

**Overview of Major Actors in Cloud Computing**

The sources describe **five major actors** involved in cloud computing:

* **Cloud Consumer**: An individual or organization that utilizes cloud products and services.
* **Cloud Provider**: The entity responsible for making cloud services available to interested parties. The Cloud Provider acquires and manages the infrastructure required for providing services, runs the cloud software, and ensures the delivery of cloud services to Cloud Consumers through network access.
* **Cloud Broker**: Manages the use, performance, and delivery of cloud services, acting as an intermediary between Cloud Providers and Cloud Consumers. The Cloud Broker can enhance, aggregate, or arbitrate services, simplifying the complexity of cloud offerings for consumers.
* **Cloud Auditor**: Conducts independent assessments of cloud services, including security controls, privacy impact, and performance.
* **Cloud Carrier**: The organization responsible for transferring data between Cloud Providers and Cloud Consumers, similar to a power distributor for the electric grid. Cloud Carriers provide access through networks, telecommunications, and other access devices.

**Interactions between Actors**

The actors interact in various ways:

* **Cloud Consumer and Cloud Provider**: The most direct interaction is between the Cloud Consumer and the Cloud Provider. Consumers browse service catalogs, request services, establish contracts, and utilize the services provided by the provider.
* **Cloud Consumer and Cloud Broker**: Consumers can choose to interact with a Cloud Broker instead of directly contacting a Cloud Provider. The broker can create new services, enhance existing ones, and help navigate the complexities of cloud offerings.
* **Cloud Provider and Cloud Carrier**: Cloud Providers rely on Cloud Carriers to transport data between themselves and Cloud Consumers. Service Level Agreements (SLAs) between the Provider and Carrier ensure consistent service delivery.
* **Cloud Auditor and Other Actors**: The Cloud Auditor interacts with other actors to collect information needed for independent assessments of cloud services.

The relationship between the Cloud Provider and Cloud Consumer changes depending on the **service model** (SaaS, PaaS, IaaS). Different models affect control over computational resources and responsibilities for security and configuration. For instance:

* In **SaaS**, the provider manages most aspects of the application and infrastructure, while consumers have limited administrative control.
* In **PaaS**, providers manage the platform infrastructure, while consumers control the deployed applications and possibly some hosting environment settings.
* In **IaaS**, providers offer access to fundamental computing resources, like virtual machines, and consumers have greater control over operating systems and software components.

**Security** is a shared responsibility among all actors. Cloud Providers and Cloud Consumers must collaboratively implement security controls to protect cloud-based systems. The specific controls and responsibilities depend on the service model and deployment model (public, private, community, hybrid).