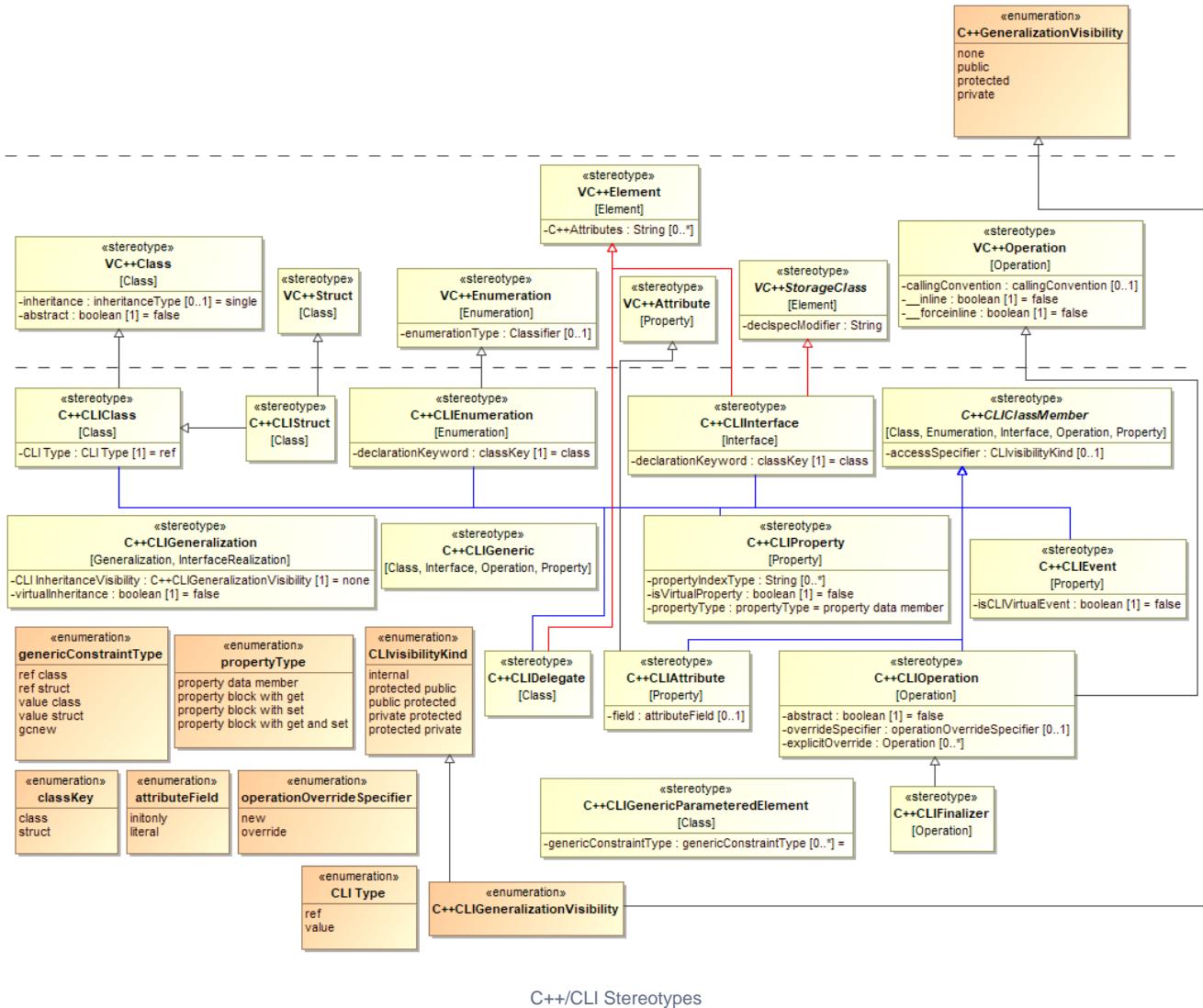


C++/CLI Profile

C++/CLI Profile

The profile table and description in this section do not include the tagged value inherited from C++ ANSI profile.

Stereotype



C++/CLI Stereotypes

C++CLIClass

| Name | Meta Class | Constraints |
|---------------|---|---|
| C++CLIClass | Class | |
| Tag | Type | Description |
| CLI Type | CLI Type[1] = ref (Enumeration) See CLI Type | Represents the utilization of ref class or value class keywords for defining a CLR class. |
| Inherited Tag | Type | Description |

| | | |
|--|--|--|
| inheritance «VC++Class» | inheritanceType[0..1] = single (Enumeration) See inheritanceType | Represents the utilization of VC++ keywords, __single inheritance , __multiple_inheritance , and __virtual_inheritance . |
| declspecModifier «VC++StorageClass» | String | For keeping an extended declaration modifier of __declspec <i>See Extended storage-class attributes with __declspec</i> |
| C++Attributes «VC++Element» | String | For keeping C++ Attributes |
| abstract «VC++Class» | boolean[1] = false | Represents the utilization of an abstract keyword. |
| accessSpecifier «C++CLIClassMember» | CLIVisibilityKind[0..1] (Enumeration) See CLIVisibilityKind | Represents the usage of visibility kind introduced in C++/CLI, including: <ul style="list-style-type: none">• internal• protected public• public protected• private protected• protected private |

C++CLIStruct

| Name | Meta Class | Constraints |
|--|--|--|
| C++CLIStruct | Class | |
| Inherited Tag | Type | Description |
| managedType «C++CLIClass» | CLI Type[1] = ref (Enumeration) See CLI Type | Represents the utilization of a ref class or value class keywords for defining a CLR class. |
| abstract «C++CLIClass» | boolean[1] = false | Represents the utilization of an abstract keyword. |
| inheritance «VC++Class» | inheritanceType[0..1] = single (Enumeration) See inheritanceType | Represent the utilization of VC++ keywords, __single inheritance , __multiple_inheritance , and __virtual_inheritance . |
| declspecModifier «VC++StorageClass» | String | For keeping an extended declaration modifier of __declspec See <i>Extended storage-class attributes with __declspec</i> |
| C++Attributes «VC++Element» | String | For keeping C++ Attributes |

C++CLIEnumeration

| Name | Meta Class | Constraints |
|---------------------------|--|---|
| C++CLIEnumeration | Enumeration | |
| Tag | Type | Descriptions |
| declarationKeyword | classKey[1] = class (Enumeration) See classKey | Represents the utilization of enum class or enum struct keywords. See enum class, enum struct |
| Inherited Tag | Type | Description |
| type «VC++Enumeration» | Classifier[0..1] | Represents the type of enumeration literal |

C++CLInterface

| Name | Meta Class | Constraints |
|--|---|---|
| C++CLInterface | Interface | |
| Tag | Type | Description |
| declarationKeyword | classKey[1] = class (Enumeration) See classKey | Represents the utilization of interface class or interface struct . keywords. See ref class, ref struct, value class, value struct, interface class, interface struct |
| Inherited Tag | Type | Description |
| declspecModifier «VC++StorageClass» | String | For keeping an extended declaration modifier of __declspec See <i>Extended storage-class attributes with __declspec</i> |
| C++Attributes «VC++Element» | String | For keeping C++ Attributes |

C++CLIClassMember

| Name | Meta Class | Constraints |
|-------------------|--|---|
| C++CLIClassMember | Operation, Property | This stereotype is an abstract stereotype for keeping access - Specifier tag definition. |
| Tag | Type | Descriptions |
| accessSpecifier | CLIVisibilityKind[0..1] (Enumeration) See CLIVisibilityKind | Represents the usage of visibility kind introduced in C++/CLI including: <ul style="list-style-type: none">• internal• protected public• public protected• private protected• protected private |

C++CLIAtribute

| Name | Meta Class | Constraints |
|--|---|---|
| C++CLIAtribute | Property | |
| Tag | Type | Descriptions |
| field | attributeField[0..1] (Enumeration) See attributeField | Represents the usage of initonly or literal keywords. |
| Inherited Tag | Type | Description |
| accessSpecifier «C++CLIClassMember» | CLIVisibilityKind[0..1] (Enumeration) See CLIVisibilityKind | Represents the usage of visibility kind introduced in C++/CLI including: <ul style="list-style-type: none">• internal• protected public• public protected• private protected• protected private |

| | | |
|--|--------|---|
| declspecModifier «VC++StorageClass» | String | For keeping extended declaration modifier of <code>__declspec</code> See <i>Extended storage-class attributes with __declspec</i> |
| C++Attributes «VC++Element» | String | For keeping C++ Attributes |

C++CLIOperation

| Name | Meta Class | Constraints |
|--|--|--|
| C++CLIOperation | Operation | |
| Tag | Type | Descriptions |
| abstract | boolean[1] = false | Represents the utilization of abstract keyword. |
| overrideSpecifier | operationOverrideSpecification[0..1] (Enumeration) See Override Specifiers | Represents the utilization of C++/CLI operation override specification, new and override . |
| explicitOverride | Operation[0..*] | Represents the usage of explicit override feature. |
| Inherited Tag | Type | Description |
| accessSpecifier «C++CLIClassMember» | CLIVisibilityKind[0..1] (Enumeration) See CLIVisibilityKind | Represents the usage of visibility kind introduced in C++/CLI including: <ul style="list-style-type: none">• internal• protected public• public protected• private protected• protected private |
| callingConvention «VC++Operation» | callingConvention[0..1] See callingConvention | Represents the utilization of keywords. <ul style="list-style-type: none">• <code>__cdecl</code>• <code>__clrcall</code>• <code>__stdcall</code>• <code>__fastcall</code>• <code>__thiscall</code> |
| C++Attributes «VC++Element» | String | For keeping C++ Attributes |

C++CLIProperty

«C++CLIProperty» is used to define a CLR property, which has the appearance of an ordinary data member, and can be written to or read from using the same syntax as a data member.

| Name | Meta Class | Constraints |
|-------------------|--------------------|---|
| C++CLIProperty | Property | The stereotype must not be applied to the same attribute as «C++Attribute» or other stereotypes derived from «C++Attribute» |
| Tag | Type | Descriptions |
| propertyIndexType | String[0..*] | index type keeps the list of property index types. |
| isVirtualProperty | boolean[1] = false | Specify whether the property. is virtual or not. |

| propertyType | PropertyType[1] = property data member | <p>Specify property type between:</p> <ul style="list-style-type: none"> • property data member • property block with get • property block with set • property block with get and set |
|-------------------------------------|--|---|
| Inherited Tag | Type | Description |
| accessSpecifier «C++CLIClassMember» | CLIVisibilityKind[0..1] (Enumeration) See CLIVisibilityKind | Represents the usage of visibility kind introduced in C++/CLI including: <ul style="list-style-type: none"> • internal • protected public • public protected • private protected • protected private |

C++CLIDelegate

| Name | Meta Class | Constraints |
|-------------------------------------|---|---|
| C++CLIDelegate | Class | Declaration of delegate can be only in a managed type. The declaration of delegate cannot have attribute and operation. Represents the utilization of delegate keyword. |
| Tag | Type | Descriptions |
| C++CLIEvent | boolean[1] = false | Specify whether the event is virtual or not. |
| Inherited Tag | Type | Description |
| accessSpecifier «C++CLIClassMember» | CLIVisibilityKind[0..1] (Enumeration) See CLIVisibilityKind | Represents the usage of visibility kind introduced in C++/CLI including: <ul style="list-style-type: none"> • internal • protected public • public protected • private protected • protected private |

C++CLIGeneric

| Name | Meta Class | Constraints |
|---------------------------------|--|--|
| C++CLIGeneric | Class, Interface, Operation, Property | Represents the usage of a generic keyword. |
| C++CLIGenericParameteredElement | Class | |
| Tag | Type | Descriptions |
| genericConstraintType | genericConstraintType[0..*] (Enumeration) See genericConstraintType | Specifies generic constraint type, including <ul style="list-style-type: none"> • ref class • ref struct • value class • value struct • gcnew |

C++CLIGeneralization

| Name | Meta Class | Constraints |
|--|--|--|
| C++CLIGeneralizationParameteredElement | Class | |
| Tag | Type | Descriptions |
| genericConstraintType | genericConstraintType[0..*] (Enumeration) See genericConstraintType | Specifies generic constraint type, including <ul style="list-style-type: none">• ref class• ref struct• value class• value struct• gcnew |

C++CLIGeneralization

| Name | Meta Class | Constraints |
|---------------------------|--|--------------|
| C++CLIGeneralization | Generalization | |
| Tag | Type | Descriptions |
| CLIIInheritanceVisibility | C++CLIGeneralizationVisibility[1] = none (Enumeration) See C++CLIGeneralizationVisibility | |
| virtualInheritance | boolean[1] = false | |

Enumeration

CLI Type

CLI Type will be used as value of tag named "CLI Type" under «C++CLIClass». The possible values are **ref** and **value**.

| Literal | Description |
|---------|------------------------------------|
| ref | For defining a CLR reference class |
| value | For defining a CLR value class |

operation OverrideSpecifier

operationOverrideSpecifier will be used as value of tag named "overrideSpecifier" under «VC++Operation». The possible values are **new** and **override** which are keywords that can be used to qualify override behavior for derivation.

| Literal | Description |
|----------|---|
| new | Indicates the use of a new keyword to qualify override behavior for derivation. In VC++, new is a keyword indicating that a virtual member will get a new slot in the table; the function does not override a base class method. |
| override | Indicates the use of the override key to qualify override behavior for derivation. In VC++, override is a keyword indicating that a member of a managed type must override a base class or a base interface member. If there is no member to override, the compiler will generate an error. |

attributeField

attributeField will be used as the value of the tag named "field" under «C++CLIAtribute». The possible values are initonly and literal, keywords used to qualify the field type of attribute.

| Literal | Description |
|---------|-------------|
| | |

| | |
|----------|--|
| initonly | Represents the utilization of initonly keyword. initonly indicates that variable assignment can only occur as part of the declaration or in a static constructor in the same class. |
| literal | Represents the utilization of literal keyword. It is the native equivalent of static const variable. Constraint: Is Static and Is Read Only must be set to true . |

classKey

| Literal | Description |
|---------|---|
| class | Represents the keyword that has the word, class . |
| struct | Represents the keyword that has the word, struct . |

Remark:

- **enum class** and **enum struct** are equivalent declarations.
- **interface class** and **interface struct** are equivalent declarations.

CLIVisibilityKind

| Literal | Description |
|-------------------|---|
| internal | Represents the internal visibility. |
| protected public | Represents the protected public visibility. |
| public protected | Represents the public protected visibility. |
| private protected | Represents the private protected visibility. |
| protected private | Represents the protected private visibility. |

genericConstraintType

| Literal | Description |
|--------------|---|
| ref class | Represents the usage of the ref class keyword in a generic constraint clause. |
| ref struct | Represents the usage of the ref struct keyword in a generic constraint clause. |
| value class | Represents the usage of the value class keyword in a generic constraint clause. |
| value strict | Represents the usage of the value strict keyword in a generic constraint clause. |
| gcnew | Represents the usage of the gcnew keyword in a generic constraint clause. |

C++CLIGeneralizationVisibility

C++CLIGeneralizationVisibility is an enumeration inheriting from C++GeneralizationVisibility and CLIVisibility- Kind. Its literals include:

- **none**,
- **public**,
- **protected**,
- **private**,
- **internal**,
- **protected public**,
- **public protected**,
- **private protected**, and
- **protected private**.

