



# NVIDIA TensorRT

API Reference | NVIDIA Docs

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# Chapter 1. Added, Deprecated, And Removed APIs

## 1.1. API Changes For TensorRT 8.6.0 EA

The following tables show which APIs were added, deprecated, and removed for the NVIDIA® TensorRT™ 8.6.0 EA release.

### C++ Changes

Table 1. New C++ Classes

New C++ Classes
<a href="#"><u>ICastLayer</u></a>
<a href="#"><u>IReverseSequenceLayer</u></a>
<a href="#"><u>INormalizationLayer</u></a>
<a href="#"><u>ILoggerFinder</u></a>

Table 2. New C++ Macros

New C++ Macros
<a href="#"><u>NV_TENSORRT_RELEASE_TYPE</u></a>
<a href="#"><u>NV_TENSORRT_RELEASE_TYPE_EARLY_ACCESS</u></a>
<a href="#"><u>NV_TENSORRT_RELEASE_TYPE_RELEASE_CANDIDATE</u></a>
<a href="#"><u>NV_TENSORRT_RELEASE_TYPE_GENERAL_AVAILABILITY</u></a>

Table 3. New C++ Functions

New C++ Functions
<a href="#"><u>getBuilderSafePluginRegistry()</u></a>
<a href="#"><u>IAlgorithmIOInfo::getVectorizedDim()</u></a>
<a href="#"><u>IAlgorithmIOInfo::getComponentsPerElement()</u></a>
<a href="#"><u>IBuilderConfig::setBuilderOptimizationLevel()</u></a>
<a href="#"><u>IBuilderConfig::getBuilderOptimizationLevel()</u></a>
<a href="#"><u>IBuilderConfig::setHardwareCompatibilityLevel()</u></a>
<a href="#"><u>IBuilderConfig::getHardwareCompatibilityLevel()</u></a>
<a href="#"><u>IBuilderConfig::setPluginsToSerialize()</u></a>
<a href="#"><u>IBuilderConfig::getPluginToSerialize()</u></a>
<a href="#"><u>IBuilderConfig::getNbPluginsToSerialize()</u></a>
<a href="#"><u>IBuilderConfig::getMaxAuxStreams()</u></a>
<a href="#"><u>IBuilderConfig::setMaxAuxStreams()</u></a>
<a href="#"><u>IBuilder::getPluginRegistry()</u></a>
<a href="#"><u>ICudaEngine::getHardwareCompatibilityLevel()</u></a>
<a href="#"><u>ICudaEngine::getNbAuxStreams()</u></a>
<a href="#"><u>IExecutionContext::setAuxStreams()</u></a>
<a href="#"><u>ILayer::setMetadata()</u></a>
<a href="#"><u>ILayer::getMetadata()</u></a>
<a href="#"><u>INetworkDefinition::addCast()</u></a>
<a href="#"><u>INetworkDefinition::addNormalization()</u></a>
<a href="#"><u>INetworkDefinition::addReverseSequence()</u></a>
<a href="#"><u>INetworkDefinition::getBuilder()</u></a>
<a href="#"><u>IPluginRegistry::isParentSearchEnabled()</u></a>
<a href="#"><u>IPluginRegistry::setParentSearchEnabled()</u></a>
<a href="#"><u>IPluginRegistry::loadLibrary()</u></a>
<a href="#"><u>IPluginRegistry::deregisterLibrary()</u></a>
<a href="#"><u>IRuntime::setTemporaryDirectory()</u></a>
<a href="#"><u>IRuntime::getTemporaryDirectory()</u></a>
<a href="#"><u>IRuntime::setTempfileControlFlags()</u></a>
<a href="#"><u>IRuntime::getTempfileControlFlags()</u></a>
<a href="#"><u>IRuntime::getPluginRegistry()</u></a>

New C++ Functions
<code><a href="#">IRuntime::loadRuntime()</a></code>
<code><a href="#">IRuntime::setEngineHostCodeAllowed()</a></code>
<code><a href="#">IRuntime::getEngineHostCodeAllowed()</a></code>
<code><a href="#">ITopKLayer::setInput()</a></code>

Table 4. New C++ Enums

New C++ Enums
<code><a href="#">HardwareCompatibilityLevel</a></code>
<code><a href="#">TempfileControlFlag</a></code>

Table 5. New C++ Enum Values

New C++ Enum Values
<code><a href="#">BuilderFlag::kVERSION_COMPATIBLE</a></code>
<code><a href="#">BuilderFlag::kEXCLUDE_LEAN_RUNTIME</a></code>
<code><a href="#">DataType::kFP8</a></code>
<code><a href="#">LayerType::kREVERSE_SEQUENCE</a></code>
<code><a href="#">LayerType::kNORMALIZATION</a></code>
<code><a href="#">LayerType::kCAST</a></code>
<code><a href="#">MemoryPoolType::kTACTIC_DRAM</a></code>
<code><a href="#">PreviewFeature::kPROFILE_SHARING_0806</a></code>
<code><a href="#">TensorFormat::kDHWC</a></code>
<code><a href="#">UnaryOperation::kISINF</a></code>

Table 6. Deprecated C++ Enums

Deprecated C++ Enums
<code><a href="#">PreviewFeature::kFASTER_DYNAMIC_SHAPES</a></code>

Table 7. Deprecated C++ Macros

Deprecated C++ Macros
<code><a href="#">NV_TENSORRT_SONAME_MAJOR</a></code>

Deprecated C++ Macros
NV_TENSORRT_SONAME_MINOR
NV_TENSORRT_SONAME_PATCH

Table 8. Depreciated C++ Functions

Depreciated C++ Functions
FieldMap::FieldMap()
IAlgorithmIOInfo::getTensorFormat()

## Python Changes

Table 9. New Python Classes

New Python Classes
<u>ICastLayer</u>
<u>IReverseSequenceLayer</u>
<u>INormalizationLayer</u>

Table 10. New Python Functions

New Python Functions
<u>IExecutionContext.set_aux_streams</u>
<u>INetworkDefinition.add_cast</u>
<u>INetworkDefinition.add_normalization</u>
<u>INetworkDefinition.add_reverse_sequence</u>
<u>IPluginRegistry.load_library</u>
<u>IPluginRegistry.deregister_library</u>
<u>IRuntime.load_runtime</u>
<u>ITopKLayer.set_input()</u>

Table 11. New Python Properties

New Python Properties
<u>BuilderFlag.EXCLUDE_LEAN_RUNTIME</u>
<u>BuilderFlag.FP8</u>



## New Python Properties

<code>BuilderFlag.VERSION_COMPATIBLE</code>
<code>DataType.FP8</code>
<code>HardwareCompatibilityLevel.AMPERE_PLUS</code>
<code>HardwareCompatibilityLevel.NONE</code>
<code>IAlgorithmIOInfo.components_per_element</code>
<code>IAlgorithmIOInfo.vectorized_dim</code>
<code>IBuilder.get_plugin_registry</code>
<code>IBuilderConfig.builder_optimization_level</code>
<code>IBuilderConfig.hardware_compatibility_level</code>
<code>IBuilderConfig.max_aux_streams</code>
<code>IBuilderConfig.plugins_to_serialize</code>
<code>ICudaEngine.hardware_compatibility_level</code>
<code>ICudaEngine.num_aux_streams</code>
<code>ILayer.metadata</code>
<code>INetworkDefinition.builder</code>
<code>INormalizationLayer.axes</code>
<code>INormalizationLayer.compute_precision</code>
<code>INormalizationLayer.epsilon</code>
<code>INormalizationLayer.num_groups</code>
<code>IPluginRegistry.parent_search_enabled</code>
<code>IReverseSequenceLayer.batch_axis</code>
<code>IReverseSequenceLayer.sequence_axis</code>
<code>IRuntime.engine_host_code_allowed</code>
<code>IRuntime.load_runtime</code>
<code>IRuntime.tempfile_control_flags</code>
<code>IRuntime.temporary_directory</code>
<code>LayerType.CAST</code>
<code>LayerType.NORMALIZATION</code>
<code>LayerType.REVERSE_SEQUENCE</code>
<code>MemoryPoolType.TACTIC_DRAM</code>
<code>PreviewFeature.PROFILE_SHARING_0806</code>
<code>TempfileControlFlag.ALLOW_IN_MEMORY_FILES</code>

New Python Properties
<code>TempfileControlFlag.ALLOW_TEMPORARY_FILES</code>
<a href="#"><code>TensorFormat.DHWC</code></a>

Table 12. New Python Enums

New Python Enums
<code>HardwareCompatibilityLevel</code>
<code>TempfileControlFlag</code>

Table 13. New Python Enum Values

New Python Enum Values
<a href="#"><code>UnaryOperation.ISINF</code></a>

Table 14. Deprecated Python Enums

Deprecated Python Enums
<code>PreviewFeature.FASTER_DYNAMIC_SHAPES</code>

Table 15. Deprecated Python Properties

Deprecated Python Properties
<code>IAlgorithmIOInfo.tensor_format</code>

## 1.2. API Changes For TensorRT 8.5.1

The following tables show which APIs were added, deprecated, and removed for the NVIDIA® TensorRT™ 8.5.1 release.

### C++ changes

Table 16. New C++ API Functions

New C++ API Functions
<a href="#"><code>ITensor::setDimensionName()</code></a>
<a href="#"><code>ITensor::getDimensionName()</code></a>

## New C++ API Functions

<a href="#"><u>IResizeLayer::setCubicCoeff()</u></a>
<a href="#"><u>IResizeLayer::getCubicCoeff()</u></a>
<a href="#"><u>IResizeLayer::setExcludeOutside()</u></a>
<a href="#"><u>IResizeLayer::getExcludeOutside()</u></a>
<a href="#"><u>IBuilderConfig::setPreviewFeature()</u></a>
<a href="#"><u>IBuilderConfig::getPreviewFeature()</u></a>
<a href="#"><u>ICudaEngine::getTensorShape()</u></a>
<a href="#"><u>ICudaEngine::getTensorDataType()</u></a>
<a href="#"><u>ICudaEngine::getTensorLocation()</u></a>
<a href="#"><u>ICudaEngine::isShapeInferenceIO()</u></a>
<a href="#"><u>ICudaEngine::getTensorIOMode()</u></a>
<a href="#"><u>ICudaEngine::getTensorBytesPerComponent()</u></a>
<a href="#"><u>ICudaEngine::getTensorComponentsPerElement()</u></a>
<a href="#"><u>ICudaEngine::getTensorFormat()</u></a>
<a href="#"><u>ICudaEngine::getTensorFormatDesc()</u></a>
<a href="#"><u>ICudaEngine::getProfileShape()</u></a>
<a href="#"><u>ICudaEngine::getNbIOTensors()</u></a>
<a href="#"><u>ICudaEngine::getIOTensorName()</u></a>
<a href="#"><u>IExecutionContext::getTensorStrides()</u></a>
<a href="#"><u>IExecutionContext::setInputShape()</u></a>
<a href="#"><u>IExecutionContext::getTensorShape()</u></a>
<a href="#"><u>IExecutionContext::setTensorAddress()</u></a>
<a href="#"><u>IExecutionContext::getTensorAddress()</u></a>
<a href="#"><u>IExecutionContext::setInputTensorAddress()</u></a>
<a href="#"><u>IExecutionContext::getOutputTensorAddress()</u></a>
<a href="#"><u>IExecutionContext::inferShapes()</u></a>
<a href="#"><u>IExecutionContext::setInputConsumedEvent()</u></a>
<a href="#"><u>IExecutionContext::getInputConsumedEvent()</u></a>
<a href="#"><u>IExecutionContext::setOutputAllocator()</u></a>
<a href="#"><u>IExecutionContext::getOutputAllocator()</u></a>
<a href="#"><u>IExecutionContext::getMaxOutputSize()</u></a>
<a href="#"><u>IExecutionContext::setTemporaryStorageAllocator()</u></a>

New C++ API Functions
<a href="#"><u>IExecutionContext::getTemporaryStorageAllocator()</u></a>
<a href="#"><u>IExecutionContext::enqueueV3()</u></a>
<a href="#"><u>IExecutionContext::setPersistentCacheLimit()</u></a>
<a href="#"><u>IExecutionContext::getPersistentCacheLimit()</u></a>
<a href="#"><u>IExecutionContext::setNvtxVerbosity()</u></a>
<a href="#"><u>IExecutionContext::getNvtxVerbosity()</u></a>
<a href="#"><u>INetworkDefinition::addOneHot()</u></a>
<a href="#"><u>INetworkDefinition::addNonZero()</u></a>
<a href="#"><u>INetworkDefinition::addGridSample()</u></a>
<a href="#"><u>INetworkDefinition::addNMS()</u></a>

Table 17. New C++ API Classes

New C++ API Classes
<a href="#"><u>IOneHotLayer</u></a>
<a href="#"><u>IGridSampleLayer</u></a>
<a href="#"><u>INonZeroLayer</u></a>
<a href="#"><u>INMSLayer</u></a>
<a href="#"><u>IOutputAllocator</u></a>

Table 18. New C++ API Enum Values

New C++ API Enum Values
<a href="#"><u>InterpolationMode::kCUBIC</u></a>
<a href="#"><u>FillOperation::kRANDOM_NORMAL</u></a>
<a href="#"><u>BuilderFlag::kREJECT_EMPTY_ALGORITHMS</u></a>
<a href="#"><u>BuilderFlag::kENABLE_TACTIC_HEURISTIC</u></a>
<a href="#"><u>TacticSource::kJIT_CONVOLUTIONS</u></a>
<a href="#"><u>DataType::kUINT8</u></a>

Table 19. New C++ API Enum Classes

New C++ API Enum Classes
<a href="#"><u>TensorIOMode</u></a>

## New C++ API Enum Classes

[PreviewFeature](#)

## Python changes

Table 20. New Python API Functions and Properties

New Python API Functions and Properties
<a href="#"><u>ITensor.set_dimension_name()</u></a>
<a href="#"><u>ITensor.get_dimension_name()</u></a>
<a href="#"><u>IResizeLayer.cubic_coeff</u></a>
<a href="#"><u>IResizeLayer.exclude_outside</u></a>
<a href="#"><u>IBuilderConfig.set_preview_feature()</u></a>
<a href="#"><u>IBuilderConfig.get_preview_feature()</u></a>
<a href="#"><u>ICudaEngine.get_tensor_shape()</u></a>
<a href="#"><u>ICudaEngine.get_tensor_dtype()</u></a>
<a href="#"><u>ICudaEngine.get_tensor_location()</u></a>
<a href="#"><u>ICudaEngine.is_shape_inference_io()</u></a>
<a href="#"><u>ICudaEngine.get_tensor_mode()</u></a>
<a href="#"><u>ICudaEngine.get_tensor_bytes_per_component()</u></a>
<a href="#"><u>ICudaEngine.get_tensor_components_per_element()</u></a>
<a href="#"><u>ICudaEngine.get_tensor_format()</u></a>
<a href="#"><u>ICudaEngine.get_tensor_format_desc()</u></a>
<a href="#"><u>ICudaEngine.get_tensor_profile_shape()</u></a>
<a href="#"><u>ICudaEngine.num_io_tensors</u></a>
<a href="#"><u>ICudaEngine.get_tensor_name()</u></a>
<a href="#"><u>IExecutionContext.get_tensor_strides()</u></a>
<a href="#"><u>IExecutionContext.set_input_shape()</u></a>
<a href="#"><u>IExecutionContext.get_tensor_shape()</u></a>
<a href="#"><u>IExecutionContext.set_tensor_address()</u></a>
<a href="#"><u>IExecutionContext.get_tensor_address()</u></a>
<a href="#"><u>IExecutionContext.infer_shapes()</u></a>
<a href="#"><u>IExecutionContext.set_input_consumed_event()</u></a>
<a href="#"><u>IExecutionContext.get_input_consumed_event()</u></a>

New Python API Functions and Properties
<a href="#"><u>IExecutionContext.set_output_allocator()</u></a>
<a href="#"><u>IExecutionContext.get_output_allocator()</u></a>
<a href="#"><u>IExecutionContext.get_max_output_size()</u></a>
<a href="#"><u>IExecutionContext.temporary_allocator</u></a>
<a href="#"><u>IExecutionContext.execute_async_v3()</u></a>
<a href="#"><u>IExecutionContext.persistent_cache_limit</u></a>
<a href="#"><u>IExecutionContext.nvtx_verbosity</u></a>
<a href="#"><u>INetworkDefinition.add_one_hot()</u></a>
<a href="#"><u>INetworkDefinition.add_non_zero()</u></a>
<a href="#"><u>INetworkDefinition.add_grid_sample()</u></a>
<a href="#"><u>INetworkDefinition.add_nms()</u></a>

Table 21. New Python API Classes

New Python API Classes
<a href="#"><u>IOneHotLayer</u></a>
<a href="#"><u>IGridSampleLayer</u></a>
<a href="#"><u>INonZeroLayer</u></a>
<a href="#"><u>INMSLayer</u></a>
<a href="#"><u>IOutputAllocator</u></a>

Table 22. New Python API Enum Values

New Python API Enum Values
<a href="#"><u>InterpolationMode.CUBIC</u></a>
<a href="#"><u>FillOperation.RANDOM_NORMAL</u></a>
<a href="#"><u>BuilderFlag.REJECT_EMPTY_ALGORITHMS</u></a>
<a href="#"><u>BuilderFlag.ENABLE_TACTIC_HEURISTIC</u></a>
<a href="#"><u>TacticSource.JIT_CONVOLUTIONS</u></a>
<a href="#"><u>DataType.UINT8</u></a>

Table 23. New Python API Enum Classes

New Python API Enum Classes
<a href="#">TensorIOMode</a>
<a href="#">PreviewFeature</a>

## 1.3. API Changes For TensorRT 8.4.1

The following tables show which APIs were added, deprecated, and removed for the NVIDIA® TensorRT™ 8.4.1 release.

### Python changes

Table 24. New Python APIs

New Python APIs
<a href="#">TacticSource::kEDGE_MASK_CONVOLUTIONS</a>

## 1.4. API Changes For TensorRT 8.4.0 EA

The following tables show which APIs were added, deprecated, and removed for the NVIDIA® TensorRT™ 8.4.0 EA release.

### C++ changes

Table 25. New C++ APIs

New C++ APIs
<a href="#">setMemoryPoolLimit (IBuilderConfig::setMemoryPoolLimit)</a>
<a href="#">getMemoryPoolLimit (IBuilderConfig::getMemoryPoolLimit)</a>
<a href="#">MemoryPoolType</a>
<a href="#">setMaxThreads (IBuilder::setMaxThreads, IRefitter::setMaxThreads, IRuntime::setMaxThreads)</a>
<a href="#">getMaxThreads (IBuilder::getMaxThreads, IRefitter::getMaxThreads, IRuntime::getMaxThreads)</a>
<a href="#">getBuilderPluginRegistry</a>

Table 26. Deprecated C++ APIs

Deprecated C++ APIs
<code>IFullyConnectedLayer</code>
<code>getMaxWorkspaceSize</code>
<code>setMaxWorkspaceSize</code>

## Python changes

Table 27. New Python APIs

New Python APIs
<code>set_memory_pool_limit</code>
<code>get_memory_pool_limit</code>
<code>MemoryPoolType</code>
<code>max_threads</code> property ( <code>Builder.max_threads</code> , <code>Refitter.max_threads</code> , <code>Runtime.max_threads</code> )
<code>get_builder_plugin_registry</code>

Table 28. Deprecated Python APIs

Deprecated Python APIs
<code>IFullyConnectedLayer</code>
<code>get_max_workspace_size</code>
<code>set_max_workspace_size</code>

# 1.5. API Changes For TensorRT 8.2.0 EA

The following tables show which APIs were added, deprecated, and removed for the NVIDIA® TensorRT™ 8.2.0 EA release.

## C++ changes

Table 29. New C++ APIs

New C++ APIs
<code>IAssertionLayer</code>
<code>IConditionLayer</code>



New C++ APIs
<a href="#"><u>IEinsumLayer</u></a>
<a href="#"><u>IScatterLayer</u></a>

## Python changes

Table 30. New Python APIs

New Python APIs
<a href="#"><u>IAssertionLayer</u></a>
<a href="#"><u>IConditionLayer</u></a>
<a href="#"><u>IEinsumLayer</u></a>
<a href="#"><u>IScatterLayer</u></a>

# 1.6. API Changes For TensorRT 8.0.1

The following tables show which APIs were added, deprecated, and removed for the TensorRT 8.0.1 release.

## C++ changes

Table 31. New C++ APIs

New C++ APIs
<a href="#"><u>class IDequantizeLayer</u></a>
<a href="#"><u>class IQuantizeLayer</u></a>
<a href="#"><u>class ITimingCache</u></a>
<a href="#"><u>IBuilder::buildSerializedNetwork()</u></a>
<a href="#"><u>IBuilderConfig::getTimingCache()</u></a>
<a href="#"><u>IBuilderConfig::setTimingCache()</u></a>
<a href="#"><u>IGpuAllocator::reallocate()</u></a>
<a href="#"><u>INetworkDefinition::addDequantize()</u></a>
<a href="#"><u>INetworkDefinition::addQuantize()</u></a>
<a href="#"><u>INetworkDefinition::setWeightsName()</u></a>
<a href="#"><u>IPluginRegistry::deregisterCreator()</u></a>
<a href="#"><u>IRefitter::getMissingWeights()</u></a>

New C++ APIs
<a href="#"><u>IRefitter::getAllWeights()</u></a>
<a href="#"><u>IRefitter::setNamedWeights()</u></a>
<a href="#"><u>IResizeLayer::getCoordinateTransformation()</u></a>
<a href="#"><u>IResizeLayer::getNearestRounding()</u></a>
<a href="#"><u>IResizeLayer::getSelectorForSinglePixel()</u></a>
<a href="#"><u>IResizeLayer::setCoordinateTransformation()</u></a>
<a href="#"><u>IResizeLayer::setNearestRounding()</u></a>
<a href="#"><u>IResizeLayer::setSelectorForSinglePixel()</u></a>
<a href="#"><u>IScaleLayer::setChannelAxis()</u></a>
<a href="#"><u>enum ResizeCoordinateTransformation</u></a>
<a href="#"><u>enum ResizeMode</u></a>
<a href="#"><u>BuilderFlag::kSPARSE_WEIGHTS</u></a>
<a href="#"><u>TacticSource::kCUDNN</u></a>
<a href="#"><u>TensorFormat::kDLA_HWC4</u></a>
<a href="#"><u>TensorFormat::kDLA_LINEAR</u></a>
<a href="#"><u>TensorFormat::kHWC16</u></a>

Table 32. Removed C++ APIs

Removed C++ APIs
<b>Core Library</b>
DimensionType
Dims::Type
class DimsCHW
class DimsNCHW
class IOutputDimensionFormula
class IPlugin
class IPluginFactory
class IPluginLayer
class IRNNLayer
<a href="#"><u>IBuilder::getEngineCapability()</u></a>
<a href="#"><u>IBuilder::allowGPUFallback()</u></a>
<a href="#"><u>IBuilder::buildCudaEngine()</u></a>

## Removed C++ APIs

<code>IBuilder::canRunOnDLA()</code>
<code>IBuilder::createNetwork()</code>
<code>IBuilder::getAverageFindIterations()</code>
<code>IBuilder::getDebugSync()</code>
<code>IBuilder::getDefaultDeviceType()</code>
<code>IBuilder::getDeviceType()</code>
<code>IBuilder::getDLACore()</code>
<code>IBuilder::getFp16Mode()</code>
<code>IBuilder::getHalf2Mode()</code>
<code>IBuilder::getInt8Mode()</code>
<code>IBuilder::getMaxWorkspaceSize()</code>
<code>IBuilder::getMinFindIterations()</code>
<code>IBuilder::getRefittable()</code>
<code>IBuilder::getStrictTypeConstraints()</code>
<code>IBuilder::isDeviceTypeSet()</code>
<code>IBuilder::reset()</code>
<code>IBuilder::resetDeviceType()</code>
<code>IBuilder::setAverageFindIterations()</code>
<code>IBuilder::setDebugSync()</code>
<code>IBuilder::setDefaultDeviceType()</code>
<code>IBuilder::setDeviceType()</code>
<code>IBuilder::setDLACore()</code>
<code>IBuilder::setEngineCapability()</code>
<code>IBuilder::setFp16Mode()</code>
<code>IBuilder::setHalf2Mode()</code>
<code>IBuilder::setInt8Calibrator()</code>
<code>IBuilder::setInt8Mode()</code>
<code>IBuilder::setMaxWorkspaceSize()</code>
<code>IBuilder::setMinFindIterations()</code>
<code>IBuilder::setRefittable()</code>
<code>IBuilder::setStrictTypeConstraints()</code>
<code>ICudaEngine::getWorkspaceSize()</code>

Removed C++ APIs
IMatrixMultiplyLayer::getTranspose()
IMatrixMultiplyLayer::setTranspose()
INetworkDefinition::addMatrixMultiply()
INetworkDefinition::addPlugin()
INetworkDefinition::addPluginExt()
INetworkDefinition::addRNN()
INetworkDefinition::getConvolutionOutputDimensionsFormula()
INetworkDefinition::getDeconvolutionOutputDimensionsFormula()
INetworkDefinition::getPoolingOutputDimensionsFormula()
INetworkDefinition::setConvolutionOutputDimensionsFormula()
INetworkDefinition::setDeconvolutionOutputDimensionsFormula()
INetworkDefinition::setPoolingOutputDimensionsFormula()
ITensor::getDynamicRange()
TensorFormat::kNHWC8
TensorFormat::NCHW
TensorFormat::kNC2HW2
Caffe Parser
class IPluginFactory
class IPluginFactoryExt
setPluginFactory()
setPluginFactoryExt()
UFF Parser
class IPluginFactory
class IPluginFactoryExt
setPluginFactory()
setPluginFactoryExt()

Table 33. Removed Plugins

Removed Plugins
class INvPlugin
createLReLUPlugin()
createClipPlugin()

Removed Plugins
<code>PluginType</code>
<code>struct SoftmaxTree</code>

For plugins based on `IPluginV2DynamicExt` and `IPluginV2IOExt`, certain methods with legacy function signatures (derived from `IPluginV2` and `IPluginV2Ext` base classes) which were deprecated and marked for removal in TensorRT 8.0 will no longer be available. Plugins using these interface methods must stop using them or implement the versions with updated signatures, as applicable.

Table 34. Unsupported plugin methods removed in TensorRT 8.0

Removed Plugins
<code>IPluginV2DynamicExt::canBroadcastInputAcrossBatch()</code>
<code>IPluginV2DynamicExt::isOutputBroadcastAcrossBatch()</code>
<code>IPluginV2DynamicExt::getTensorRTVersion()</code>
<code>IPluginV2IOExt::configureWithFormat()</code>
<code>IPluginV2IOExt::getTensorRTVersion()</code>

Table 35. Updated versions for supported plugin methods

Removed Plugin	Replaced with
	<code>IPluginV2DynamicExt::configurePlugin()</code>
	<code>IPluginV2DynamicExt::enqueue()</code>
	<code>IPluginV2DynamicExt::getOutputDimensions()</code>
	<code>IPluginV2DynamicExt::getWorkspaceSize()</code>
	<code>IPluginV2IOExt::configurePlugin()</code>
<code>IPluginV2DynamicExt::supportsFormat()</code>	<code>IPluginV2DynamicExt::supportsFormatCombination()</code>
<code>IPluginV2IOExt::supportsFormat()</code>	<code>IPluginV2IOExt::supportsFormatCombination()</code>

## Python changes

Table 36. New Python APIs

New Python APIs
<code>class IDequantizeLayer</code>
<code>class IQuantizeLayer</code>

New Python APIs
<code>class ITimingCache</code>
<code>Builder.build_serialized_network()</code>
<code>IBuilderConfig.get_timing_cache()</code>
<code>IBuilderConfig.set_timing_cache()</code>
<code>IGpuAllocator.reallocate()</code>
<code>INetworkDefinition.add_dequantize()</code>
<code>INetworkDefinition.add_quantize()</code>
<code>INetworkDefinition.set_weights_name()</code>
<code>IPluginRegistry.deregister_creator()</code>
<code>Refitter.get_all_weights()</code>
<code>Refitter.get_missing_weights()</code>
<code>Refitter::set_named_weights()</code>
<code>IResizeLayer.coordinate_transformation</code>
<code>IResizeLayer.nearest_rounding</code>
<code>IResizeLayer.selector_for_single_pixel</code>
<code>IScaleLayer.channel_axis</code>
<code>enum ResizeCoordinateTransformationDoc</code>
<code>enum ResizeMode</code>
<code>BuilderFlag.SPARSE_WEIGHTS</code>
<code>TacticSource.CUDNN</code>
<code>TensorFormat.DLA_HWC4</code>
<code>TensorFormat.DLA_LINEAR</code>
<code>TensorFormat.HWC16</code>

Table 37. Removed Python APIs

Removed Python APIs
<b>Core Library</b>
<code>class DimsCHW</code>
<code>class DimsNCHW</code>
<code>class IPlugin</code>
<code>class IPluginFactory</code>
<code>class IPluginLayer</code>

Removed Python APIs
<code>class IRNNLayer</code>
<code>Builder.build_cuda_engine()</code>
<code>Builder.average_find_iterations</code>
<code>Builder.debug_sync</code>
<code>Builder.fpl6_mode</code>
<code>IBuilder.int8_mode</code>
<code>Builder.max_workspace_size</code>
<code>Builder.min_find_iterations</code>
<code>Builder.refittable</code>
<code>Builder.strict_type_constraints</code>
<code>ICudaEngine.max_workspace_size</code>
<code>IMatrixMultiplyLayer.transpose0</code>
<code>INetworkDefinition.add_matrix_multiply_deprecated()</code>
<code>INetworkDefinition.add_plugin()</code>
<code>INetworkDefinition.add_plugin_ext()</code>
<code>INetworkDefinition.add_rnn()</code>
<code>INetworkDefinition.convolution_output_dimensions_formula</code>
<code>INetworkDefinition.deconvolution_output_dimensions_formula</code>
<code>INetworkDefinition.pooling_output_dimensions_formula</code>
<code>ITensor.get_dynamic_range()</code>
<code>Dims.get_type()</code>
<code>TensorFormat.HWC8</code>
<code>TensorFormat.NCHW</code>
<code>TensorFormat.NCHW2</code>
Caffe Parser
<code>class IPluginFactory</code>
<code>class IPluginFactoryExt</code>
<code>CaffeParser.plugin_factory</code>
<code>CaffeParser.plugin_factory_ext</code>
UFF Parser
<code>class IPluginFactory</code>
<code>class IPluginFactoryExt</code>

Removed Python APIs
<code>UffParser.plugin_factory</code>
<code>UffParser.plugin_factory_ext</code>

## Deprecated

For our deprecation policy, refer to the [TensorRT Deprecation Policy](#).

Table 38. Depreciated APIs

Deprecated APIs	Replaced with
<code>nvinfer1::IResizeLayer::setAlignCorners</code>	<code>nvinfer1::IResizeLayer::setCoordinateTransformation</code>
<code>nvinfer1::IResizeLayer::getAlignCorners</code>	<code>nvinfer1::IResizeLayer::setSelectorForSinglePixel</code>
	<code>nvinfer1::IResizeLayer::setNearestRounding</code>



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## Chapter 2. C++ API

To view this API, refer to the [TensorRT C++ API](#).

The NVIDIA TensorRT C++ API allows developers to import, calibrate, generate and deploy networks using C++. Networks can be imported directly from ONNX. They may also be created programmatically by instantiating individual layers and setting parameters and weights directly.

Within the core C++ API in `NvInfer.h`, the following APIs are included:

- ▶ [Builder API](#)
- ▶ [Execution API](#)
- ▶ [Network Definition API](#)
- ▶ [ONNX Parser API](#)
- ▶ [Plugin API](#)

For more information about the C++ API, including sample code, refer to the [NVIDIA TensorRT Developer Guide](#).

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## Chapter 3. Python API

To view this API, refer to the [TensorRT Python API](#).

The NVIDIA TensorRT Python API enables developers in Python based development environments and those looking to experiment with TensorRT to easily parse models (for example, from ONNX) and generate and run PLAN files.

For more information about the Python API, including sample code, refer to the [NVIDIA TensorRT Developer Guide](#).

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