

# ***THE SIGMA SCRIPTS***

***AWS Certified Developer (Associate)  
Exam Course Guide***

***ENTER***



# Linux Academy

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Linux Academy  
Keller, Texas  
United States of America

To All Linux Academy Students,

Welcome to Linux Academy's AWS Certified Developer (associate level) prep course. This course builds off of previous innovation from our AWS Certified Solutions Architect course in ***The Orion Papers*** to bring you ***The Sigma Scripts***.

***The Sigma Scripts***, much like ***The Orion Papers***, is a non-linear, visual, interactive guide designed to enhance your learning and understanding of AWS. The guide can be used independently of the video lessons but is meant to be supplemental and used in conjunction with the video lessons and hands-on labs provided on linuxacademy.com.

We hope you'll enjoy this experience, and best of luck on your AWS adventures!

Sincerely,

*Fernando Medina Corey*

Fernando Medina Corey  
Course Author

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# Appendix

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**Welcome to the Appendix for The Sigma Scripts**

Here you will find helpful resources and links  
to aid in your exploration of AWS.

Select a resource in the navigation panel above  
to explore various parts of the appendix.

## Account & Services Layer

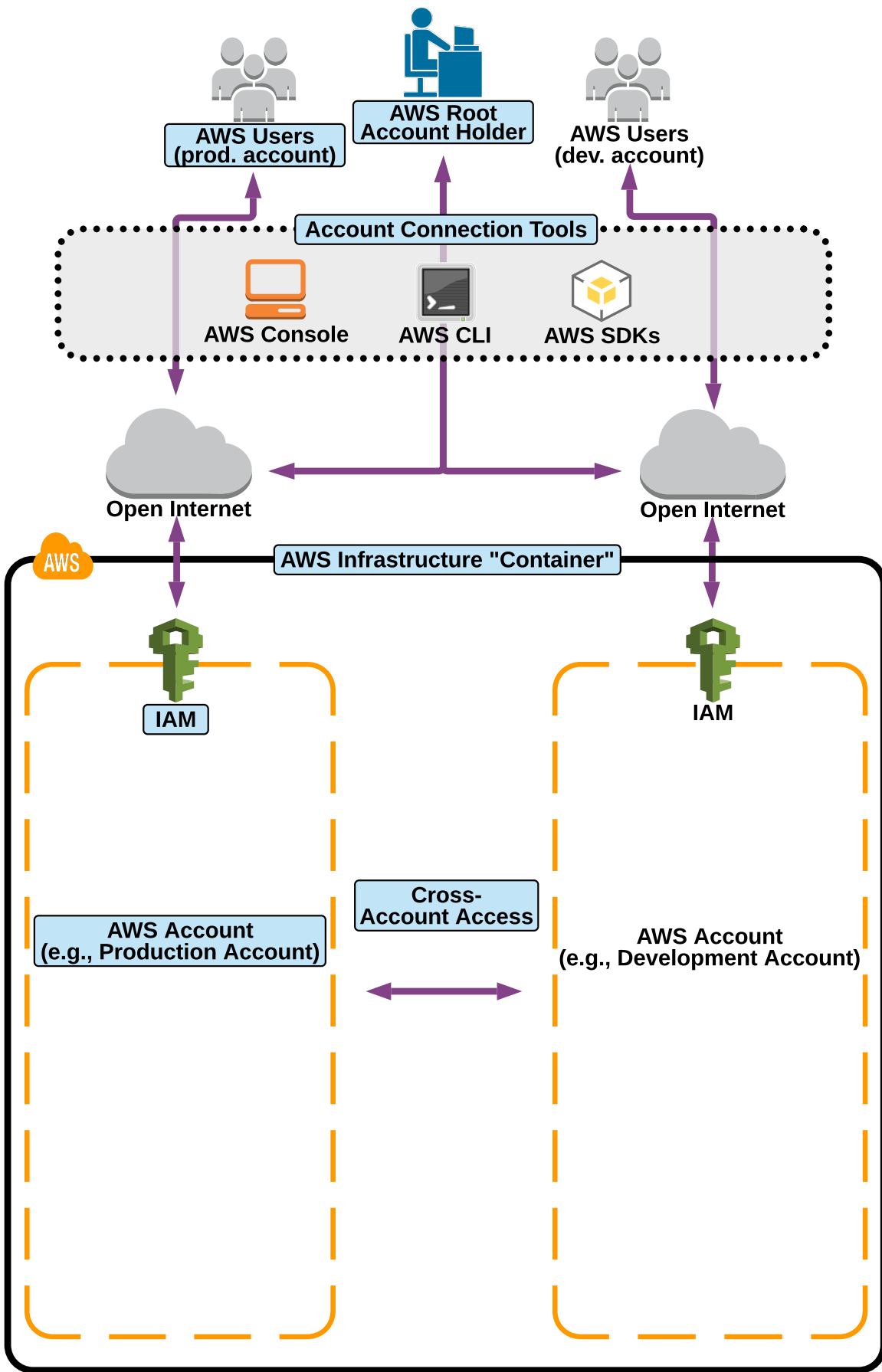
## Physical & Networking Layer

### AWS Account & Services Layer

The Account & Services Layer represents how you create, access, and manage an AWS account and its services — from how you interact with an AWS account and managing user rights to how you access and use various AWS services and features.

*This layer is all about account management and managing services.*

Appendix



Account & Services Layer

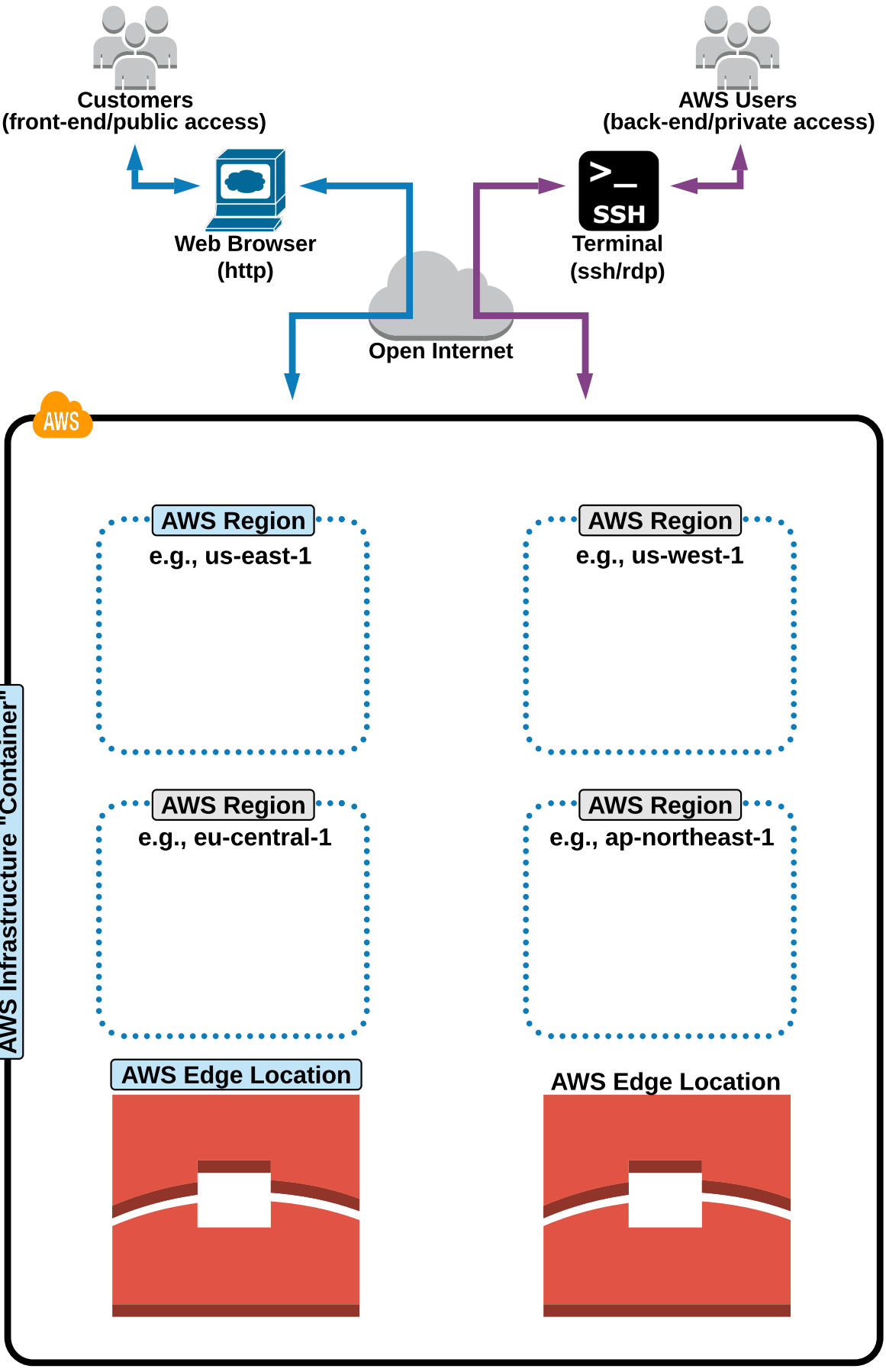
Physical & Networking Layer

### AWS Physical & Networking Layer


The Physical & Networking Layer represents the global infrastructure of AWS in terms of where resources are physically located around the world and how data flows through the AWS network.

*This layer is all about how AWS is organized and how internal and external communication with AWS works.*

Appendix



On-Premises Data Center



On-Premises Servers

Hybrid Environments



Account & Services Layer

Physical & Networking Layer

### AWS Physical & Networking Layer


(Networking)

Moving into a pure networking view, this diagram represents how **data is routed** through AWS's networking infrastructure for **highly available and fault-tolerant web applications**. Identifying the methods of access for both customers (front-end) and developers (back-end).

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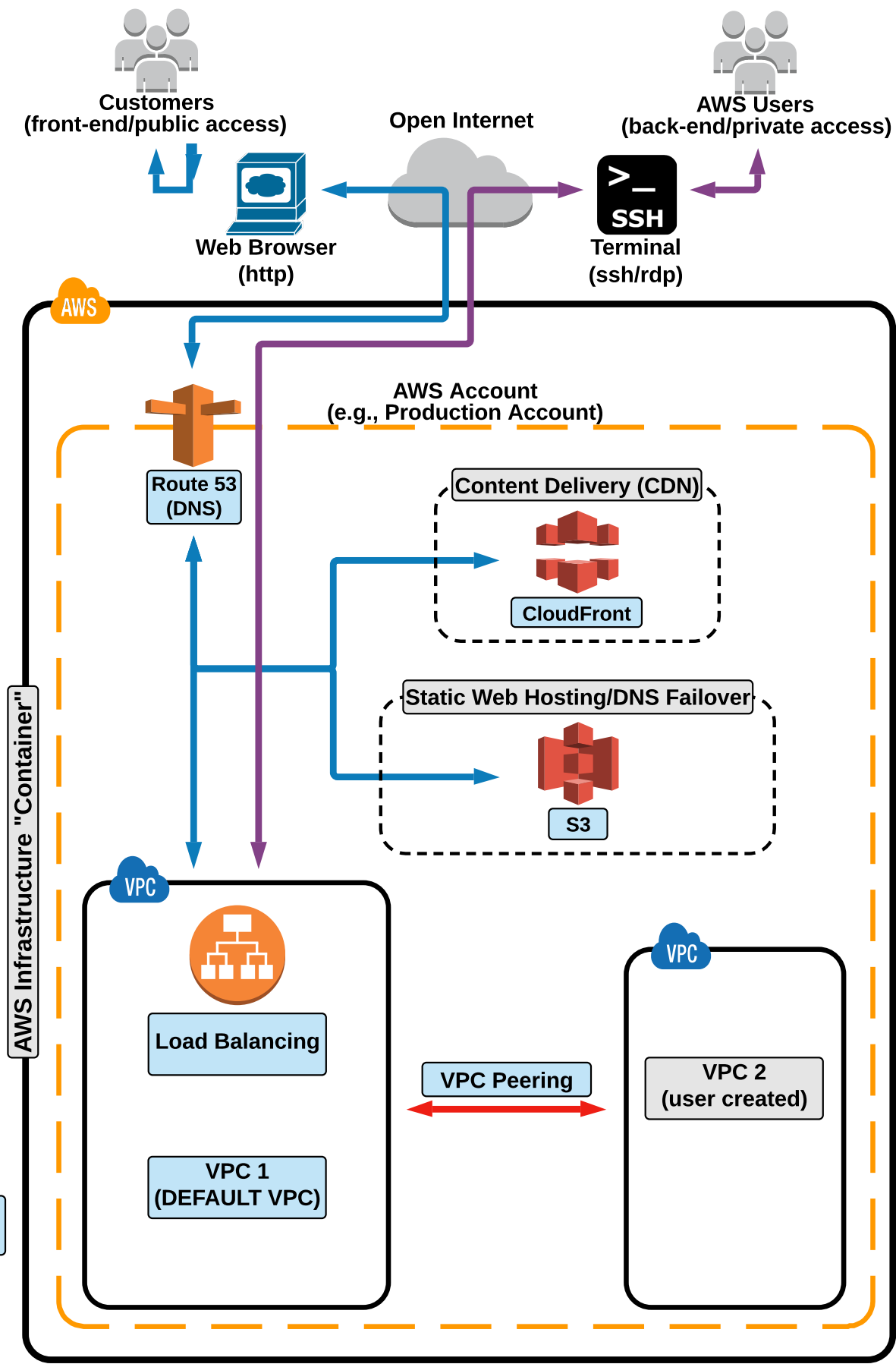
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## Load Balancers

Account & Services Layer

Physical & Networking Layer

**AWS Physical & Networking Layer**  
*(Hybrid Environments)*

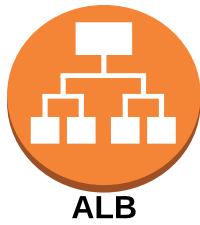
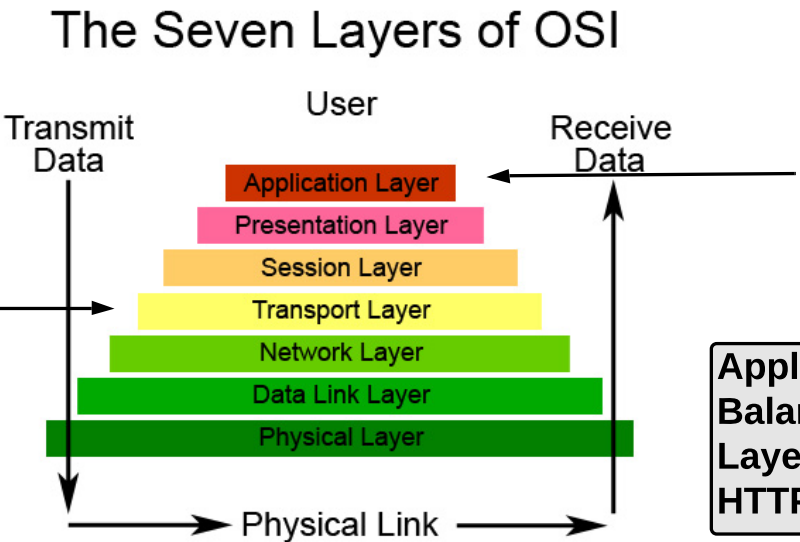
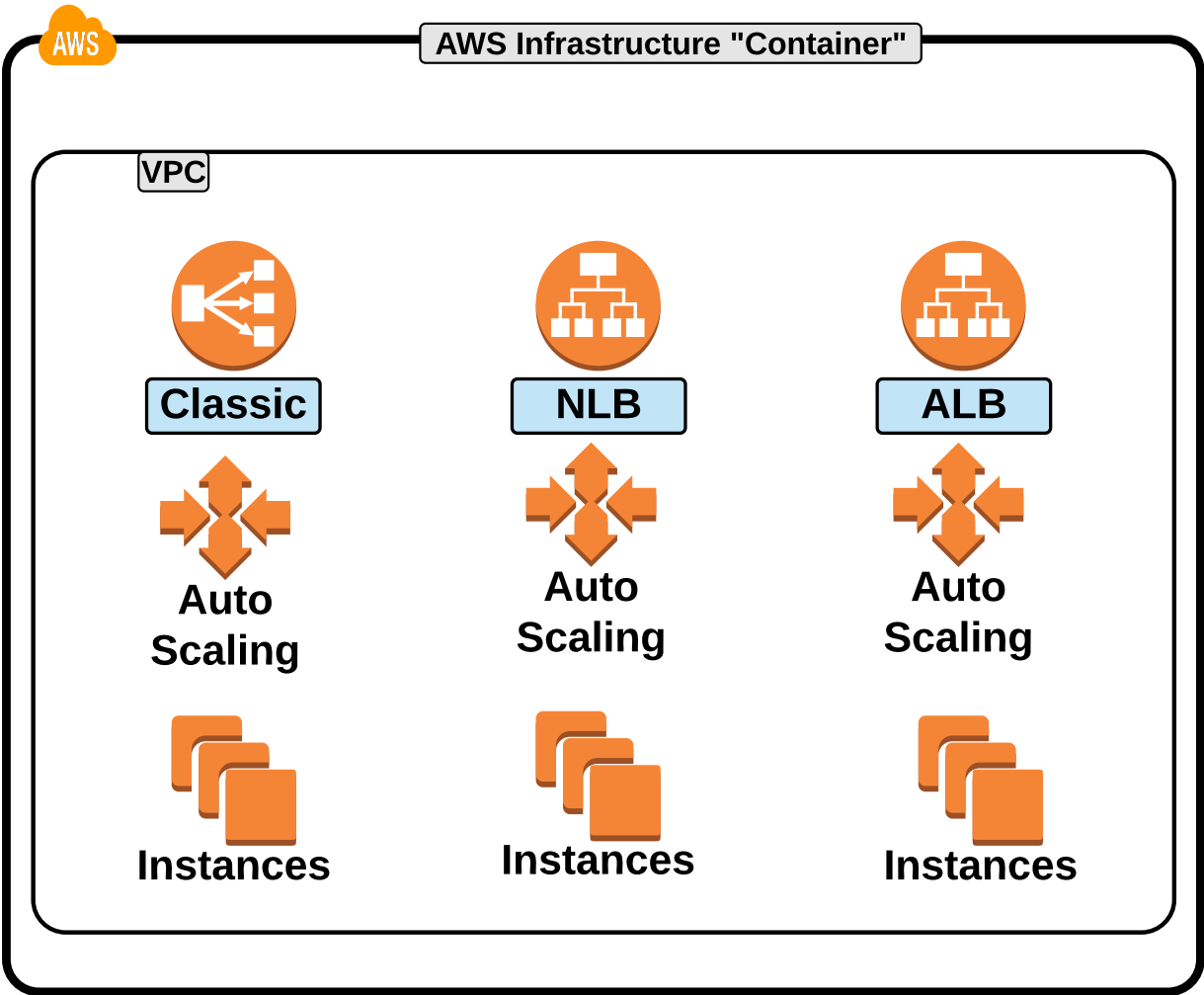
Hybrid architecture allows you to combine resources located in the AWS cloud with resources located on-premises and use them as if they were located in the same environment.

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The second-generation load balancers (ALB, NLB) support dynamic ports.

Network Load Balancer operates on Layer 4 and handles TCP traffic.



Application Load Balancer operates on Layer 7 and handles HTTP/HTTPS traffic.

Account & Services Layer

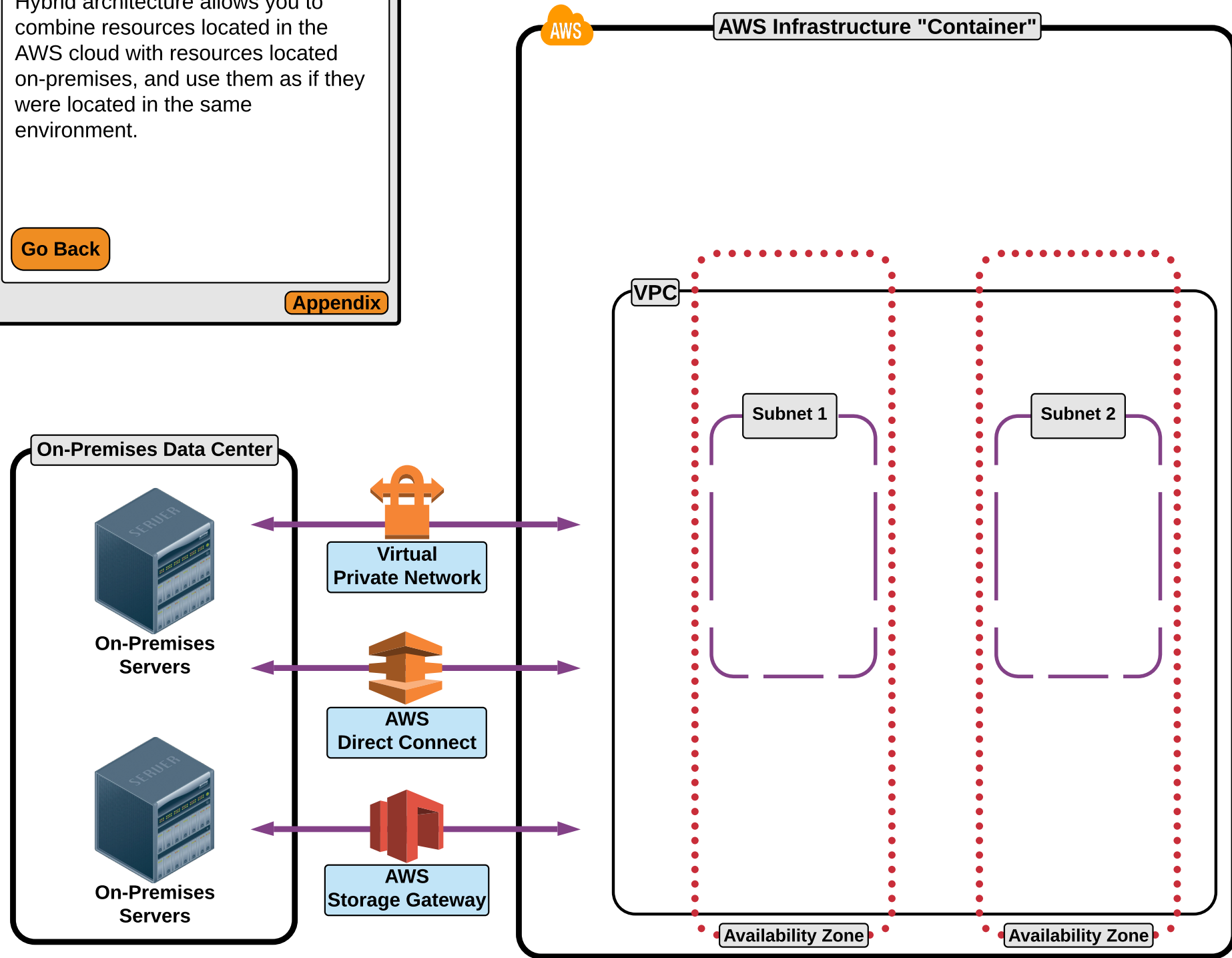
Physical & Networking Layer

**AWS Physical & Networking Layer**  
*(Hybrid Environments)*

Hybrid architecture allows you to combine resources located in the AWS cloud with resources located on-premises, and use them as if they were located in the same environment.

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Account & Services Layer

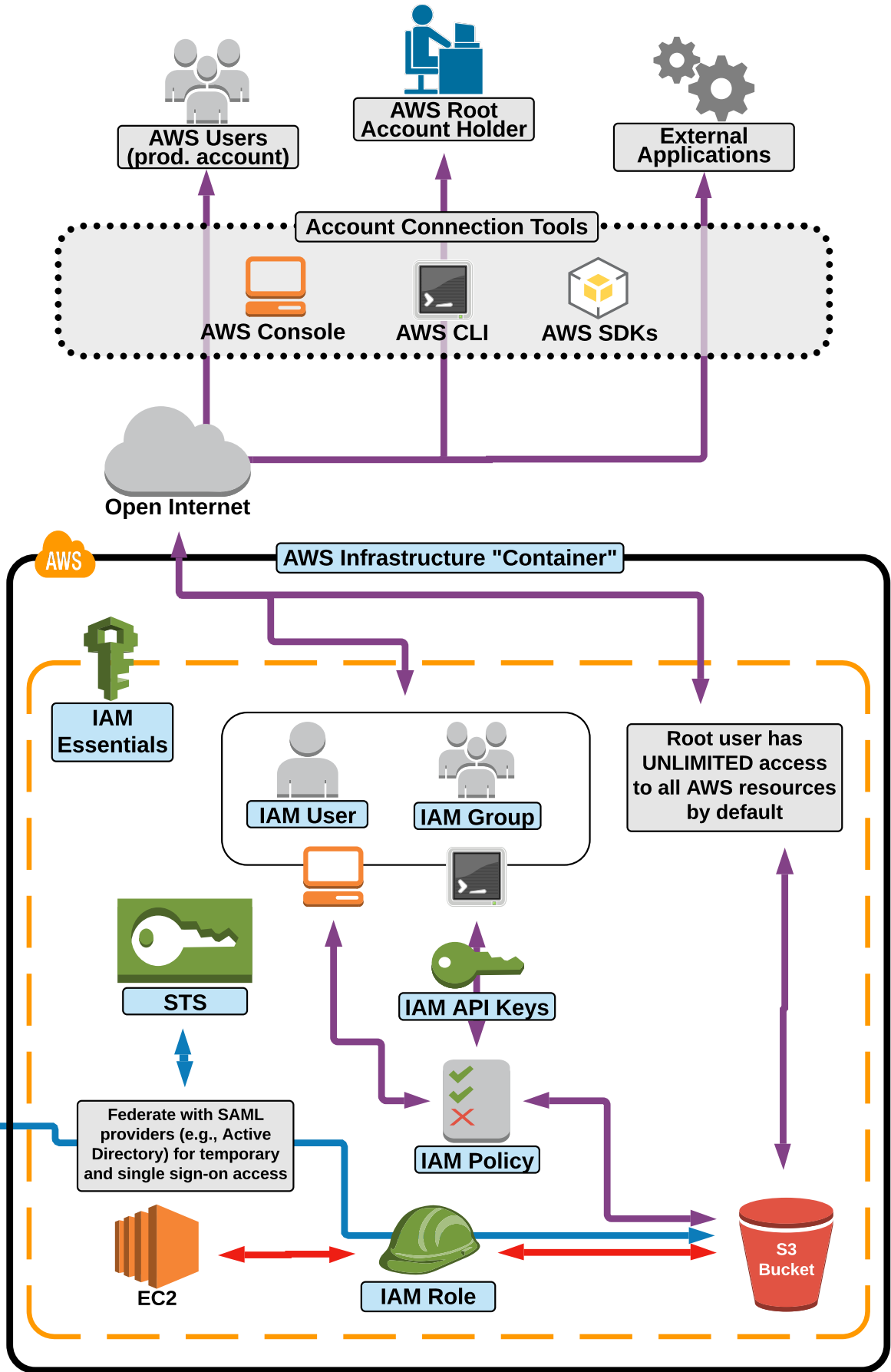
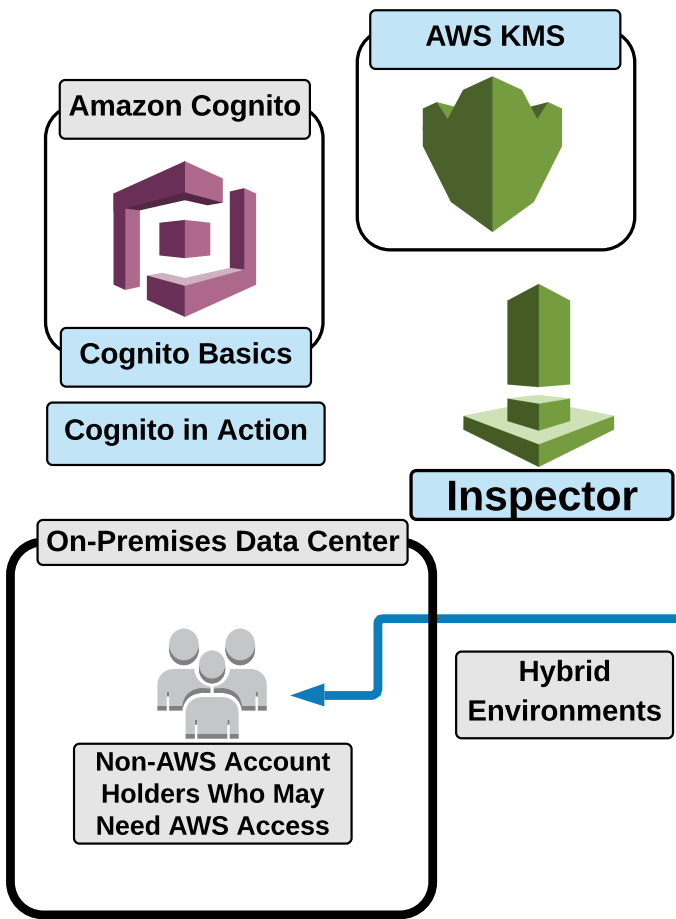
Physical & Networking Layer

AWS Account & Services Layer  
(IAM)

Moving into a more detailed view of IAM, here you can view an example of various ways different users and resources access an S3 bucket, including all the IAM components required, such as **users**, **groups**, **roles**, **policies**, and **API keys**.

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Account & Services Layer

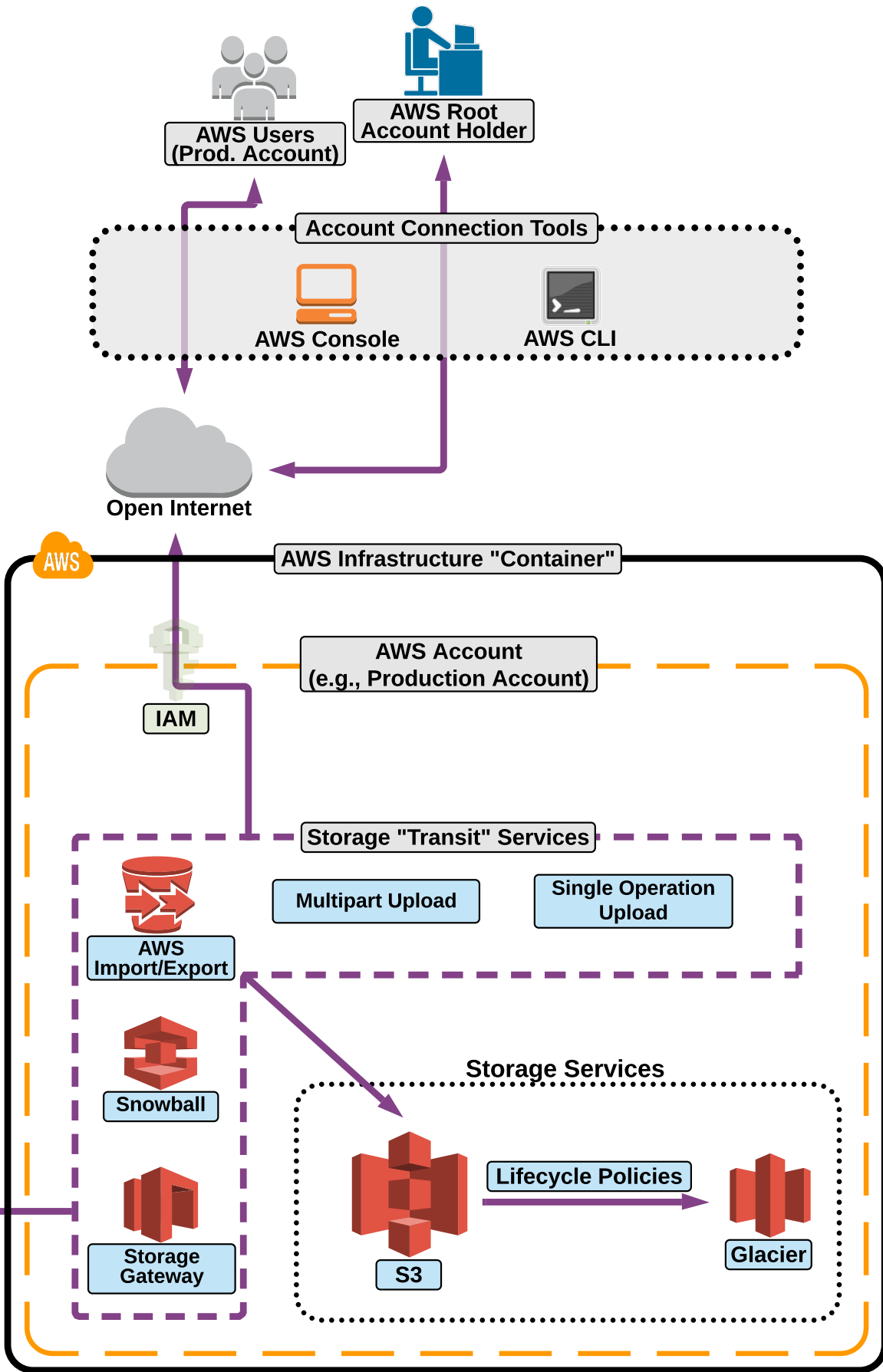
Physical & Networking Layer

## AWS Account & Services Layer (Storage Services)

AWS's main storage service is S3. As represented in the diagram, S3 has many different methods of importing, exporting, and syncing data with on-premises networks.

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Account & Services Layer

Physical & Networking Layer


**AWS Account & Services Layer**  
(Developer Tools)

AWS offers a variety of developer tools used for tasks ranging from source control to deployment to advanced application debugging.

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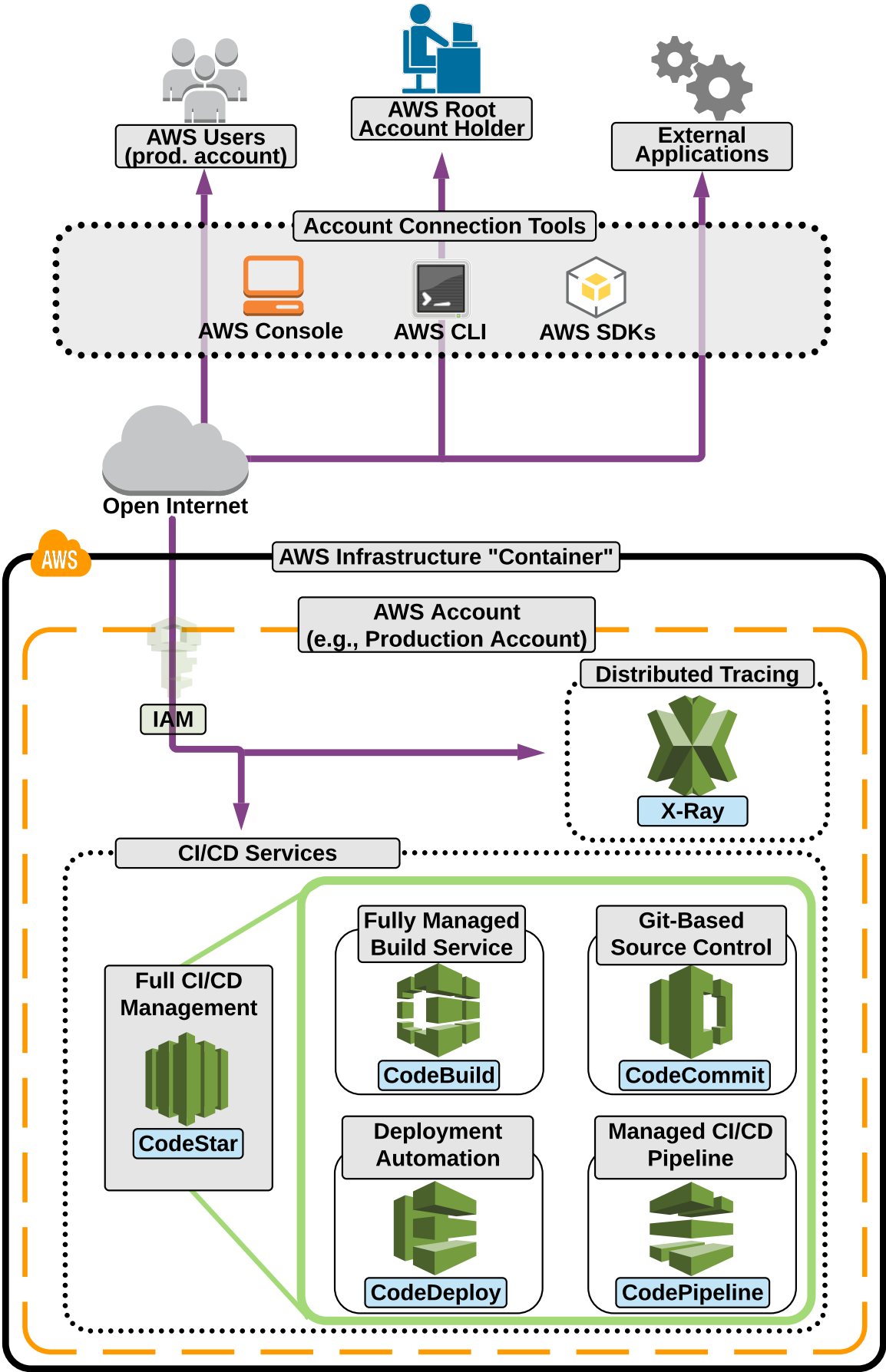
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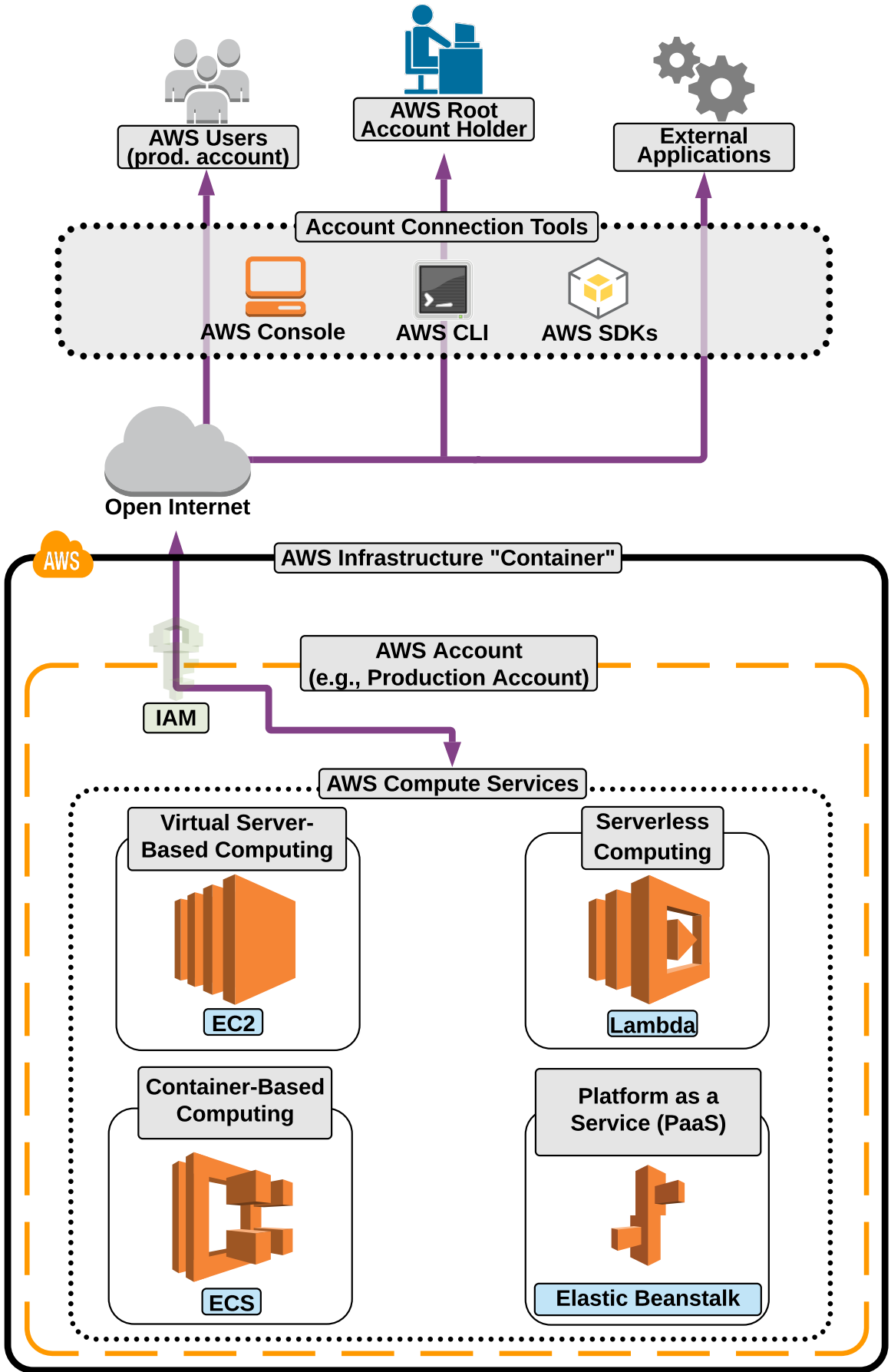
Physical & Networking Layer

AWS Account & Services Layer  
(Compute Services)


AWS offers several compute services. Four of the primary services are **EC2** (virtual servers you can provision in the AWS cloud), **ECS** (a managed container service), **Elastic Beanstalk** (a PaaS solution), and **Lambda** (a **serverless** computing option).

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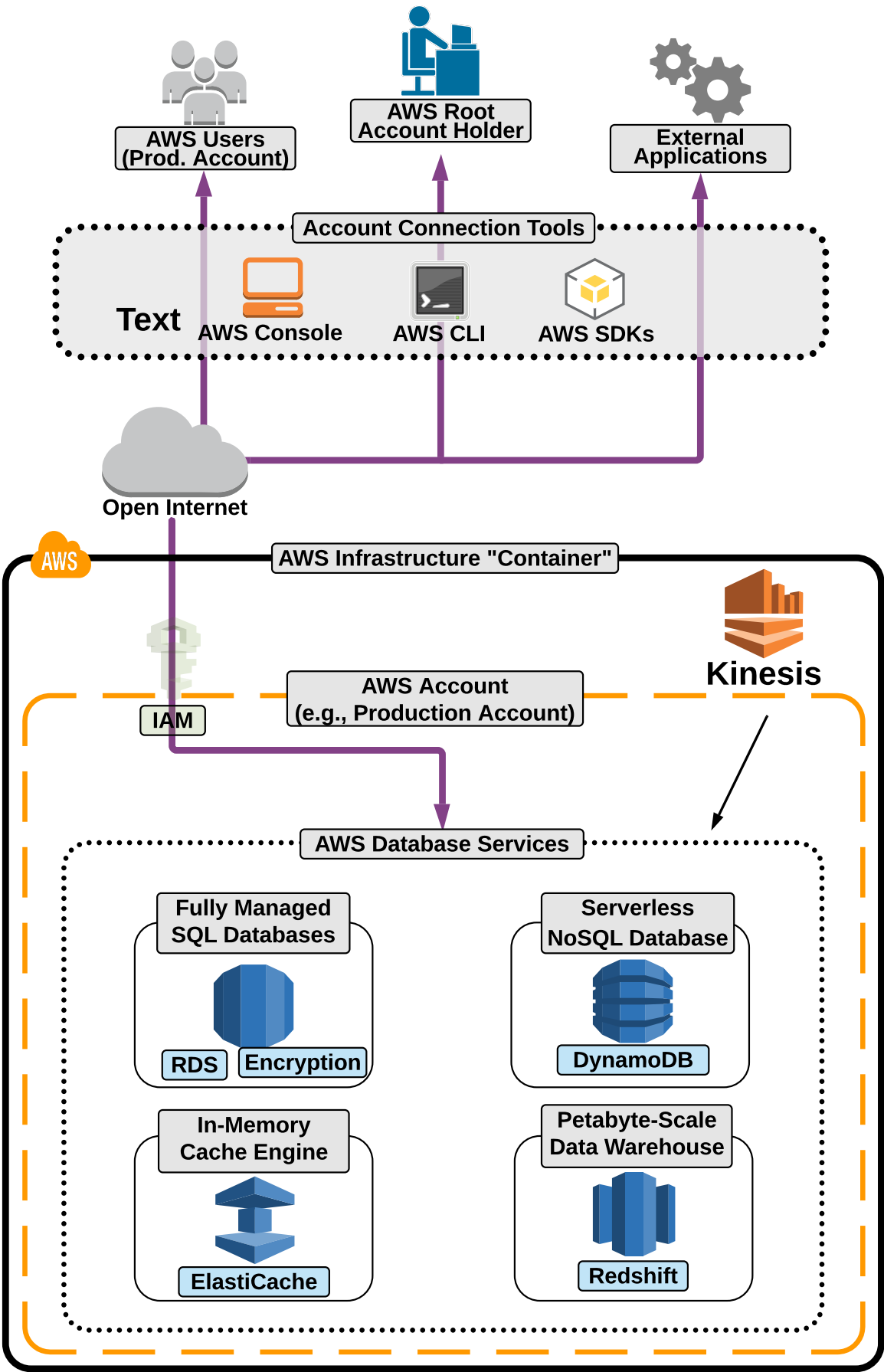
Physical & Networking Layer

AWS Account & Services Layer  
(Database Services)

AWS offers a wide range of database services with its primary offerings being **RDS** (SQL) and **DynamoDB** (NoSQL). Also included in the database category are options for high performance (**ElastiCache**) and data warehousing (**Redshift**) data sets.

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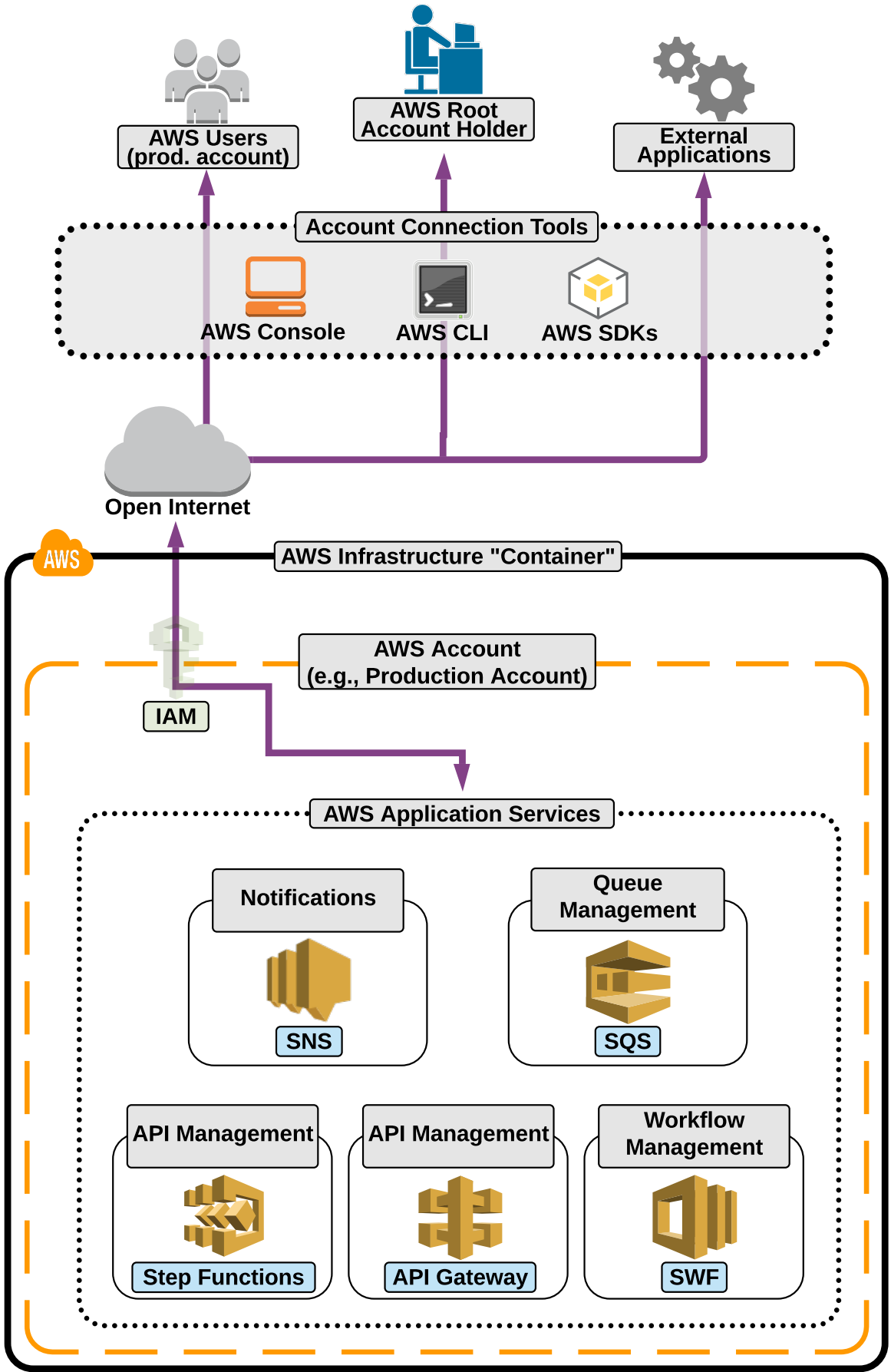
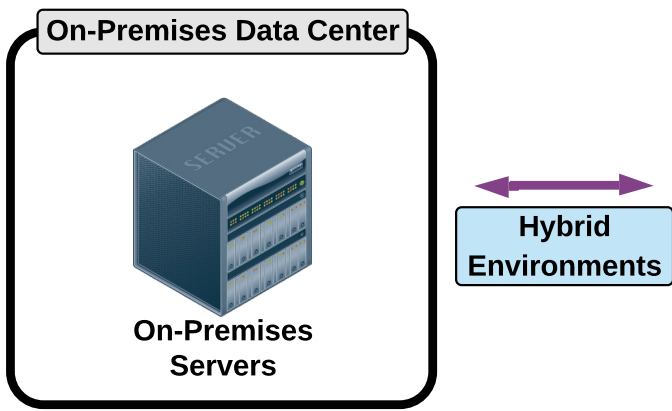
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**AWS Account & Services Layer**  
(Application Services)

Application and messaging services provided by AWS offer a great variety of solutions — from receiving important alerts and creating decoupled environments to managing every task required in workflow.

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Account & Services Layer

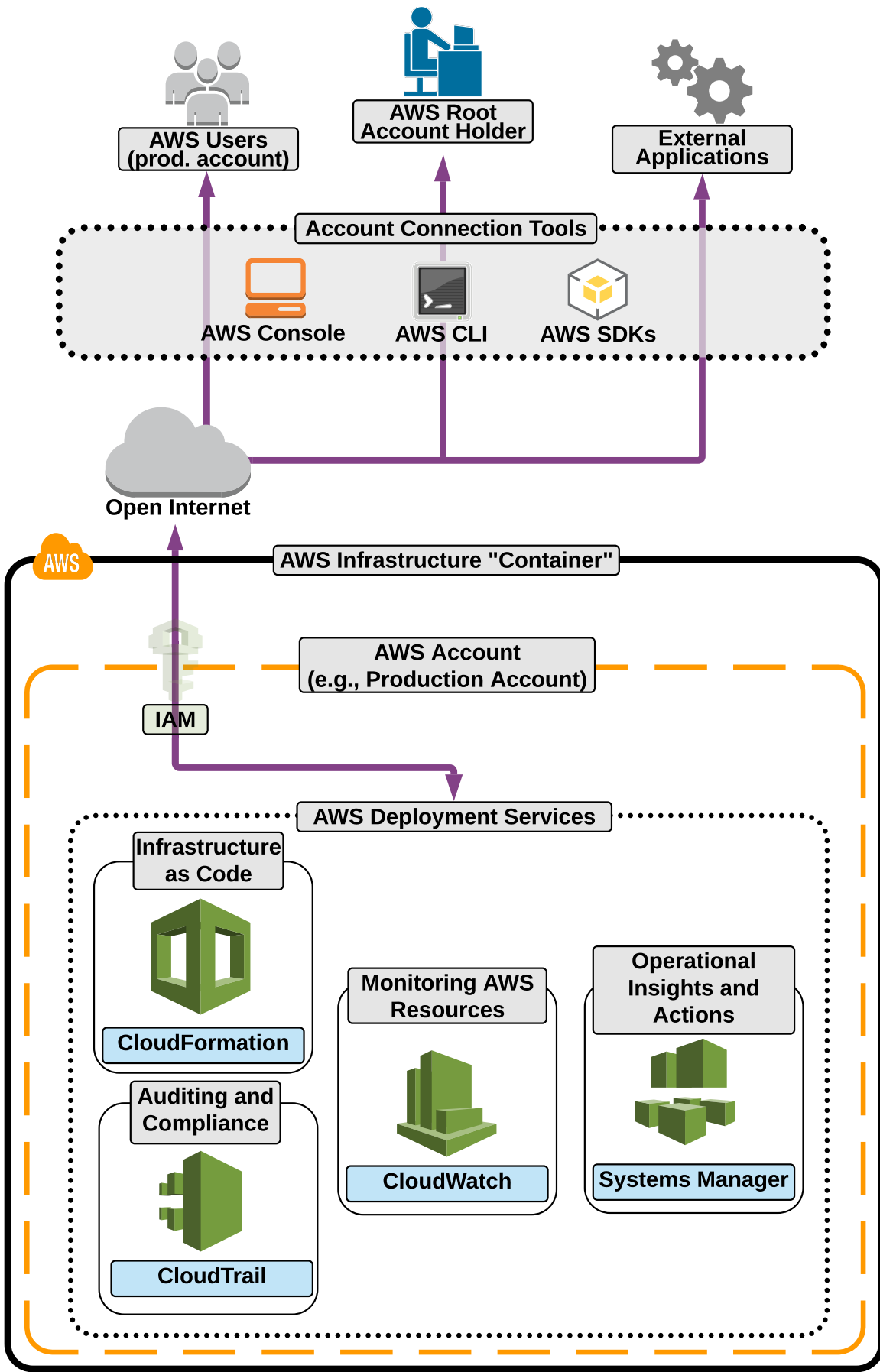
Physical & Networking Layer

AWS Account & Services Layer  
(Management Tools)

AWS offers many tools to help you manage resources. **CloudFormation** is a service that lets you describe AWS infrastructure as code, **CloudWatch** provides monitoring and alerting, and **AWS Systems Manager** provides operational insights into your applications to guide your actions.

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