
AIMMS Function Reference - Error Handling Functions

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Error Handling Functions

AIMMS supports the following functions for error handling:

- `errh::Adapt`
- `errh::Attribute`
- `errh::Category`
- `errh::Code`
- `errh::Column`
- `errh::CreationTime`
- `errh::Filename`
- `errh::InsideCategory`
- `errh::IsMarkedAsHandled`
- `errh::Line`
- `errh::MarkAsHandled`
- `errh::Message`
- `errh::Multiplicity`
- `errh::Node`
- `errh::NumberOfLocations`
- `errh::Severity`

errh::Adapt

The procedure `errh::Adapt` adapts an error with the specified information.

```
errh::Adapt(  
  err,      ! (input) an element  
  severity, ! (optional input) an element  
  message,  ! (optional input) a string  
  category, ! (optional input) an element  
  code      ! (optional input) an element  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

severity

An element in the set `errh::AllErrorSeverities`.

message

A string describing the problem and possibly suggestions for repairing the problem.

category

An element in the set `errh::AllErrorCategories`, indicating the problem category to which the error belongs.

code

An element with root set `errh::ErrorCodes`. The element will be added to the set `errh::ErrorCodes` if needed.

Return value:

Returns 1 if adapting the error is successful, 0 otherwise. In the latter case additional error(s) have been raised.

Remarks:

When `err` doesn't reference an error in the set `errh::PendingErrors` an additional error will be raised.

If the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The functions `errh::Severity`, `errh::Message`, `errh::Category` and `errh::Code`. The predeclared identifiers `errh::PendingErrors`, `errh::AllErrorSeverities`, `errh::AllErrorCategories` and `errh::ErrorCodes`.

errh::Attribute

The function `errh::Attribute` returns the identifier or node in which the error occurred.

```
errh::Attribute(  
    err, ! (input) an element  
    loc  ! (optional input) an integer, default 1.  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

loc

An integer in the range { 1 .. `errh::NumberOfLocations(err)` }.

Return value:

Returns an element in `AllAttributeNames` if the information is available and the empty element otherwise.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The functions `errh::Node`, `errh::Line` and `errh::NumberOfLocations`. The predeclared identifiers `errh::PendingErrors` and `AllAttributeNames`.

errh::Category

The function `errh::Category` returns the error category to which the error belongs.

```
errh::Category(  
    err ! (input) an element  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

Return value:

Returns an element in `errh::AllErrorCategories` if the information is available and the empty element otherwise.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The function `errh::Code`, `errh::InsideCategory`. The predeclared identifiers `errh::PendingErrors` and `errh::AllErrorCategories`.

errh::Code

The function `errh::Code` returns the identification code of the format string.

```
errh::Code(  
    err ! (input) an element  
)
```

Arguments:

err
An element in the set `errh::PendingErrors` referencing an error.

Return value:

Returns an element in `errh::ErrorCodes` if the information is available and the empty element otherwise.

Remarks:

When *err* doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The function `errh::Category` and the procedure `errh::Adapt`. The predeclared identifiers `errh::ErrorCodes` and `errh::PendingErrors`.

errh::Column

The function `errh::Column` returns the column number within the line in the file in which the error occurred during reading from file.

```
errh::Column(  
    err ! (input) an element  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

Return value:

Returns a column number if the information is available and 0 otherwise.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The functions `errh::Line` and `errh::Filename`. The predeclared identifier `errh::PendingErrors`.

errh::CreationTime

The function `errh::CreationTime` returns the creation time of the error.

```
errh::CreationTime(  
    err, ! (input) an element  
    fmt  ! (optional) a format string.  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

fmt

A string that holds the date and time format used in the returned string. Valid format strings are described in Section 31.7. When this argument is not given, or if `fmt` is not a valid string format, the full reference date format “%c%y-%m-%d %H:%M:%S” will be used.

Return value:

Returns the creation time of the error as a string.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The function `CurrentToString` and the predeclared identifier `errh::PendingErrors`.

errh::Filename

The function `errh::Filename` returns the file in which the error occurred during reading from file

```
errh::Filename(  
    err ! (input) an element  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

Return value:

Returns a string containing the filename in which the error occurred, if that error occurred during reading from file and the empty string otherwise.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The functions `errh::Line` and `errh::Column`. The predeclared identifier `errh::PendingErrors`.

errh::InsideCategory

The function `errh::InsideCategory` returns 1 if the error is inside the given category.

```
errh::InsideCategory(  
    err, ! (input) an element  
    cat ! (input) an element  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

cat

An element in the set `errh::AllErrorCategories` referencing an error.

Return value:

Returns 1 if *err* is inside the category *cat* and 0 otherwise.

Remarks:

When *err* doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The functions `errh::Code` and `errh::Category`. The predeclared identifiers `errh::PendingErrors` and `errh::AllErrorCategories`.

errh::IsMarkedAsHandled

The function `errh::IsMarkedAsHandled` returns 1 if the error is marked as handled and 0 otherwise.

```
errh::IsMarkedAsHandled(  
    err ! (input) an element  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

Return value:

Returns 1 if the error is marked as handled and 0 otherwise.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The function `errh::MarkAsHandled` and the predeclared identifier `errh::PendingErrors`.

errh::Line

The function `errh::Line` returns the line number in the file or attribute in which the error occurred.

```
errh::Line(  
  err, ! (input) an element  
  loc  ! (optional input) an integer, default 1.  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

loc

An integer in the range { 1 .. `errh::NumberOfLocations(err)` }.

Return value:

Returns a line number if the information is available and 0 otherwise.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The function `errh::Column`, `errh::Filename`, `errh::Attribute`, `errh::Node` and `errh::NumberOfLocations`. The predeclared identifier `errh::PendingErrors`.

errh::Message

The function `errh::Message` returns a description of the error.

```
errh::Message(  
    err ! (input) an element  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

Return value:

Returns a string if the information is available and the empty string otherwise.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The procedure `errh::Adapt` and the predeclared identifier `errh::PendingErrors`.

errh::MarkAsHandled

The procedure `errh::MarkAsHandled` marks or unmarks an error as handled.

```
errh::MarkAsHandled(  
    err,      ! (input) an element  
    actually ! (optional input), default 1.  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

actually

When 1, the error `err` is marked as handled, when 0, the mark is cleared.

Return value:

Returns a line number if the information is available and 0 otherwise.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The function `errh::IsMarkedAsHandled`. The predeclared identifier `errh::PendingErrors`.

errh::Multiplicity

The function `errh::Multiplicity` returns the number of occurrences of this error.

```
errh::Multiplicity(  
    err ! (input) an element  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

Return value:

Returns the number of occurrences of this error.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The functions `errh::Code`, `errh::Category`, `errh::Message` and `errh::Severity`.
The predeclared identifier `errh::PendingErrors`

errh::Node

The function `errh::Node` returns the identifier or node in which the error occurred.

```
errh::Node(  
  err, ! (input) an element  
  loc ! (optional input) an integer, default 1.  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

Return value:

Returns an element in `AllSymbols` if the information is available and the empty element otherwise.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The functions `errh::Attribute`, `errh::Line` and `errh::NumberOfLocations`. The predeclared identifiers `errh::PendingErrors` and `AllSymbols`.

errh::NumberOfLocations

The function `errh::NumberOfLocations` returns the number of locations stored to which this error is relevant. The relevant locations are file (if any) that is being read, and the procedures currently active.

```
errh::NumberOfLocations(  
    err ! (input) an element  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

Return value:

Returns the number locations for which this error is relevant.

Remarks:

When *err* doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The functions `errh::Node`, `errh::Attribute` and `errh::Line`. The predeclared identifier `errh::PendingErrors`.

errh::Severity

The function `errh::Severity` returns the severity of the error.

```
errh::Severity(  
    err ! (input) an element  
)
```

Arguments:

err

An element in the set `errh::PendingErrors` referencing an error.

Return value:

Returns an element in `errh::AllErrorSeverities` if the information is available and the empty element otherwise.

Remarks:

When `err` doesn't reference an element in `errh::PendingErrors` or when the current filter is the filter `To Global Collector` an additional error will be raised.

See also:

The procedures `errh::Adapt` and `errh::MarkAsHandled`. The predeclared identifiers `errh::PendingErrors` and `errh::AllErrorSeverities`.