AWS with Pravin Mishra
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What is Cloud Computing?

- **Cloud Computing** is the on-demand delivery of computing resources such as compute, storage, databases, and networking over the internet.
- Cloud computing provides **worldwide, convenient, and on-demand access** to shared computing resources that can be quickly provisioned and released with minimal management effort.
- True cloud providers (like AWS, Microsoft Azure, and Google Cloud) offer a **global network of data centers**.
- **Convenient Access**: Users can access cloud resources using the internet via a management console, SDK, or CLI with HTTP/HTTPS protocols.
- **On-Demand Delivery**: Cloud services are provided when needed, similar to ordering exact ingredients for a recipe.
- **Pay-As-You-Go**: Users only pay for the resources they use and can release them when done.
- **Self-Service**: Users can provision and deprovision resources without needing to contact the cloud provider.

Core Cloud Computing Services

1. **Compute**: The processing power required to run applications. It includes virtual machines, containers, and other services that offer computational power.
    - Example: If too many tasks (browser tabs, music player) are running on a computer, it slows down due to limited compute power.
    - Cloud providers offer this compute power on demand to handle workloads in the cloud.
2. **Storage**: The space where data is stored in the cloud. Cloud storage enables permanent or temporary data storage with flexibility and safety.
    - Example: Saving files like presentations or videos on a hard drive. Cloud storage replicates this for secure storage over the internet.
3. **Database**: A structured collection of data that enables efficient storage and retrieval of information. Databases in the cloud handle large amounts of data and support various database engines.
    - Example: Organizing data in an Excel sheet with rows and columns.
4. **Networking**: Provides connectivity between compute, storage, and database services over the internet or private networks. Networking services ensure the communication between cloud resources.