



# What is AWS Resource Access Manager (AWS RAM)?



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AWS Resource Access Manager is a service that enables you to share your AWS resources securely. Instead of duplicating resources across multiple accounts, you can create them once in a central location. AWS RAM then allows you to share these resources with other AWS accounts, organizational units (OUs), or specific IAM users or roles. This simplifies management, reduces operational overhead, and helps optimize costs in multi-account AWS environments.

## Key Features of AWS RAM

### 1. Centralized Resource Sharing:

A "resource share" is created in one account to share specific AWS resources securely. This prevents duplication, simplifying cloud architecture and streamlining management. It acts as a central hub for distributing access to shared infrastructure.

## **2. Extensive Resource Support:**

AWS RAM is flexible, allowing you to share various types of AWS resources. This includes key network components, such as VPC subnets and Transit Gateways. Because it works with so many resources, it fits a wide range of needs.

## **3. Seamless AWS Organizations Integration:**

Resources can be shared effortlessly with an entire AWS Organization or specific Organizational Units. This vastly simplifies management for large-scale, multi-account structures. Within an Organization, resource sharing can even be configured for automatic acceptance.

## **4. Granular Access Control:**

Precise "managed permissions" are defined to dictate what recipients can do with the shared resources. The owner of the resource retains full ownership and control at all times. This keeps things very secure, as only the necessary access is given, following the rule of "least privilege."

## **5. Cost Optimization:**

Sharing expensive or foundational resources, such as NAT Gateways or Private Certificate Authorities, avoids unnecessary duplication. This promotes efficient resource utilization across an AWS environment.

# **How AWS RAM Works?**

## **1. Owner Account Creates a Resource Share:**

The resource-owning AWS account initiates sharing by creating a "resource share" in AWS RAM. This defines a container for resources to be made available. The process occurs via the console, API, or CLI.

## **2. Resources are Added to the Share:**

Specific AWS resources, like a VPC subnet or EC2 Capacity Reservation, are included in the new resource share. Note that only regional resources from the same AWS Region as the share can be included.

### **3. Permissions are Defined:**

For each resource type, the owner specifies "managed permissions" to control recipient actions. This ensures the owner retains full control while granting precise access. AWS offers default or custom permission options.

### **4. Principals (Recipients) are Specified:**

The owner identifies who will receive access; this can be other AWS accounts, entire Organizations, or specific OUs. For some resource types, even individual IAM roles or users can be designated.

### **5. Invitation and Acceptance Process:**

Within your AWS Organization, shared resources can be automatically accepted if you've set up "trusted access." If not, or if you are sharing outside your Organization, the other accounts will receive an invitation and need to accept it to manually use the shared resources.

### **6. Accessing the Shared Resources:**

Once a resource is shared and accepted, other accounts can use it just like their own, following the rules set by the owner. They use regular AWS tools for this, but they can't change or delete the original resource itself.

### **7. Ongoing Management:**

The owner account maintains control by adding or removing resources, changing permissions, and updating recipients. AWS RAM automatically logs all sharing activities with CloudTrail. This provides a clear and secure audit trail for all changes.

## **AWS Combo Training with InfosecTrain**

AWS Resource Access Manager (RAM) makes managing multiple AWS accounts much easier and more efficient. It's a great tool that lets you securely share your cloud resources from a single, central location. This helps organizations better control their cloud setup and maintain everything in a well-managed state. For mastering these advanced cloud skills, [InfosecTrain](#) offers a comprehensive [AWS combo training](#), preparing individuals for complex cloud challenges.