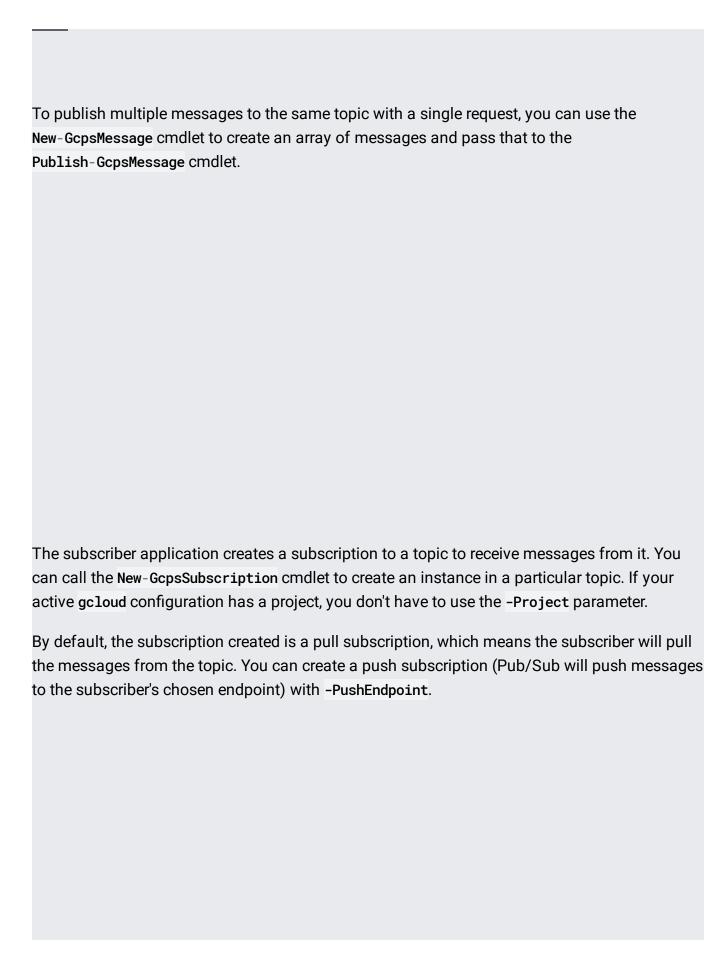Pub/Sub is a fully-managed real-time messaging service that allows you to send and receive messages between independent applications. This page shows how to manage Pub/Sub using Cloud Tools for PowerShell. It walks through a simple example of creating a topic, publishing messages to the topic, creating a subscription to the topic, and pulling messages from the topic to the subscription.

Read the Cloud Tools for PowerShell cmdlet reference
(http://googlecloudplatform.github.io/google-cloud-powershell/#/google-cloud-pubsub) to learn more about Pub/Sub cmdlets. To learn more about Pub/Sub in general, read the Overview of Pub/Sub (/pubsub/overview).

The publisher application creates and sends messages to a topic. You can call the `New‑GcpsTopic` cmdlet to create an instance in a particular topic. If your active gcloud configuration has a project, you don't have to use the `‑Project` parameter.

To publish messages to a topic, you can use the `Publish‑GcpsMessage` cmdlet.

To publish multiple messages to the same topic with a single request, you can use the `New-GcpsMessage` cmdlet to create an array of messages and pass that to the `Publish-GcpsMessage` cmdlet.

The subscriber application creates a subscription to a topic to receive messages from it. You can call the `New-GcpsSubscription` cmdlet to create an instance in a particular topic. If your active `gcloud` configuration has a project, you don't have to use the `-Project` parameter.

By default, the subscription created is a pull subscription, which means the subscriber will pull the messages from the topic. You can create a push subscription (Pub/Sub will push messages to the subscriber's chosen endpoint) with `-PushEndpoint`.

To pull messages for the subscription, you can use the `Get-GcpsMessage` cmdlet. By default, the cmdlet will block until at least one message is retrieved. To prevent blocking, use the parameter `-ReturnImmediately`. The cmdlet can also automatically send an acknowledgement for every retrieved message if you use the parameter `-AutoAck`. If not, you will have to use the `Send-GcpsAck` cmdlet to send the acknowledgement. Unacknowledged messages become available again for pulling after the acknowledgement deadline of the message expires.