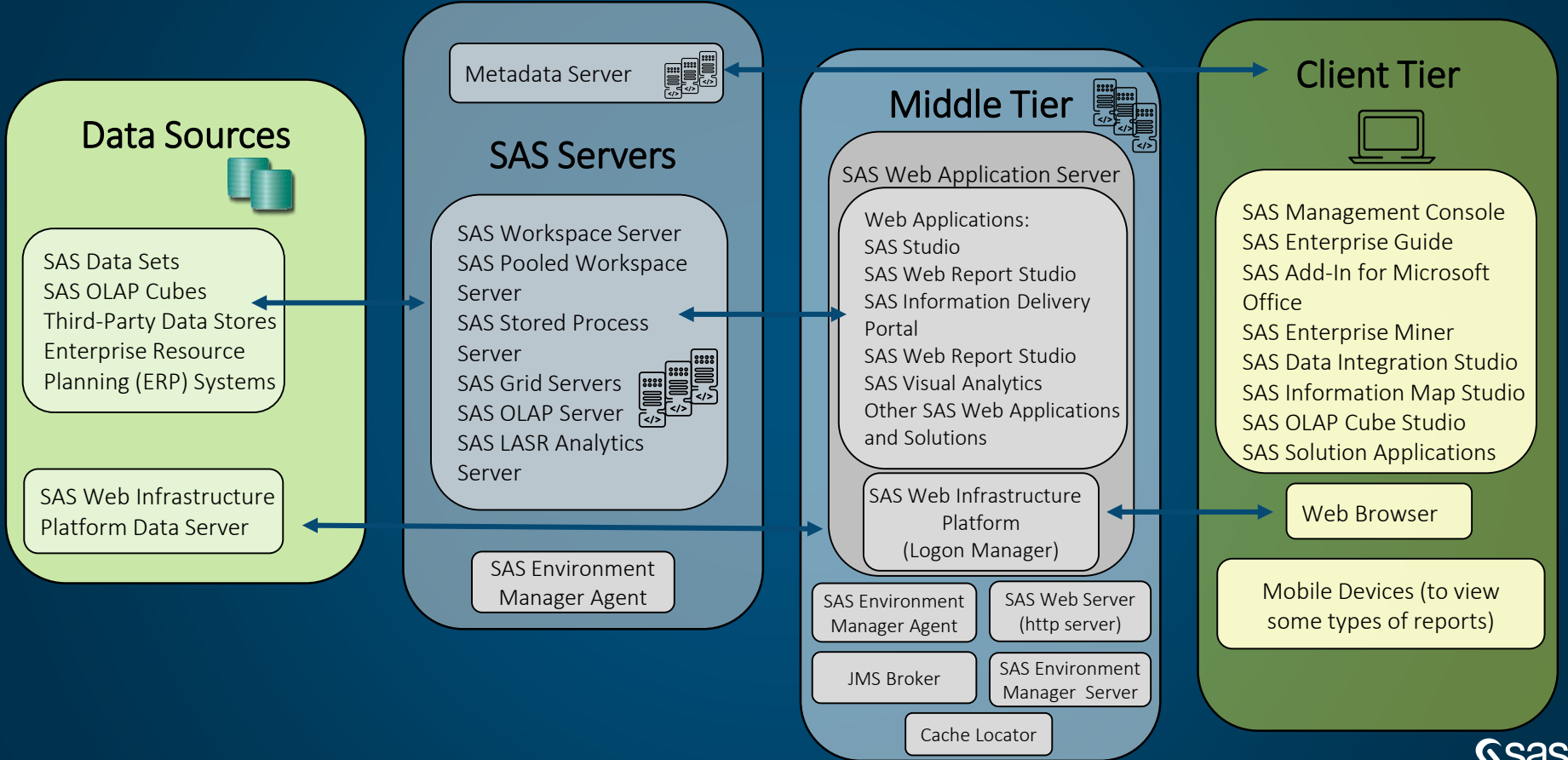




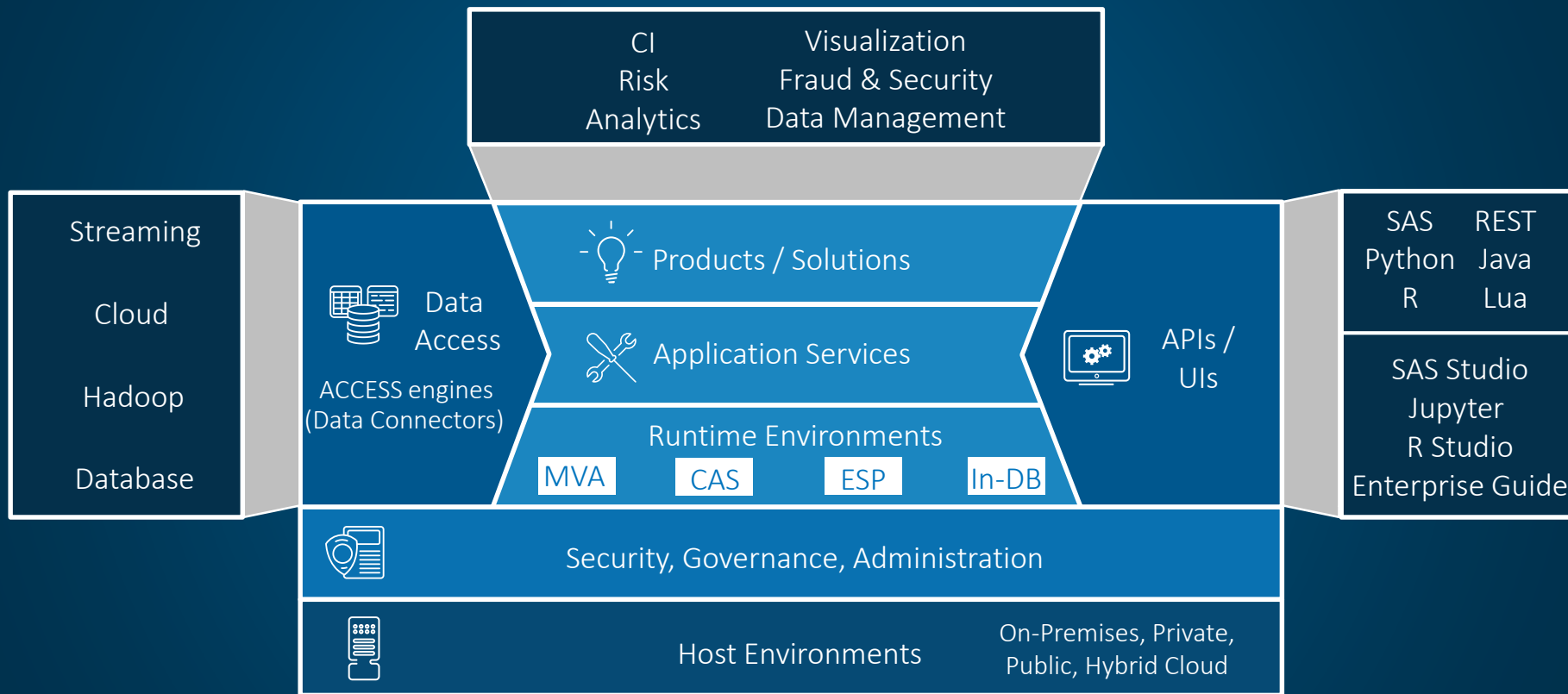
Administering SAS[®] – Comparing SAS[®] 9.4 to SAS[®] Viya[®]

Darrell Barton
SAS Education

SAS Platform Architecture – SAS 9.4



The SAS Platform Architecture – SAS Viya



Non-Distributed CAS Deployment Architecture

SAS Cloud Analytic Services

CAS Controller

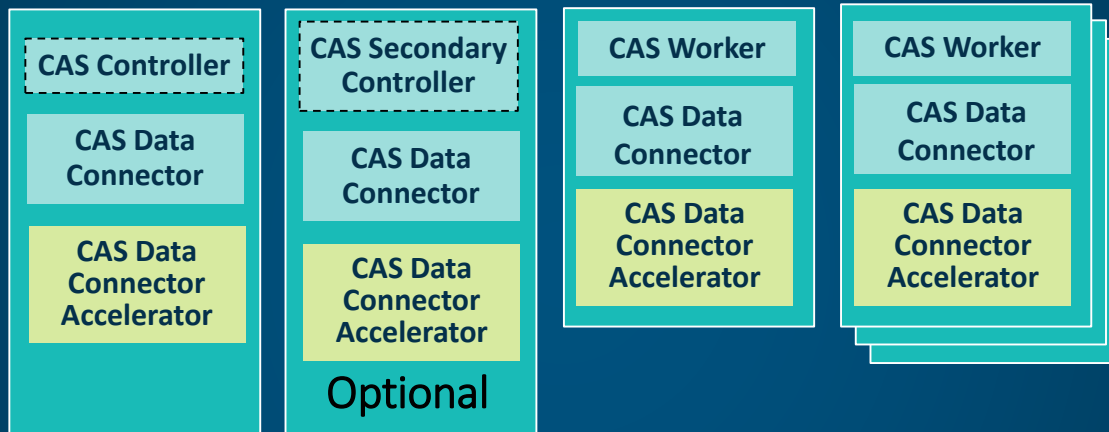
Data Connector

Symmetric Multiprocessing
(SMP)



Distributed CAS Deployment Architecture

SAS Cloud Analytic Services: Analytics Cluster



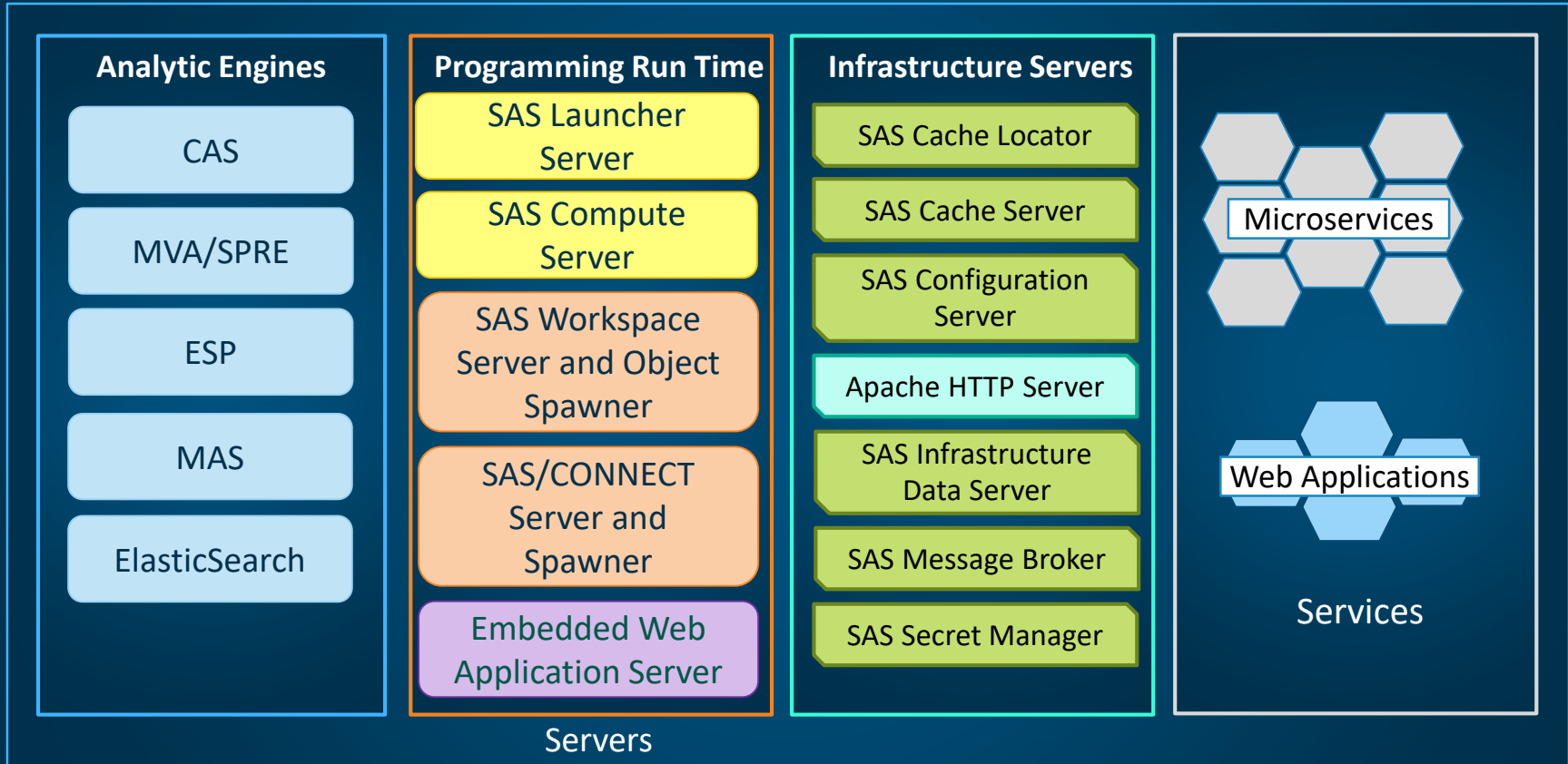
Massively Parallel Processing
(MPP)



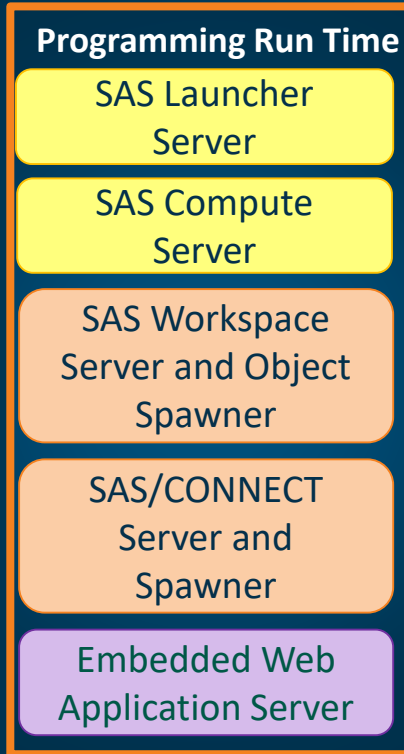
Platform Architecture Comparison

SAS 9.4	SAS Viya
SAS Metadata Server	SAS Infrastructure Data Server SAS Configuration Server CAS Server Permstore
SAS Object Spawner/SAS Workspace Server	SAS Object Spawner/SAS Workspace Server Launcher/Compute Server
IOM	REST APIs SAS Message Broker
Multi-tenancy (SAS Grid)	Multi-tenancy (All)

SAS Viya Servers and Services

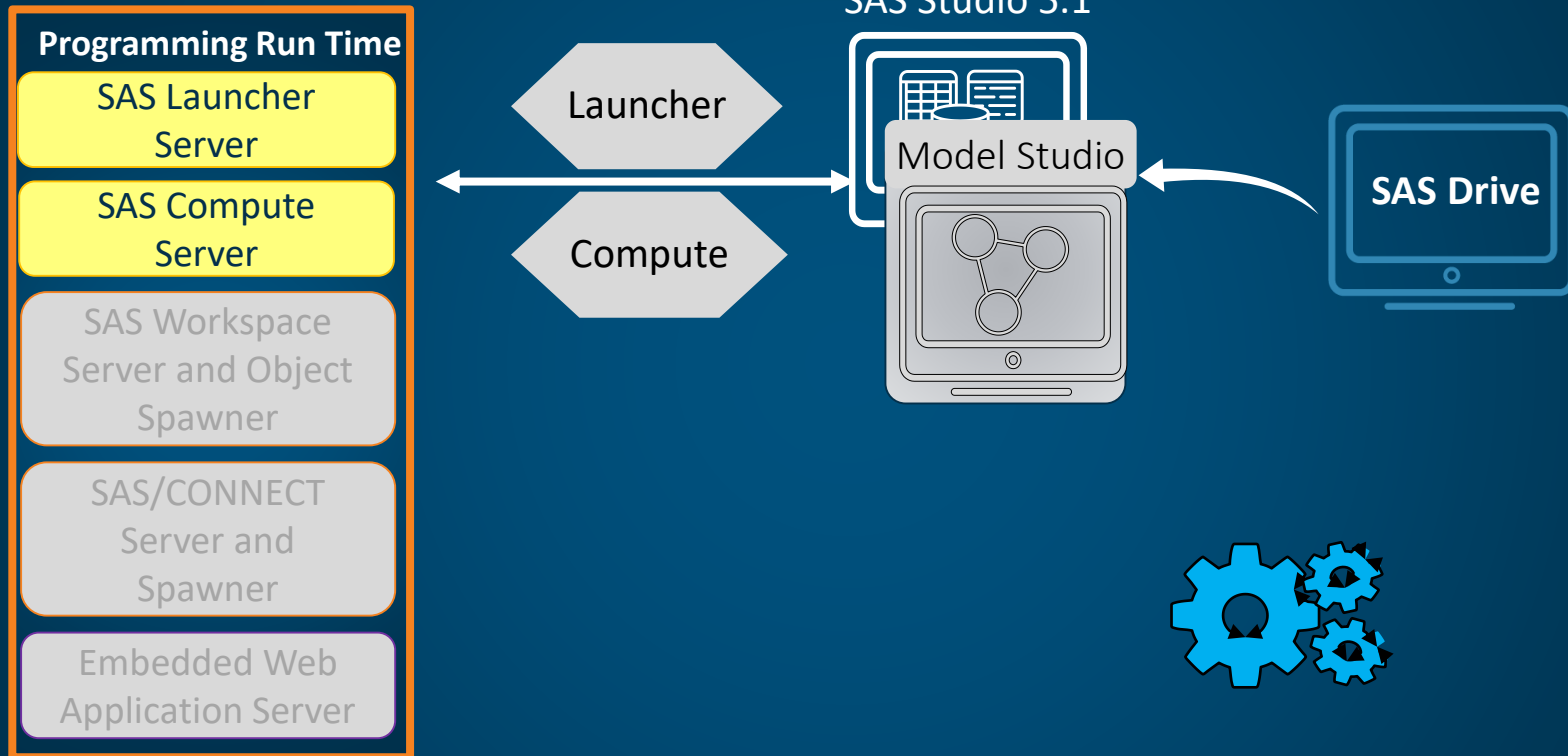


Programming Run Time Servers

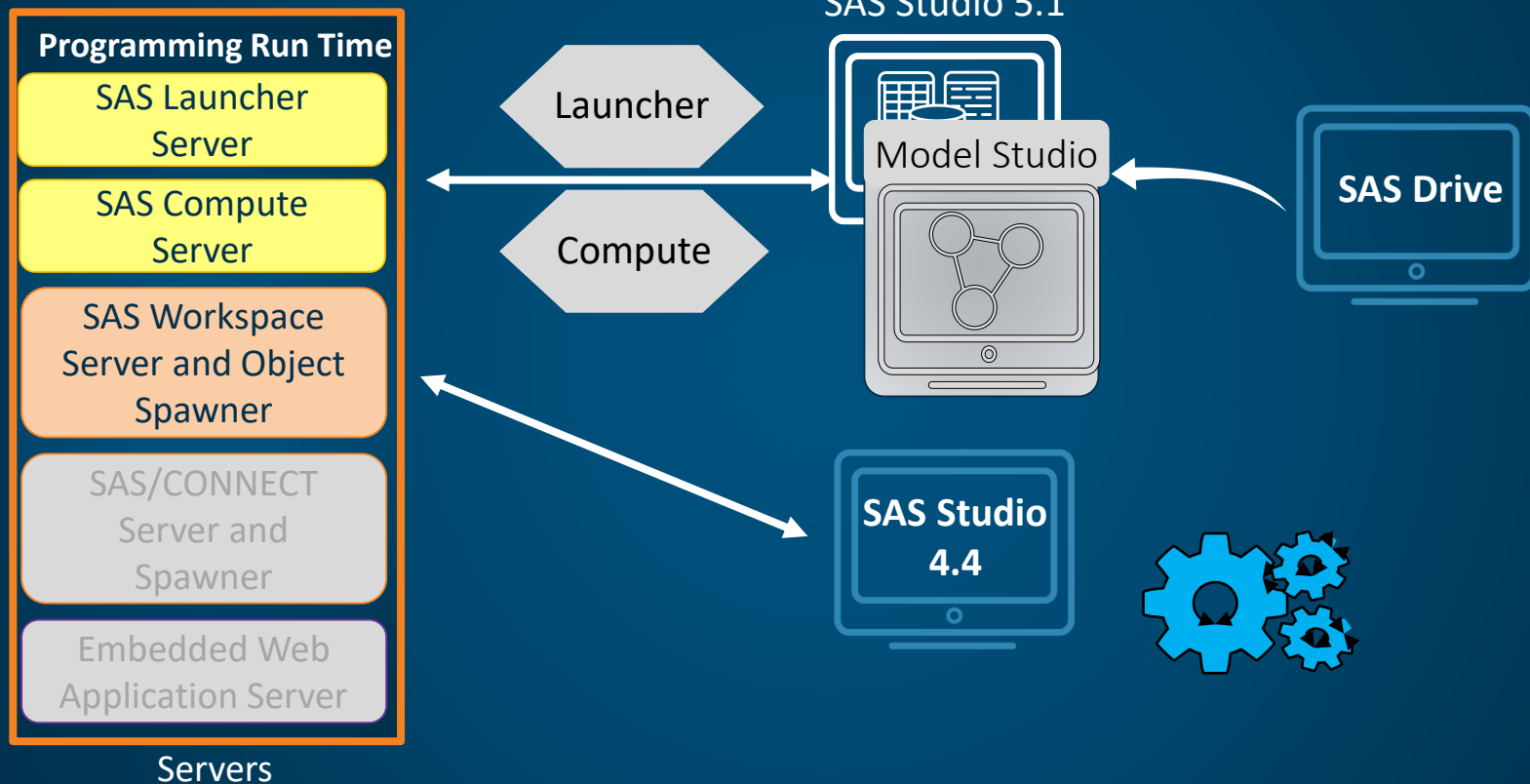


SAS Programming Runtime Environment

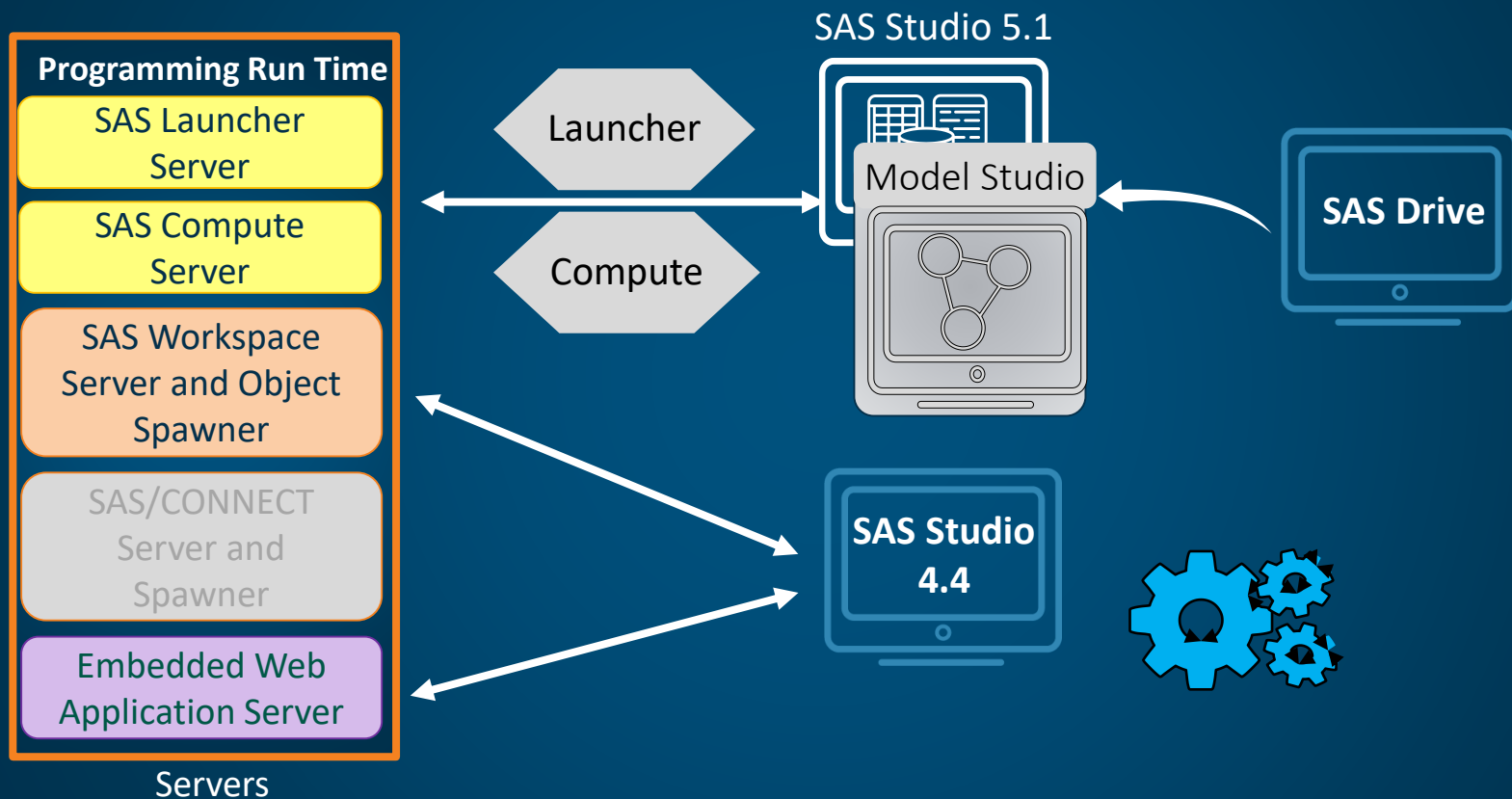
Programming Run Time Servers



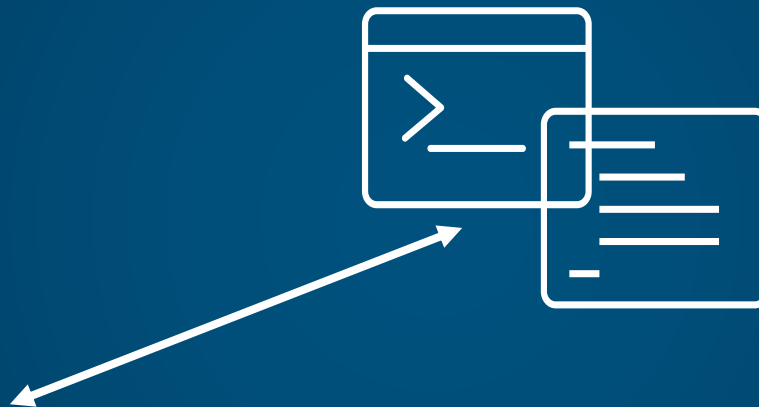
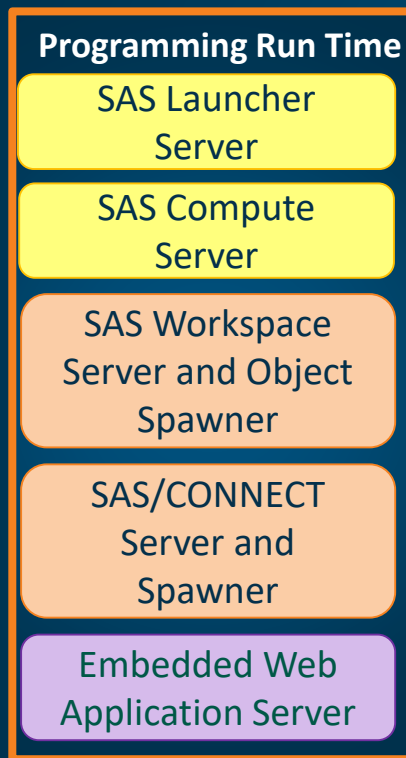
Programming Run Time Servers



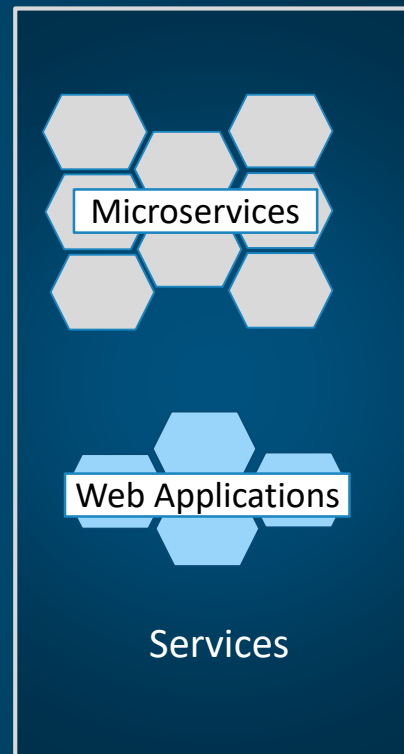
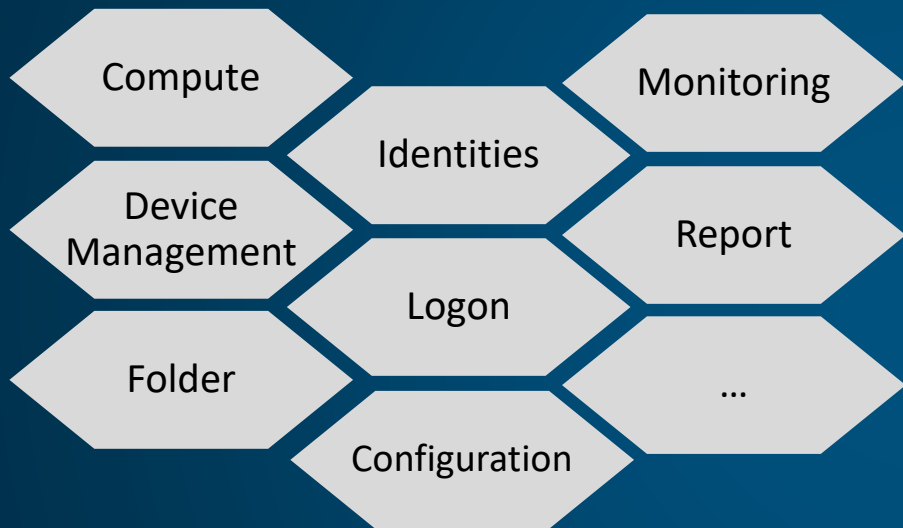
Programming Run Time Servers



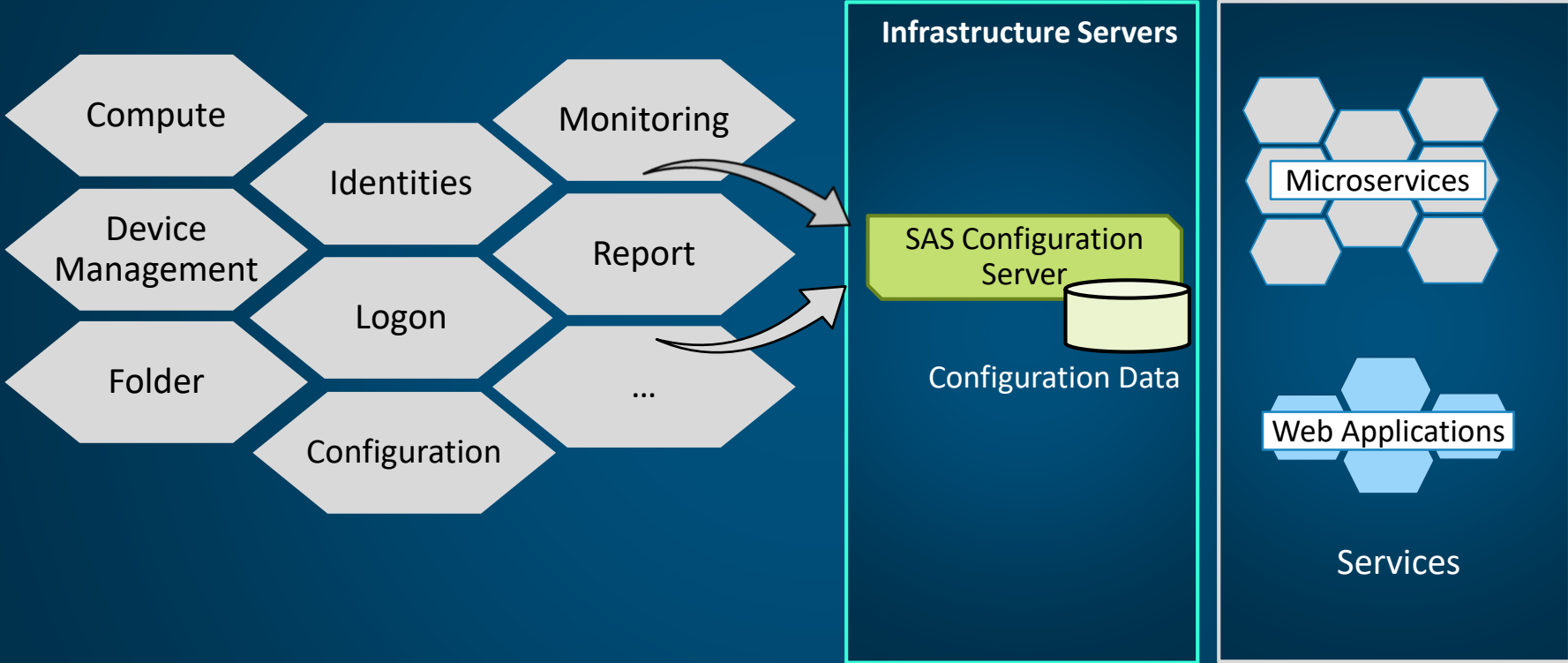
Programming Run Time Servers



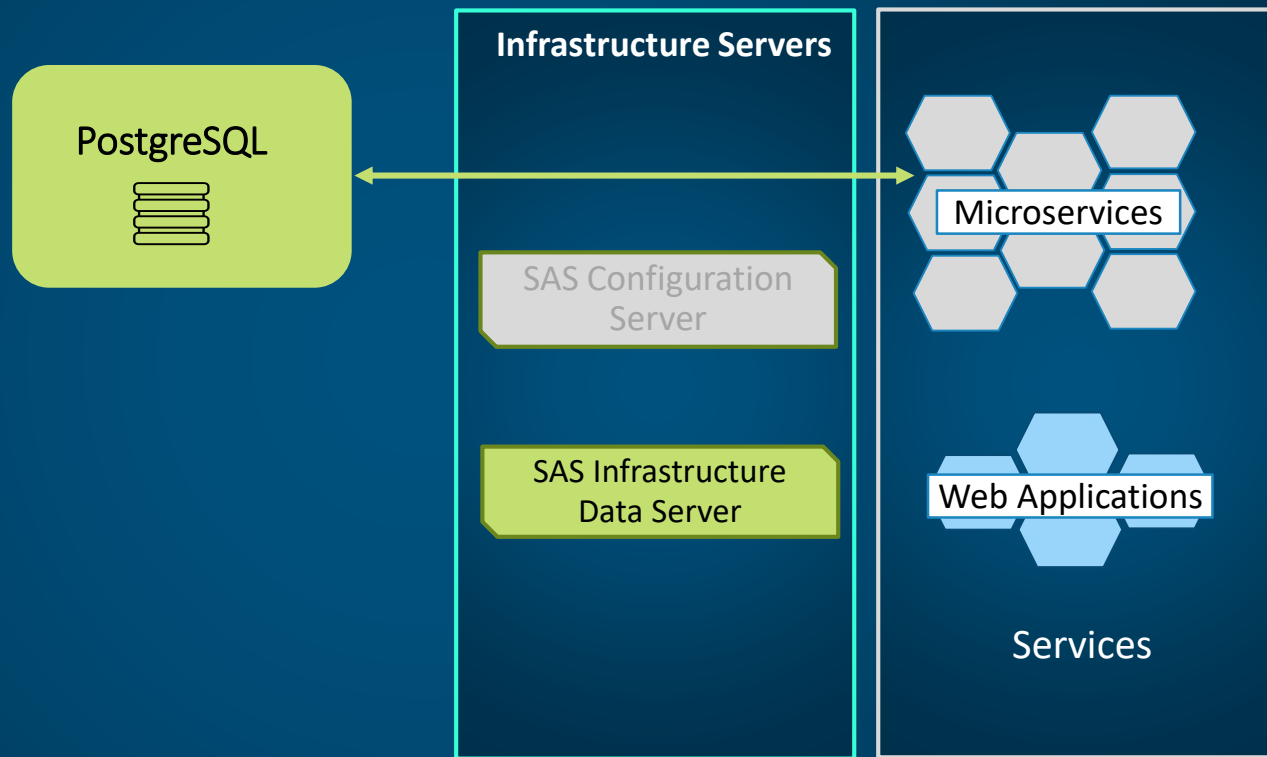
Microservices



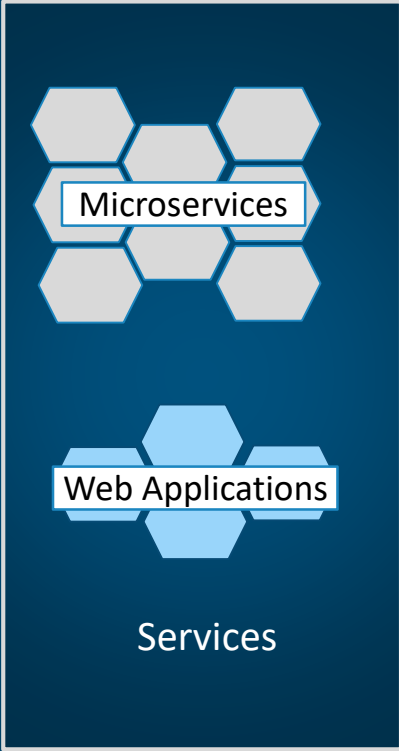
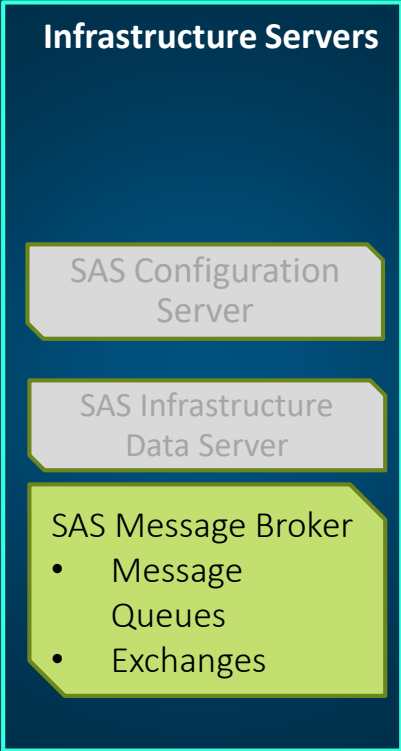
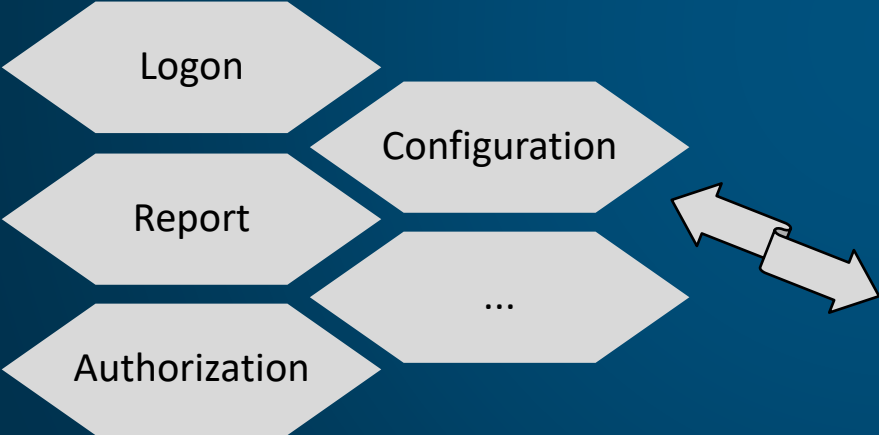
SAS Infrastructure Servers



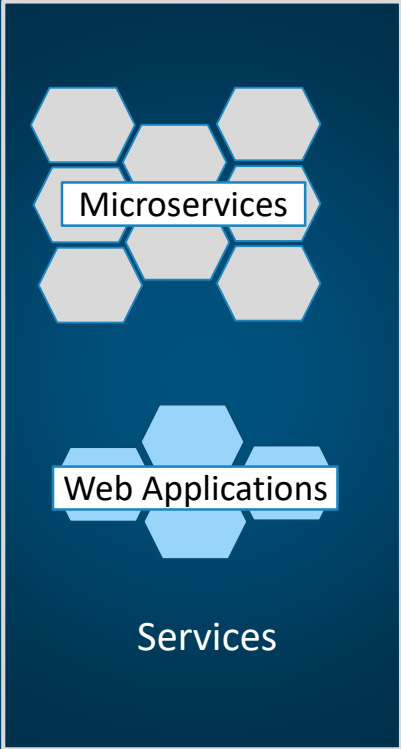
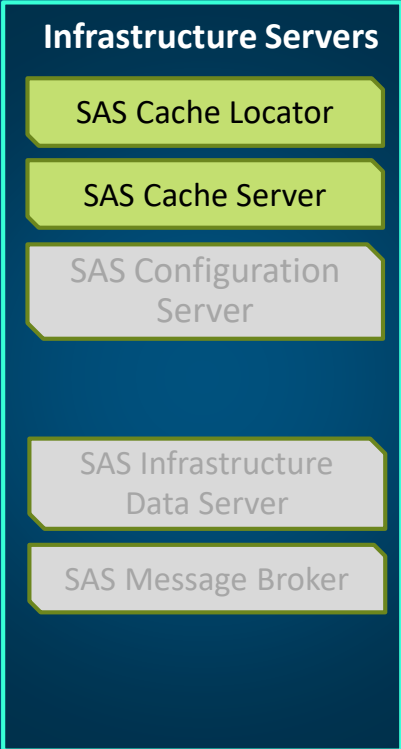
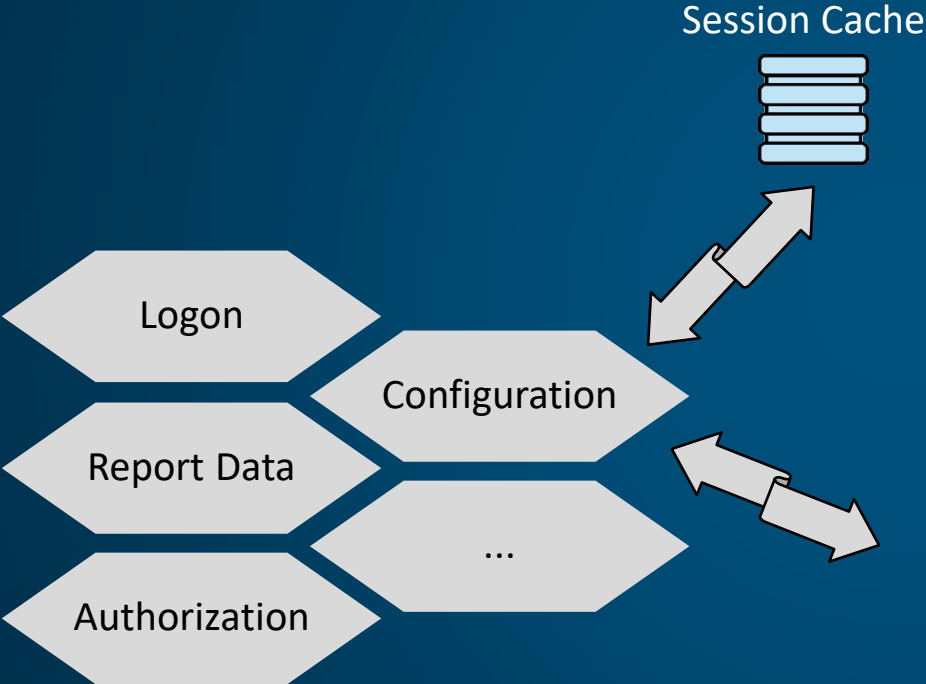
SAS Infrastructure Servers



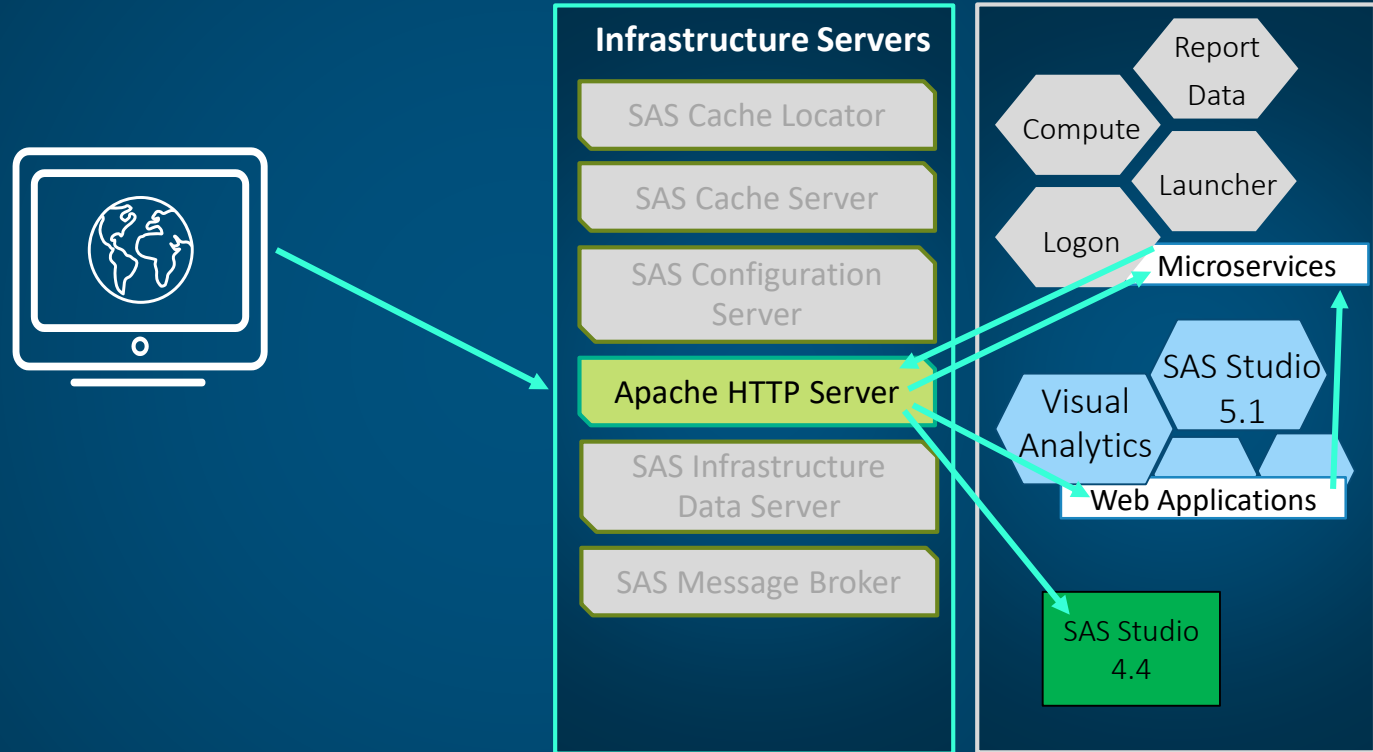
SAS Infrastructure Servers



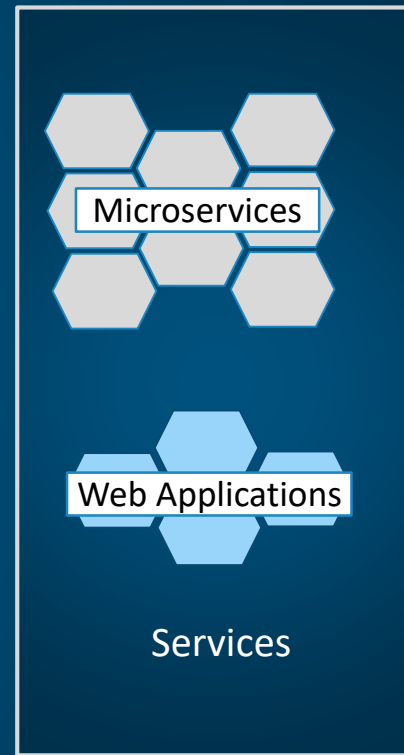
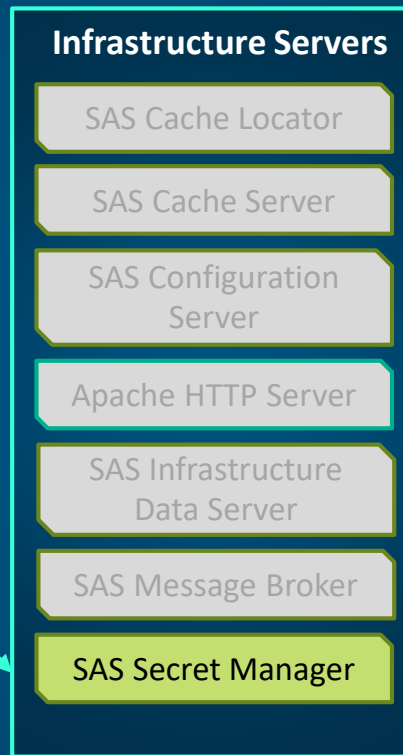
SAS Infrastructure Servers



SAS Infrastructure Servers



SAS Infrastructure Servers



SAS Platform Management Tools – SAS 9.4

SAS Management Console is a desktop client application that enables administrators to administer metadata, register users and data, and set metadata security.

Administrative functionality is presented through plug-ins.

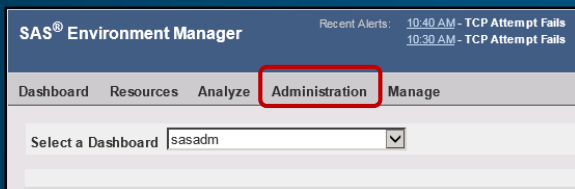
Metadata is organized in folders.

SAS Platform Management Tools – SAS 9.4

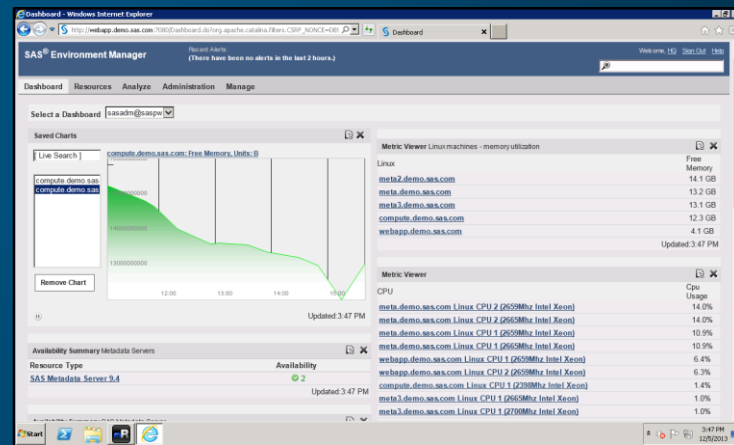
SAS Environment Manager is a web-based administration tool that enables you to, including the operation of SAS servers on the server tier and middle tier.

Features include the following:

- Administer metadata, register users and data, and set metadata security



- monitor the performance, operation, and health of your SAS deployments
- collect and chart data on metrics for SAS resources
- monitor log events and reporting alerts



SAS Platform Management Tools – SAS Viya



SAS Command-line Interface

Global options

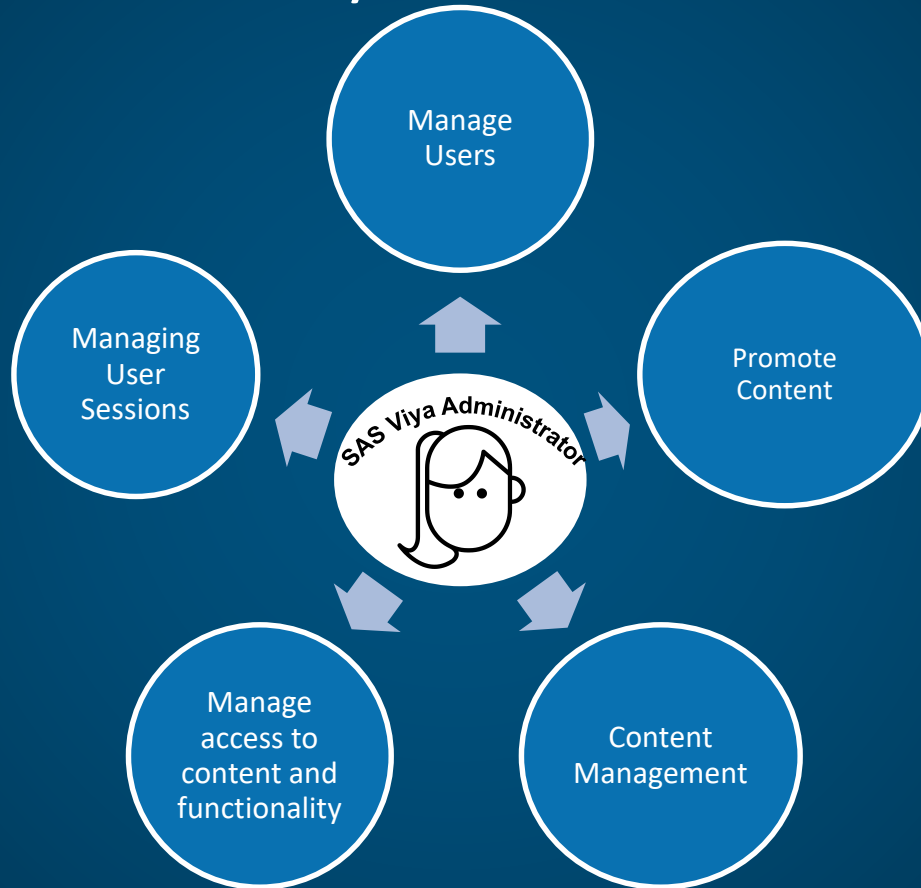
Command

Command options

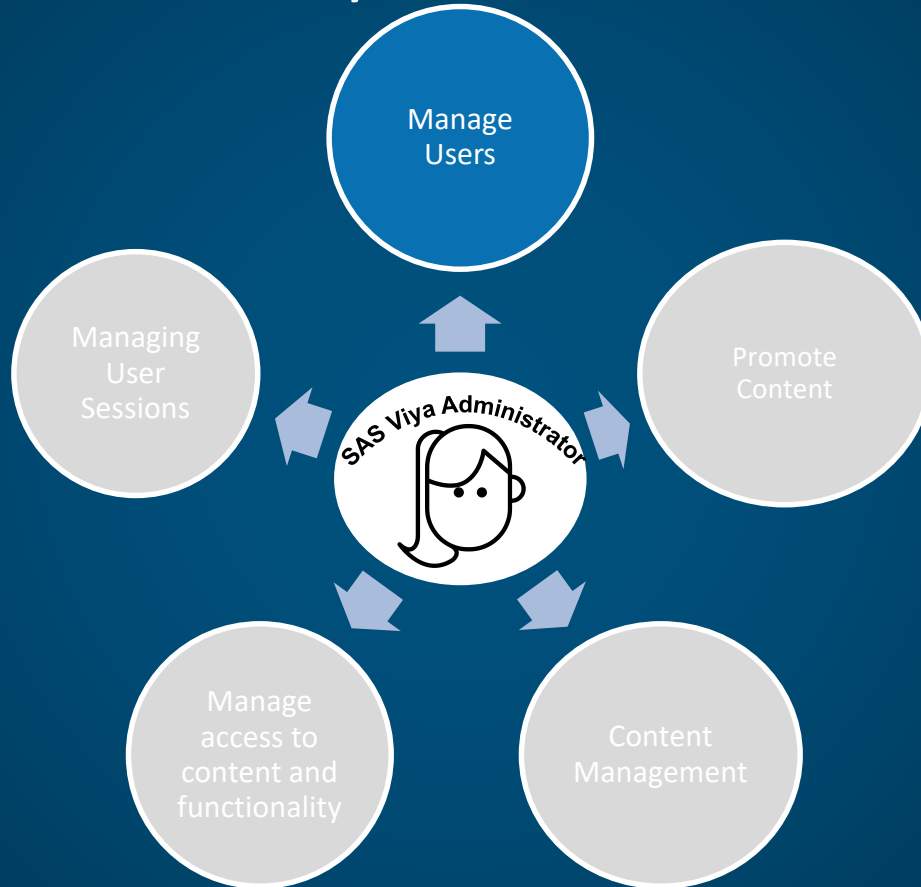
```
./sas-admin identities --output text list-members --group-id SASAdmins
```

Interface name

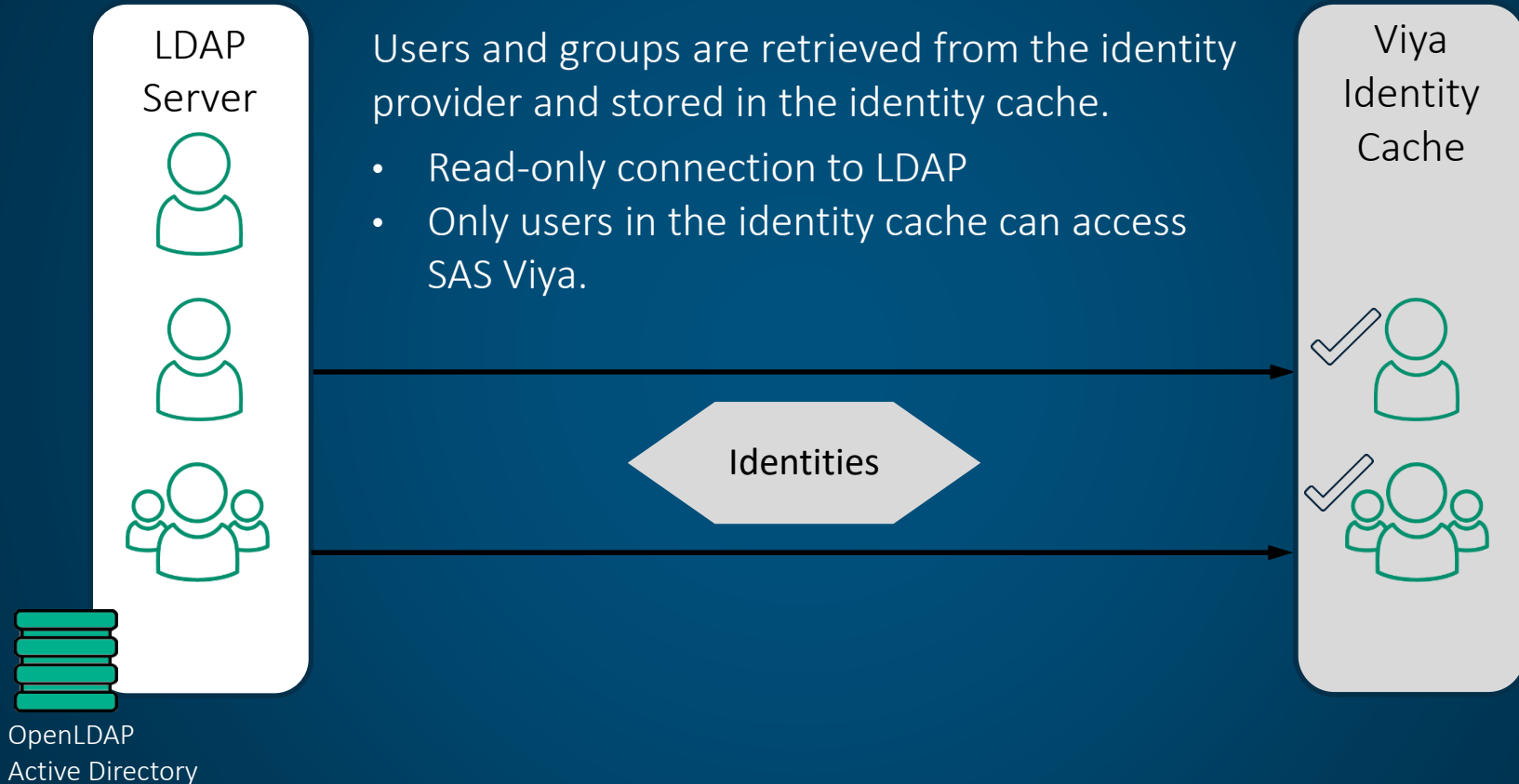
Common SAS Viya Administration Tasks



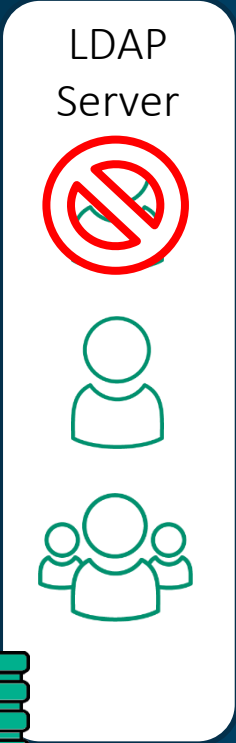
Common SAS Viya Administration Tasks



Identity Management in SAS Viya

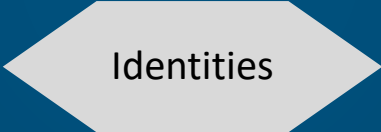


Identity Management in SAS Viya



Users and groups are retrieved from the identity Provider and stored in the identity cache.

- Read-only connection to LDAP
- Only users in the identity cache can access SAS Viya.

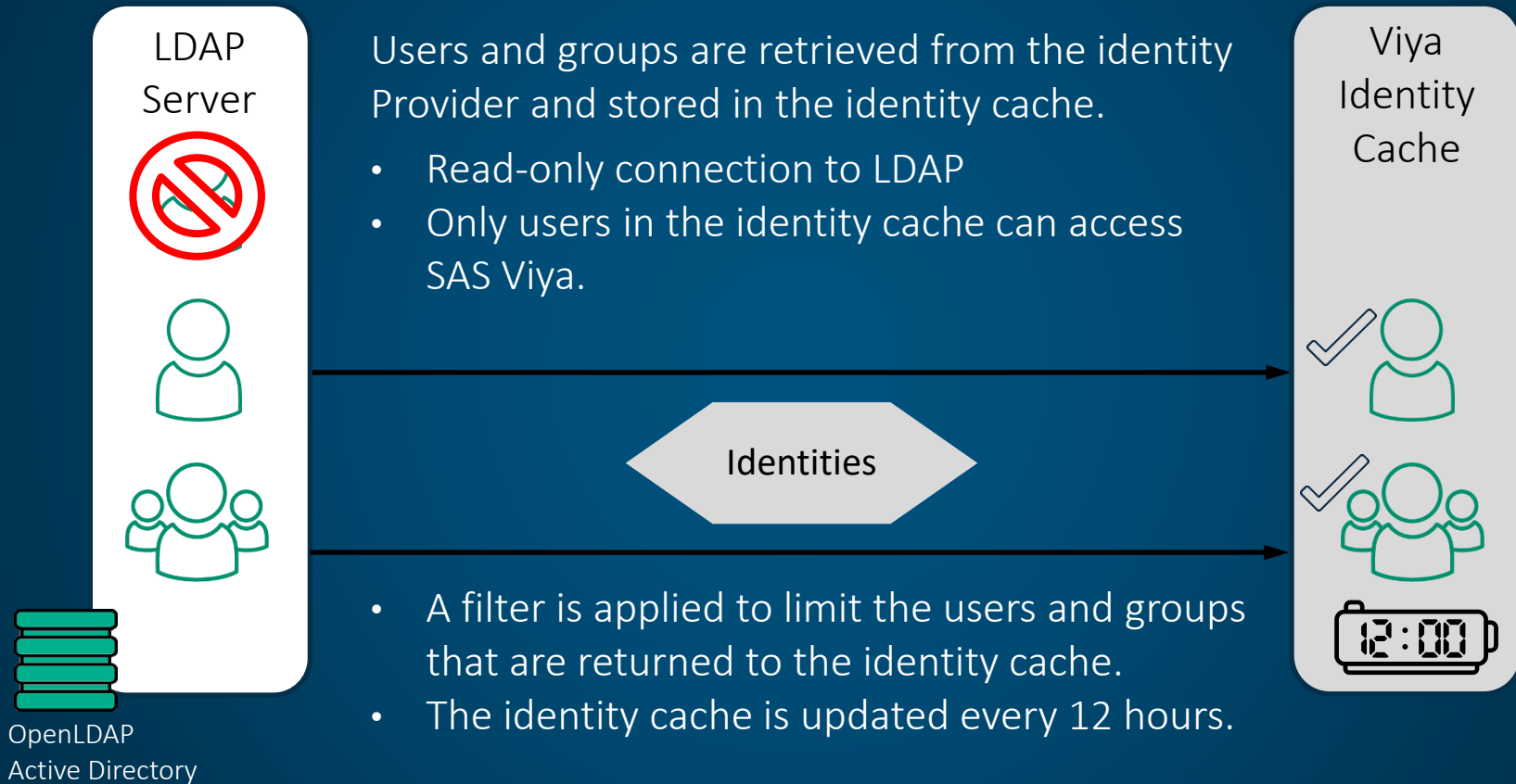


- A filter is applied to limit the users and groups that are returned to the identity cache.

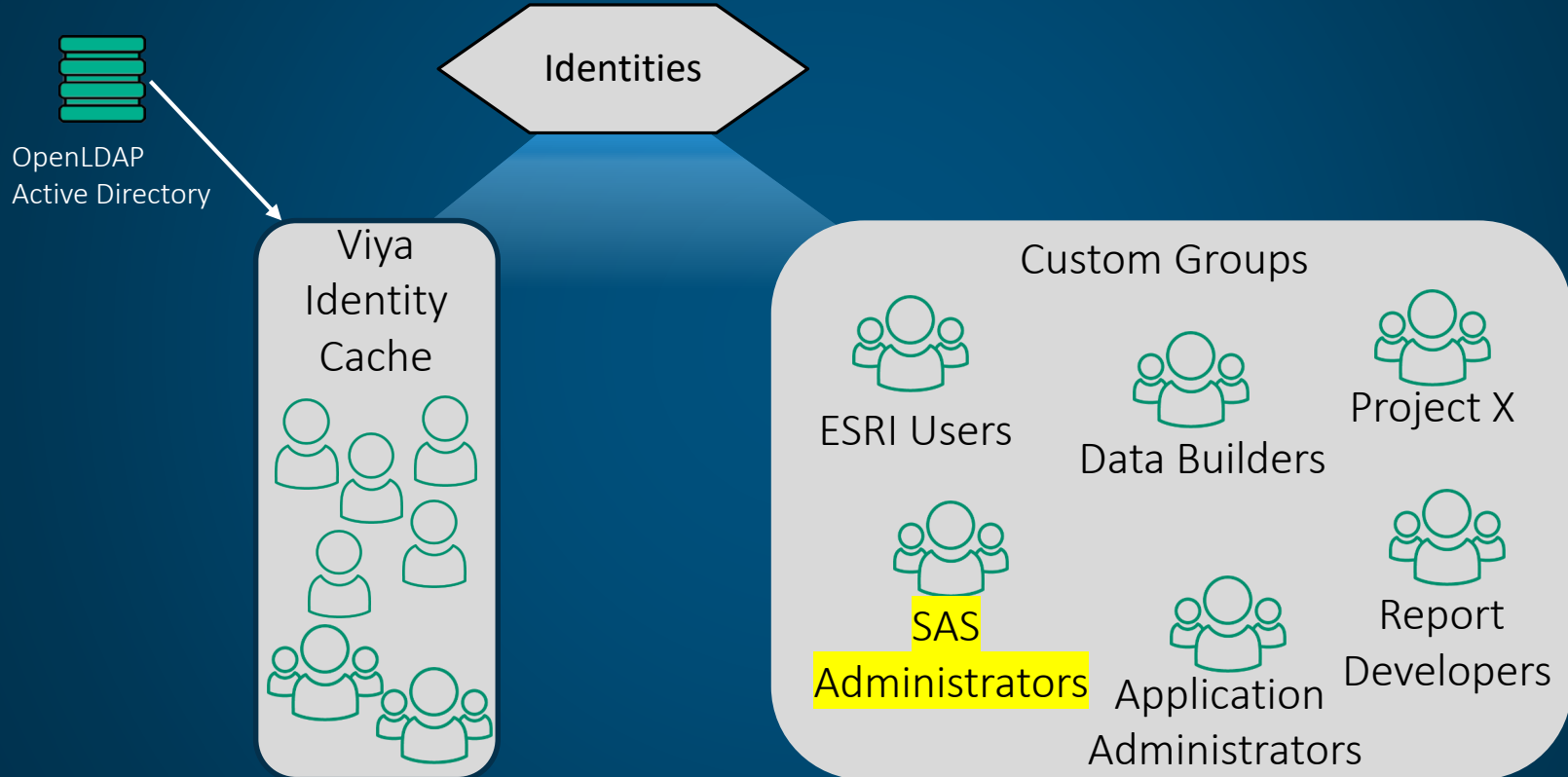


OpenLDAP
Active Directory

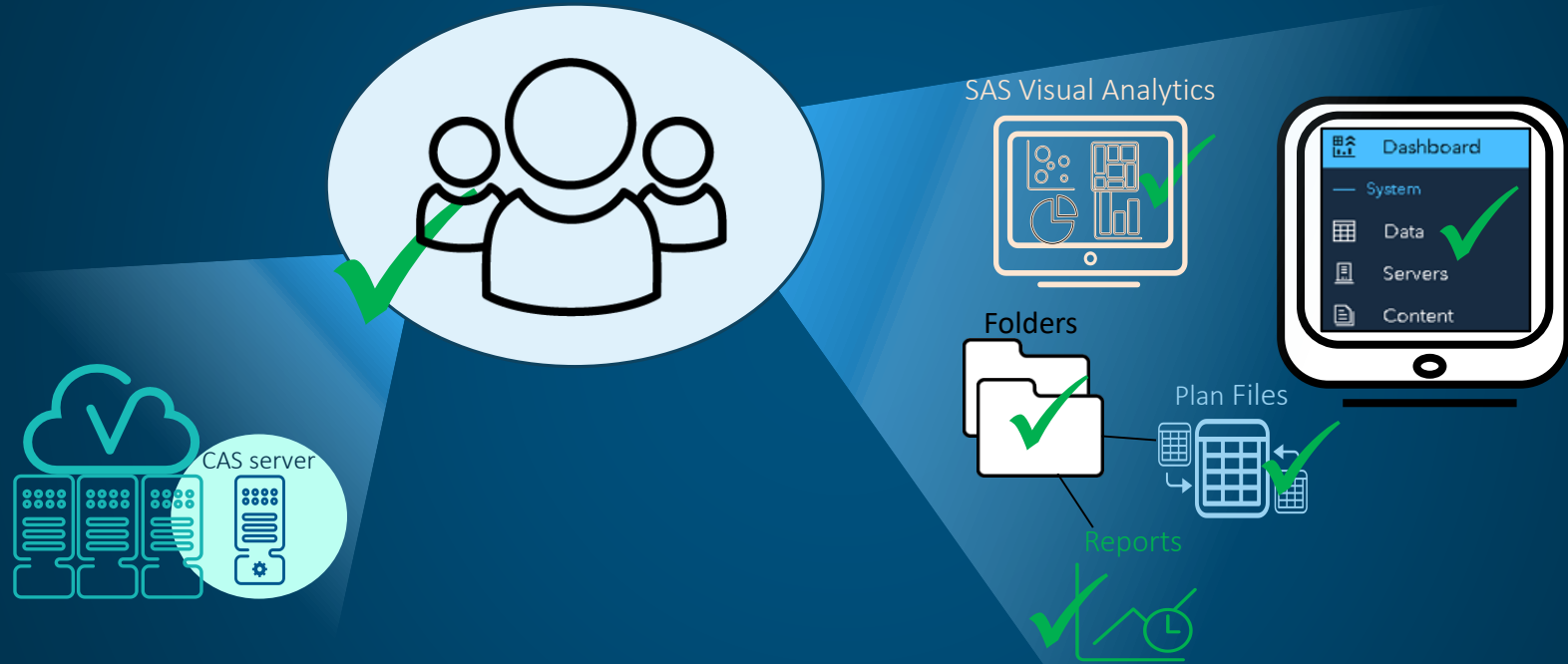
Identity Management in SAS Viya



Custom Groups in SAS Viya

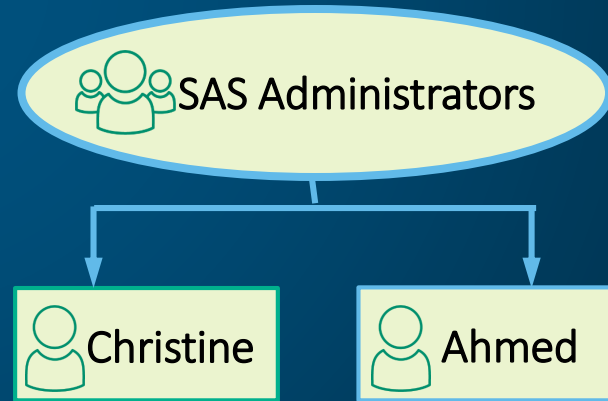


Implicit Group: Authenticated Users = SASUSERS

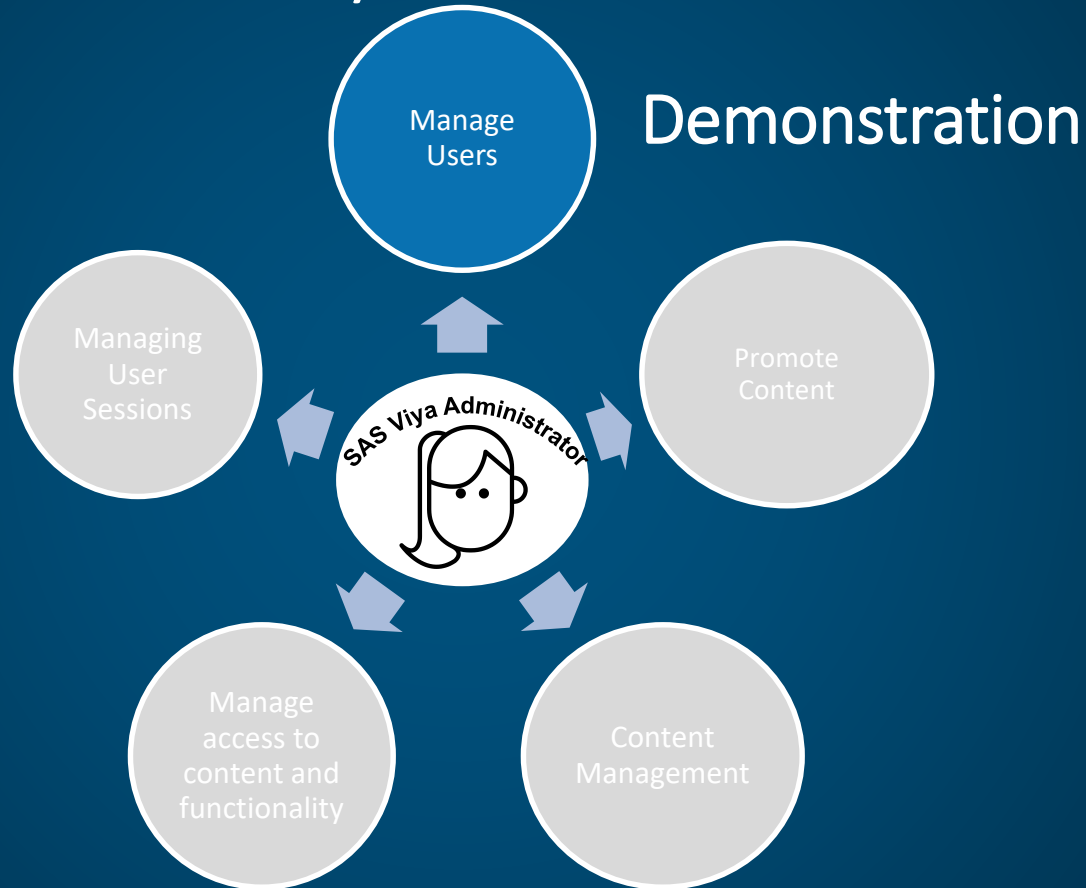


Initial User: sasboot Account

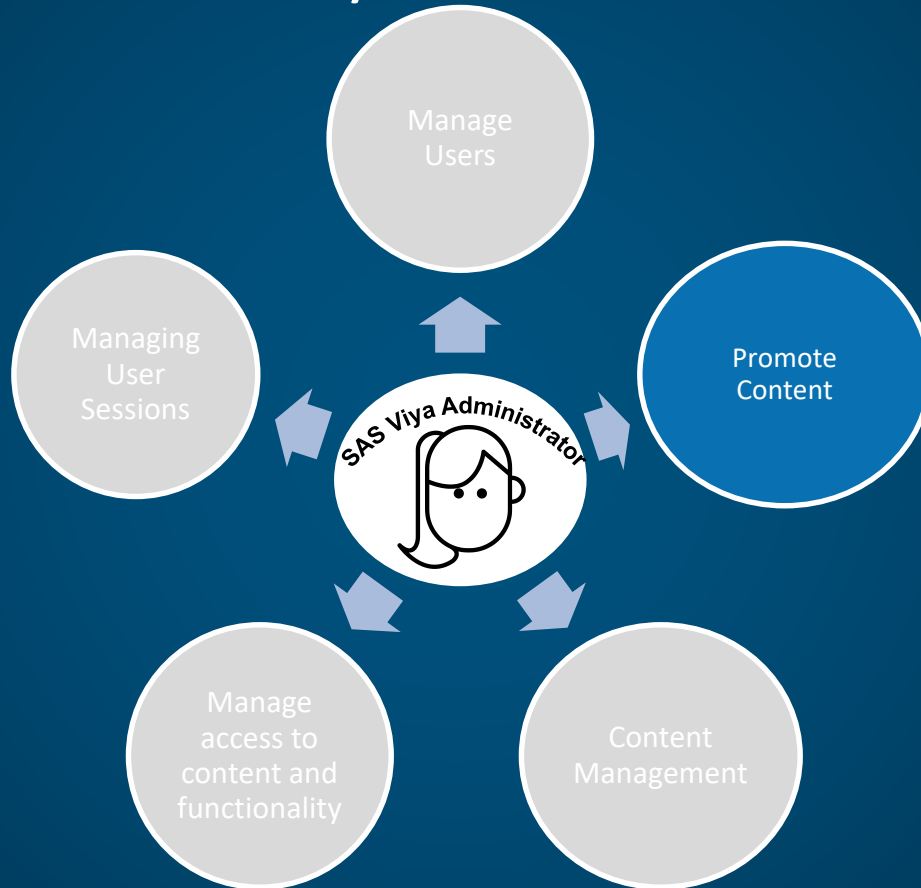
- Internal account used to resolve authentication issues.
- Can perform initial configuration to the identity provider
- Setup initial administrative users



Common SAS Viya Administration Tasks

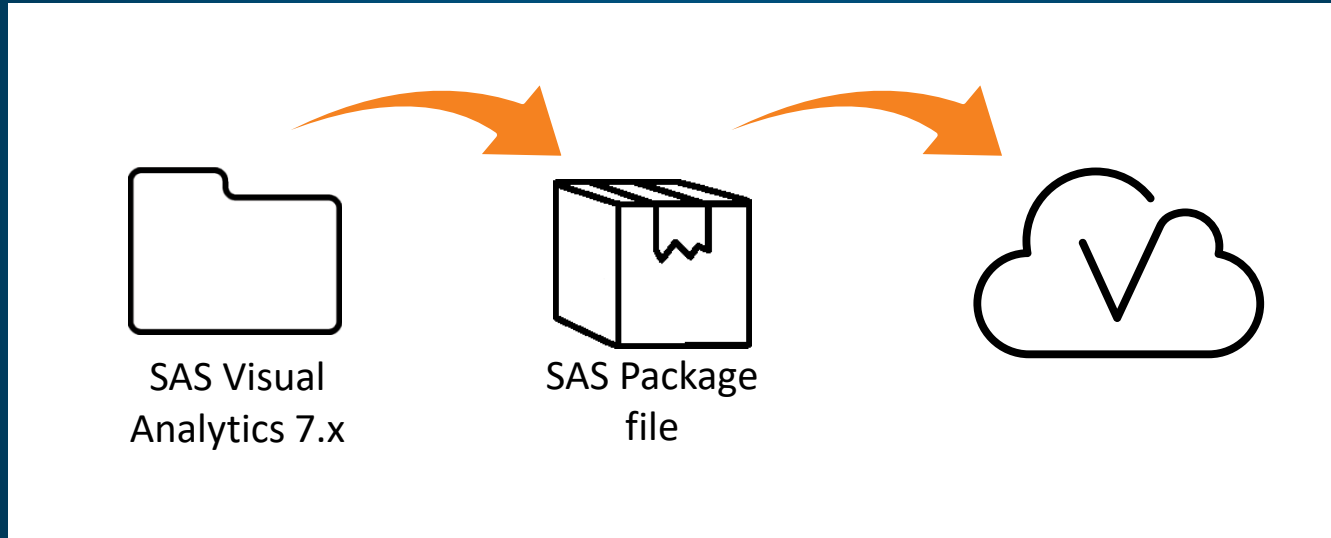


Common SAS Viya Administration Tasks



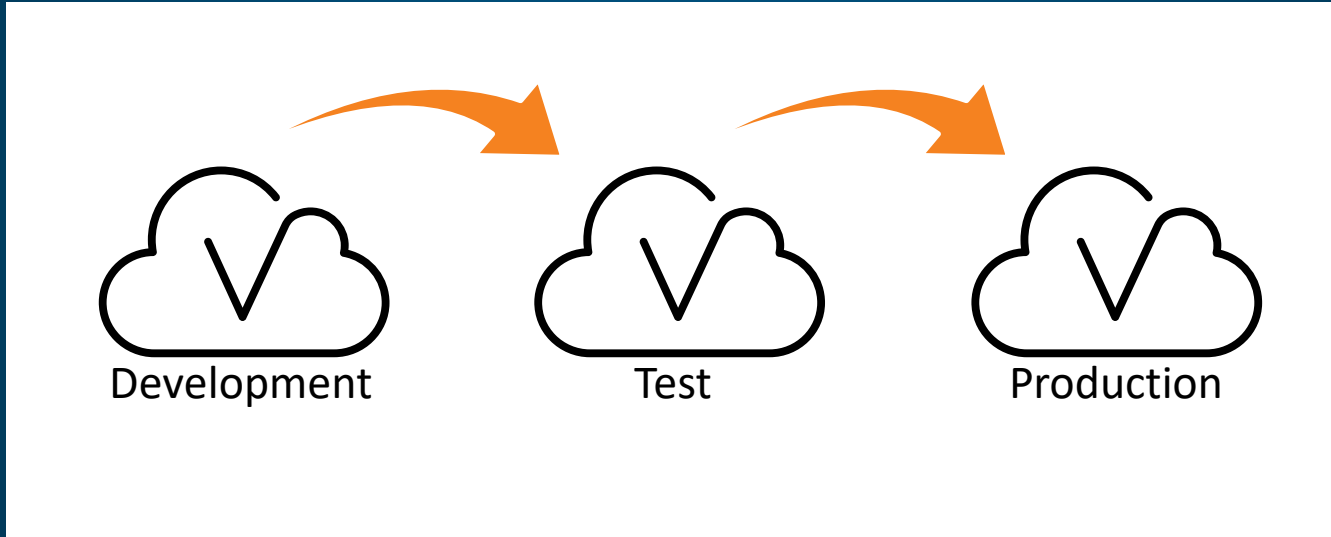
Promoting Content between Releases

Promotion is the process of capturing content from one location and moving it to a different location.

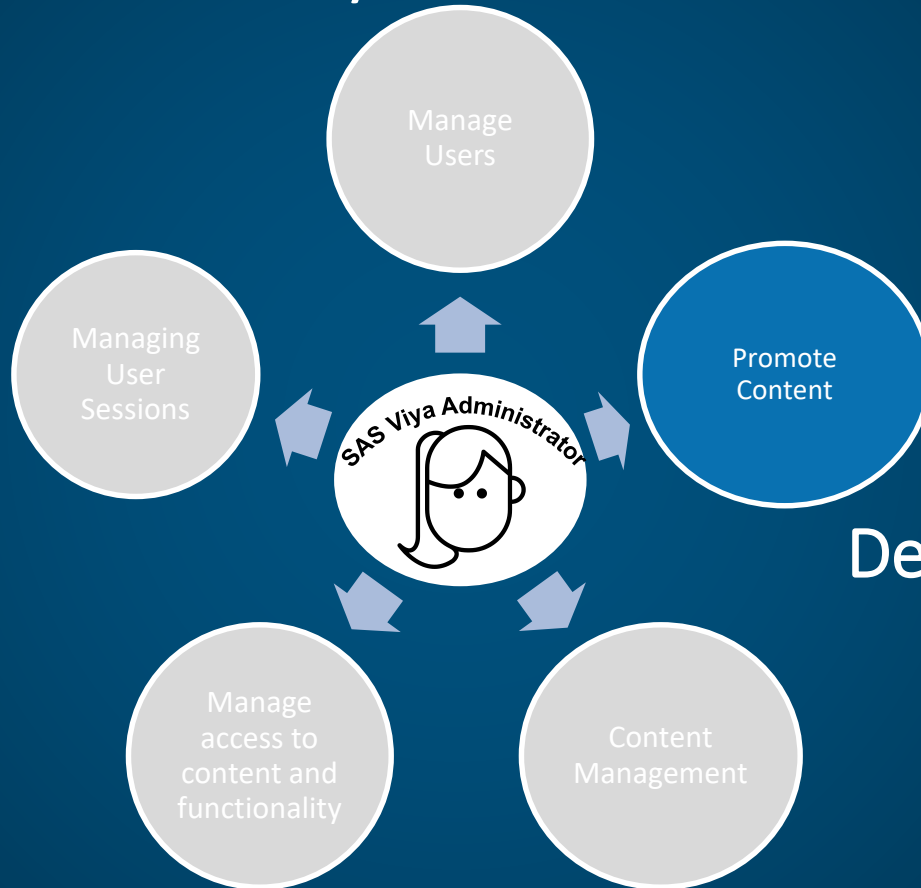


Promoting Content within a Release

Promotion is the process of capturing content from one location and moving it to a different location.

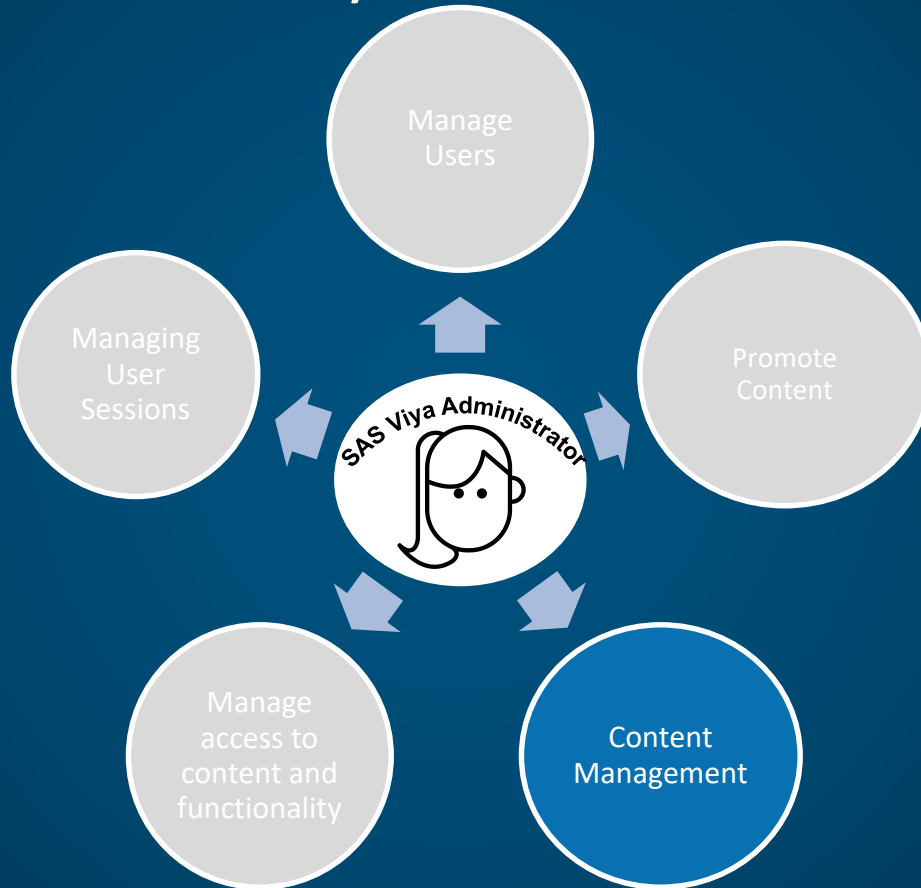


Common SAS Viya Administration Tasks



Demonstration

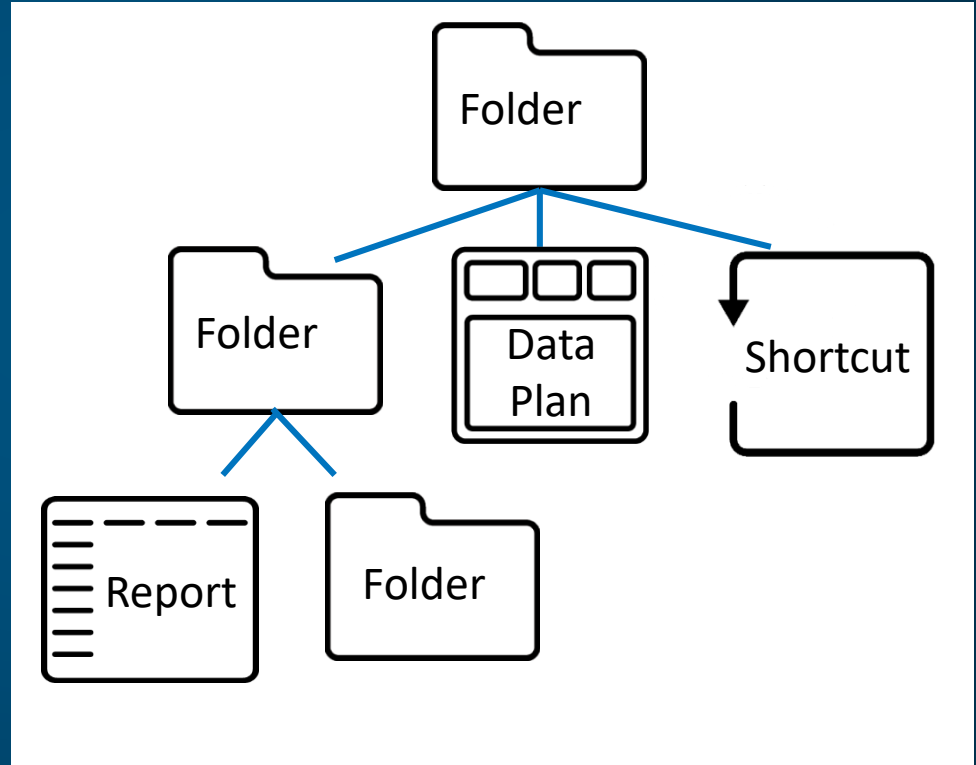
Common SAS Viya Administration Tasks



Content Types and Characteristics

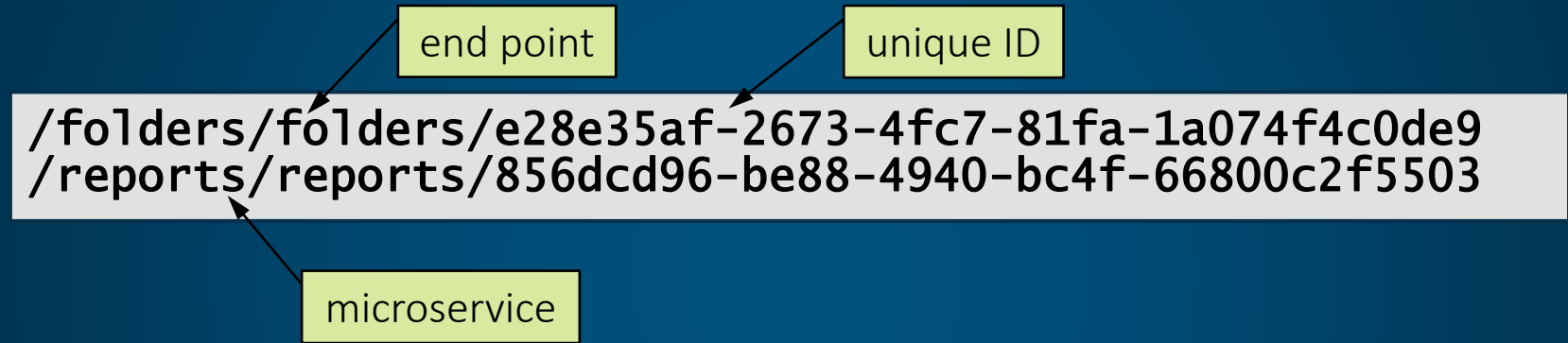
All content objects have these characteristics:

- can have only one parent
- can be moved
- cannot be copied or duplicated
- have a unique identifier, a uniform resource identifier (URI)

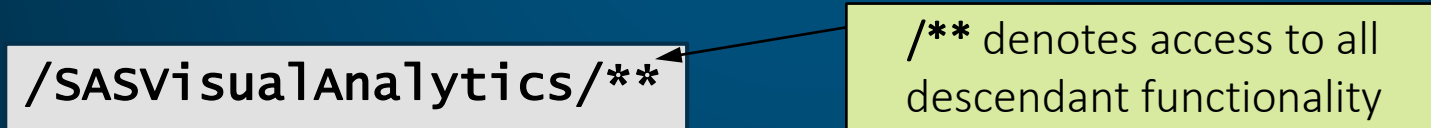


Uniform Resource Identifier

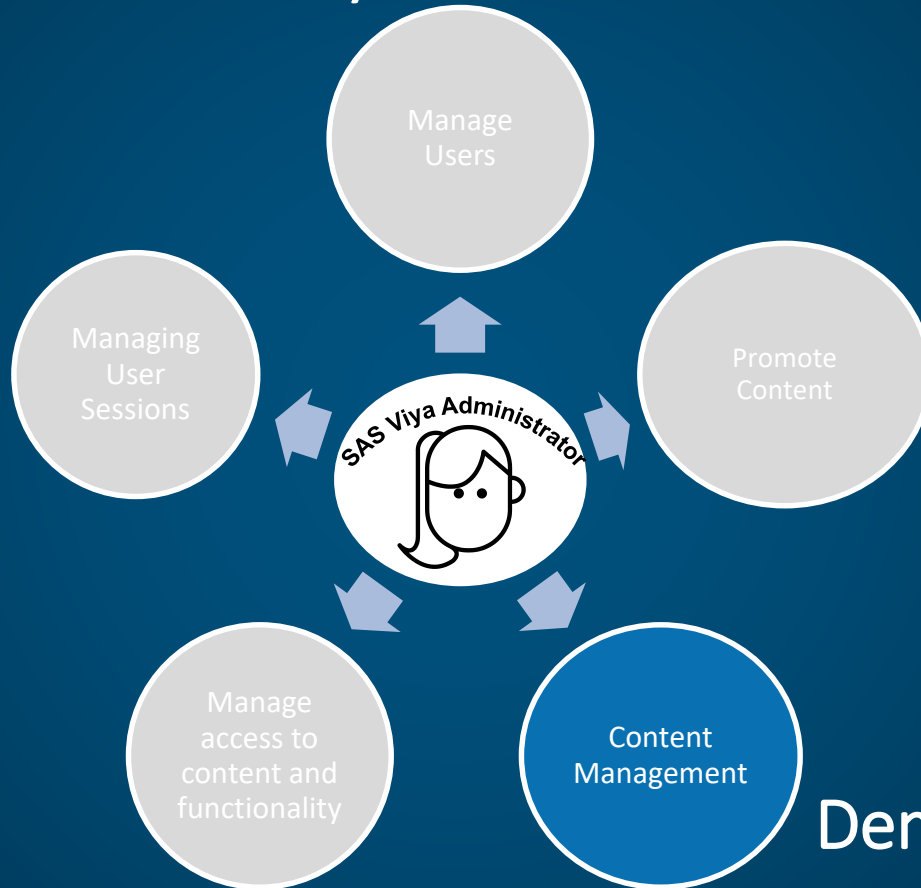
Content URI:



Functionality URI:

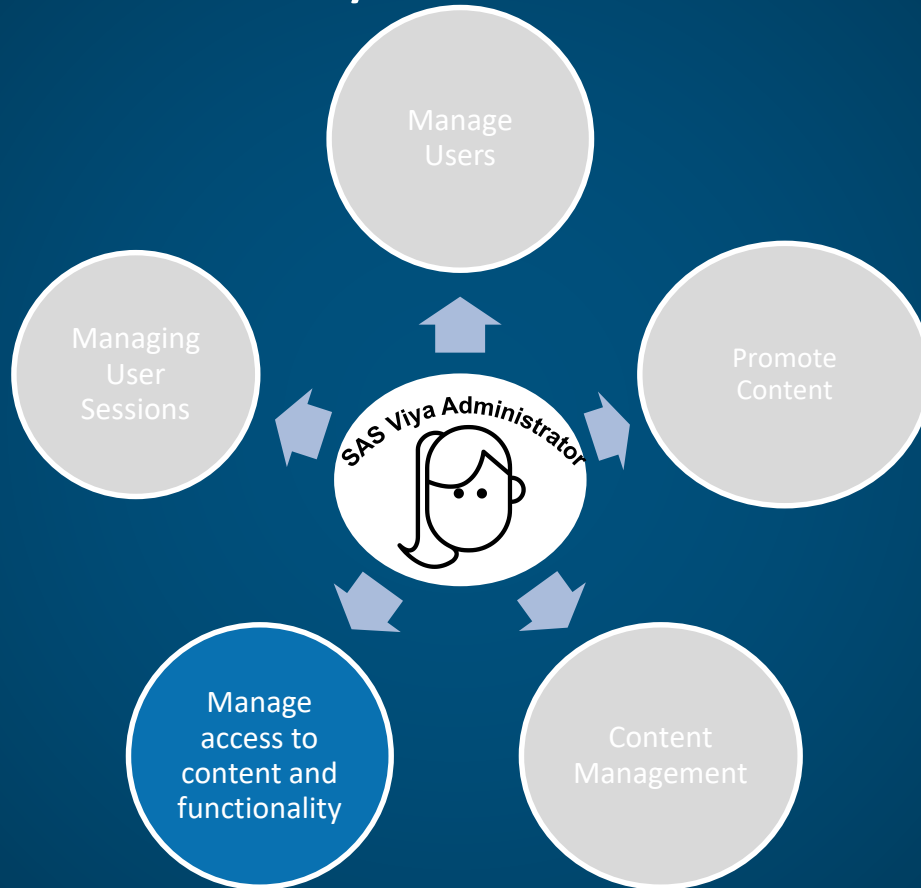


Common SAS Viya Administration Tasks



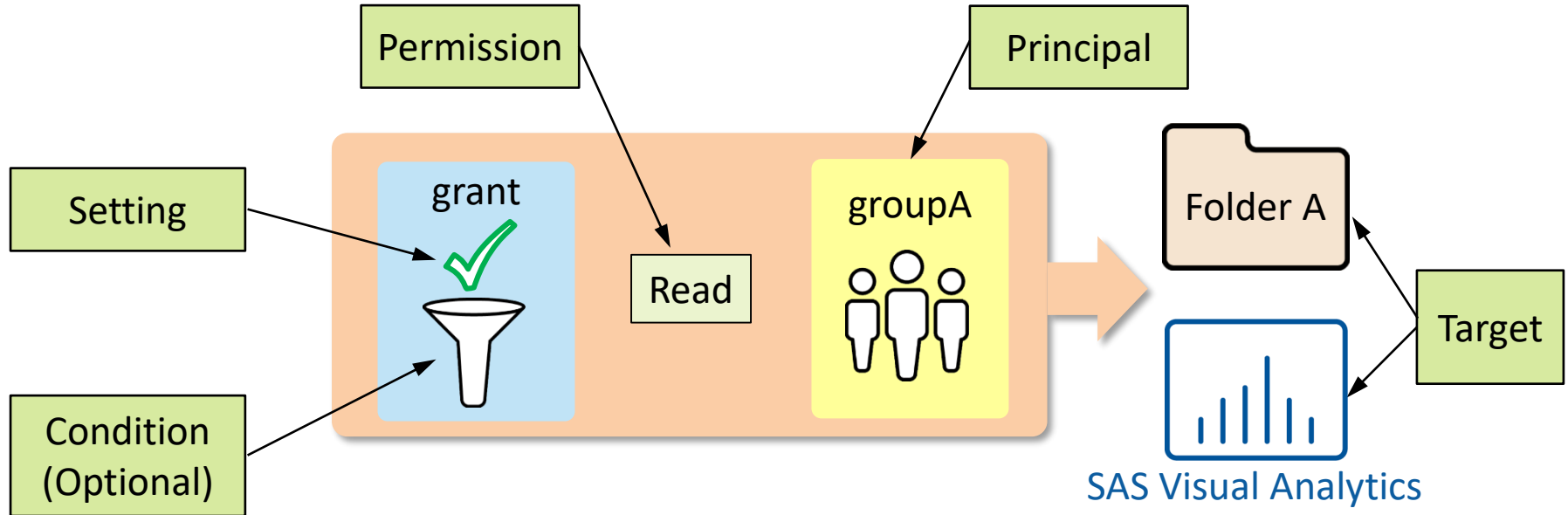
Demonstration

Common SAS Viya Administration Tasks



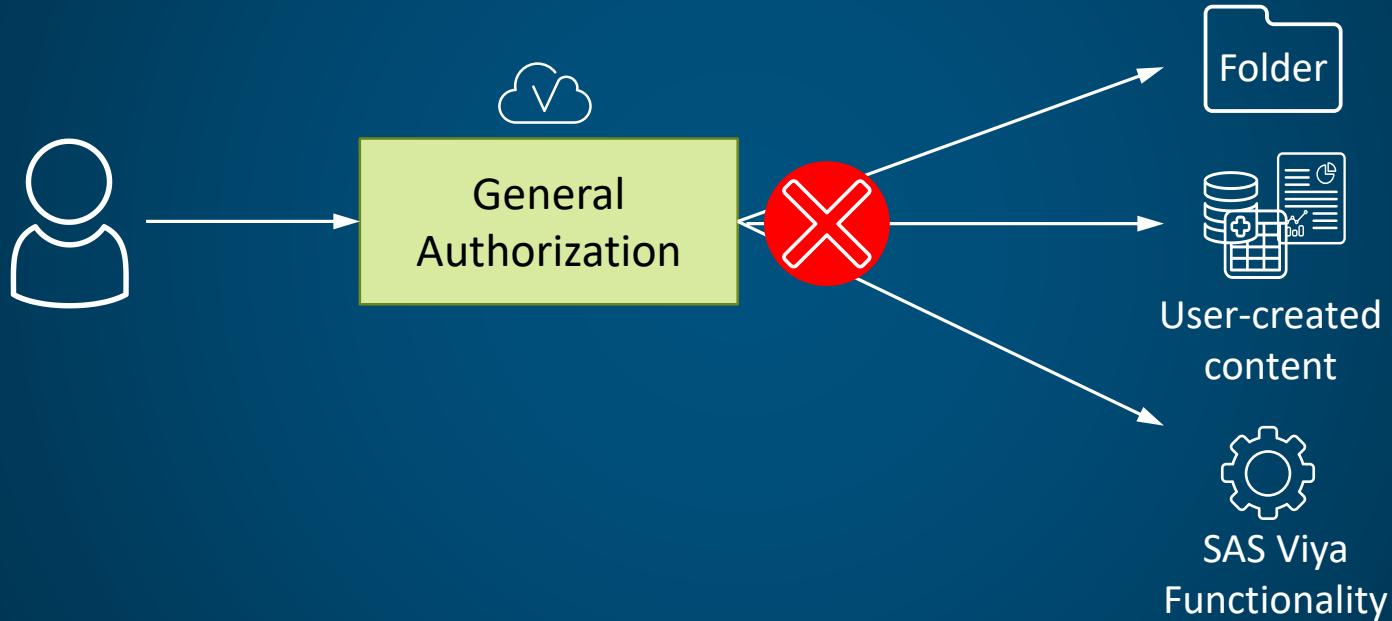
General Authorization-Access Controlled Via Rules

A rule is a composite of authorization elements.



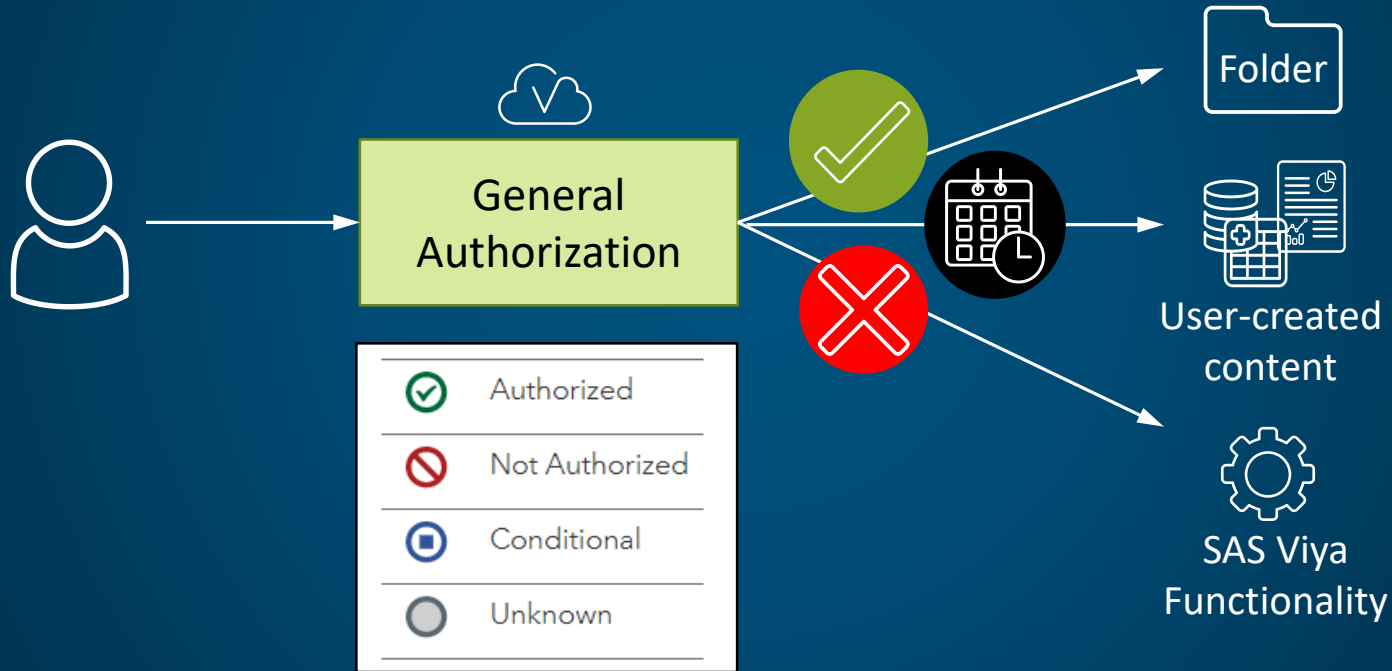
General Authorization

In general authorization, any access that is not explicitly granted is implicitly denied.

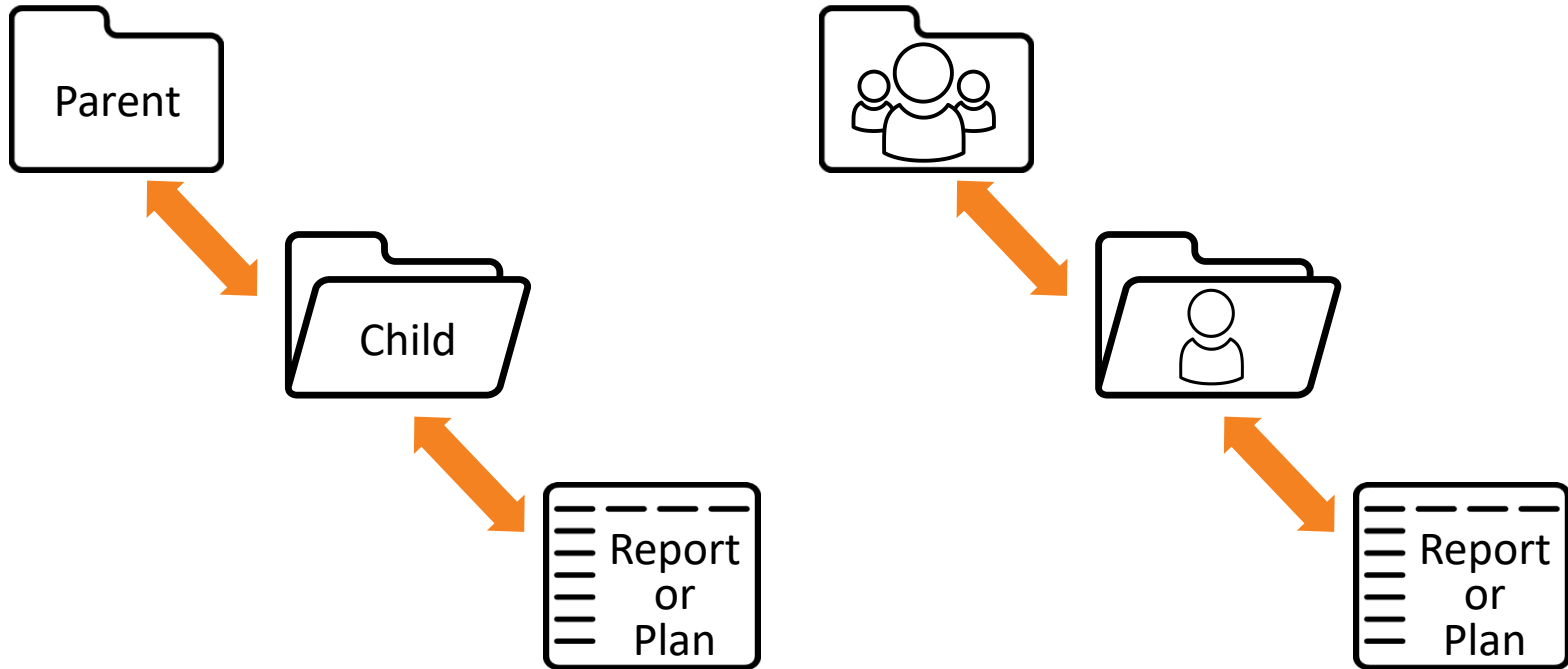


General Authorization

Using rules, general authorization determines whether a principal is or is not authorized for an object or functionality.



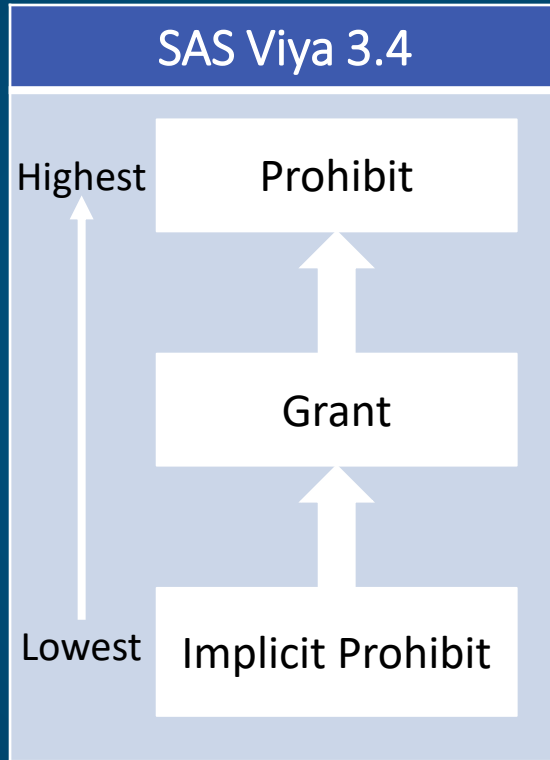
Inheritance of Authorization



Precedence of Authorization

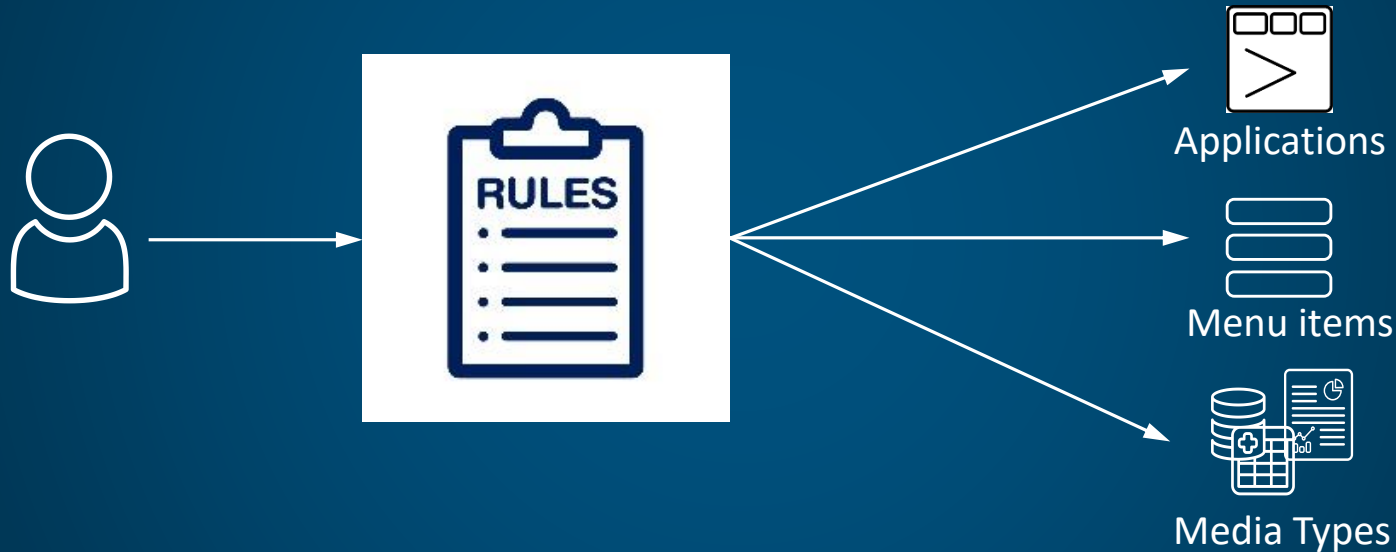


If you explicitly prohibit authorized users, you impact the SAS administrators as well.

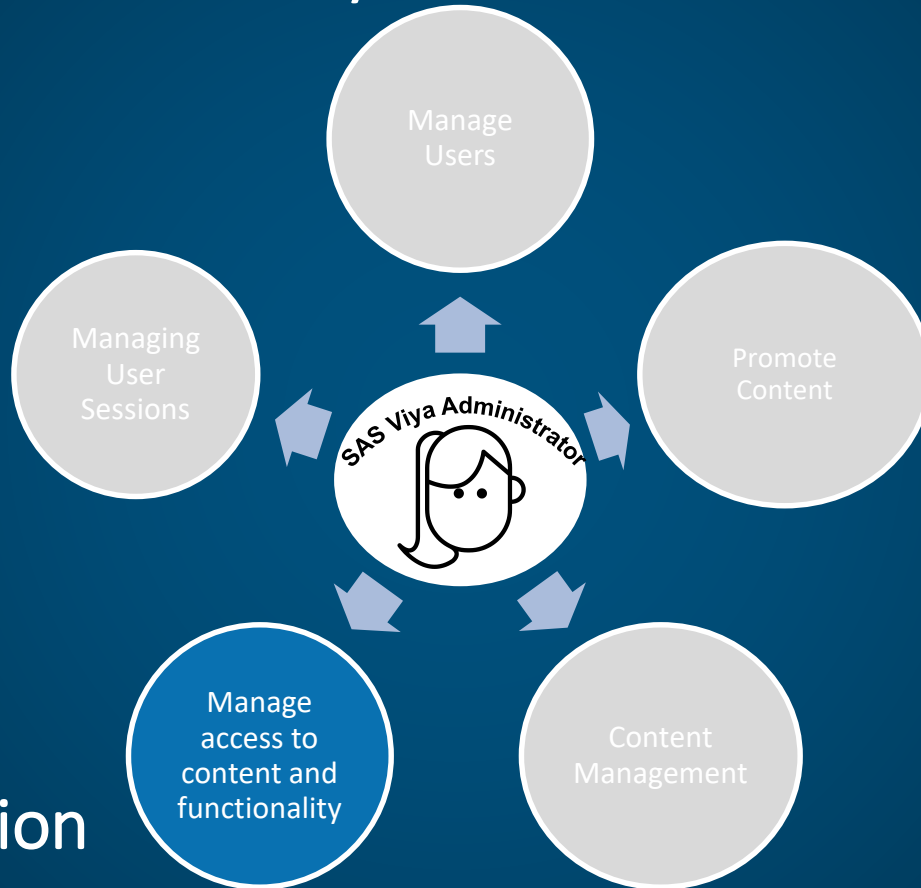


Using Rules to Control Access to Functionality

Access to functionality is administered using *rules* that determine the features that are available to a user.

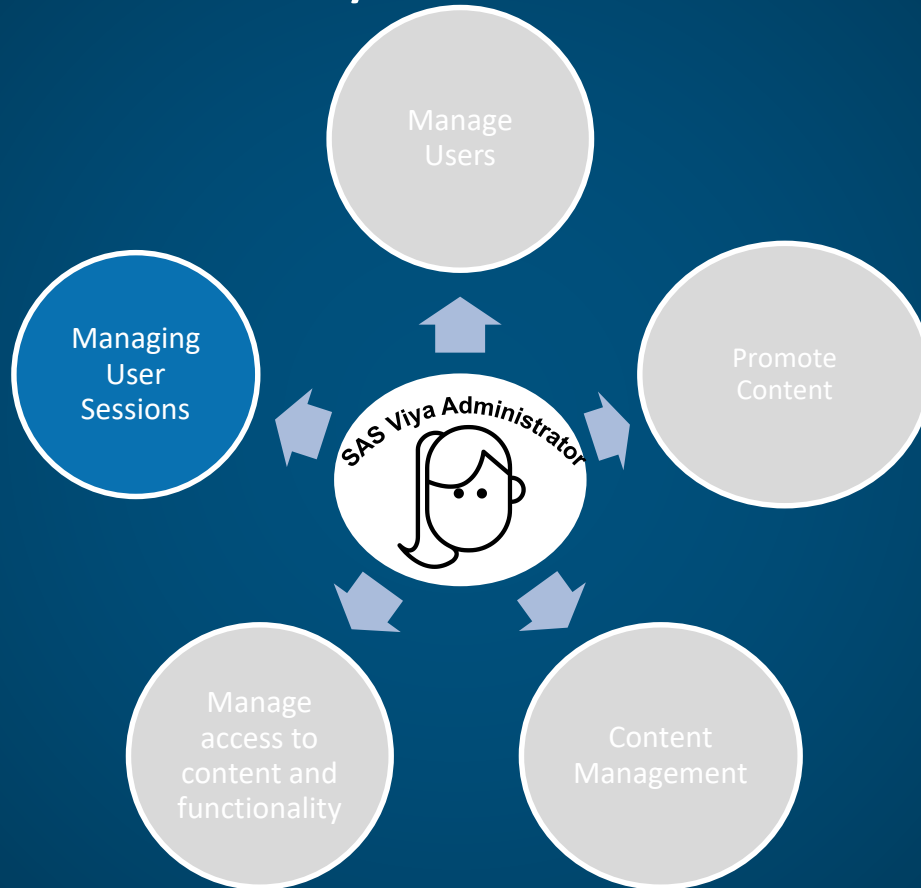


Common SAS Viya Administration Tasks

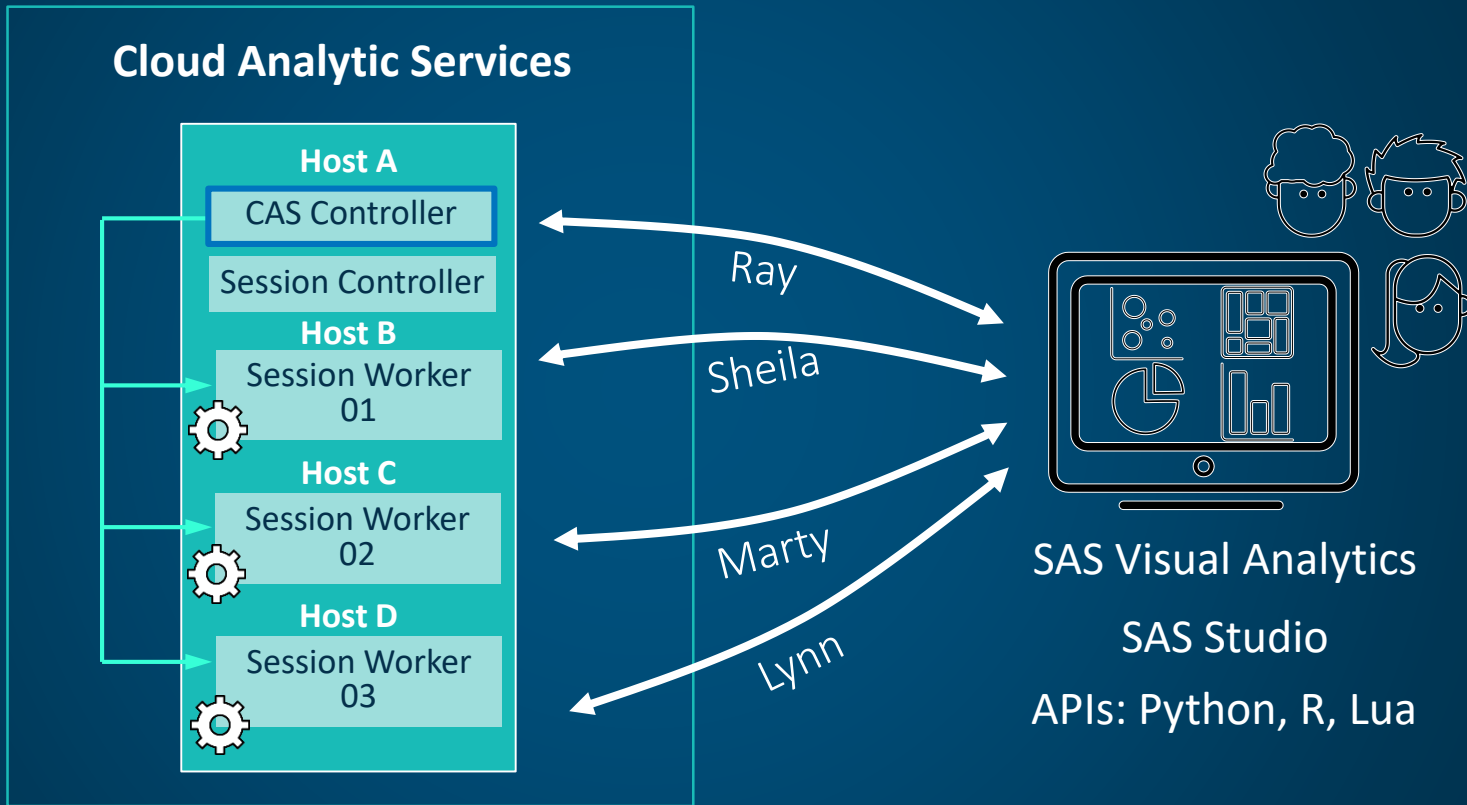


Demonstration

Common SAS Viya Administration Tasks



CAS Server User Sessions



Session Process Ownership

SAS Visual Analytics

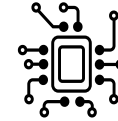


User: Lynn

SAS Logon
Manager

Identities

CAS Session



User: cas

CASHostAccountRequired

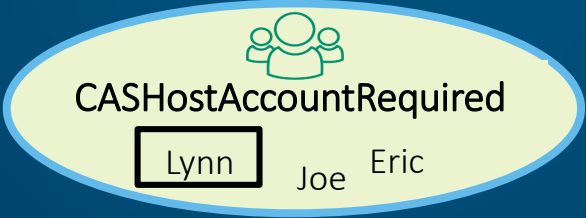
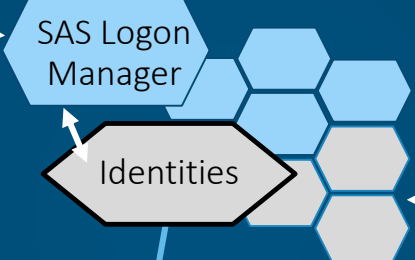
Joe Eric

Session Process Ownership

SAS Visual Analytics



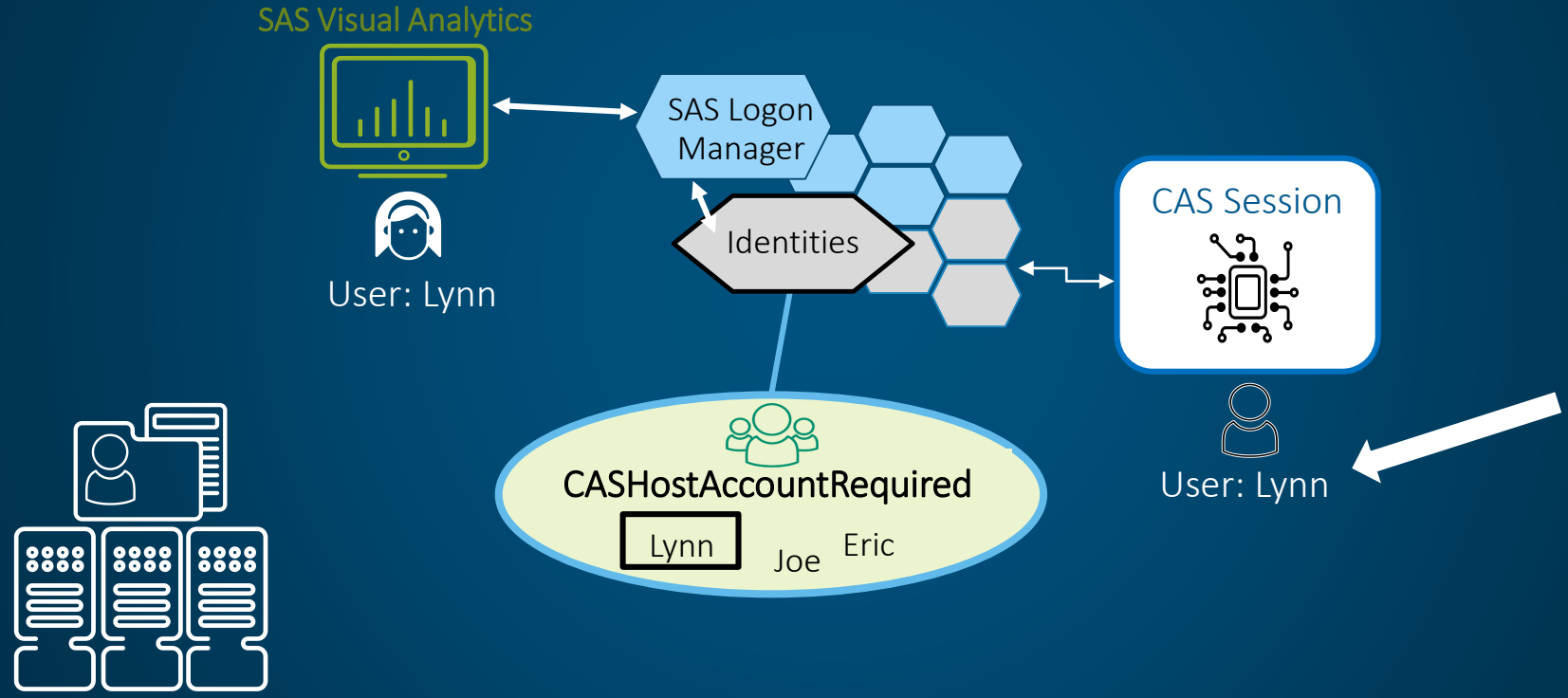
User: Lynn



User: Lynn

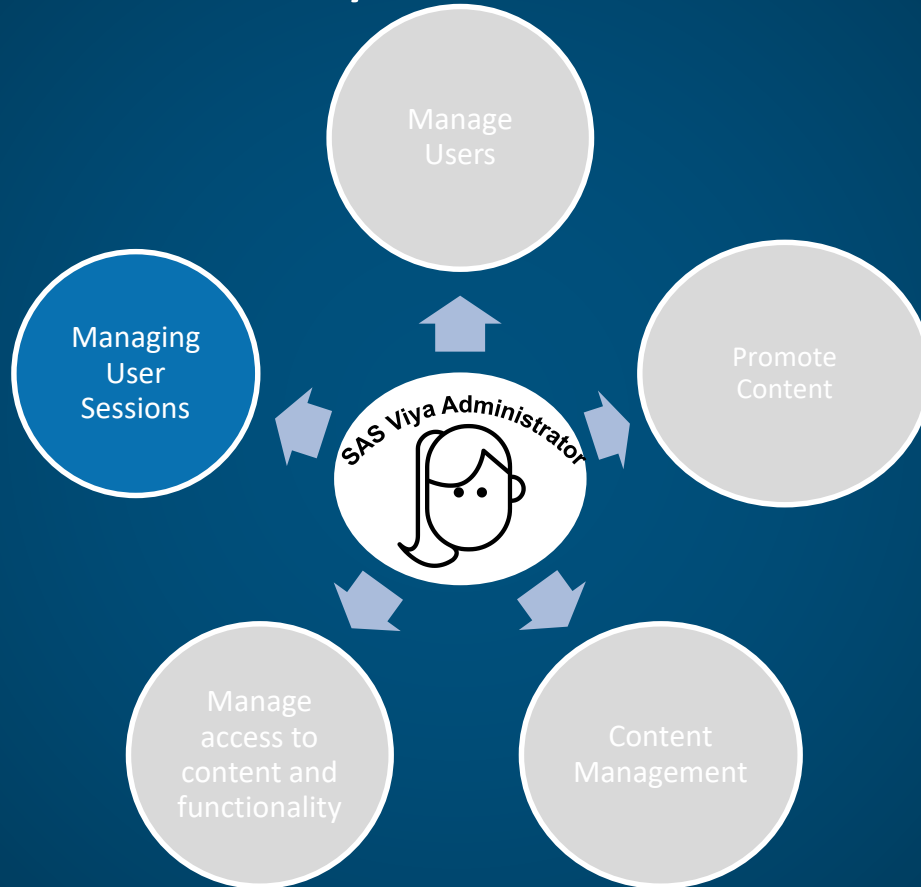


Session Process Ownership



Common SAS Viya Administration Tasks

Demonstration



Q&A

Please submit your questions in the Q&A window

