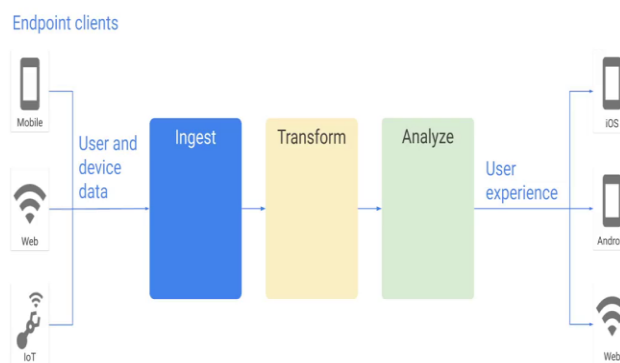**Google Cloud Computing Foundation Course**
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Lecture-40
**Managed Message Services**

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Next let us look at the use cases for manage message services. Across industry verticals a common scenario is that organizations have to rapidly ingest transform and analyze massive amounts of data. For example a gaming application might receive and process user engagement and click stream data. In the shipping industry the Internet of things applications might receive large amounts of sensor data from 100's of sensors. Data processing applications transform the ingested data and save it in an analytics database.

You can then analyze the data to provide business insights and create innovative user experiences.

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Organizations orchestrate complex processes
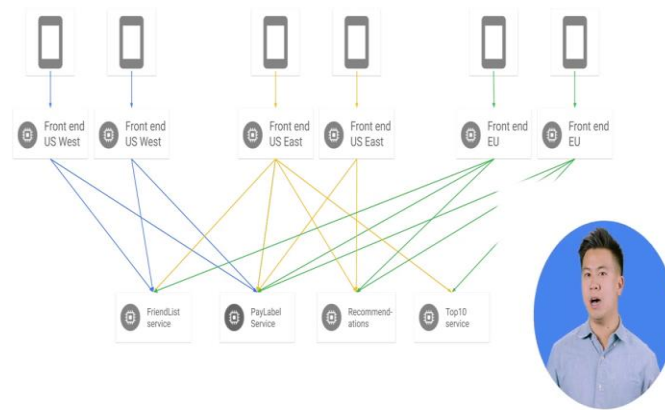
Organizations often have complex business processes that require many applications to interact with each other. For example when a user plays a song a music streaming service must perform many operations in the background. There might be operations to pay the record company, perform live updates to the catalog, update song recommendations, handle add interaction events and perform analytics on user actions. Such complex application interactions are difficult to manage with brittle point-to-point application connections.

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Use cases for a managed messaging system

Implement asynchronous workflows
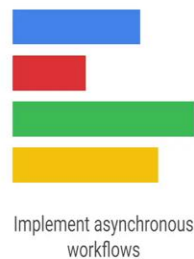
There are many different reasons why a manage messaging system might be used. Balancing workloads and network clusters for example a large queue of tasks can be efficiently distributed among multiple workers such as compute engine instances. Implementing asynchronous

workflows an order processing application can place an order on a topic from which it can be processed by one or more workers.

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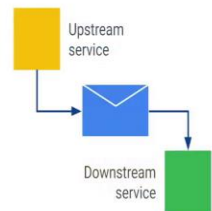
Distributing event notifications a service that accepts user signups can send notifications whenever a new user registers. And downstream services can subscribe to receive notifications of the event.

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Refreshing distributed caches an application can publish invalidation events to update the IDs of objects that have changed.
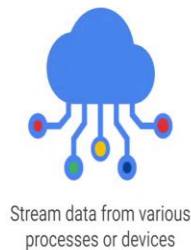
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Use cases for a managed messaging system

Log to multiple systems

Logging to multiple systems a compute engine instance can write logs to the monitoring system to a database for later querying and so on.

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Use cases for a managed messaging system

Stream data from various processes or devices

Data streaming from various processes or devices a residential sensor can stream data to back-end servers hosted in the cloud.

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Use cases for a managed messaging system

Reliability improvement

Reliability improvement a single zone compute engine service can operate in additional zones by subscribing to a common topic to recover from failures in a zone or region.