Google Cloud

=== Resource Hierarchy ===

The resource hierarchy in Google Cloud provides a structured way to organize and manage resources. It consists of the following levels:

1. **Organization**: Represents a company or entity. It contains folders and projects.

2. **Folder**: Used to group projects hierarchically. Folders can contain projects and other folders.

3. **Project**: The fundamental organizing entity within Google Cloud. It serves as a basis for resource allocation, permissions, and usage tracking.

=== Creating a Free Tier Account ===

To create a Google Cloud Free Tier account:

1. Go to the Google Cloud Console (https://console.cloud.google.com/).
2. Click on "Get Started for Free."
3. Follow the on-screen instructions to create a new Google Account or sign in with an existing one.
4. Provide the required information and set up billing. The Free Tier includes a $300 credit valid for 12 months.

=== Securing Your Account ===

Securing your Google Cloud account is crucial. Key steps include:

1. **Enabling Two-Factor Authentication (2FA)**: Adds an extra layer of security to your account.

2. **Setting up Identity and Access Management (IAM)**: Define who has access to what resources within your project.

3. **Audit Logging**: Enable Cloud Audit Logs to monitor and track activity in your project.

=== Cloud Billing ===

Google Cloud uses a pay-as-you-go billing model. Key points:

1. **Billing Account**: A billing account is associated with one or more projects and is used to pay for Google Cloud services.

2. **Billing Reports**: Access detailed billing reports in the Cloud Console to monitor usage and costs.

=== Controlling Costs and Budget Alerts ===

To control costs and set up budget alerts:

1. **Budgets**: Set up budgets to track and control your Google Cloud spending.

2. **Alerts**: Create budget alerts to receive notifications when costs exceed specified thresholds.

=== Billing Export ===

Billing export allows you to export detailed Google Cloud billing data to BigQuery or Cloud Storage for further analysis.

1. **BigQuery Export**: Export billing data to BigQuery for in-depth analysis and custom reporting.

2. **Cloud Storage Export**: Export billing data to Cloud Storage in CSV format for easy access and sharing.

Remember to review the Google Cloud Pricing documentation regularly to stay informed about costs and pricing updates.