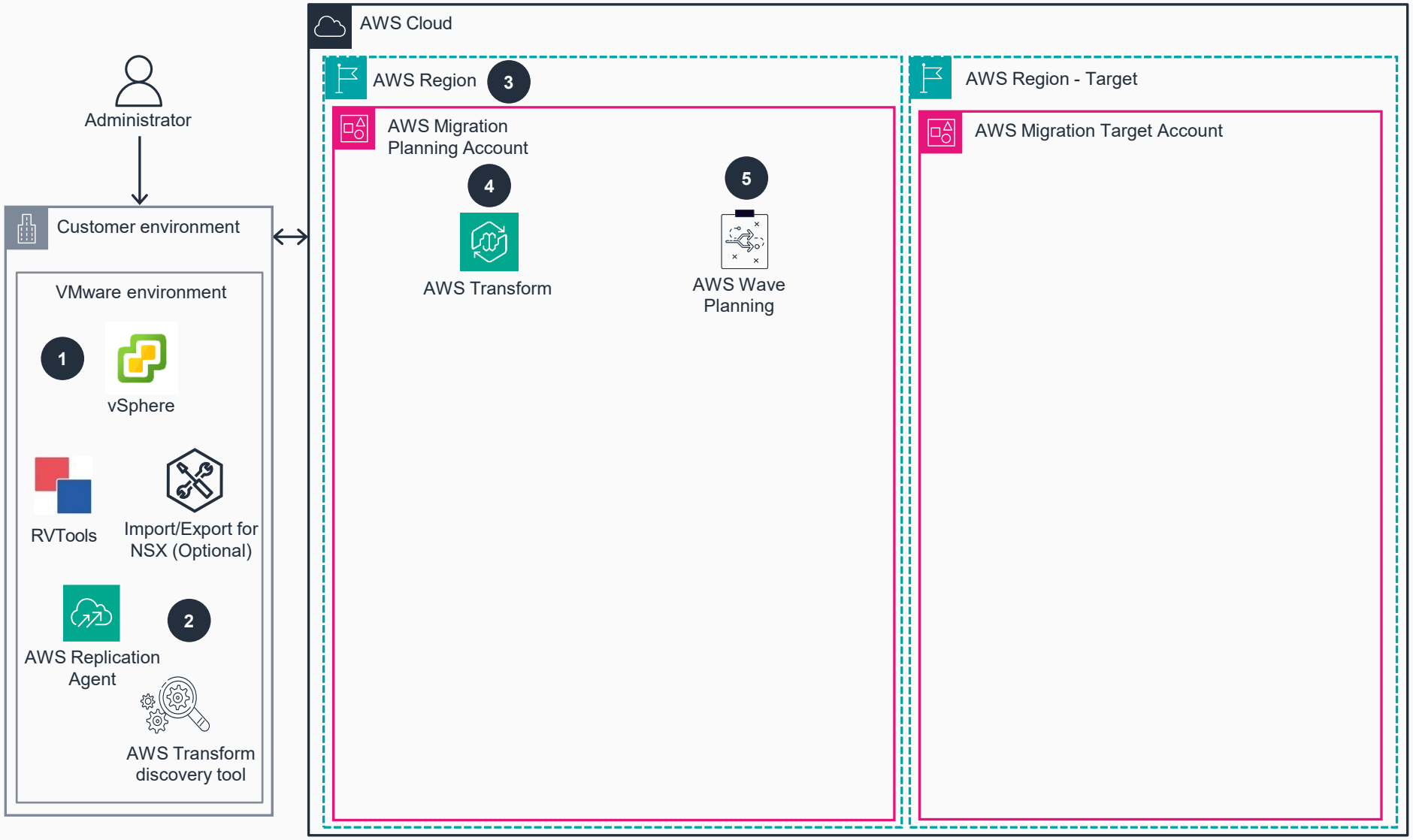
Guidance for Automated Setup of AWS Transform for VMware

Phase 1: Environment Setup

This architecture diagram shows environment setup and access configuration.



1. The customer VMware environment hosts the workloads to be migrated. RVTools can be used along with optional import/export functionality for customers running VMware NSX.

2. **AWS Transform discovery tool** (instead of RVTools) gathers and collects data and dependencies for migration. Many other data sources are supported for discovery. **AWS Replication Agent** migrates virtual machines to AWS.

3. **AWS Transform for VMware** workspaces are available globally. A full list of supported AWS Regions can be found in the Supported Regions for **AWS Transform** section of the **AWS Transform** User Guide.

4. **AWS Transform for VMware** helps optimize infrastructure and reduces operational overhead, giving you a more predictable, cost-efficient path to modernization.

5. As part of **AWS Transform**, the **Wave Planning capability** uses graph neural networks to analyze application dependencies and plan migration waves. AWS Transform utilizes an AI-powered migration planning capability with a conversational interface to transform complex VMware infrastructure data into actionable migration strategies through intelligent dependency analysis and structured validation.

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AWS Reference Architecture

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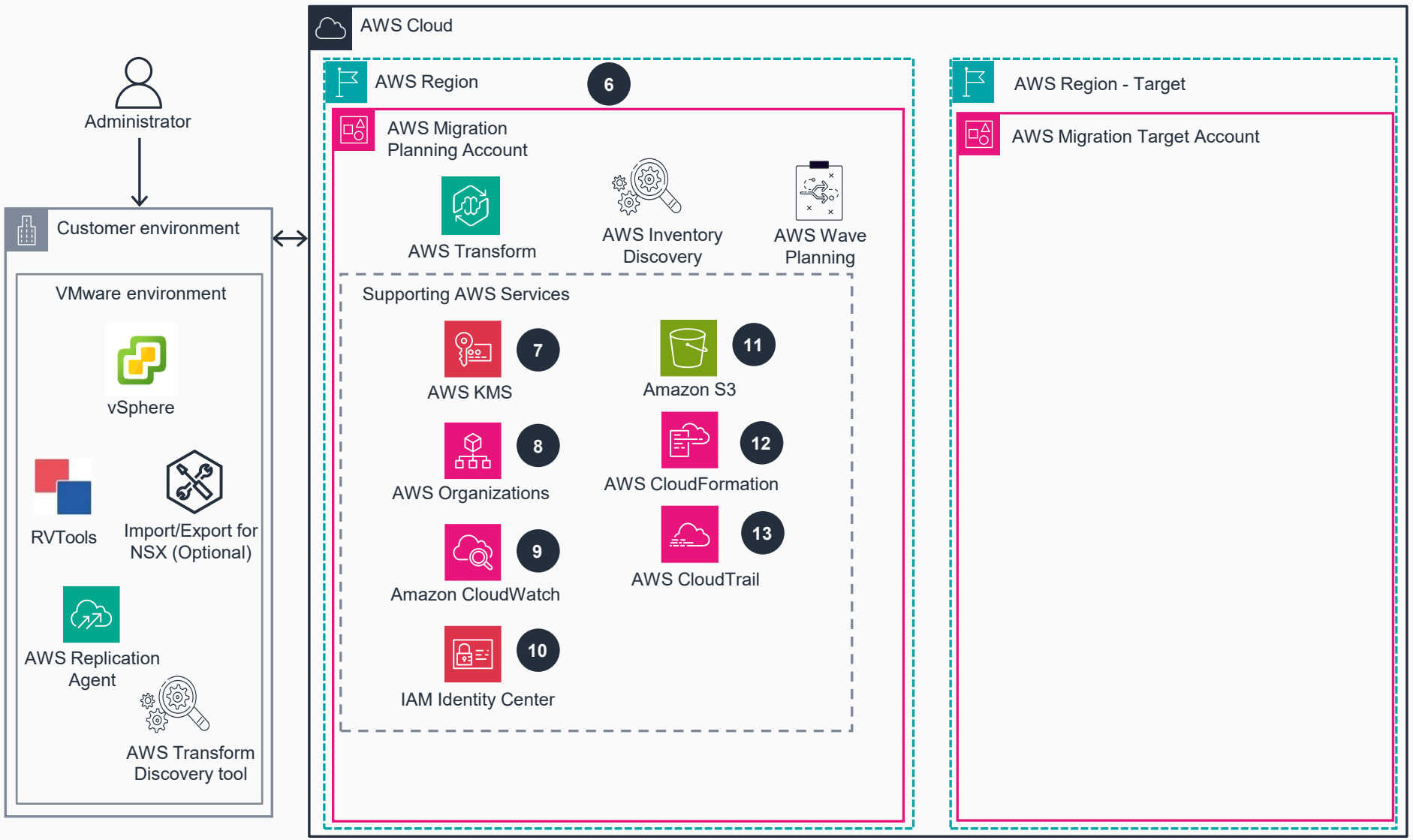
Phase 2: Data Collection

This architecture diagram shows data collection and initial migration planning.



6 The AWS migration planning account hosts **AWS Transform** for migration planning activities.

7 **AWS Key Management Service (AWS KMS)** encrypts data using AWS managed keys by default or optional customer managed keys (CMKs).

8 **AWS Organizations** enables centralized management of AWS accounts through organizational units (OUs).

9 **Amazon CloudWatch** monitors **AWS Transform** activities, resources, and metrics in the management account.

10 **AWS Identity and Access Management (IAM) Identity Center** provides centralized access management across all AWS accounts.

11 **Amazon Simple Storage Service (Amazon S3)** buckets store key migration artifacts, including inventory data, dependency mappings, wave plans, and application groupings. By default, the artifact are stored in a service-managed buckets. Customers can optionally configure their own **Amazon S3** bucket for greater control over data storage, encryption, and access policies. Discovery data and migration artifacts are also stored there.

12 **AWS CloudFormation** automates resource provisioning across AWS accounts and Regions for test and production environments.

13 **AWS CloudTrail** logs API activities in AWS accounts, while **AWS Transform** tracks migration activities.

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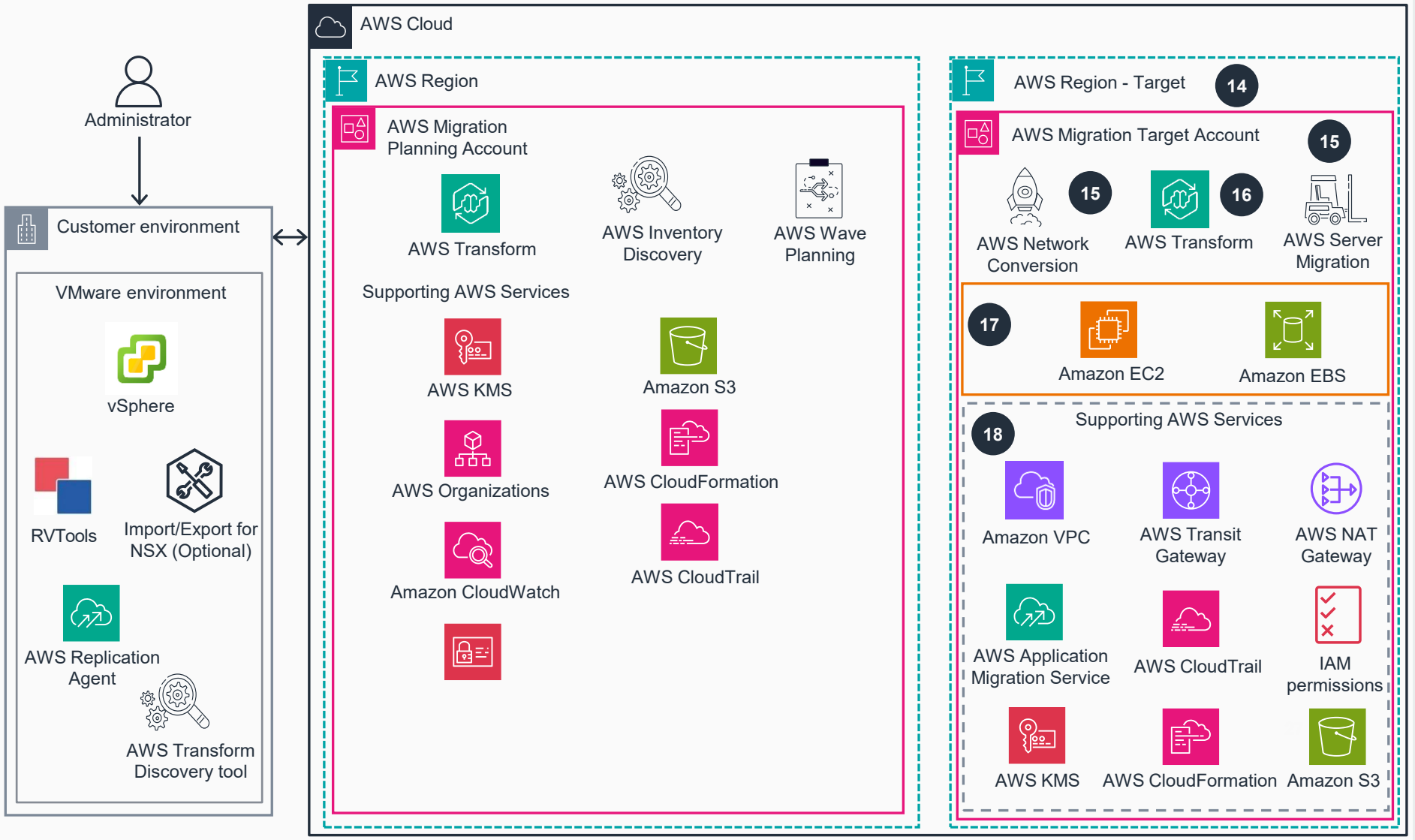
AWS Reference Architecture

Guidance for Automated Setup of AWS Transform for VMware

Phase 3: Workload Migration

This architecture diagram shows workload migration and network conversion to AWS.



NOTE: For the most up-to-date information on supported Regions, refer to the AWS Services by Region homepage.

14 The AWS target (provisioning) account hosts migrated production workloads and applications.

15 The **AWS Transform** network migration capability converts on-premises networks to AWS using **CloudFormation, AWS Cloud Development Kit (AWS CDK)** templates, Terraform and Amazon Landing Zone Accelerator are also supported.

16 **AWS Transform** orchestrates end-to-end migration by coordinating across various AWS tools and service, including the **AWS Application Migration Service** *server* migration or rehost capability.

17 **Amazon Elastic Compute Cloud (Amazon EC2)** and **Amazon Elastic Block Store (Amazon EBS)** host migrated VMware virtual machines with recommended AMI instance types and storage.

18 The network foundation of this migration relies on **Amazon Virtual Private Cloud (Amazon VPC)** and **AWS Transit Gateway** working in tandem, where **Amazon VPC** provides dedicated network isolation for migrated workloads while **Transit Gateway** acts as the central hub connecting these virtual private clouds (VPCs). NAT gateways enable secure internet access for private subnet resources.

A comprehensive set of AWS services, including **AWS KMS**, **CloudWatch**, **CloudTrail**, **IAM** permissions, **CloudFormation**, and **Amazon S3**, work together to maintain security, enable in-depth monitoring, and automate the infrastructure deployment through stored per-wave migration plans.

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