

Bergermeister Home Automation

Source Code Documentation (SCD)

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Chapter 1

Namespace Index

1.1 Namespace List

Here is a list of all documented namespaces with brief descriptions:

[GNCommon](#)
Namespace containing Common components and infrastrucutre 11

[GNCommon::NDataAuthentication](#)
Namespace containing Data Authentication and Validity utilities 14

[GNCommon::NNotification](#)
Namespace containing system Alerts 14

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

GNCommon::NComponent::GTcEvent< auIMaxListeners > 17

GNCommon::NComponent::GTcEvent< xuiMaxListeners > 17

GNCommon::NContainers::GTcLinkedList< GTcType > 18

GNCommon::NContainers::GTcLinkedList< GNCommon::NComponent::GTcListener > 18

GNCommon::NContainers::GTcList< GTcType > 18

GNCommon::NComponent::GTcListener 19

GNCommon::NContainers::GTcListNode< GTcType > 20

GNCommon::NContainers::GTcListNode< GNCommon::NComponent::GTcListener > 20

GNCommon::NContainers::GTcQueue< GTcType > 21

GNCommon::GTcStopWatch 21

GNCommon::NDataAuthentication::TcCRC32 30

GNCommon::NNotification::TcIdentifier 34

GNCommon::NComponent::TcModel 38

 GNCommon::NNotification::TcAlert 23

GNCommon::NNotification::TcStatus 39

Chapter 3

Class Index

3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

GNCommon::NComponent::GTcEvent< auIMaxListeners > 17

GNCommon::NContainers::GTcLinkedList< GTcType > 18

GNCommon::NContainers::GTcList< GTcType > 18

GNCommon::NComponent::GTcListener 19

GNCommon::NContainers::GTcListNode< GTcType > 20

GNCommon::NContainers::GTcQueue< GTcType > 21

GNCommon::GTcStopWatch 21

GNCommon::NNotification::TcAlert 23

GNCommon::NDataAuthentication::TcCRC32

 32-bit Cycle Redundancy Code (CRC) Class 30

GNCommon::NNotification::TcIdentifier 34

GNCommon::NComponent::TcModel 38

GNCommon::NNotification::TcStatus 39

Chapter 4

File Index

4.1 File List

Here is a list of all documented files with brief descriptions:

C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/ Constants.h	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/ StopWatch.h	58
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/ Types.h	
Common Framework namespace, type definitions, and coding style guide Defines the common namespace (GNCommon), common primitive types, and provides the style guide to be used	59
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Component/ Event.h	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Component/ Listener.h	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Component/ Model.h	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Containers/ LinkedList.h	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Containers/ List.h	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Containers/ ListNode.h	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Containers/ Queue.h	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/DataAuthentication/ CRC32.h	
Package interface for the CRC32 class	45
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/ Alert.h	
Package interface for the Alert Class	47
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/ ComponentId.h	49
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/ Criticality.h	
Package interface for the Alert Criticality Enumeration	50
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/ EventId.h	
Package interface for the Event Identifier Enumeration	51
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/ GroupId.h	
Package interface for the Group Identifier Enumeration	53
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/ Identifier.h	
Package interface for the Alert Identifier	54
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/ Status.h	
Package interface for the Alert Status	56
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/ StopWatch.cpp	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/Component/ Listener.cpp	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/Component/ Model.cpp	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/DataAuthentication/ CRC32.cpp	??
C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/Notification/ Alert.cpp	??
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C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/Notification/ Status.cpp	
Package implementation for the Alert Status	62

Chapter 5

Namespace Documentation

5.1 GNCommon Namespace Reference

Namespace containing Common components and infrastrucutre.

Namespaces

- [NDataAuthentication](#)
Namespace containing Data Authentication and Validity utilities.
- [NNotification](#)
Namespace containing system Alerts.

Classes

- class [GTcStopWatch](#)

Typedefs

- typedef bool [Tb8](#)
- typedef char [Tc8](#)
- typedef signed char [Ti8](#)
- typedef unsigned char [Tu8](#)
- typedef signed short [Ti16](#)
- typedef unsigned short [Tu16](#)
- typedef signed long [Ti32](#)
- typedef unsigned long [Tu32](#)
- typedef signed long long [Ti64](#)
- typedef unsigned long long [Tu64](#)
- typedef float [Tf32](#)
- typedef double [Tf64](#)

5.1.1 Detailed Description

Namespace containing Common components and infrastrucutre.

5.1.2 Typedef Documentation

5.1.2.1 Tb8

```
typedef bool GNCommon::Tb8
```

Type definition for 8-bit boolean primitive

Definition at line 54 of file [Types.h](#).

5.1.2.2 Tc8

```
typedef char GNCommon::Tc8
```

Type definition for 8-bit character primitive

Definition at line 55 of file [Types.h](#).

5.1.2.3 Tf32

```
typedef float GNCommon::Tf32
```

Type definition for 32-bit single-precision floating point primitive

Definition at line 64 of file [Types.h](#).

5.1.2.4 Tf64

```
typedef double GNCommon::Tf64
```

Type definition for 64-bit double-precision floating point primitive

Definition at line 65 of file [Types.h](#).

5.1.2.5 Ti16

```
typedef signed short GNCommon::Ti16
```

Type definition for signed 16-bit integer primitive

Definition at line 58 of file [Types.h](#).

5.1.2.6 Ti32

```
typedef signed long GNCommon::Ti32
```

Type definition for signed 32-bit integer primitive

Definition at line 60 of file [Types.h](#).

5.1.2.7 Ti64

```
typedef signed long long GNCommon::Ti64
```

Type definition for signed 64-bit integer primitive

Definition at line 62 of file [Types.h](#).

5.1.2.8 Ti8

```
typedef signed char GNCommon::Ti8
```

Type definition for signed 8-bit integer primitive

Definition at line 56 of file [Types.h](#).

5.1.2.9 Tu16

```
typedef unsigned short GNCommon::Tu16
```

Type definition for unsigned 16-bit integer primitive

Definition at line 59 of file [Types.h](#).

5.1.2.10 Tu32

```
typedef unsigned long GNCommon::Tu32
```

Type definition for unsigned 32-bit primitive

Definition at line 61 of file [Types.h](#).

5.1.2.11 Tu64

```
typedef unsigned long long GNCommon::Tu64
```

Type definition for unsigned 64-bit integer primitive

Definition at line 63 of file [Types.h](#).

5.1.2.12 Tu8

```
typedef unsigned char GNCommon::Tu8
```

Type definition for unsigned 8-bit integer primitive

Definition at line 57 of file [Types.h](#).

5.2 GNCommon::NDataAuthentication Namespace Reference

Namespace containing Data Authentication and Validity utilities.

Classes

- class [TcCRC32](#)
32-bit Cycle Redundancy Code (CRC) Class

5.2.1 Detailed Description

Namespace containing Data Authentication and Validity utilities.

5.3 GNCommon::NNotification Namespace Reference

Namespace containing system Alerts.

Classes

- class [TcAlert](#)
- class [TcIdentifier](#)
- class [TcStatus](#)

Enumerations

- enum [TcComponentId](#) : Tu8 { [TcComponentId::XeNone](#) = 0, [TcComponentId::XeServer](#) = 1, [TcComponentId::XeSensor](#) = 2 }
- *Enumeration of Alert Component Identifiers.*
- enum [TcCriticality](#) : Tu8 { [TcCriticality::XeNone](#) = 0, [TcCriticality::XeNotice](#) = 1, [TcCriticality::XeWarning](#) = 2, [TcCriticality::XeAlarm](#) = 3 }
- enum [TcEventId](#) : Tu32 { [XeIdentifier](#), [XeStatus](#), [XeTimestamp](#), [XeData](#) }
- enum [TcGroupId](#) : Tu8 { [TcGroupId::XeNone](#) = 0, [TcGroupId::XeNetwork](#) = 1 }

5.3.1 Detailed Description

Namespace containing system Alerts.

5.3.2 Enumeration Type Documentation

5.3.2.1 TcComponentId

```
enum GNCommon::NNotification::TcComponentId : Tu8 [strong]
```

Enumeration of Alert Component Identifiers.

Enumerator

XeNone	Enumerated Component: None
XeServer	Enumerated Component: Server
XeSensor	Enumerated Component: Sensor

Definition at line 12 of file [ComponentId.h](#).

5.3.2.2 TcCriticality

```
enum GNCommon::NNotification::TcCriticality : Tu8 [strong]
```

Enumeration of Alert Criticality Identifiers

Enumerator

XeNone	Enumerated Alert Level: None
XeNotice	Enumerated Alert Level: Notice
XeWarning	Enumerated Alert Level: Warning
XeAlarm	Enumerated Alert Level: Alarm

Definition at line 12 of file [Criticality.h](#).

5.3.2.3 TcEventId

enum [GNCommon::NNotification::TcEventId](#) : [Tu32](#) [strong]

Enumeration of Alert Event Identifiers

Definition at line 12 of file [EventId.h](#).

5.3.2.4 TcGroupId

enum [GNCommon::NNotification::TcGroupId](#) : [Tu8](#) [strong]

Enumeration of Group Identifiers

Enumerator

XeNone	Enumerated Group: None
XeNetwork	Enumerated Group: Network

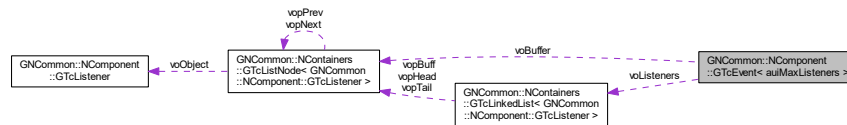
Definition at line 12 of file [GroupId.h](#).

Chapter 6

Class Documentation

6.1 GNCommon::NComponent::GTcEvent< auiParamListeners > Class Template Reference

Collaboration diagram for GNCommon::NComponent::GTcEvent< auiParamListeners >:



Public Member Functions

- void **MNotify** (void *aopSender, const [Tu32](#) auiParamIdentifier)
- [GTcEvent](#) & **operator+=** (const [GTcListener](#) &aorListener)
- [GTcEvent](#) & **operator-=** (const [GTcListener](#) &aorListener)

Protected Attributes

- [GNCommon::NContainers::GTcListNode< GTcListener >](#) **voBuffer** [[auiParamListeners](#)]
- [GNCommon::NContainers::GTcLinkedList< GTcListener >](#) **voListeners**

6.1.1 Detailed Description

```
template<Tu32 auiParamListeners>
class GNCommon::NComponent::GTcEvent< auiParamListeners >
```

Definition at line 14 of file [Event.h](#).

The documentation for this class was generated from the following file:

- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Component/Event.h

6.2 GNCommon::NContainers::GTcLinkedList< GTcType > Class Template Reference

Public Member Functions

- void **MInitialize** (GTcListNode< GTcType > *aopBuffer, Tu32 auiSize)
- Tb8 **MIsInitialized** (void) const
- Tb8 **MInsertAtHead** (GTcType &aorObject)
- Tb8 **MInsertAtTail** (GTcType &aorObject)
- Tb8 **MInsert** (GTcType &aorObject)
- Tb8 **MRemoveHead** (void)
- Tb8 **MRemoveTail** (void)
- Tb8 **MRemove** (GTcType &aorObject)

Protected Attributes

- GTcListNode< GTcType > * **vopBuff**
- GTcListNode< GTcType > * **vopHead**
- GTcListNode< GTcType > * **vopTail**
- Tu32 **vuiSize**
- Tu32 **vuiCount**
- Tb8 **vblInitialized**

6.2.1 Detailed Description

```
template<class GTcType>
class GNCommon::NContainers::GTcLinkedList< GTcType >
```

Definition at line 11 of file [LinkedList.h](#).

The documentation for this class was generated from the following file:

- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Containers/LinkedList.h

6.3 GNCommon::NContainers::GTcList< GTcType > Class Template Reference

Public Member Functions

- **GTcList** (GTcType *aopBuffer, const Tu32 auiCapacity)
- **GTcList** (const GTcList< GTcType > &aorList)
- virtual GTcList< GTcType > & **operator=** (const GTcList< GTcType > &aorList)
- virtual Tb8 **MAdd** (const GTcType &aorItem)
- virtual Tb8 **MInsert** (const GTcType &aorItem, const Tu32 auiIndex)
- virtual Tb8 **MRemove** (const GTcType &aorItem)
- virtual Tb8 **MRemvoveAt** (const Tu32 auiIndex)
- virtual void **MClear** (void)
- virtual Tb8 **MContains** (const GTcType &aorItem) const
- virtual Tu32 **MIndexOf** (const GTcType &aorItem) const
- Tu32 **MCapacity** (void) const
- Tu32 **MCount** (void) const

Public Attributes

- GTcType *& **VorItem**
- const **Tu32** & **VuirCapacity**
- const **Tu32** & **VuirCount**

Protected Attributes

- GTcType * **vopBuffer**
- **Tu32** **vuiCapacity**
- **Tu32** **vuiCount**

6.3.1 Detailed Description

```
template<class GTcType>
class GNCommon::NContainers::GTcList< GTcType >
```

Definition at line 8 of file [List.h](#).

The documentation for this class was generated from the following file:

- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Containers/List.h

6.4 GNCommon::NComponent::GTcListener Class Reference

Public Types

- typedef void(* **TsHandle**) (void *aopListener, void *aopParameter)

Public Member Functions

- **GTcListener** (void *aopInstance, const TsHandle aopHandle)
- void * **MGetInstance** (void) const
- TsHandle **MGetHandle** (void) const
- **Tb8 operator==** (const **GTcListener** &aorListener)

Protected Attributes

- void * **vopInstance**
- TsHandle **vopHandle**

6.4.1 Detailed Description

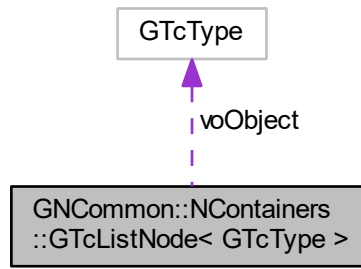
Definition at line 7 of file [Listener.h](#).

The documentation for this class was generated from the following files:

- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Component/Listener.h
- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/Component/Listener.cpp

6.5 GNCommon::NContainers::GTcListNode< GTcType > Class Template Reference

Collaboration diagram for GNCommon::NContainers::GTcListNode< GTcType >:



Public Member Functions

- void **MSetObject** (GTcType &aorObject)
- GTcType * **MGetObject** (void)
- void **MSetNext** ([GTcListNode](#)< GTcType > *aopNode)
- void **MSetPrev** ([GTcListNode](#)< GTcType > *aopNode)
- [GTcListNode](#)< GTcType > * **MSGetNext** (void)
- [GTcListNode](#)< GTcType > * **MSGetPrev** (void)
- **Tb8 MInsertAfter** ([GTcListNode](#)< GTcType > &aorNode)
- **Tb8 MInsertBefore** ([GTcListNode](#)< GTcType > &aorNode)
- **Tb8 MRemove** (void)

Protected Attributes

- [GTcListNode](#)< GTcType > * **vopNext**
- [GTcListNode](#)< GTcType > * **vopPrev**
- GTcType **voObject**
- **Tb8 vbAvailable**

6.5.1 Detailed Description

```
template<class GTcType>
class GNCommon::NContainers::GTcListNode< GTcType >
```

Definition at line 11 of file [ListNode.h](#).

The documentation for this class was generated from the following file:

- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Containers/ListNode.h

6.6 GNCommon::NContainers::GTcQueue< GTcType > Class Template Reference

Public Member Functions

- **GTcQueue** (GTcType *aopBuffer, [Tu32](#) auiSize)
- [Tb8](#) **MEnqueue** (GTcType &aorElement)
- [Tb8](#) **MDequeue** (GTcType &aorElement)
- [Tb8](#) **MIsEmpty** (void) const
- [Tb8](#) **MIsFull** (void) const
- [Tu32](#) **MCount** (void) const

6.6.1 Detailed Description

```
template<class GTcType>
class GNCommon::NContainers::GTcQueue< GTcType >
```

Definition at line 8 of file [Queue.h](#).

The documentation for this class was generated from the following file:

- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Containers/Queue.h

6.7 GNCommon::GTcStopWatch Class Reference

Public Member Functions

- **GTcStopWatch** (const [GTcStopWatch](#) &aorStopWatch)
- [GTcStopWatch](#) & **operator=** (const [GTcStopWatch](#) &aorStopWatch)
- void **MStart** (void)
- [Tu64](#) **MStop** (void)
- [Tu64](#) **MElapsed** (void)

Protected Attributes

- [Ti64](#) **vlStart**
- [Ti64](#) **vlEnd**
- [Tb8](#) **vbRunning**

Static Protected Attributes

- static const [Ti64](#) **xlMaxQuadPart** = 9223372036854775807
- static const [Tu64](#) **xulTimeBase** = 1000000LL
- static [Tu64](#) **vulFrequency** = 0

6.7.1 Detailed Description

Definition at line 10 of file [StopWatch.h](#).

6.7.2 Member Data Documentation

6.7.2.1 xulTimeBase

```
const Tu64 GNCommon::GtcStopWatch::xulTimeBase = 1000000LL [static], [protected]
```

Microseconds

Definition at line 14 of file [StopWatch.h](#).

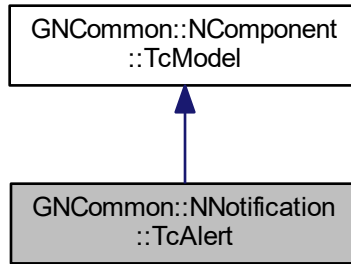
The documentation for this class was generated from the following files:

- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/[StopWatch.h](#)
- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/StopWatch.cpp

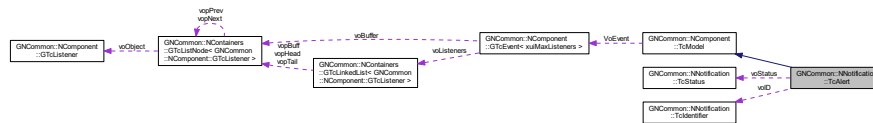
6.8 GNCommon::NNotification::TcAlert Class Reference

```
#include <Alert.h>
```

Inheritance diagram for GNCommon::NNotification::TcAlert:



Collaboration diagram for GNCommon::NNotification::TcAlert:



Public Member Functions

- **TcAlert** (void)
- **~TcAlert** (void)
- **TcAlert** (const **TcAlert** &aorAlert)
- **TcAlert & operator=** (const **TcAlert** &aorAlert)
- void **MSetIdentifier** (const **TcIdentifier** &aorID)
- void **MSetStatus** (const **TcStatus** &aorStatus)
- void **MSetTimestamp** (const **Tu64** aulTimestamp)
- void **MSetData** (const **Tu64** aulData)
- **TcIdentifier MGetIdentifier** (void) const
- **TcStatus MGetStatus** (void) const
- **Tu64 MGetTimestamp** (void) const
- **Tu64 MGetData** (void) const

Static Public Attributes

- static const **Tu32 XuiSizeOfIdentifier** = sizeof(**TcIdentifier**)
- static const **Tu32 XuiSizeOfStatus** = sizeof(**TcStatus**)

Protected Attributes

- [TcIdentifier](#) `voID`
- [TcStatus](#) `voStatus`
- [Tu64](#) `vuITimestamp`
- [Tu64](#) `vuIData`

Additional Inherited Members

6.8.1 Detailed Description

Alert Class

Definition at line 19 of file [Alert.h](#).

6.8.2 Constructor & Destructor Documentation

6.8.2.1 `TcAlert()` [1/2]

```
TcAlert::TcAlert (
    void )
```

Default Constructor

Definition at line 13 of file [Alert.cpp](#).

6.8.2.2 `~TcAlert()`

```
TcAlert::~~TcAlert (
    void )
```

Default Destructor

Definition at line 24 of file [Alert.cpp](#).

6.8.2.3 `TcAlert()` [2/2]

```
TcAlert::TcAlert (
    const TcAlert & aorAlert )
```

Copy Constructor

Parameters

<i>aorAlert</i>	Alert Constant Reference to copy
-----------------	----------------------------------

Definition at line 33 of file [Alert.cpp](#).

6.8.3 Member Function Documentation

6.8.3.1 MGetData()

```
Tu64 TcAlert::MGetData (
    void ) const
```

MGetTrigger

Returns

this->vulData constant 64-bit Integer Data

Definition at line 136 of file [Alert.cpp](#).

6.8.3.2 MGetIdentifier()

```
TcIdentifier TcAlert::MGetIdentifier (
    void ) const
```

MGetIdentifier

Returns

this->voID constant TsIdentifier

Definition at line 109 of file [Alert.cpp](#).

6.8.3.3 MGetStatus()

```
TcStatus TcAlert::MGetStatus (
    void ) const
```

MGetStatus

Returns

this->voStatus constant TsStatus

Definition at line 118 of file [Alert.cpp](#).

6.8.3.4 MGetTimestamp()

```
Tu64 TcAlert::MGetTimestamp (
    void ) const
```

MGetTimestamp

Returns

this->vulTimestamp constant 64-bit Integer Timestamp

Definition at line 127 of file [Alert.cpp](#).

6.8.3.5 MSetData()

```
void TcAlert::MSetData (
    const Tu64 aulData )
```

MSetData

Parameters

<i>aulData</i>	constant 64-bit Integer Data
----------------	------------------------------

Definition at line 96 of file [Alert.cpp](#).

Here is the caller graph for this function:



6.8.3.6 MSetIdentifier()

```
void TcAlert::MSetIdentifier (
    const TcIdentifier & aorID )
```

MSetIdentifier

Parameters

<i>aorID</i>	Identifier Structure Constant Reference
--------------	---

Definition at line 57 of file [Alert.cpp](#).

Here is the caller graph for this function:



6.8.3.7 MSetStatus()

```
void TcAlert::MSetStatus (
    const TcStatus & aorStatus )
```

MSetStatus

Parameters

<i>aorStatus</i>	Status Structure Constant Reference
------------------	-------------------------------------

Definition at line 70 of file [Alert.cpp](#).

Here is the caller graph for this function:



6.8.3.8 MSetTimestamp()

```
void TcAlert::MSetTimestamp (
    const Tu64 aulTimestamp )
```

MSetTimeStamP

Parameters

<i>aulTimestamp</i>	constant 64-bit Integer Timestamp
---------------------	-----------------------------------

Definition at line 83 of file [Alert.cpp](#).

Here is the caller graph for this function:



6.8.3.9 operator=()

```
TcAlert & TcAlert::operator= (
    const TcAlert & aorAlert )
```

operator= Override

Parameters

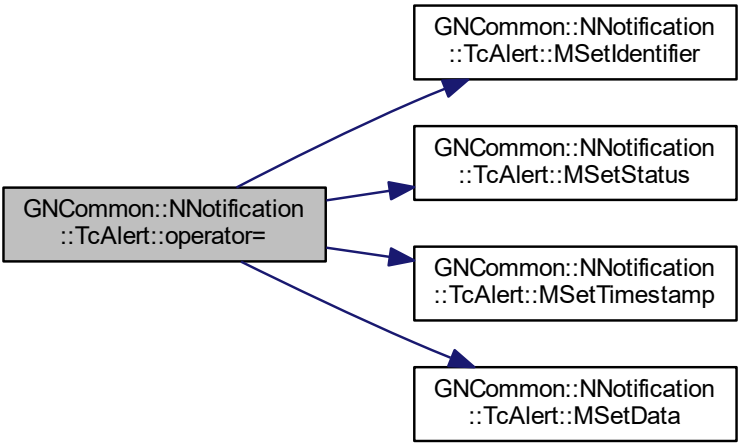
<i>aorAlert</i>	Alert Constant Reference to copy
-----------------	----------------------------------

Returns

*this GTcAlert Reference

Definition at line 43 of file [Alert.cpp](#).

Here is the call graph for this function:



6.8.4 Member Data Documentation

6.8.4.1 void

`TcIdentifier` `GNCommon::NNotification::TcAlert::void` [protected]

Encoded Identifier

Definition at line 26 of file `Alert.h`.

6.8.4.2 voStatus

`TcStatus` `GNCommon::NNotification::TcAlert::voStatus` [protected]

Encoded Status

Definition at line 27 of file `Alert.h`.

6.8.4.3 vulData

`Tu64 GNCommon::NNotification::TcAlert::vulData [protected]`

64-bit Additional Data

Definition at line 29 of file [Alert.h](#).

6.8.4.4 vulTimestamp

`Tu64 GNCommon::NNotification::TcAlert::vulTimestamp [protected]`

64-bit Timestamp of Occurrence

Definition at line 28 of file [Alert.h](#).

6.8.4.5 XuiSizeOfIdentifier

`const Tu32 GNCommon::NNotification::TcAlert::XuiSizeOfIdentifier = sizeof(TcIdentifier) [static]`

Size of Identifier

Definition at line 22 of file [Alert.h](#).

6.8.4.6 XuiSizeOfStatus

`const Tu32 GNCommon::NNotification::TcAlert::XuiSizeOfStatus = sizeof(TcStatus) [static]`

Size of Status

Definition at line 23 of file [Alert.h](#).

The documentation for this class was generated from the following files:

- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/[Alert.h](#)
- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/Notification/Alert.cpp

6.9 GNCommon::NDataAuthentication::TcCRC32 Class Reference

32-bit Cycle Redundancy Code (CRC) Class

```
#include <CRC32.h>
```

Public Member Functions

- **TcCRC32** (const [TcCRC32](#) &aorCRC)
- **TcCRC32 & operator=** (const [TcCRC32](#) &aorCRC)
- **Tu32 MGet** (const [Tu8](#) *aucpBuffer, const [Tu32](#) auiBytes, const [Tu32](#) auiSeed=[xuiDefaultSeed](#), const [Tu32](#) aui←
Table[[XuiTableSize](#)]=[xuiTable](#)) const
- **Tb8 MVerify** (void) const
- void **MGenerateTable** ([Tu32](#) auiTable[[XuiTableSize](#)], const [Tu32](#) auiPolynomial=[XuiPolynomial](#))
Generate a CRC Lookup Table.
- **Tb8 MCompareTable** (const [Tu32](#) auiTable[[XuiTableSize](#)])
Compares the lookup table.

Static Public Attributes

- static const [Tu32](#) [XuiTableSize](#) = 256
- static const [Tu32](#) [XuiPolynomial](#) = 0xEDB88320

Static Protected Attributes

- static const [Tu32](#) [xuiDefaultSeed](#) = 0xFFFFFFFF
- static const [Tu32](#) [xuiTableCRC](#) = 0x6FCF9E13
- static const [Tu32](#) [xuiShift8](#) = 8
- static const [Tu32](#) [xuiMaskByte](#) = 0x000000FF
- static const [Tu32](#) [xuiTable](#) [[XuiTableSize](#)]

6.9.1 Detailed Description

32-bit Cycle Redundancy Code (CRC) Class

Definition at line 15 of file [CRC32.h](#).

6.9.2 Member Function Documentation

6.9.2.1 MCompareTable()

```
Tb8 TcCRC32::MCompareTable (
    const Tu32 auiTable[XuiTableSize] )
```

Compares the lookup table.

Compares the given lookup table to the default internal lookup table

Returns

True if all of the values in the given table match the internal lookup table, False otherwise

Formal Parameters

[in] auiTable Lookup table to compare against the internal lookup table

Local Symbols

kbMatch Flag indicating if the tables match
kuiIndex Table loop index

Definition at line 109 of file [CRC32.cpp](#).

6.9.2.2 MGenerateTable()

```
void TcCRC32::MGenerateTable (
    Tu32 auiTable[XuiTableSize],
    const Tu32 auiPolynomial = XuiPolynomial )
```

Generate a CRC Lookup Table.

Generate a CRC Lookup Table based on the given polynomial

Returns

None

Formal Parameters

[out] auiTable Location to store the generated lookup table

Local Symbols

kuiBit	Index to iterate through bits
kuiRemainder	Flag indicating if the tables match
kucByte	Index into the lookup table

Definition at line 70 of file [CRC32.cpp](#).

6.9.3 Member Data Documentation

6.9.3.1 xuiDefaultSeed

```
const Tu32 GNCommon::NDataAuthentication::TcCRC32::xuiDefaultSeed = 0xFFFFFFFF [static], [protected]
```

Default Seed value when calculating a CRC

Definition at line 22 of file [CRC32.h](#).

6.9.3.2 xuiMaskByte

```
const Tu32 GNCommon::NDataAuthentication::TcCRC32::xuiMaskByte = 0x000000FF [static], [protected]
```

Single byte mask

Definition at line 25 of file [CRC32.h](#).

6.9.3.3 XuiPolynomial

```
const Tu32 GNCommon::NDataAuthentication::TcCRC32::XuiPolynomial = 0xEDB88320 [static]
```

Polynomial used to generate the CRC-32 table

Definition at line 19 of file [CRC32.h](#).

6.9.3.4 xuiShift8

```
const Tu32 GNCommon::NDataAuthentication::TcCRC32::xuiShift8 = 8 [static], [protected]
```

Shift by 8 bits

Definition at line 24 of file [CRC32.h](#).

6.9.3.5 xuiTable

```
const Tu32 TcCRC32::xuiTable [static], [protected]
```

Lookup table

Table obtained from <http://www.efg2.com/Lab/Mathematics/CRC.htm>

Definition at line 26 of file [CRC32.h](#).

6.9.3.6 xuiTableCRC

```
const Tu32 GNCommon::NDataAuthentication::TcCRC32::xuiTableCRC = 0x6FCF9E13 [static], [protected]
```

CRC of the default look up table

Definition at line 23 of file [CRC32.h](#).

6.9.3.7 XuiTableSize

```
const Tu32 GNCommon::NDataAuthentication::TcCRC32::XuiTableSize = 256 [static]
```

Number of 4-bit words in the CRC-32 table

Definition at line 18 of file [CRC32.h](#).

The documentation for this class was generated from the following files:

- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/DataAuthentication/[CRC32.h](#)
- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/DataAuthentication/CRC32.cpp

6.10 GNCommon::NNotification::TcIdentifier Class Reference

```
#include <Identifier.h>
```

Public Member Functions

- [TcIdentifier](#) (void)
- [TcIdentifier](#) (const [TcIdentifier](#) &aorIdentifier)
- [~TcIdentifier](#) (void)
- [TcIdentifier](#) & [operator=](#) (const [TcIdentifier](#) &aorIdentifier)
- [Tb8 operator==](#) (const [TcIdentifier](#) &aorIdentifier)
- [Tb8 operator!=](#) (const [TcIdentifier](#) &aorIdentifier)

Public Attributes

- [Tu8 vucIndex](#)
- [TcGroupId voGroup](#)
- [TcComponentId voCompDet](#)
- [TcComponentId voCompGen](#)

6.10.1 Detailed Description

Alert Identifier

Definition at line 16 of file [Identifier.h](#).

6.10.2 Constructor & Destructor Documentation

6.10.2.1 TcIdentifier() [1/2]

```
TcIdentifier::TcIdentifier (
    void )
```

Default Constructor

Initializes the internal members to default values.

Returns

None

Formal Parameters

None

Local Symbols

None

Definition at line 27 of file [Identifier.cpp](#).

6.10.2.2 TcIdentifier() [2/2]

```
TcIdentifier::TcIdentifier (
    const TcIdentifier & aorIdentifier )
```

Copy Constructor

Copies the internal members of the given Identifier to this Identifier via the assignment operator.

Returns

None

Formal Parameters

[in] aorIdentifier Identifier object reference to be copied

Local Symbols

None

Definition at line 48 of file [Identifier.cpp](#).

6.10.2.3 ~TcIdentifier()

```
TcIdentifier::~~TcIdentifier (
    void )
```

Destructor

Nothing to destruct.

Returns

None

Formal Parameters

None

Local Symbols

None

Definition at line 66 of file [Identifier.cpp](#).

6.10.3 Member Function Documentation

6.10.3.1 operator!=()

```
Tb8 TcIdentifier::operator!= (
    const TcIdentifier & aorIdentifier )
```

Inequality Operator

Compares this Identifier to the given Identifier and returns if they are not equal.

Returns

True if any of this Identifier's internal members are not equal to the given Identifier's internal members, False otherwise

Formal Parameters

[in] aorIdentifier Identifier object reference to be compared

Local Symbols

None

Definition at line 135 of file [Identifier.cpp](#).

6.10.3.2 operator=()

```
TcIdentifier & TcIdentifier::operator= (
    const TcIdentifier & aorIdentifier )
```

Assignment Operator

Copies the internal members of the given Identifier

Returns

Identifier object reference to this Identifier

Formal Parameters

[in] aorIdentifier Identifier object reference to be copied

Local Symbols

None

Definition at line 84 of file [Identifier.cpp](#).

6.10.3.3 operator==()

```
Tb8 TcIdentifier::operator== (
    const TcIdentifier & aorIdentifier )
```

Equality Operator

Compares this Identifier to the given Identifier and returns if they are equal.

Returns

True if all of this Identifier's internal members equal the given Identifier's internal members, False otherwise

Formal Parameters

[in] aorIdentifier Identifier object reference to be compared

Local Symbols

kbEqual Flag indicating if the Identifiers are equal

Definition at line 107 of file [Identifier.cpp](#).

6.10.4 Member Data Documentation

6.10.4.1 voCompDet

[TcComponentId](#) GNCommon::NNotification::TcIdentifier::voCompDet

Bits 16 - 23 : Detecting Component

Definition at line 21 of file [Identifier.h](#).

6.10.4.2 voCompGen

[TcComponentId](#) GNCommon::NNotification::TcIdentifier::voCompGen

Bits 24 - 31 : Generating Component

Definition at line 22 of file [Identifier.h](#).

6.10.4.3 voGroup

```
TcGroupId GNCommon::NNotification::TcIdentifier::voGroup
```

Bits 8 - 15 : Group

Definition at line 20 of file Identifier.h.

6.10.4.4 vucIndex

```
Tu8 GNCommon::NNotification::TcIdentifier::vucIndex
```

Bits 0 - 7 : Index

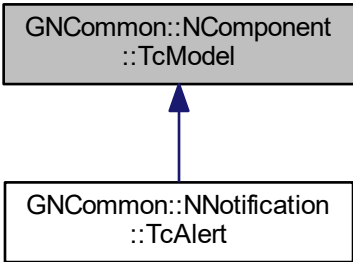
Definition at line 19 of file Identifier.h.

The documentation for this class was generated from the following files:

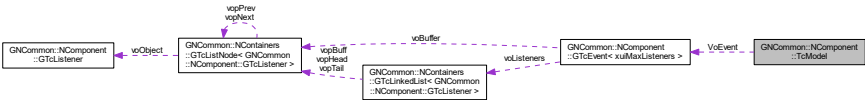
- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/Identifier.h
- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/Notification/Identifier.cpp

6.11 GNCommon::NComponent::TcModel Class Reference

Inheritance diagram for GNCommon::NComponent::TcModel:



Collaboration diagram for GNCommon::NComponent::TcModel:



Public Attributes

- [GTcEvent](#) < xuiMaxListeners > **VoEvent**

Static Protected Attributes

- static const [Tu32](#) **xuiMaxListeners** = 16

6.11.1 Detailed Description

Definition at line 10 of file [Model.h](#).

The documentation for this class was generated from the following files:

- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Component/Model.h
- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/Component/Model.cpp

6.12 GNCommon::NNotification::TcStatus Class Reference

```
#include <Status.h>
```

Public Member Functions

- [TcStatus](#) (void)
Default Constructor.
- [TcStatus](#) (const [TcStatus](#) &aorStatus)
Copy Constructor.
- [~TcStatus](#) (void)
Destructor.
- [TcStatus](#) & [operator=](#) (const [TcStatus](#) &aorStatus)
Assignment Operator.
- [Tb8 operator==](#) (const [TcStatus](#) &aorStatus)
Equality Operator.
- [Tb8 operator!=](#) (const [TcStatus](#) &aorStatus)
Inequality Operator.

Public Attributes

- [Tu8 vucActive](#): 1
- [Tu8 vucAcknowledged](#): 1
- [Tu8 vucCleared](#): 1
- [Tu8 vucTrigger](#): 1
- [Tu8 vucSpare1](#): 4
- [TcCriticality voCriticality](#)
- [Tu8 vucSpare2](#)
- [Tu8 vucChildren](#)

6.12.1 Detailed Description

Alert Status

Definition at line 15 of file [Status.h](#).

6.12.2 Constructor & Destructor Documentation

6.12.2.1 TcStatus() [1/2]

```
TcStatus::TcStatus (
    void )
```

Default Constructor.

Initializes the internal members to default values.

Returns

None

Formal Parameters

None

Local Symbols

None

Definition at line 25 of file [Status.cpp](#).

6.12.2.2 TcStatus() [2/2]

```
TcStatus::TcStatus (
    const TcStatus & aorStatus )
```

Copy Constructor.

Copies the internal members of the given Status to this Status via the assignment operator.

Returns

None

Formal Parameters

[in] aorStatus Status object reference to be copied

Local Symbols

None

Definition at line 50 of file [Status.cpp](#).

6.12.2.3 ~TcStatus()

```
TcStatus::~~TcStatus (
    void )
```

Destructor.

Nothing to destruct

Returns

None

Formal Parameters

None

Local Symbols

None

Definition at line 68 of file [Status.cpp](#).

6.12.3 Member Function Documentation

6.12.3.1 operator!=(())

```
Tb8 TcStatus::operator!= (
    const TcStatus & aorStatus )
```

Inequality Operator.

Compares this Status to the given Status and returns if they are not equal.

Returns

True if any of this Status's internal members are not equal to the given Status's internal members

Formal Parameters

[in] aorStatus Status object reference to be compared

Local Symbols

None

Definition at line 146 of file [Status.cpp](#).

6.12.3.2 operator=()

```
TcStatus & TcStatus::operator= (
    const TcStatus & aorStatus )
```

Assignment Operator.

Copies the internal members of the given Status

Returns

Status object reference to this Status

Formal Parameters

[in] aorStatus Status object reference to be copied

Local Symbols

None

Definition at line 87 of file [Status.cpp](#).

6.12.3.3 operator==()

```
Tb8 TcStatus::operator==(
    const TcStatus & aorStatus )
```

Equality Operator.

Compares this Status to the given Status and returns if they are equal.

Returns

True if all of this Status's internal members equal the given Status's internal members

Formal Parameters

[in] aorStatus Status object reference to be compared

Local Symbols

kbEqual Flag indicating if the Statuses are equal

Definition at line 114 of file [Status.cpp](#).

6.12.4 Member Data Documentation

6.12.4.1 voCriticality

`TcCriticality` GNCommon::NNotification::TcStatus::voCriticality

Bits 8 - 15 : Alert Level

Definition at line 23 of file [Status.h](#).

6.12.4.2 vucAcknowledged

`Tu8` GNCommon::NNotification::TcStatus::vucAcknowledged

Bit 1 : Acknowledged Flag

Definition at line 19 of file [Status.h](#).

6.12.4.3 vucActive

`Tu8` GNCommon::NNotification::TcStatus::vucActive

Bit 0 : Active Flag

Definition at line 18 of file [Status.h](#).

6.12.4.4 vucChildren

`Tu8` GNCommon::NNotification::TcStatus::vucChildren

Bits 24 - 31 : Number of Child Alerts

Definition at line 25 of file [Status.h](#).

6.12.4.5 vucCleared

`Tu8` GNCommon::NNotification::TcStatus::vucCleared

Bit 2 : Cleared Flag

Definition at line 20 of file [Status.h](#).

6.12.4.6 vucSpare1

Tu8 GNCommon::NNotification::TcStatus::vucSpare1

Bits 4 - 7 : Spare Flags

Definition at line 22 of file [Status.h](#).

6.12.4.7 vucSpare2

Tu8 GNCommon::NNotification::TcStatus::vucSpare2

Bits 16 - 23 : Spare

Definition at line 24 of file [Status.h](#).

6.12.4.8 vucTrigger

Tu8 GNCommon::NNotification::TcStatus::vucTrigger

Bit 3 : Trigger Available Flag

Definition at line 21 of file [Status.h](#).

The documentation for this class was generated from the following files:

- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/[Status.h](#)
- C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/Notification/[Status.cpp](#)

Chapter 7

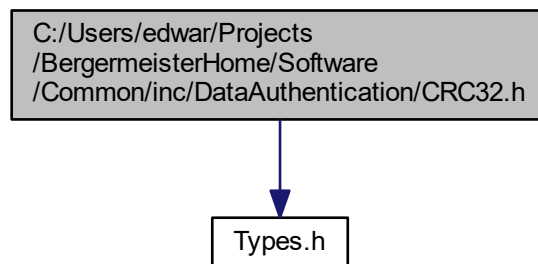
File Documentation

7.1 C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/DataAuthentication/CRC32.h File Reference

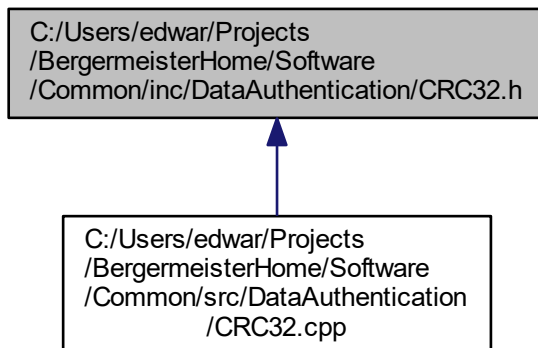
Package interface for the CRC32 class.

```
#include <Types.h>
```

Include dependency graph for CRC32.h:



This graph shows which files directly or indirectly include this file:



Classes

- class [GNCommon::NDataAuthentication::TcCRC32](#)
32-bit Cycle Redundancy Code (CRC) Class

Namespaces

- [GNCommon](#)
Namespace containing Common components and infrastrucutre.
- [GNCommon::NDataAuthentication](#)
Namespace containing Data Authentication and Validity utilities.

7.1.1 Detailed Description

Package interface for the CRC32 class.

Definition in file [CRC32.h](#).

7.2 CRC32.h

```

00001
00005 #pragma once
00006
00007 #include <Types.h>
00008
00009 namespace GNCommon
00010 {
00012     namespace NDataAuthentication
00013     {
00015         class TcCRC32
00016         {
00017         public:           // Public Attributes
  
```

```

00018         static const Tu32 XuiTableSize = 256;
00019         static const Tu32 XuiPolynomial = 0xEDB88320;
00021     protected: // Protected Attributes
00022         static const Tu32 xuiDefaultSeed = 0xFFFFFFFF;
00023         static const Tu32 xuiTableCRC = 0x6FCF9E13;
00024         static const Tu32 xuiShift8 = 8;
00025         static const Tu32 xuiMaskByte = 0x000000FF;
00026         static const Tu32 xuiTable[ XuiTableSize ];
00028     public: // Public Methods
00029         TcCRC32( void );
00030         TcCRC32( const TcCRC32& aorCRC );
00031         ~TcCRC32( void );
00032
00033         TcCRC32& operator=( const TcCRC32& aorCRC );
00034
00035         Tu32 MGet( const Tu8* aucpBuffer,
00036                 const Tu32 auiBytes,
00037                 const Tu32 auiSeed = xuiDefaultSeed,
00038                 const Tu32 auiTable[ XuiTableSize ] =
00039                 xuiTable ) const;
00040
00041         Tb8 MVerify( void ) const;
00042
00043         void MGenerateTable( Tu32 auiTable[ XuiTableSize ], const
00044                             Tu32 auiPolynomial = XuiPolynomial );
00045         Tb8 MCompareTable( const Tu32 auiTable[
00046                             XuiTableSize ] );
00047     };
00048 }
00049

```

7.3 C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/Alert.h File Reference

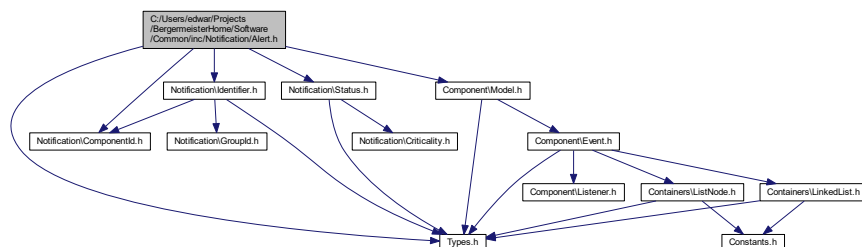
Package interface for the Alert Class.

```

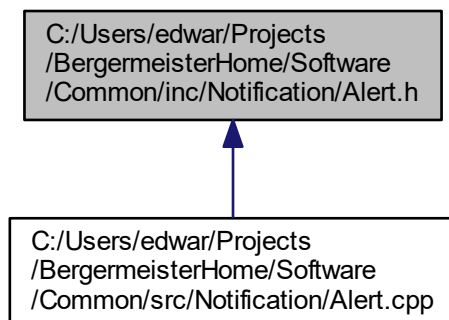
#include <Types.h>
#include <Component\Model.h>
#include <Notification\ComponentId.h>
#include <Notification\Identifier.h>
#include <Notification\Status.h>

```

Include dependency graph for Alert.h:



This graph shows which files directly or indirectly include this file:



Classes

- class [GNCommon::NNotification::TcAlert](#)

Namespaces

- [GNCommon](#)
Namespace containing Common components and infrastrucutre.
- [GNCommon::NNotification](#)
Namespace containing system Alerts.

7.3.1 Detailed Description

Package interface for the Alert Class.

Definition in file [Alert.h](#).

7.4 Alert.h

```

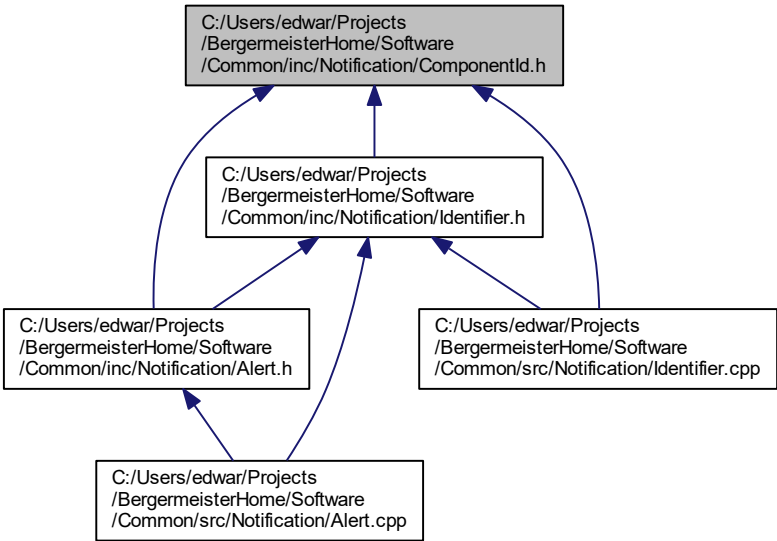
00001
00005 #pragma once
00006
00007 #include <Types.h>
00008 #include <Component\Model.h>
00009 #include <Notification\ComponentId.h>
00010 #include <Notification\Identifier.h>
00011 #include <Notification\Status.h>
00012
00013 namespace GNCommon
00014 {
00016     namespace NNotification
00017     {
00019         class TcAlert : public GNCommon::NComponent::TcModel
00020         {
  
```



```
00021     public:          // Public Type Definitions
00022         static const Tu32 XuiSizeOfIdentifier = sizeof(
TcIdentifier );
00023         static const Tu32 XuiSizeOfStatus    = sizeof(
TcStatus );
00025     protected:      // Protected Attributes
00026         TcIdentifier voID;
00027         TcStatus     voStatus;
00028         Tu64         vulTimestamp;
00029         Tu64         vulData;
00031     public:          // Public Methods
00032         TcAlert ( void );
00033         ~TcAlert( void );
00034         TcAlert ( const TcAlert& aorAlert );
00035         TcAlert& operator=( const TcAlert& aorAlert );
00036
00037         void MSetIdentifier( const TcIdentifier& aorID );
00038         void MSetStatus    ( const TcStatus&     aorStatus );
00039         void MSetTimestamp ( const Tu64          aulTimestamp );
00040         void MSetData      ( const Tu64          aulData );
00041
00042         TcIdentifier MGetIdentifier( void ) const;
00043         TcStatus     MGetStatus    ( void ) const;
00044         Tu64         MGetTimestamp ( void ) const;
00045         Tu64         MGetData      ( void ) const;
00046     };
00047 }
00048 }
00049
```

7.5 C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/ComponentId.h File Reference

This graph shows which files directly or indirectly include this file:



Namespaces

- GNCommon
Namespace containing Common components and infrastrucutre.
- GNCommon::NNotification
Namespace containing system Alerts.

Enumerations

- enum `GNCommon::NNotification::TcComponentId` : `Tu8` { `GNCommon::NNotification::TcComponentId::XeNone` = 0, `GNCommon::NNotification::TcComponentId::XeServer` = 1, `GNCommon::NNotification::TcComponentId::XeSensor` = 2 }
Enumeration of Alert Component Identifiers.

7.6 ComponentId.h

```

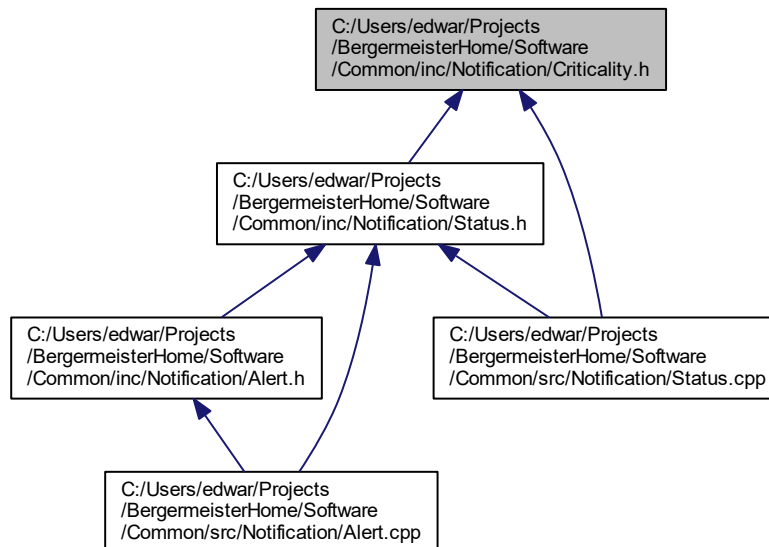
00001
00005 #pragma once
00006
00007 namespace GNCommon
00008 {
00009     namespace NNotification
00010     {
00012         enum class TcComponentId : Tu8
00013         {
00014             XeNone = 0,
00015             XeServer = 1,
00016             XeSensor = 2
00017         };
00018     }
00019 }
00020

```

7.7 C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/Criticality.h File Reference

Package interface for the Alert Criticality Enumeration.

This graph shows which files directly or indirectly include this file:



Namespaces

- [GNCommon](#)
Namespace containing Common components and infrastrucutre.
- [GNCommon::NNotification](#)
Namespace containing system Alerts.

Enumerations

- enum [GNCommon::NNotification::TcCriticality](#) : Tu8 { [GNCommon::NNotification::TcCriticality::XeNone](#) = 0, [GNCommon::NNotification::TcCriticality::XeNotice](#) = 1, [GNCommon::NNotification::TcCriticality::XeWarning](#) = 2, [GNCommon::NNotification::TcCriticality::XeAlarm](#) = 3 }

7.7.1 Detailed Description

Package interface for the Alert Criticality Enumeration.

Definition in file [Criticality.h](#).

7.8 Criticality.h

```

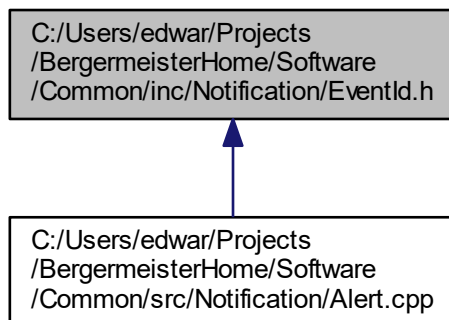
00001
00005 #pragma once
00006
00007 namespace GNCommon
00008 {
00009     namespace NNotification
00010     {
00012         enum class TcCriticality : Tu8
00013         {
00014             XeNone      = 0,
00015             XeNotice    = 1,
00016             XeWarning   = 2,
00017             XeAlarm     = 3
00018         };
00019     }
00020 }
00021

```

7.9 C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/EventId.h File Reference

Package interface for the Event Identifier Enumeration.

This graph shows which files directly or indirectly include this file:



Namespaces

- [GNCommon](#)
Namespace containing Common components and infrastrucutre.
- [GNCommon::NNotification](#)
Namespace containing system Alerts.

Enumerations

- enum [GNCommon::NNotification::TcEventId](#) : Tu32 { **XeIdentifier**, **XeStatus**, **XeTimestamp**, **XeData** }

7.9.1 Detailed Description

Package interface for the Event Identifier Enumeration.

Definition in file [EventId.h](#).

7.10 EventId.h

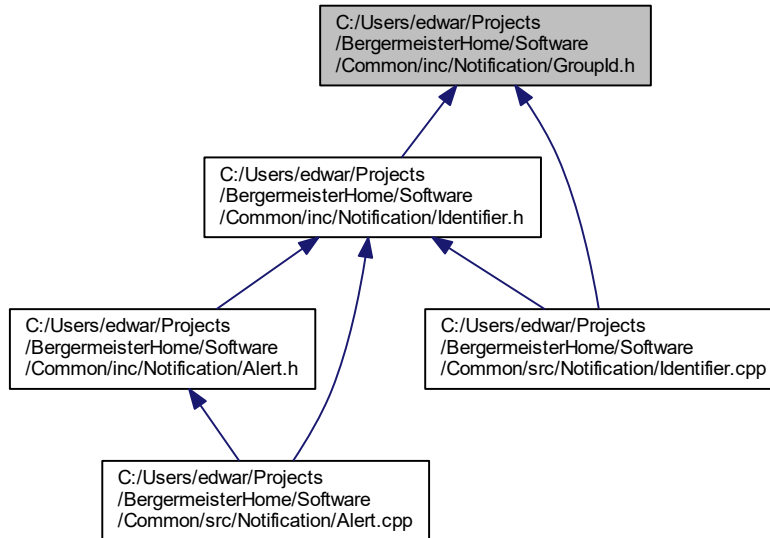
```

00001
00005 #pragma once
00006
00007 namespace GNCommon
00008 {
00009     namespace NNotification
00010     {
00012         enum class TcEventId : Tu32
00013         {
00014             XeIdentifier,
00015             XeStatus,
00016             XeTimestamp,
00017             XeData
00018         };
00019     }
00020 }
00021
  
```

7.11 C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/GroupId.h File Reference

Package interface for the Group Identifier Enumeration.

This graph shows which files directly or indirectly include this file:



Namespaces

- [GNCommon](#)
Namespace containing Common components and infrastrucutre.
- [GNCommon::NNotification](#)
Namespace containing system Alerts.

Enumerations

- enum [GNCommon::NNotification::TcGroupId](#) : Tu8 { [GNCommon::NNotification::TcGroupId::XeNone](#) = 0, [GNCommon::NNotification::TcGroupId::XeOne](#) = 1 }

7.11.1 Detailed Description

Package interface for the Group Identifier Enumeration.

Definition in file [GroupId.h](#).

7.12 GroupId.h

```

00001
00005 #pragma once
00006
00007 namespace GNCommon
00008 {
00009     namespace NNotification
00010     {
00012         enum class TcGroupId : Tu8
00013         {
00014             XeNone      = 0,
00015             XeNetwork    = 1
00016         };
00017     }
00018 }
    
```

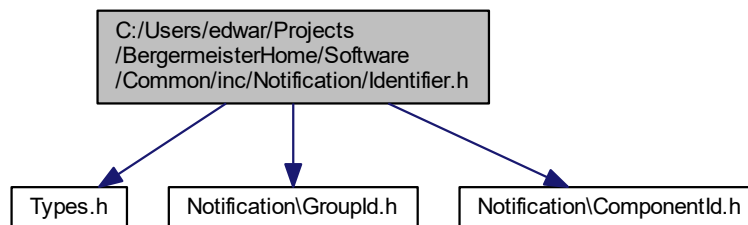
7.13 C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/Identifier.h File Reference

Package interface for the Alert Identifier.

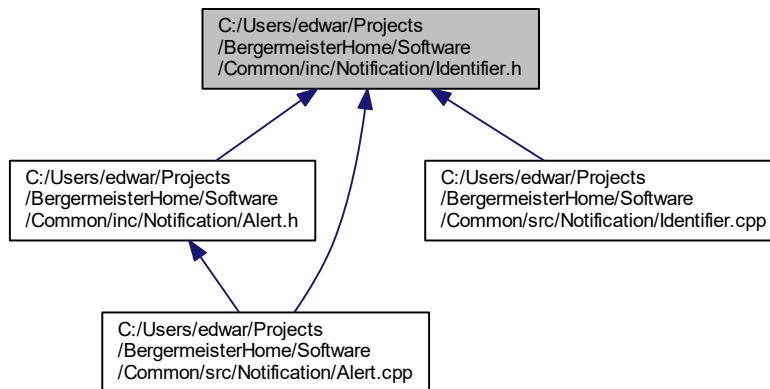
```

#include <Types.h>
#include <Notification\GroupId.h>
#include <Notification\ComponentId.h>
    
```

Include dependency graph for Identifier.h:



This graph shows which files directly or indirectly include this file:



Classes

- class [GNCommon::NNotification::TcIdentifier](#)

Namespaces

- [GNCommon](#)
Namespace containing Common components and infrastrucutre.
- [GNCommon::NNotification](#)
Namespace containing system Alerts.

7.13.1 Detailed Description

Package interface for the Alert Identifier.

Definition in file [Identifier.h](#).

7.14 Identifier.h

```

00001
00005 #pragma once
00006
00007 #include <Types.h>
00008 #include <Notification\GroupId.h>
00009 #include <Notification\ComponentId.h>
00010
00011 namespace GNCommon
00012 {
00013     namespace NNotification
00014     {
00016         class TcIdentifier
00017         {
00018         public:           // Public Attributes
00019             Tu8         vucIndex;
  
```

```

00020         TcGroupId      voGroup;
00021         TcComponentId voCompDet;
00022         TcComponentId voCompGen;
00024     public:          // Public Methods
00025         TcIdentifier ( void );
00026         TcIdentifier ( const TcIdentifier& aorIdentifier );
00027         ~TcIdentifier( void );
00028         TcIdentifier& operator=( const TcIdentifier& aorIdentifier );
00029
00030         Tb8 operator==( const TcIdentifier& aorIdentifier );
00031         Tb8 operator!=( const TcIdentifier& aorIdentifier );
00032     };
00033 }
00034 }

```

7.15 C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/Notification/Status.h File Reference

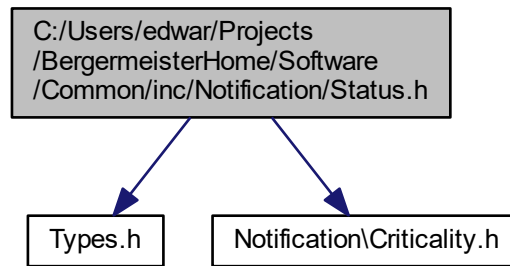
Package interface for the Alert Status.

```

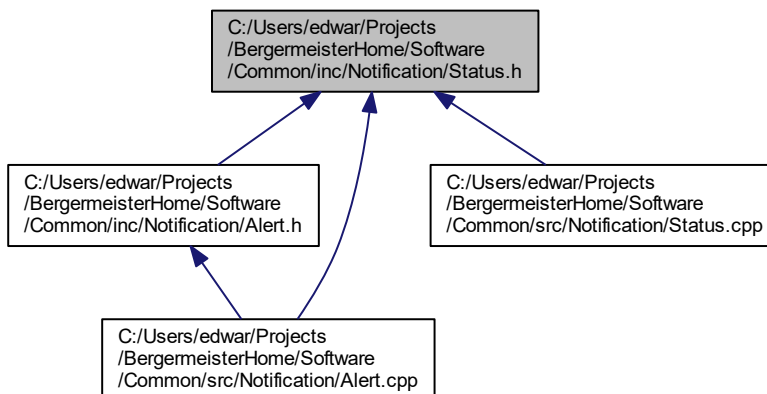
#include <Types.h>
#include <Notification\Criticality.h>

```

Include dependency graph for Status.h:



This graph shows which files directly or indirectly include this file:



Classes

- class [GNCommon::NNotification::TcStatus](#)

Namespaces

- [GNCommon](#)
Namespace containing Common components and infrastrucutre.
- [GNCommon::NNotification](#)
Namespace containing system Alerts.

7.15.1 Detailed Description

Package interface for the Alert Status.

Definition in file [Status.h](#).

7.16 Status.h

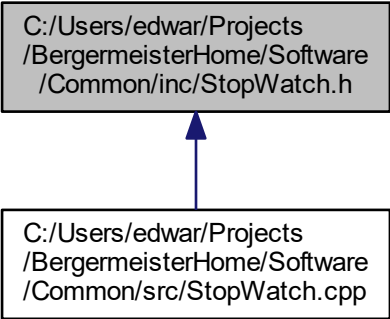
```

00001
00005 #pragma once
00006
00007 #include <Types.h>
00008 #include <Notification\Criticality.h>
00009
00010 namespace GNCommon
00011 {
00012     namespace NNotification
00013     {
00015         class TcStatus
00016         {
00017         public:           // Public Attributes
00018             Tu8         vucActive      : 1;
  
```

```
00019         Tu8           vucAcknowledged : 1;
00020         Tu8           vucCleared      : 1;
00021         Tu8           vucTrigger      : 1;
00022         Tu8           vucSpare1       : 4;
00023         TcCriticality voCriticality;
00024         Tu8           vucSpare2;
00025         Tu8           vucChildren;
00027     public:           // Public Methods
00028         TcStatus ( void );
00029         TcStatus ( const TcStatus& aorStatus );
00030         ~TcStatus( void );
00031         TcStatus& operator=( const TcStatus& aorStatus );
00032
00033         Tb8 operator==( const TcStatus& aorStatus );
00034         Tb8 operator!=( const TcStatus& aorStatus );
00035     };
00036 }
00037 }
```

7.17 C:/Users/edwar/Projects/BergermeisterHome/Software/Common/inc/StopWatch.h File Reference

This graph shows which files directly or indirectly include this file:



Classes

- class [GNCommon::GTcStopWatch](#)

Namespaces

- [GNCommon](#)
Namespace containing Common components and infrastrucutre.

7.17.1 Detailed Description

Package interface for the Stop Watch class interface

Definition in file [StopWatch.h](#).

Typedefs

- typedef bool [GNCommon::Tb8](#)
- typedef char [GNCommon::Tc8](#)
- typedef signed char [GNCommon::Ti8](#)
- typedef unsigned char [GNCommon::Tu8](#)
- typedef signed short [GNCommon::Ti16](#)
- typedef unsigned short [GNCommon::Tu16](#)
- typedef signed long [GNCommon::Ti32](#)
- typedef unsigned long [GNCommon::Tu32](#)
- typedef signed long long [GNCommon::Ti64](#)
- typedef unsigned long long [GNCommon::Tu64](#)
- typedef float [GNCommon::Tf32](#)
- typedef double [GNCommon::Tf64](#)

7.19.1 Detailed Description

Common Framework namespace, type definitions, and coding style guide Defines the common namespace ([GNCommon](#)), common primitive types, and provides the style guide to be used.

```
* Style Guide
*
* (S)cope:
*
*      | Priv | Pub | Global |
*      |-----|-----|-----|
* Class Variable | v | V | ---- |
* Stack Variable | k | --- | ---- |
*      Argument | a | --- | ---- |
*      Typedef | t | T | GT |
* Constant ROM | x | X | GX |
*      Method | m | M | GM |
*
* (T)ype:
*
*      | Prefix |
*      |-----|
*      Tb8 | b |
*      Tc8 | c |
*      Ti8 | c |
*      Tu8 | uc |
*      Ti16 | s |
*      Tu16 | us |
*      Ti32 | i |
*      Tu32 | ui |
*      Ti64 | l |
*      Tu64 | ul |
*      Tf32 | f |
*      Tf64 | d |
*
* (O)perator:
*
*      | Prefix |
*      |-----|
*      pointer | p |
*      reference | r |
*
* Naming Convention:
*      STOCamelCaseName
*      GMFunctionGlobal
*
```

Definition in file [Types.h](#).

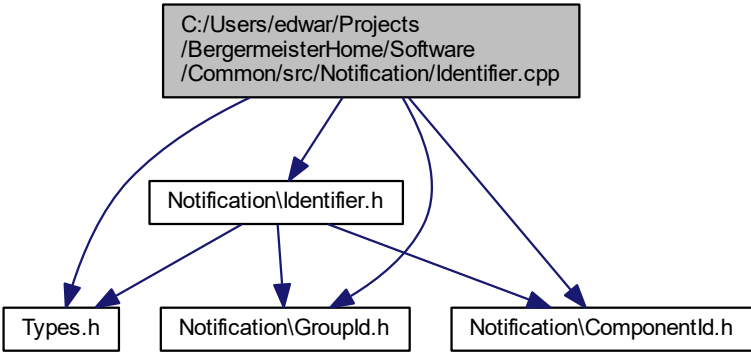
7.20 Types.h

```
00001
00048 #pragma once
00049
00051 namespace GNCommon
00052 {
00053
00054     typedef          bool   Tb8;
00055     typedef          char   Tc8;
00056     typedef signed   char   Ti8;
00057     typedef unsigned  char   Tu8;
00058     typedef signed   short  Ti16;
00059     typedef unsigned  short  Tu16;
00060     typedef signed   long   Ti32;
00061     typedef unsigned  long   Tu32;
00062     typedef signed   long long Ti64;
00063     typedef unsigned  long long Tu64;
00064     typedef          float  Tf32;
00065     typedef          double Tf64;
00067     static const Tu32 XuiSizeOfTb8  = sizeof( Tb8 );
00068     static const Tu32 XuiSizeOfTi8   = sizeof( Ti8 );
00069     static const Tu32 XuiSizeOfTu8   = sizeof( Tu8 );
00070     static const Tu32 XuiSizeOfTi16  = sizeof( Ti16 );
00071     static const Tu32 XuiSizeOfTu16  = sizeof( Tu16 );
00072     static const Tu32 XuiSizeOfTi32  = sizeof( Ti32 );
00073     static const Tu32 XuiSizeOfTu32  = sizeof( Tu32 );
00074     static const Tu32 XuiSizeOfTi64  = sizeof( Ti64 );
00075     static const Tu32 XuiSizeOfTu64  = sizeof( Tu64 );
00076     static const Tu32 XuiSizeOfTf32  = sizeof( Tu64 );
00077     static const Tu32 XuiSizeOfTf64  = sizeof( Tu64 );
00078 }
```

7.21 C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/Notification/Identifier.cpp
File Reference

```
#include <Types.h>
#include <Notification\GroupId.h>
#include <Notification\ComponentId.h>
#include <Notification\Identifier.h>
```

Include dependency graph for Identifier.cpp:



7.21.1 Detailed Description

Package implementation for the Alert Identifier
Definition in file [Identifier.cpp](#).

7.22 Identifier.cpp

```

00001
00006 #include <Types.h>
00007 #include <Notification\GroupId.h>
00008 #include <Notification\ComponentId.h>
00009 #include <Notification\Identifier.h>
00010
00011 using namespace GNCommon;
00012 using namespace GNCommon::NNotification;
00013
00027 TcIdentifier::TcIdentifier( void )
00028 {
00029     this->vucIndex = 0;
00030     this->voGroup = TcGroupId::XeNone;
00031     this->voCompDet = TcComponentId::XeNone;
00032     this->voCompGen = TcComponentId::XeNone;
00033 }
00034
00048 TcIdentifier::TcIdentifier( const TcIdentifier& aorIdentifier )
00049 {
00050     *this = aorIdentifier;
00051 }
00052
00066 TcIdentifier::~TcIdentifier( void )
00067 {
00068     // Nothing to Destruct
00069 }
00070
00084 TcIdentifier& TcIdentifier::operator=( const
TcIdentifier& aorIdentifier )
00085 {
00086     this->vucIndex = aorIdentifier.vucIndex;
00087     this->voGroup = aorIdentifier.voGroup;
00088     this->voCompDet = aorIdentifier.voCompDet;
00089     this->voCompGen = aorIdentifier.voCompGen;
00090
00091     return( *this );
00092 }
00093
00107 Tb8 TcIdentifier::operator==( const TcIdentifier& aorIdentifier )
00108 {
00109     Tb8 kbEqual = true; // Assume Equal
00110
00111     if ( ( this->vucIndex != aorIdentifier.vucIndex ) ||
00112         ( this->voGroup != aorIdentifier.voGroup ) ||
00113         ( this->voCompDet != aorIdentifier.voCompDet ) ||
00114         ( this->voCompGen != aorIdentifier.voCompGen ) )
00115     {
00116         kbEqual = false;
00117     }
00118
00119     return( kbEqual );
00120 }
00121
00135 Tb8 TcIdentifier::operator!=( const TcIdentifier& aorIdentifier )
00136 {
00137     return( !( *this == aorIdentifier ) );
00138 }
00139

```

7.23 C:/Users/edwar/Projects/BergermeisterHome/Software/Common/src/Notification/Status.cpp File Reference

Package implementation for the Alert Status.

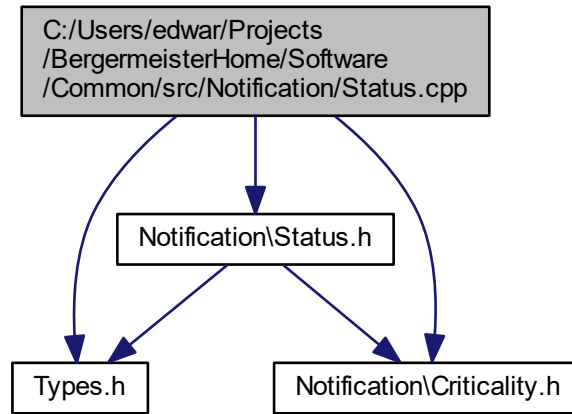
```

#include <Types.h>
#include <Notification\Criticality.h>

```

```
#include <Notification\Status.h>
```

Include dependency graph for Status.cpp:



7.23.1 Detailed Description

Package implementation for the Alert Status.

Definition in file [Status.cpp](#).

7.24 Status.cpp

```

00001
00005 #include <Types.h>
00006 #include <Notification\Criticality.h>
00007 #include <Notification\Status.h>
00008
00009 using namespace GNCommon;
00010 using namespace GNCommon::NNotification;
00011
00025 TcStatus::TcStatus( void )
00026 {
00027     this->vucActive = false;
00028     this->vucAcknowledged = false;
00029     this->vucCleared = false;
00030     this->vucTrigger = false;
00031     this->vucSpare1 = 0;
00032     this->voCriticality = TcCriticality::XeNone;
00033     this->vucSpare2 = 0;
00034     this->vucChildren = 0;
00035 }
00036
00050 TcStatus::TcStatus( const TcStatus& aorStatus )
00051 {
00052     *this = aorStatus;
00053 }
00054
00068 TcStatus::~~TcStatus( void )
00069 {
00070     // Nothing to destruct
00071 }
00072
00073
  
```

```

00087 TcStatus& TcStatus::operator=( const TcStatus& aorStatus )
00088 {
00089     this->vucActive           = aorStatus.vucActive;
00090     this->vucAcknowledged     = aorStatus.vucAcknowledged;
00091     this->vucCleared          = aorStatus.vucCleared;
00092     this->vucTrigger          = aorStatus.vucTrigger;
00093     this->vucSpare1           = aorStatus.vucSpare1;
00094     this->voCriticality        = aorStatus.voCriticality;
00095     this->vucSpare2           = aorStatus.vucSpare2;
00096     this->vucChildren          = aorStatus.vucChildren;
00097
00098     return( *this );
00099 }
00100
00114 Tb8 TcStatus::operator==( const TcStatus& aorStatus )
00115 {
00116     Tb8 kbEqual = true; // Assume Equal
00117
00118     if ( ( this->vucActive           != aorStatus.vucActive           ) ||
00119         ( this->vucAcknowledged     != aorStatus.vucAcknowledged     ) ||
00120         ( this->vucCleared          != aorStatus.vucCleared          ) ||
00121         ( this->vucTrigger          != aorStatus.vucTrigger          ) ||
00122         ( this->vucSpare1           != aorStatus.vucSpare1           ) ||
00123         ( this->voCriticality        != aorStatus.voCriticality        ) ||
00124         ( this->vucSpare2           != aorStatus.vucSpare2           ) ||
00125         ( this->vucChildren          != aorStatus.vucChildren          ) )
00126     {
00127         kbEqual = false;
00128     }
00129
00130     return( kbEqual );
00131 }
00132
00146 Tb8 TcStatus::operator!=( const TcStatus& aorStatus )
00147 {
00148     return( !( *this == aorStatus ) );
00149 }
00150

```


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