

# Geometry: Group

Geometry

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## Functions

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afx_msg VARIANT	<b>OSGeometryUI::CreateGroup</b> (const VARIANT FAR &groupType, const VARIANT FAR &bstrGroup)	Creates a group with specified name for the specified type for selected entities.
afx_msg VARIANT	<b>OSGeometryUI::GetGroupCountAll</b> ()	Returns the number of all group types in the current model.
afx_msg VARIANT	<b>OSGeometryUI::GetGroupCount</b> (const VARIANT FAR &varGroupType)	Returns the number of group with specified type in the current model.
afx_msg VARIANT	<b>OSGeometryUI::GetGroupNames</b> (const VARIANT FAR &varGroupType, VARIANT FAR &szGroupNameList)	Returns the list of string name of group(s) with specified group type in current model.
afx_msg VARIANT	<b>OSGeometryUI::GetGroupEntityCount</b> (const VARIANT FAR &szGroupName)	Returns the total number of entities in certain group.
afx_msg VARIANT	<b>OSGeometryUI::GetGroupEntities</b> (const VARIANT FAR &szGroupName, VARIANT FAR &varEntityList)	A function to obtain the all entities in a certain group.
afx_msg VARIANT	<b>OSGeometryUI::CreateGroupEx</b> (const VARIANT FAR &varGroupType, const VARIANT FAR &szGroupName, const VARIANT FAR &varEntityCount, const VARIANT FAR &varEntityList)	Creates a group with specified name for the specified type for selected entities.
afx_msg VARIANT	<b>OSGeometryUI::DeleteGroup</b> (const VARIANT FAR &szGroupName)	Deletes a group specified by group string name.
afx_msg VARIANT	<b>OSGeometryUI::UpdateGroup</b> (const VARIANT FAR &szGroupName, const VARIANT FAR &varFlag, const VARIANT FAR &varEntity, VARIANT FAR &varEntityList)	Updates (replaces, removes, adds) entities to a specified group.

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## Detailed Description

These functions are related to operations of creating, adding, getting and deleting group(s).

## Function Documentation

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### ◆ CreateGroup()

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```
VARIANT OSGeometryUI::CreateGroup ( const VARIANT FAR & groupType,
                                     const VARIANT FAR & bstrGroup )
```

private

Creates a group with specified name for the specified type for selected entities.

## Parameters

[in] **groupType** Type of entities in group:

Index	Group Type
1	Nodes
2	Members
3	Plates
4	Solids
5	Geometry (Members, Plates and Solids)
6	Floor (Floor beam)

[in] **bstrGroup** (LPCTSTR) String name of the group.

## Return values

- 0** OK.
- 1** General error.
- 100** Invalid Argument.
- 110** No beam / plate / solid has been selected.
- 2005** No node has been selected.
- 3005** No member has been selected.
- 4005** No plate has been selected.
- 5005** No solid has been selected.
- 7001** Group already exists.

## C++ Syntax

```
// Create a new node group named "NodeGroup" for selected nodes.
VARIANT RetVal = OSGeometryUI::CreateGroup(1, (LPCTSTR)"NodeGroup");
```

## VBA Syntax

```
' Create a new node group named "NodeGroup" for selected nodes.
Dim RetVal As VARIANT = OSGeometryUI.CreateGroup(1, "NodeGroup")
```

## See also

[OSGeometryUI::GetGroupCount](#)

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## OSGeometryUI::DeleteGroup

- ◆ **CreateGroupEx()**

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```
VARIANT OSGeometryUI::CreateGroupEx ( const VARIANT FAR & varGroupType,
                                         const VARIANT FAR & szGroupName,
                                         const VARIANT FAR & varEntityCount,
                                         const VARIANT FAR & varEntityList )
```

private

Creates a group with specified name for the specified type for selected entities.

## Parameters

[in] **varGroupType** Type of entities in group:

Index	Group Type
1	Nodes
2	Members
3	Plates
4	Solids
5	Geometry (Members, Plates and Solids)
6	Floor (Floor beam)

[in] **szGroupName** (LPCTSTR) String name of the group.

## Return values

- 0** OK.
- 1** General error.
- 100** Invalid Argument.
- 110** No beam / plate / solid has been selected.
- 2005** No node has been selected.
- 3005** No member has been selected.
- 4005** No plate has been selected.
- 5005** No solid has been selected.
- 7001** Group already exists.

## Parameters

[in] **varEntityCount** Entity count VARIANT array.

[out] **varEntityList** Entity number ID(s) VARIANT array.

## C++ Syntax

```
// Create a new node group named "NodeGroup" for selected nodes.
VARIANT RetVal = OSGeometryUI::CreateGroup(1, (LPCTSTR)"NodeGroup", 4, &varEntityList);
```

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```
' Create a new node group named "NodeGroup" for selected nodes.
Dim RetVal As VARIANT = OSGeometryUI.CreateGroup(1, "NodeGroup", 4, &varEntityList)
```

**See also**

[OSGeometryUI::CreateGroup](#)  
[OSGeometryUI::GetGroupCount](#)  
[OSGeometryUI::GetGroupNames](#)  
[OSGeometryUI::DeleteGroup](#)

**◆ DeleteGroup()**

VARIANT OSGeometryUI::DeleteGroup ( const VARIANT FAR & **szGroupName** )

private

Deletes a group specified by group string name.

**Parameters**

[in] **szGroupName** (LPCTSTR) Group string name.

**Return values**

**0** OK.  
**-1** General error.

**C++ Syntax**

```
// Delete the "NodeGroup" group.
VARIANT RetVal = OSGeometryUI::DeleteGroup((LPCTSTR)"NodeGroup");
```

**VBA Syntax**

```
' Delete the "NodeGroup" group.
Dim RetVal As VARIANT = OSGeometryUI.DeleteGroup("NodeGroup")
```

**See also**

[OSGeometryUI::CreateGroup](#)

**◆ GetGroupCount()**

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**VARIANT OSGeometryUI::GetGroupCount ( const VARIANT FAR & varGroupType )**

private

Returns the number of group with specified type in the current model.

**Parameters**

[in] **varGroupType** Type of entities in group:

Index	Group Type
1	Nodes
2	Members
3	Plates
4	Solids
5	Geometry (Members, Plates and Solids)
6	Floor (Floor beam)

**Returns**

The total number of group(s).

**C++ Syntax**

```
// Count for the group(s) of node type.
VARIANT nNodeGroup = OSGeometryUI::GetGroupCount(1);
```

**VBA Syntax**

```
' Count for the group(s) of node type.
Dim nNodeGroup As VARIANT = OSGeometryUI.GetGroupCount(1)
```

**See also**

[OSGeometryUI::CreateGroup](#)  
[OSGeometryUI::GetGroupNames](#)

- ◆ [GetGroupCountAll\(\)](#)

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**VARIANT OSGeometryUI::GetGroupCountAll( )**

private

Returns the number of all group types in the current model.

Type of entities in group:

Index	Group Type
1	Nodes
2	Members
3	Plates
4	Solids
5	Geometry (Members, Plates and Solids)
6	Floor (Floor beam)

**Returns**

The total number of group(s).

**C++ Syntax**

```
// Count for the group(s) of all types.
VARIANT nAllGroup = OSGeometryUI::GetGroupCountAll();
```

**VBA Syntax**

```
' Count for the group(s) of all types.
Dim nAllGroup As VARIANT = OSGeometryUI.GetGroupCountAll()
```

**See also**

[OSGeometryUI::CreateGroup](#)  
[OSGeometryUI::GetGroupNames](#)  
[OSGeometryUI::GetGroupCount](#)

◆ [GetGroupEntities\(\)](#)

```
VARIANT OSGeometryUI::GetGroupEntities ( const VARIANT FAR & szGroupName,
                                         VARIANT FAR & varEntityList )
```

private

A function to obtain the all entities in a certain group.

## Parameters

- [in] **szGroupName** (LPCTSTR) Group string name.
- [out] **varEntityList** Entity number ID(s) VARIANT array.

## Returns

The total number of entities in specified group.

## Return values

- 1 General error.
- 107 Array of integer expected.

## C++ Syntax

```
// Get entity IDs.
VARIANT RetVal = OSGeometryUI::GetGroupEntities((LPCTSTR)"NodeGroup", &varEntityList);
```

## VBA Syntax

```
' Get entity IDs.
Dim RetVal As VARIANT = OSGeometryUI.GetGroupEntities("NodeGroup", &varEntityList)
```

## See also

- [OSGeometryUI::GetGroupEntityCount](#)
- [OSGeometryUI::UpdateGroup](#)

## ◆ [GetGroupEntityCount\(\)](#)

## VARIANT OSGeometryUI::GetGroupEntityCount ( const VARIANT FAR & szGroupName )

private

Returns the total number of entities in certain group.

### Parameters

[in] **szGroupName** (LPCTSTR) Group string name.

### Returns

The total number of entities in specified group.

### C++ Syntax

```
// Count for the entities in "NodeGroup" group.  
VARIANT GroupEntityCount = OSGeometryUI::GetGroupEntityCount((LPCTSTR)"NodeGroup");
```

### VBA Syntax

```
' Count for the entities in "NodeGroup" group.  
Dim GroupEntityCount As VARIANT = OSGeometryUI.GetGroupEntityCount("NodeGroup")
```

### See also

[OSGeometryUI::GetGroupEntities](#)

### ◆ [GetGroupNames\(\)](#)

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**VARIANT OSGeometryUI::GetGroupNames ( const VARIANT FAR & **varGroupType**,  
VARIANT FAR & **szGroupNameList** )**

**private**

Returns the list of string name of group(s) with specified group type in current model.

### Parameters

[in] **varGroupType** Type of entities in group:

Index	Group Type
1	Nodes
2	Members
3	Plates
4	Solids
5	Geometry (Members, Plates and Solids)
6	Floor (Floor beam)

[out] **szGroupNameList** Group string name VARIANT array.

### Return values

**0** OK.

**-107** Array of string expected.

### C++ Syntax

```
// Get the list of name of groups of node type.
VARIANT RetVal = OSGeometryUI::GetGroupNames(1, &szGroupNameList)
```

### VBA Syntax

```
' Get the list of name of groups of node type.
Dim RetVal As VARIANT = OSGeometryUI.GetGroupNames(1, &szGroupNameList)
```

### See also

[OSGeometryUI::CreateGroup](#)

[OSGeometryUI::GetGroupCount](#)

### ◆ UpdateGroup()

```
VARIANT OSGeometryUI::UpdateGroup ( const VARIANT FAR & szGroupName,
                                    const VARIANT FAR & varFlag,
                                    const VARIANT FAR & varEntityCount,
                                    VARIANT FAR &           varEntityList )
```

private

Updates (replaces, removes, adds) entities to a specified group.

## Parameters

- [in] **szGroupName** (LPCTSTR) Group string name.
- [in] **varFlag** Option for operation: 0 = replace the group entities with a array of entities;  
1 = remove entities from this group;  
2 = add entities to this group.
- [in] **varEntityCount** Entity count VARIANT array.
- [out] **varEntityList** Entity number ID(s) VARIANT array.

## Return values

- 0** OK.
- 1** General error.
- 107** Array of integer expected.

## C++ Syntax

```
// Add entities into "NodeGroup" group.
VARIANT RetVal = OSGeometryUI::UpdateGroup((LPCTSTR)"NodeGroup", 2, 4, &varEntityList);
```

## VBA Syntax

```
' Add entities into "NodeGroup" group.
Dim RetVal As VARIANT = OSGeometryUI.UpdateGroup("NodeGroup", 2, 4, &varEntityList)
```

## See also

- [OSGeometryUI::CreateGroup](#)
- [OSGeometryUI::GetGroupEntities](#)

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