

[AI & Machine Learning Products](https://cloud.google.com/products/machine-learning/) (<https://cloud.google.com/products/machine-learning/>)

[Cloud TPU](https://cloud.google.com/tpu/) (<https://cloud.google.com/tpu/>)

[Documentation](https://cloud.google.com/tpu/docs/) (<https://cloud.google.com/tpu/docs/>) [Guides](#)

Concepts

Cloud TPU

Cloud TPUs

An overview of Cloud TPU resources.

(<https://cloud.google.com/tpu/docs/tpus>)

Services that can access TPUs

Helps you decide which Cloud TPU service (Compute Engine, Google Kubernetes Engine, or AI Platform) best suits your needs.

(<https://cloud.google.com/tpu/docs/deciding-tpu-service>)

TPU types and zones

Details the types of Cloud TPU and their zones of availability.

(<https://cloud.google.com/tpu/docs/types-zones>)

Internal IP address ranges

Setting up internal IP addresses for Cloud TPU nodes.

(<https://cloud.google.com/tpu/docs/performance-guide>)

Performance guide

High-level performance tips for running TensorFlow programs on Cloud TPU.

(<https://cloud.google.com/tpu/docs/performance-guide>)

Training on TPU Pods

An overview of training on Cloud TPU Pods.

(<https://cloud.google.com/tpu/docs/training-on-tpu-pods>)

Using TPU Estimator API

The differences between training a TensorFlow model with the standard TensorFlow Estimator and with the TPUEstimator API.

(<https://cloud.google.com/tpu/docs/using-estimator-api>)

Processing large images with TPUs

Using spatial partitioning with Cloud TPUs and TPUEstimator for training with very large images and video.

(<https://cloud.google.com/tpu/docs/spatial-partitioning>)

System Architecture

An overview of Cloud TPU hardware and software architecture.

(<https://cloud.google.com/tpu/docs/system-architecture>)

Using bfloat16

Using the bfloat16 format to store activations and gradients in memory.

(<https://cloud.google.com/tpu/docs/bfloat16>)

Advanced Guide to Inception v3

An advanced view of the guide to running Inception v3 on Cloud TPU.

(<https://cloud.google.com/tpu/docs/inception-v3-advanced>)

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