Module: tf.errors

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* [Other Members](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors#other_members)

Exception types for TensorFlow errors.

Classes

[class AbortedError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AbortedError): The operation was aborted, typically due to a concurrent action.

[class AlreadyExistsError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AlreadyExistsError): Raised when an entity that we attempted to create already exists.

[class CancelledError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/CancelledError): Raised when an operation or step is cancelled.

[class DataLossError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DataLossError): Raised when unrecoverable data loss or corruption is encountered.

[class DeadlineExceededError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DeadlineExceededError): Raised when a deadline expires before an operation could complete.

[class FailedPreconditionError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/FailedPreconditionError): Operation was rejected because the system is not in a state to execute it.

[class InternalError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InternalError): Raised when the system experiences an internal error.

[class InvalidArgumentError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InvalidArgumentError): Raised when an operation receives an invalid argument.

[class NotFoundError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/NotFoundError): Raised when a requested entity (e.g., a file or directory) was not found.

[class OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError): A generic error that is raised when TensorFlow execution fails.

[class OutOfRangeError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OutOfRangeError): Raised when an operation iterates past the valid input range.

[class PermissionDeniedError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/PermissionDeniedError): Raised when the caller does not have permission to run an operation.

[class ResourceExhaustedError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/ResourceExhaustedError): Some resource has been exhausted.

[class UnauthenticatedError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnauthenticatedError): The request does not have valid authentication credentials.

[class UnavailableError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnavailableError): Raised when the runtime is currently unavailable.

[class UnimplementedError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnimplementedError): Raised when an operation has not been implemented.

[class UnknownError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnknownError): Unknown error.

Other Members

* ABORTED = 10
* ALREADY\_EXISTS = 6
* CANCELLED = 1
* DATA\_LOSS = 15
* DEADLINE\_EXCEEDED = 4
* FAILED\_PRECONDITION = 9
* INTERNAL = 13
* INVALID\_ARGUMENT = 3
* NOT\_FOUND = 5
* OK = 0
* OUT\_OF\_RANGE = 11
* PERMISSION\_DENIED = 7
* RESOURCE\_EXHAUSTED = 8
* UNAUTHENTICATED = 16
* UNAVAILABLE = 14
* UNIMPLEMENTED = 12
* UNKNOWN = 2

# tf.compat.v1.errors.error\_code\_from\_exception\_type

tf.compat.v1.errors.error\_code\_from\_exception\_type(cls)

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

# tf.compat.v1.errors.exception\_type\_from\_error\_code

tf.compat.v1.errors.exception\_type\_from\_error\_code(error\_code)

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

# tf.compat.v1.errors.raise\_exception\_on\_not\_ok\_status

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/compat/v1/errors/raise_exception_on_not_ok_status#top_of_page)
* [Class raise\_exception\_on\_not\_ok\_status](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/compat/v1/errors/raise_exception_on_not_ok_status#class_raise_exception_on_not_ok_status)
* [Methods](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/compat/v1/errors/raise_exception_on_not_ok_status#methods)
  + [\_\_enter\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/compat/v1/errors/raise_exception_on_not_ok_status#__enter__)
  + [\_\_exit\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/compat/v1/errors/raise_exception_on_not_ok_status#__exit__)

## Class raise\_exception\_on\_not\_ok\_status

Context manager to check for C API status.

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

## Methods

### \_\_enter\_\_

\_\_enter\_\_()

### \_\_exit\_\_

\_\_exit\_\_(  
    type\_arg,  
    value\_arg,  
    traceback\_arg  
)

# tf.errors.AbortedError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AbortedError#top_of_page)
* [Class AbortedError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AbortedError#class_abortederror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AbortedError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AbortedError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AbortedError#properties)

## Class AbortedError

The operation was aborted, typically due to a concurrent action.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.AbortedError
* Class tf.compat.v2.errors.AbortedError
* Class tf.errors.AbortedError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

For example, running a tf.QueueBase.enqueue operation may raise AbortedError if atf.QueueBase.close operation previously ran.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates an AbortedError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.AlreadyExistsError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AlreadyExistsError#top_of_page)
* [Class AlreadyExistsError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AlreadyExistsError#class_alreadyexistserror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AlreadyExistsError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AlreadyExistsError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/AlreadyExistsError#properties)

## Class AlreadyExistsError

Raised when an entity that we attempted to create already exists.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.AlreadyExistsError
* Class tf.compat.v2.errors.AlreadyExistsError
* Class tf.errors.AlreadyExistsError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

For example, running an operation that saves a file (e.g. tf.train.Saver.save) could potentially raise this exception if an explicit filename for an existing file was passed.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates an AlreadyExistsError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.CancelledError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/CancelledError#top_of_page)
* [Class CancelledError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/CancelledError#class_cancellederror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/CancelledError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/CancelledError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/CancelledError#properties)

## Class CancelledError

Raised when an operation or step is cancelled.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.CancelledError
* Class tf.compat.v2.errors.CancelledError
* Class tf.errors.CancelledError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

For example, a long-running operation (e.g. tf.QueueBase.enqueue may be cancelled by running another operation (e.g. tf.QueueBase.close, or by tf.Session.close. A step that is running such a long-running operation will fail by raising CancelledError.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates a CancelledError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.DataLossError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DataLossError#top_of_page)
* [Class DataLossError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DataLossError#class_datalosserror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DataLossError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DataLossError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DataLossError#properties)

## Class DataLossError

Raised when unrecoverable data loss or corruption is encountered.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.DataLossError
* Class tf.compat.v2.errors.DataLossError
* Class tf.errors.DataLossError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

For example, this may be raised by running a tf.WholeFileReader.read operation, if the file is truncated while it is being read.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates a DataLossError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.DeadlineExceededError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DeadlineExceededError#top_of_page)
* [Class DeadlineExceededError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DeadlineExceededError#class_deadlineexceedederror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DeadlineExceededError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DeadlineExceededError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/DeadlineExceededError#properties)

## Class DeadlineExceededError

Raised when a deadline expires before an operation could complete.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.DeadlineExceededError
* Class tf.compat.v2.errors.DeadlineExceededError
* Class tf.errors.DeadlineExceededError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

This exception is not currently used.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates a DeadlineExceededError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.FailedPreconditionError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/FailedPreconditionError#top_of_page)
* [Class FailedPreconditionError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/FailedPreconditionError#class_failedpreconditionerror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/FailedPreconditionError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/FailedPreconditionError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/FailedPreconditionError#properties)

## Class FailedPreconditionError

Operation was rejected because the system is not in a state to execute it.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.FailedPreconditionError
* Class tf.compat.v2.errors.FailedPreconditionError
* Class tf.errors.FailedPreconditionError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

This exception is most commonly raised when running an operation that reads a [tf.Variable](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Variable) before it has been initialized.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates a FailedPreconditionError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.InternalError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InternalError#top_of_page)
* [Class InternalError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InternalError#class_internalerror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InternalError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InternalError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InternalError#properties)

## Class InternalError

Raised when the system experiences an internal error.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.InternalError
* Class tf.compat.v2.errors.InternalError
* Class tf.errors.InternalError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

This exception is raised when some invariant expected by the runtime has been broken. Catching this exception is not recommended.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates an InternalError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.InvalidArgumentError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InvalidArgumentError#top_of_page)
* [Class InvalidArgumentError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InvalidArgumentError#class_invalidargumenterror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InvalidArgumentError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InvalidArgumentError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/InvalidArgumentError#properties)

## Class InvalidArgumentError

Raised when an operation receives an invalid argument.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.InvalidArgumentError
* Class tf.compat.v2.errors.InvalidArgumentError
* Class tf.errors.InvalidArgumentError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

This may occur, for example, if an operation is receives an input tensor that has an invalid value or shape. For example, the [tf.matmul](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/linalg/matmul) op will raise this error if it receives an input that is not a matrix, and the [tf.reshape](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/reshape) op will raise this error if the new shape does not match the number of elements in the input tensor.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates an InvalidArgumentError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.NotFoundError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/NotFoundError#top_of_page)
* [Class NotFoundError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/NotFoundError#class_notfounderror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/NotFoundError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/NotFoundError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/NotFoundError#properties)

## Class NotFoundError

Raised when a requested entity (e.g., a file or directory) was not found.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.NotFoundError
* Class tf.compat.v2.errors.NotFoundError
* Class tf.errors.NotFoundError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

For example, running the tf.WholeFileReader.read operation could raise NotFoundError if it receives the name of a file that does not exist.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates a NotFoundError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.OpError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#top_of_page)
* [Class OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#class_operror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#properties)

## Class OpError

A generic error that is raised when TensorFlow execution fails.

### Aliases:

* Class tf.compat.v1.OpError
* Class tf.compat.v1.errors.OpError
* Class tf.compat.v2.errors.OpError
* Class tf.errors.OpError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

Whenever possible, the session will raise a more specific subclass of OpError from the [tf.errors](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors)module.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message,  
    error\_code  
)

Creates a new OpError indicating that a particular op failed.

#### Args:

* **node\_def**: The node\_def\_pb2.NodeDef proto representing the op that failed, if known; otherwise None.
* **op**: The ops.Operation that failed, if known; otherwise None.
* **message**: The message string describing the failure.
* **error\_code**: The error\_codes\_pb2.Code describing the error.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.OutOfRangeError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OutOfRangeError#top_of_page)
* [Class OutOfRangeError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OutOfRangeError#class_outofrangeerror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OutOfRangeError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OutOfRangeError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OutOfRangeError#properties)

## Class OutOfRangeError

Raised when an operation iterates past the valid input range.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.OutOfRangeError
* Class tf.compat.v2.errors.OutOfRangeError
* Class tf.errors.OutOfRangeError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

This exception is raised in "end-of-file" conditions, such as when a tf.QueueBase.dequeue operation is blocked on an empty queue, and a tf.QueueBase.close operation executes.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates an OutOfRangeError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.PermissionDeniedError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/PermissionDeniedError#top_of_page)
* [Class PermissionDeniedError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/PermissionDeniedError#class_permissiondeniederror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/PermissionDeniedError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/PermissionDeniedError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/PermissionDeniedError#properties)

## Class PermissionDeniedError

Raised when the caller does not have permission to run an operation.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.PermissionDeniedError
* Class tf.compat.v2.errors.PermissionDeniedError
* Class tf.errors.PermissionDeniedError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

For example, running the tf.WholeFileReader.read operation could raise PermissionDeniedError if it receives the name of a file for which the user does not have the read file permission.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates a PermissionDeniedError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.ResourceExhaustedError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/ResourceExhaustedError#top_of_page)
* [Class ResourceExhaustedError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/ResourceExhaustedError#class_resourceexhaustederror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/ResourceExhaustedError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/ResourceExhaustedError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/ResourceExhaustedError#properties)

## Class ResourceExhaustedError

Some resource has been exhausted.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.ResourceExhaustedError
* Class tf.compat.v2.errors.ResourceExhaustedError
* Class tf.errors.ResourceExhaustedError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

For example, this error might be raised if a per-user quota is exhausted, or perhaps the entire file system is out of space.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates a ResourceExhaustedError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.UnauthenticatedError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnauthenticatedError#top_of_page)
* [Class UnauthenticatedError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnauthenticatedError#class_unauthenticatederror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnauthenticatedError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnauthenticatedError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnauthenticatedError#properties)

## Class UnauthenticatedError

The request does not have valid authentication credentials.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.UnauthenticatedError
* Class tf.compat.v2.errors.UnauthenticatedError
* Class tf.errors.UnauthenticatedError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

This exception is not currently used.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates an UnauthenticatedError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.UnavailableError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnavailableError#top_of_page)
* [Class UnavailableError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnavailableError#class_unavailableerror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnavailableError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnavailableError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnavailableError#properties)

## Class UnavailableError

Raised when the runtime is currently unavailable.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.UnavailableError
* Class tf.compat.v2.errors.UnavailableError
* Class tf.errors.UnavailableError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

This exception is not currently used.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates an UnavailableError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.UnimplementedError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnimplementedError#top_of_page)
* [Class UnimplementedError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnimplementedError#class_unimplementederror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnimplementedError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnimplementedError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnimplementedError#properties)

## Class UnimplementedError

Raised when an operation has not been implemented.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.UnimplementedError
* Class tf.compat.v2.errors.UnimplementedError
* Class tf.errors.UnimplementedError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

Some operations may raise this error when passed otherwise-valid arguments that it does not currently support. For example, running the [tf.nn.max\_pool2d](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/nn/max_pool2d) operation would raise this error if pooling was requested on the batch dimension, because this is not yet supported.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message  
)

Creates an UnimplementedError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.

# tf.errors.UnknownError

* [**Contents**](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnknownError#top_of_page)
* [Class UnknownError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnknownError#class_unknownerror)
  + [Aliases:](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnknownError#aliases)
* [\_\_init\_\_](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnknownError#__init__)
* [Properties](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/UnknownError#properties)

## Class UnknownError

Unknown error.

Inherits From: [OpError](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError)

### Aliases:

* Class tf.compat.v1.errors.UnknownError
* Class tf.compat.v2.errors.UnknownError
* Class tf.errors.UnknownError

Defined in [python/framework/errors\_impl.py](https://github.com/tensorflow/tensorflow/tree/r2.0/tensorflow/python/framework/errors_impl.py).

An example of where this error may be returned is if a Status value received from another address space belongs to an error-space that is not known to this address space. Also errors raised by APIs that do not return enough error information may be converted to this error.

## \_\_init\_\_

\_\_init\_\_(  
    node\_def,  
    op,  
    message,  
    error\_code=UNKNOWN  
)

Creates an UnknownError.

## Properties

### error\_code

The integer error code that describes the error.

### message

The error message that describes the error.

### node\_def

The NodeDef proto representing the op that failed.

### op

The operation that failed, if known.

N.B. If the failed op was synthesized at runtime, e.g. a Send or Recv op, there will be no corresponding [tf.Operation](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/Operation) object. In that case, this will return None, and you should instead use the [tf.errors.OpError.node\_def](https://www.tensorflow.org/versions/r2.0/api_docs/python/tf/errors/OpError#node_def) to discover information about the op.

#### Returns:

The Operation that failed, or None.