Autodesk® Topobase™

Autodesk® Topobase™ Feature Rule Reference

Autodesk®

Published by:
Autodesk, Inc.
111 McInnis Parkway
San Rafael, CA 94903, USA

Contents

Chapter 1 **Autodesk Topobase Feature Rules** 1

Introduction 1
What This Reference Covers 1
Topobase Feature Rules Overview 2
Basic Feature Rules 4
Server Side Feature Rules 4
Delete Child Features 5
Truncate Area 6
Truncate Exact_Area 7
Round Geometry 7
Check Perimeter 8
Extract From Collection 9
Validate Intersection Polygon-Main (Locator) 10
Validate Intersection Polygon-AD (Locator) 11
Validate Intersection Line rule group 11
Validate Intersection Polygon (Spatial) rule group 13
Compound Polygon rule group 14
Validate Geometry 17
Compound Line rule group 17
Label rule group 20
Client Side Feature Rules 23
Basic Feature Rules 23
COGO Feature Rules 26
Area Topology Feature Rules 28

Logical Topology Feature Rules . . . 33
Template Feature Rules . . . 36
Utility Feature Rules . . . 39
Extension Feature Rules . . . 60
PLT_PreventInsertOnTemlateInstances_BI . . . 61
PLT_PreventEditGeometryOnTemlateInstances_BU . . . 62
PLT_PreventEditAttributesOnTemlateInstances_BU . . . 63
PLT_PreventDeleteOnTemlateInstances_BD . . . 64
PLT_SetFixedPosition_AIU . . . 65
PLT_ValidateMapPlaceHolder_BIU . . . 66
PLT_MoveModelInsertionPoint_AIU . . . 67
PLT_PreventDeleteMainMapPlaceholder_BD . . . 67
PLT_UpdatePlotCover rule group . . . 68
PLT_PreventDeleteOfRootGroup_BD . . . 69
PLT_PreventUpdateOfRootGroup_BU . . . 69
PLT_ValidatePlotGroup_BIU . . . 70
PLT_CreateMainPlotCover_AIU . . . 70
PLT_ValidatePlot_BIU . . . 71
PLT_DetachPlotInstance_BD . . . 71
Topobase Feature Rules by Module . . . 72
Topobase Electric CE . . . 72
EL_CreateSegmentCrossSection rule group . . . 72
EL_DeleteStructureLine_BD . . . 74
EL_DeleteSegment_BD . . . 74
EL_MoveDuctInCrossSection_BU . . . 75
EL_CreateDuctCrossSection rule group . . . 75
EL_CreateDevice_AI . . . 77
EL_CreateConductor_AI . . . 77
EL_ForbidDuplicateDevice_BIU . . . 78
EL_MoveConductorInCrossSection_BU . . . 78
EL_ScaleCrossSection_BU . . . 79
EL_MoveCsLegendDecoration_BU . . . 80
EL_MoveAccordingSnappoint_BU . . . 81
EL_MoveAccordingSegment rule group . . . 81
EL_DeleteCSConductor rule group . . . 83
EL_DeleteElLine_BD . . . 84
EL_DeleteConductor rule group . . . 85
EL_DeleteCSDuct rule group . . . 86
EL_DeleteDuct rule group . . . 87
EL_DeleteDuctArea rule group . . . 89
EL_DeleteStructurePoint_BD . . . 90
EL_CreateSegmentBorders_BI . . . 90
EL_UpdateSegmentBorders_StrLine_BU . . . 91
EL_UpdateSegmentBorders_Segment_BU . . . 91
EL_DeleteSegmentBorders rule group . . . 92
EL_AutoSplitSegment_AI . . . 93

Topobase Electric NA 93
EL_DeleteSegment rule group 94
EL_CreateSegmentCrossSection rule group 95
EL_DeleteSegmentCrossSection_BD 96
EL_CreatePoleTowerCrossSection rule group 97
EL_CreateDuctCrossSection rule group 98
EL_MoveAccordingSnappoint_BU 100
EL_RermoveSnappointUnderneath_BD 100
EL_DeleteSanppoint_BD 101
EL_DeleteCSConductor rule group 101
EL_DeleteConductor rule group 103
EL_DeleteCSDuct rule group 104
EL_DeleteDuct rule group 106
EL_MoveDuctInCrossSection_BU 107
EL_MoveConductorInCrossSection_BU 108
EL_ScaleCrossSection_BU 109
EL_MoveCsLegendDecoration_BU 109
EL_ComputeNextMaintDate_BIU 110
EL_ForbidDupliacteDevice_BIU 110
EL_MoveAccordingSegment rule group 111
ValidateElectricTopology rule group 112
Topobase Gas 114
GA_ComputeNextMaintDate_BIU 114
GA_RejectDuplicatePoints_BIU 115
GA_SetPressureZone_BI 116
GA_SetPressureZone_BIU rule group 117
GA_SetSupplyZone_BI 119
GA_SetSupplyZone rule group 120
Topobase Wastewater 122
WW_ComputeNextMaintDate_BIU 122
WW_CompNbrOfSectionsManhole_AI 123
WW_CompNbrOfSectionsManhole_AU 124
WW_ComputeNbrOfSections rule group 124
WW_ConnectCover_BIU 127
WW_ConnectCoverPolygon_AIU 128
WW_ComputeSubDrainArea_BIU 128
WW_ConnSectionWashingArea_BI 129
WW_ConnSectionWashingArea_BU 130
WW_ConnWashingAreaSection_BIU 130
WW_ConnSubAreaWDrainArea_BIU 131
WW_ConnDrainAreaWSubArea_BIU 132
WW_ComputeSectionElevation_BIU 132
WW_ConnSubDrainAreaSection_BI 133
WW_ConnSectionSubDrainArea_BI 134
WW_ConnSubDrainAreaSection_BU 134
WW_ConnSubDrainAreaManhole_BIU 135

WW_ConnManholeSubDrainArea_BIU 136
WW_DeleteSectionObservation rule group 136
WW_DeleteManholeObservation rule group 138
WW_DeleteSiteObservation rule group 139
WW_CopyLengthSection_BI 140
WW_CopyLengthLine_AU 141
WW_CopyInputOutputZ_AI 141
WW_CopyInputOutputZ_BU 142
WW_SetFallHeightDefault_AI 143
WW_SetInputStepDefault_AI 143
WW_CalcPipeLengthLine_AU 144
WW_CalcPipeLengthPoint_AI 145
WW_CalcPipeLengthSection_BI 145
Topobase Water 146
RejectDuplicatePoints_BIU 146
SetPressureZone_BI 147
SetPressureZone rule group 148
SetSupplyZone_BI 150
SetSupplyZone rule group 152
Topobase Survey 154
Survey Delete NetplanLine 154
Survey Delete Measure Fieldpoint 155
Survey Delete Session Fieldpoint 155
Survey Delete Session File Rule Group 156
Survey Del Main FieldPoint Rule Group 157
Topobase Feature Rules Reference 158
Topobase Feature Rules A to L 158
Topobase Feature Rules M to S 162
Topobase Feature Rules T to Z 163

Index 167

Autodesk Topobase Feature Rules

Introduction

What This Reference Covers

This reference document describes Autodesk® Topobase™ feature rules. Feature rules enforce business rules by performing specific tasks on your data whenever you change an associated feature class in the database.

The reference provides a brief overview of the concept of feature rules and includes sections that describe the basic server-side and client-side rules, the rules that you can use with feature classes in the Coordinate Geometry (COGO), Template, and Plot extensions, and rules that you can associate with the specialized feature classes of the Topobase vertical application modules.

The topics in this reference that describe individual feature rules and feature rule groups provide the following information:

- Rule description
- Class and assembly locations (in the case of client-side feature rules)
- Rule type: client-side or server-side
- Rule applicability: before or after delete, insert, update
- Rule dependencies (if any)
- Rule parameters (if any)

- Feature class or classes to which this rule can be applied

The last section in the document comprises three subsections that list alphabetically all of the Topbase feature rules. If you know the name of a feature rule, but do not know if it is a basic server-side or client-side rule, or whether it is associated with an extension or vertical application module, find the rule in theTopobase Feature Rules Reference on page 158. Every rule listed in the reference links to its detailed information topic in this reference.

Working with feature rules in Topobase Administrator

[dwh::10.Sep -- Might decide to remove this section if we integrate procedures and tasks with the feature rule descriptions. If we do that, however, this document is no longer strictly a reference doc.]

The **Autodesk Topobase Administrator Guide** includes detailed information about the Topobase system table, feature rule priorities, and procedures for viewing, exploring, enabling, and disabling feature rules.

Adding feature rules programmatically

[dwh::10.Sep -- The reference to the Developer's Guide below should be an actual link when the TFR is incorporated into the Topobase doc set.]

If you are building your own vertical application module or customizing an existing module, you can add feature rule plug-ins to manage the feature rules of your application.

Refer to the **Adding Feature Rules** section in the **Autodesk Topobase Developer's Guide** for details about how to create a feature rules plug-in, how to write the rules themselves, set rule priorities, and how to install the new plug-in.

Topobase Feature Rules Overview

In Topobase, feature rules are associated with particular feature classes. They are like Oracle stored procedures and triggers and enforce business rules by performing specified tasks whenever you change a feature class in the database. Featrue rules help to maintain the integrity of data in the database.For example, when you update the database by moving a feature, an associated feature rule can ensure that the location of the label that describes the feature is also updated.

Topobase characterizes feature rules by whether they are stored in the database as server-side rules, or are written in a .NET language and stored in a dynamic linked library (DLL) as client-side rules. A further classification of client-side feature rules is by component and module.

Every Topobase document has available a basic set of feature rules. If you add a vertical application module or an extension to a Topobase document, you can associate module- or extension-specific feature rules with the feature classes in the document.

Data models use feature rule IDs to manage feature rules, rule group members, and parameters. Feature rule IDs are not unique, but they lie within certain ranges. Refer to the Feature Rule ID topic in the Administrator Guide for more information about feature rule ID values and ranges.

Basic feature rules

Every Topobase document provides the following basic feature rules:

- Server-side feature rules.
  When you create a Topobase document in the Data Model Administrator, the document contains several server-side feature rules. The TB_RULE_DEF table contains the server-side feature rules.
  Server-side feature rules A number of default server-side feature rules are available in Topobase documents that have been created using the data model administrator. They are stored in the system table TB_RULE_DEF. See also ???
- Client-side feature rules.
  Client-side feature rules control Coordinate Geometry (COGO) dimensioning, area topologies, logical topologies, templates, and the utility model.

Module feature rules

Module-specific feature rules control capabilities that are specific to the feature classes in a vertical application module. For example, you can associate a feature rule with the Duct feature class in the Electric CE module to create a conductor when Topobase creates the Duct. This feature rule is not applicable to feature classes in other modules.

The following vertical application modules have module-specific feature rules:

- Topobase Electric CE on page 72
- Topobase Electric NA on page 93
- Topobase Gas on page 114

- Topobase Wastewater on page 122
- Topobase Water on page 146
- Topobase Survey on page 154.

Extension feature rules

Topobase enables extension-specific feature rules when you add an extension to your document.

- Plot extension, see also Plot feature rules on page 60.

Basic Feature Rules

Server Side Feature Rules

[dwh::18.Sep -- This section needs more attention. Some feature rules have examples, some don't. Might have to leave the documentation of feature rule examples to phase 2 -- during the Everest writing cycle.]

Server Side Feature Rules

Server-side feature rules are procedures or triggers stored in the database that can run many queries or simple before-delete rules (BD) quickly. If you comfortable working with PL/SQL, you can create your own server-side feature rules.

When you use the Topobase Administrator to create documents, the Data Model Administrator enables server-side feature rules by default. The TB_RULE_DEF table contains the server-side feature rules.

You can identify server-side feature rules in the system tables by the NULL values associated with theTB_RULE_DEF.ASSEMBLY attribute. The value of a server-side TB_RULE_DEF.TRIGGER_TEXT attribute is the PL/SQL code that specifies the rule.

Server-side rules must adhere to Oracle trigger limitations. In particular, except for the changed row, row triggers cannot query or modify tables in jobs. Because of this, many server-side rules are implemented as a group of rules. A group of feature rules, or rule group, consists of a before-action rule on the row that inserts the ROWID of modified features into a temporary table, and an after-action rule that does the actual work.

Idwh::08.Sep -- original text] In the system tables, you can identify server-side feature rules by TB_RULE_DEF.ASSEMBLY = NULL and by TB_RULE_DEF.TRIGGER_TEXT is not NULL.
Copy of Topobase Administrator Guide > Feature Rule Reference > Server-Side Feature Rules.
Details to be added.

Delete Child Features

Delete Child Features maintains consistency between related features if the parent feature is deleted. The feature rule uses the option that is set in TB_RELATIONS.DELETE_CHILD.

IMPORTANT Do not disable this feature rule. If you want to modify feature class relationships, change the Relation Type in the TB_RELATIONS table. Refer to the Attribute Relations Settings topic in the Topobase Administrator Guide.

[dwh::08.Sep -- When this document is integrated into the full Topobase doc set, add xref to the relevant section in the Admin Guide. This comment (requested by Andreas) makes the Best Practices note below unnecessary.]

BEST PRACTICE We recommend that you do not disable this feature rule.

The following list shows examples of parent-child relationships between feature classes:

- Building feature class (parent) and label feature class (child).
- Domain table (parent) and feature class (child).

If you delete a building that has a label feature stored in the related label feature class, the related label feature will be deleted in accordance with the value of the DELETE_CHILD attribute (D = Delete feature when parent is deleted).

Name	**Delete Child Features**
Type	Server-side. After Delete (AD). Is System. Is Row.

Description	Cascade deletes child features along with TB_RELATIONS
Parameters	P1: feature class name P2: parent column name, default is FID.

When is this feature rule assigned ? When you perform any action that adds an entry to TB_RELATION, such as create a label feature class, or add an attribute with a relation ?

Truncate Area

Truncate Area cuts short the area value that is stored in the AREA attribute, and stores the new area value in the AREA_NOMINAL attribute. The feature rule executes when the feature geometry is modified.

BEST PRACTICE We recommend that you ....

Example:
For example, in land management applications, different types of area are stored. Needed

Name	**Truncate Area**
Type	Server-side. Before Insert (BI) Before Update (BU) Is System. Is Row.
Description	Calculates the truncated polygon area (from attribute AREA) in attribute AREA_NOMINAL. Can be applied to polygon feature classes.
Execute Column	GEOM
Parameters	P1: feature class name P2: number of decimals to truncate.

Truncate Exact_Area

Truncate Exact Area truncates the area that is stored in the attribute EXACT_AREA, and stores the value in the attribute AREA_NOMINAL. The feature rule is executed, when the feature geometry is modified.

Example:
Needed: Which feature classes have EXACT_AERA ?

Name	**Truncate Exact Area**
Type	Server-side Is System. Is Row. Before Insert (BI) Before Update (BU)
Description	Calculates the truncated polygon area (from attribute EXACT_AREA) in attribute AREA_NOMINAL.
Execute Column	GEOM
Parameters	P1: feature class name P2: number of decimals to truncate.

Round Geometry

The Round Geometry feature rule rounds the geometries of the line, point, and polygon feature classes with which it is associated. The feature rule is executed when the feature geometry is modified.

The purpose of the Round Geometry feature rule is to ensure that the ends of lines, for example, match exactly when a user snaps them together in Topobase Client. The feature rule compensates for the slight rounding errors that occur in geometric calculations and that could prevent the lines from snapping together.

If you have the Round Geometry feature rule enabled and the geometries you are working with do not match properly, it is possible that you are working with data (possibly imported data) that has not beed rounded. In the Data

Model Administrator, in Autodest Topobase Administrator, you can choose to round geometries on a single feature class or on all the feature classes in a data model.
[dwh::11.Sep -- Consider incorporating in the Admin Guide the procedure for rounding geometries on single and all feature classes in a data model. See TB Tech Discussion email thread 05.Aug.2008.]

Name	**Round Geometry**
Type	Server-side Before Insert (BI) Before Update (BU)
Description	Rounds the geometry to specified decimals.
Execute Column	GEOM
Parameters	P1: number of decimals to round. Default is 3.

Check Perimeter

Check Perimeter checks whether a feature lies within a given perimeter. See also Job Perimeter.

Name	**Check Perimeter**
Type	Server-side Is System. Is Row. BI, BU.
Description	Checks whether a feature is inside the selected perimeter, and if not, raises an exception.
Execute Column	GEOM

Parameters	P1: feature class name.

Extract From Collection

The Extract from Collection feature rule extracts a single geometry from a collection (a feature that contains different geometries, for example, a line and a point).
Needed.

This feature rule is useful when migrating data. For example, if you migrate features that contain more than one geometry into a Topobase point feature class, you can use the Extract from Collection feature rule to remove from the migrated feature only point and multipoint geometries.

Name	**Extract From Collection**
Type	Server-side
Description	Extracts specified geometry types from an Oracle collection feature (for Oracle 10g and higher).
Execute Column	GEOM
Parameters	P1: feature class name P2: extract type ■ 1: Point ■ 2: Line ■ 3:Polygon P3: extract type ■ 5: MultiPoint ■ 6: MultiLine ■ 7:MultiPolygon

See also:

- Feature Class Type: Collection

Validate Intersection Polygon-Main (Locator)

Validation of intersection polygons is executed by a group of two feature rules.

What does Locator indicate ? [dwh::22.Sep -- Perhaps 'Locator' indicates that these feature rules operate with the Locator feature of Oracle 10g/11g while those marked 'Spatial' operate only with the Spatial option for Oracle Enterprise?]

- Validate Intersection Polygon-Main (Locator)
- Validate Intersection Polygon-AD (Locator)

NOTE These rules can only be applied as a group. This group applies to Orale Locator.

Name	**Validate Intersection Polygon Main (Locator)**
Type	Server-side Member of a rule group. TB_RULE_GROUP.ID = 29. Before Insert (BI). Is System. Is Row.
Description	Validate intersection polygon and move invalid geometry to _TSER feature class (for Oracle 10g and higher).
Parameters	P1: error feature class name, default: _TSER P2: name of the intersection P3: decimals to round

See also:

- Feature Rule Group

Validate Intersection Polygon-AD (Locator)

Validation of intersection polygons is executed by a group of two feature rules.

- Validate Intersection Polygon-Main (Locator)
- Validate Intersection Polygon-AD (Locator)

NOTE These rules can only be applied as a group. This group applies to Orale Locator.

Name	**Validate Intersection Polygon AD (Locator)**
Type	Server-side Member of a rule group. TB_RULE_GROUP.ID = 29. Before Insert (BI). Is System. Is Row.
Description	Validate intersection polygon and move invalid geometry to _TSER feature class (for Oracle 10g and higher).
Parameters	P1: error feature class name. Default is _TSER P2: name of the intersection P3: decimals to round

See also:

- Feature Rule Group

Validate Intersection Line rule group

The Validate Intersection Line rule group validates intersection lines.

- Validate Intersection Line-Main
- Validate Intersection Line-AD

Validate Intersection Line Main

Name	**Validate Intersection Line Main**
Type	Server-side Before Insert (BI). Is System. Is Row.
Description	Validates intersection line and moves invalid geometry to _TSER feature class (for Oracle 10g and higher)
Parameters	P1: error feature class name; default: _TSER. P2: name of intersection.
Dependency	Member of a rule group.

Validate Intersection Line AD

Name	**Validate Intersection Line AD**
Type	Server-side After Delete (AD). Is System. Is Row.
Description	Validates intersection line and moves invalid geometry to _TSER feature class (for Oracle 10g and higher)
Parameters	P1: error feature class name; default: _TSER. P2: name of intersection.
Dependency	Member of a rule group.

Validate Intersection Polygon (Spatial) rule group

Validation of intersection polygons is executed by a group of two feature rules.

- Validate Intersection Polygon-Main (Spatial)
- Validate Intersection Polygon-AD (Spatial)

Validate Intersection Polygon-Main (Spatial)

Name	**Validate Intersection Polygon Main (Spatial)**
Type	Server-side Before Insert (BI). Is System. Is Row.
Description	Validate intersection polygon and move invalid geometry to _TSER feature class (for Oracle 10g and higher). For Oracle 10 g and higher, Spatial Extension
Parameters	P1: error feature class name, default: _TSER P2: name of the intersection P3: decimals to round
Dependency	Member of a rule group. The group applies to Orale Spatial.

Validate Intersection Polygon-AD (Spatial)

Name	**Validate Intersection Polygon AD (Spatial)**
Type	Server-side Before Insert (BI). Is System. Is Row.

Description	Validate intersection polygon and move invalid geometry to _TSER feature class (for Oracle 10g and higher). For Oracle 10 g and higher, Spatial Extension
Parameters	P1: error feature class name, default: _TSER P2: name of the intersection P3: decimals to round
Dependency	Member of a rule group. The group applies to Orale Spatial.

Compound Polygon rule group

Maintenance of compound polygon feature classes is executed by a group of feature rules. The Compound Polygon rule group generates compound polygons from child lines. When you create a compound feature class using the data model administrator, the rule group is applied automatically.

- Compound Row (BI)
- Compound Row (BU)
- Compound Row (AD)
- Compound Statement (AI)
- Compound Statement (AU)
- Compound Statement (AD)

This group applies to compound polygon feature classes.

Created a Compound Polygon, but no specific feature rules are available, neither assigned, nor unassigned ???; Also, a rule group with one rule is available: ID 80: Clear _TSER.)

See also:

- Feature Rule Group
- Data Model: Compounds

Compound Row BI (Polygon)

Name	**Compound Row (BI)**
Type	Server-side Before Insert (BI). Is System. Is Row.
Description	Generates compound polygon from child lines.
Dependency	Member of a rule group.

Compound Row BU (Polygon)

Name	**Compound Row (BU)**
Type	Server-side Before Update (BU). Is System. Is Row.
Description	Generates compound polygon from child lines.
Execute Column	GEOM
Dependency	Member of a rule group.

Compound Row AD (Polygon)

Name	**Compound Row (AD)**
Type	Server-side After Delete (AD). Is System. Is Row.

Description	Generates compound polygon from child lines.
Dependency	Member of a rule group.

Compound Statement AI (Polygon)

Name	**Compound Statement (AI)**
Type	Server-side After Insert (AI). Is System.
Description	Generates compound polygon from child lines.
Dependency	Member of a rule group.

Compound Statement AU (Polygon)

Name	**Compound Statement (AU)**
Type	Server-side After Update (AU). Is System.
Description	Generates compound polygon from child lines.
Execute Column	GEOM
Dependency	Member of a rule group.

Compound Statement AD (Polygon)

Name	**Compound Statement (AD)**
Type	Server-side After Delete (AD). Is System.
Description	Generates compound polygon from child lines.
Dependency	Member of a rule group.

Validate Geometry

The feature rules is exectued, when a feature is inserted, or updated.
The rule is applied when you ???, nor be default ??

Name	**Validate Geometry**
Type	Server-side Before Insert (BI); Before Update (BU). Is System. Is Row.
Description	Validates geometry before insert and raises an exception, if invalid.
Execute Column	GEOM
Parameters	P1: feature class name.

Compound Line rule group

Maintenance of compound line string feature classes is executed by a group of feature rules. The Compound Line String rule group generates compound

line strings from child lines. When you create a compound feature class using the data model administrator, the rule group is applied automatically.

- Compound Row (BI)
- Compound Row (BU)
- Compound Row (AD)
- Compound Statement (AI)
- Compound Statement (AU)
- Compound Statement (AD)

This group applies to compound polygon line string feature classes.

Insert Xref to Compound line strings.

Compound Row BI (Line)

[dwh:: 11.Sep -- removed Parameters row from table. See email from Karsten 08.Sep.]

Name	**Compound Row (BI)**
Type	Server-side Before Insert (BI). Is System. Is Row.
Description	Generates compound line string from child lines.
Dependency	Member of a rule group.

Compound Row BU (Line)

Name	**Compound Row (BU)**
Type	Server-side Before Update (BU). Is System. Is Row.

Description	Generates compound line string from child lines.
Execute Column	GEOM
Dependency	Member of a rule group.

Compound Row AD (Line)

Name	**Compound Row (AD)**
Type	Server-side After Delete (AD). Is System. Is Row.
Description	Generates compound line string from child lines.
Dependency	Member of a rule group.

Compound Statement AI (Line)

Name	**Compound Statement (AI)**
Type	Server-side After Insert (AI). Is System.
Description	Generates compound line string from child lines.
Dependency	Member of a rule group.

Compound Statement AU (Line)

Name	**Compound Statement (AU)**
Type	Server-side After Update (AU). Is System.
Description	Generates compound line string from child lines.
Execute Column	GEOM
Dependency	Member of a rule group.

Compound Statement AD (Line)

Name	**Compound Statement (AD)**
Type	Server-side After Update (AU). Is System.
Description	Generates compound line string from child lines.
Dependency	Member of a rule group.

Label rule group

The Label rule group that maintains consistency between features and their labels. The feature rules create auto labels, update label text, and move labels. When you create a label feature class, the rule group automatically is applied to the parent feature class.

More information needed about each rule.

- Label (LAE)

- Label (LAR)
- Label (LAS)
- Label (LBI)

See also:

- Feature Rule Group
- Data Model: Labels

Label (LAE)

Name	**Label (LAE)**
Type	Server-side Before Update (BU). Is System. Is Row.
Description	Creates auto labels, updates label text, and moves labels if necessary.
Dependency	Member of a rule group.

Label (LAR)

Name	**Label (LAR)**
Type	Server-side Before Insert (BI); Before Update (BU). Is System. Is Row.
Description	Creates auto labels, updates label text, and moves labels if necessary.
Execute Column	GEOM
Parameters	P1: feature class name

Dependency	Member of a rule group.

Label (LAS)

Name	**Label (LAS)**
Type	Server-side After Insert (AI); After Update (AU). Is System.
Description	Creates auto labels, updates label text, and moves labels if necessary.
Parameters	P1: feature class name
Dependency	Member of a rule group.

Label (LBI)

Name	**Label (LBI)**
Type	Server-side Before Insert (BI); Before Update (BU). Is System.
Description	Creates auto labels, updates label text, and moves labels if necessary.
Dependency	Member of a rule group.

Client Side Feature Rules

Basic Feature Rules

Basic Feature Rules

The Topobase application provides client-side feature rules, which Topobase uses when user interaction is involved or when operations require a large amount of memory or calculating power.

Add a table containing the 8 feature rules.
Basic client-side feature rules are described in ??

LineLength_BIU

The feature rule calculates the length of a line string feature, and stores the value in the attribute LENGTH. When you create a line feature class using Topobase Administrator, the rule automatically is applied.
Crossreference to Round Geometry (serverside ?)

Name	<**rule name**>
Location	Assembly: Topobase.BaseFeatureRules.dll Classname: LineLengthRules
Type	Client-side Before Insert (BI); Before Update (BU). Is System. Is Row.
Description	Calculates the length of a line before an insert or update.
Execute Column	GEOM

PolygonArea_BIU

The feature rule calculates the area of a polygon feature, and stores the value in the attribute AREA. When you create a line feature class using Topobase Administrator, the rule automatically is applied.

Name	**PolygonArea_BIU**
Location	Assembly: Topobase.BaseFeatureRules.dll Classname: PolygonAreaRules
Type	Client-side Before Insert (BI); Before Update (BU). Is System. Is Row.
Description	Calculates the area of a polygon before an insert or update.
Execute Column	GEOM

Regenerate Label rule group

The Regenerate Label rule group controls the regeneration of labels that display attributes of a secondary feature class. For example, a label definition of the building feature class displays informations that is stored in the street feature class.

- RegenerateLabel_BU
- RegenerateLabel_AU
- RegenerateLabel_AI
- RegenerateLabel_BD
- RegenerateLabel_AD

The rule group is applied automatically, when you define a Regeneration Definition for a label. For more information about Regeneration Definition, see Label Properties: Regeneration Definition.

IMPORTANT Do not use the Feature Rules Properties dialog box to disable the feature rules. Use the Label Properties dialog box to disable the feature rules.

RegenerateLabel_BU

Name	**RegenerateLabel_BU**
Location	Assembly: Topobase.BaseFeatureRules.dll Classname: RegenerateLabelRules
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Regenerates labels that are not directly related to the feature after an update.
Dependency	Member of a rule group.

RegenerateLabel_AU

Regenerate Label_AU is member of a rule group that controls the regeneration of labels that display attributes of a secondary feature class. See

RegenerateLabel_AI

Regenerate Label_AI is member of a rule group that controls the regeneration of labels that display attributes of a secondary feature class. See

RegenerateLabel_BD

Regenerate Label_BD is member of a rule group that controls the regeneration of labels that display attributes of a secondary feature class. See

RegenerateLabel_AD

Regenerate Label_AD is member of a rule group that controls the regeneration of labels that display attributes of a secondary feature class. See

SetSystemCreated_BU

This rule is in a group of only one member ??
The feature rule <steps> . When you <do what> the <rule or group> automatically is applied to <what feature class>..

NOTE <note>

Name	**SetSystemCreated_BU**
Location	Assembly: Topobase.BaseFeatureRules.dll Classname: SetSystemCreated
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Sets the SYSTEM_CREATE attribute to null.
Execute Column	GEOM

COGO Feature Rules

Coordinate Geometry (COGO) Feature Rules

COGO client-side feature rules control the dimensioning that can optionally be applied when you perform COGO calculations.

DimensionCleanup rule group

The Dimension Cleanup rule group maintains consistency between dimensioning features and parent features. their labels.

- DimensionCleanup_BD
- DimensionCleanup_AD

DimensionCleanup_BD

Name	**DimensionCleanup_BD**
Location	Assembly: Topobase.Construct.dll Classname: DimensioningCleanupRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Registers the features that are related to dimension feature components.
Dependency	Member of a rule group.

DimensionCleanup_AD

Name	**DimensionCleanup_AD**
Location	Assembly: Topobase.Construct.dll Classname: DimensioningCleanupRules
Type	Client-side After Delete (AD). Is System. Is Row.
Description	Deletes features that are related to dimension feature components.
Dependency	Member of a rule group.

Area Topology Feature Rules

Area Topology Feature Rules

[dwh::10.Sep -- Note from SWD that users shouldn't touch the topology and label rules. Plan to review the rules individually with Andreas 24.Sep.]

The maintenance of area topologies is controlled by two rule groups that contain client-side feature rules.

UpdateAreaTopoLS rule group

The UpdateAreaTopoLS rule group updates the area topology tables after a feature of the Line Feature Class has been mofified.

- UpdateAreaTopoLS_BU
- UpdateAreaTopoLS_AU
- UpdateAreaTopoLS_AI
- UpdateAreaTopoLS_BD
- UpdateAreaTopoLS_AD

The rule group is applied automatically to the topology Line Feature Class when you create an area topology. For more information about area topologies, see Topobase Administrator Guide.

IMPORTANT Do not disable the rule group manually.

UpdateAreaTopoLS_BU

Name	**UpdateAreaTopoLS_BU**
Location	Assembly: Topobase.AreaTopology.Feature-Rules.dll Classname: AreaTopologyRules
Type	Client-side Before Update (BU).

	Is System. Is Row.
Description	Updates the area topology before updating a line string.
Dependency	Member of a rule group.

UpdateAreaTopoLS_AU

Name	**UpdateAreaTopoLS_AU**
Location	Assembly: Topobase.AreaTopology.Feature-Rules.dll Classname: AreaTopologyRules
Type	Client-side After Update (AU). Is System. Is Row.
Description	Updates the area topology after updating a line string.
Dependency	Member of a rule group.

UpdateAreaTopoLS_AI

Name	**UpdateAreaTopoLS_AI**
Location	Assembly: Topobase.AreaTopology.Feature-Rules.dll Classname: AreaTopologyRules
Type	Client-side After Insert (AI). Is System. Is Row.

Description	Updates the area topology after inserting a line string.
Dependency	Member of a rule group.

UpdateAreaTopoLS_BD

Name	**UpdateAreaTopoLS_BD**
Location	Assembly: Topobase.AreaTopology.Feature-Rules.dll Classname: AreaTopologyRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Updates the area topology before deleting a line string.
Dependency	Member of a rule group.

UpdateAreaTopoLS_AD

Name	**UpdateAreaTopoLS_AD**
Location	Assembly: Topobase.AreaTopology.Feature-Rules.dll Classname: AreaTopologyRules
Type	Client-side After Delete (BD). Is System. Is Row.
Description	Updates the area topology after deleting a line string.

Dependency	Member of a rule group.

UpdateAreaTopoCE rule group

The UpdateAreaTopoCE rule group updates the area topology tables after a feature of the Centroid Feature Class has been mofified.

- UpdateAreaTopoCE_BU
- UpdateAreaTopoCE_AU
- UpdateAreaTopoCE_AI
- UpdateAreaTopoCE_BD
- UpdateAreaTopoCE_AD

The rule group is applied automatically to the topology Centroid Feature Class when you create an area topology. For more information about area topologies, see Topobase Administrator Guide.

IMPORTANT Do not disable the rule group manually.

UpdateAreaTopoCE_BU

Name	**UpdateAreaTopoCE_BU**
Location	Assembly: Topobase.AreaTopology.Feature-Rules.dll Classname: AreaTopologyRules
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Updates the area topology after updating a centroid.
Dependency	Member of a rule group.

UpdateAreaTopoCE_AU

Name	**UpdateAreaTopoCE_AU**
Location	Assembly: Topobase.AreaTopology.Feature-Rules.dll Classname: AreaTopologyRules
Type	Client-side After Update (AU). Is System. Is Row.
Description	Updates the area topology after updating a centroid.
Dependency	Member of a rule group.

UpdateAreaTopoCE_AI

Name	**UpdateAreaTopoCE_AI**
Location	Assembly: Topobase.AreaTopology.Feature-Rules.dll Classname: AreaTopologyRules
Type	Client-side After Insert (AI). Is System. Is Row.
Description	Updates the area topology after inserting a centroid.
Dependency	Member of a rule group.

UpdateAreaTopoCE_BD

Name	**UpdateAreaTopoCE_BD**

Location	Assembly: Topobase.AreaTopology.Feature-Rules.dll Classname: AreaTopologyRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Updates the area topology before deleting a centroid.
Dependency	Member of a rule group.

UpdateAreaTopoCE_AD

Name	**UpdateAreaTopoCE_AD**
Location	Assembly: Topobase.AreaTopology.Feature-Rules.dll Classname: AreaTopologyRules
Type	Client-side After Delete (BD). Is System. Is Row.
Description	Updates the area topology after deleting a centroid.
Dependency	Member of a rule group.

Logical Topology Feature Rules

Logical Topology Feature Rules

[dwh::10.Sep -- Note from SWD that users shouldn't touch the topology and label rules. Plan to review the rules individually with SWD 24.Sep.]

The maintenance of logical topologies is controlled by a rule group that contains client-side feature rules.

UpdateLogicalTopo rule group

The UpdateLogicalTopo rule group updates the logical topology tables after a feature has been mofified.

- UpdateLogicalTopo_BU
- UpdateLogicalTopo_AU
- UpdateLogicalTopo_AI
- UpdateLogicalTopo_BD
- UpdateLogicalTopo_AD

The rule group is applied automatically to the topology Feature Classes when you create a logical topology. For more information about logical topologies, see Topobase Administrator Guide.

IMPORTANT Do not disable the rule group manually.

UpdateLogicalTopo_BU

Name	**UpdateLogicalTopo_BU**
Location	Assembly: Topobase.LogicalTopology.FeatureRules.dll Classname: LogicalTopologyRules
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Updates the logical topology before updating a feature.
Dependency	Member of a rule group.

UpdateLogicalTopo_AU

Name	**UpdateLogicalTopo_AU**
Location	Assembly: Topobase.LogicalTopology.FeatureRules.dll Classname: LogicalTopologyRules
Type	Client-side After Update (AU). Is System. Is Row.
Description	Updates the logical topology after updating a feature.
Dependency	Member of a rule group.

UpdateLogicalTopo_AI

Name	**UpdateLogicalTopo_AI**
Location	Assembly: Topobase.LogicalTopology.FeatureRules.dll Classname: LogicalTopologyRules
Type	Client-side After Insert (AI). Is System. Is Row.
Description	Updates the logical topology after inserting a feature.
Dependency	Member of a rule group.

UpdateLogicalTopo_BD

Name	**UpdateLogicalTopo_BD**

Location	Assembly: Topobase.LogicalTopology.FeatureRules.dll Classname: LogicalTopologyRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Updates the logical topology before deleting a feature.
Dependency	Member of a rule group.

UpdateLogicalTopo_AD

Name	**UpdateLogicalTopo_AD**
Location	Assembly: Topobase.LogicalTopology.FeatureRules.dll Classname: LogicalTopologyRules
Type	Client-side After Delete (AD). Is System. Is Row.
Description	Updates the logical topology after deleting a feature.
Dependency	Member of a rule group.

Template Feature Rules

Template Feature Rules

The rule group UpdateTemplateInstances controls the maintenance of features that have been createed using templates.

Optionally, you can group the features of the template. Then, when you move or rotate a feature of the group, Topobase treats the group as a unit and moves or rotates all other features the same way. The feature rule Update Template Instances controls this behavior for the feature classes that are part of the template.

UpdateTemplateInstances rule group

The feature rules in the UpdateTemplateInstances rule group update features ???
template.

- UpdateTemplateInstances_BU
- UpdateTemplateInstances_AU
- UpdateTemplateInstances_BD
- UpdateTemplateInstances_AD

The rule group is applied automatically to
what feature classes???
. For more information about templates, see Topobase Client User Guide.

IMPORTANT Do not disable members of this rule group manually.

UpdateTemplateInstances_BU

Name	**UpdateTemplateInstances_BU**
Location	Assembly: Topobase.Templates.dll Classname: TemplateRules
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Updates the template instances after updating a feature.

Dependency	Member of a rule group.

UpdateTemplateInstances_AU

Name	**UpdateTemplateInstances_AU**
Location	Assembly: Topobase.Templates.dll Classname: TemplateRules
Type	Client-side After Update (AU). Is System. Is Row.
Description	Updates the template instances after updating a feature.
Dependency	Member of a rule group.

UpdateTemplateInstances_BD

Name	**UpdateTemplateInstances_BD**
Location	Assembly: Topobase.Templates.dll Classname: TemplateRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Update the template instances after deleting a feature.
Dependency	Member of a rule group.

UpdateTemplateInstances_AD

Name	**UpdateTemplateInstances_AD**
Location	Assembly: Topobase.Templates.dll Classname: TemplateRules
Type	Client-side After Delete (AD). Is System. Is Row.
Description	Update the template instances after deleting a feature.
Dependency	Member of a rule group.

Utility Feature Rules

Utility feature rules: Copy of the Topobase Administratotr Guide > Utility Reference > Utility feature rules.

Utility Feature Rules

Utility client-side feature rules control the maintenance of utility model feature classes.

Topobase uses utility feature rules to keep the database consistent. You can view and edit the applied feature rules in the data model explorer.

DeleteAttribute rule group

The feature rules in the DeleteAttributes rule group delete attribute features when a geometry feature is deleted. The rule group applies to Utility geometry feature classes.

- DeleteAttribute_BD
- DeleteAttribute_AD

IMPORTANT Do not disable the DeleteAttribute feature rules manually.

DeleteAttribute_BD

Name	**DeleteAttribute_BD**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.GeometryFeatureRules
Type	Client-side Member of a rule group. Before Delete (BD). Is System. Is Row.
Description	Delete attributes when their last geometry is deleted.

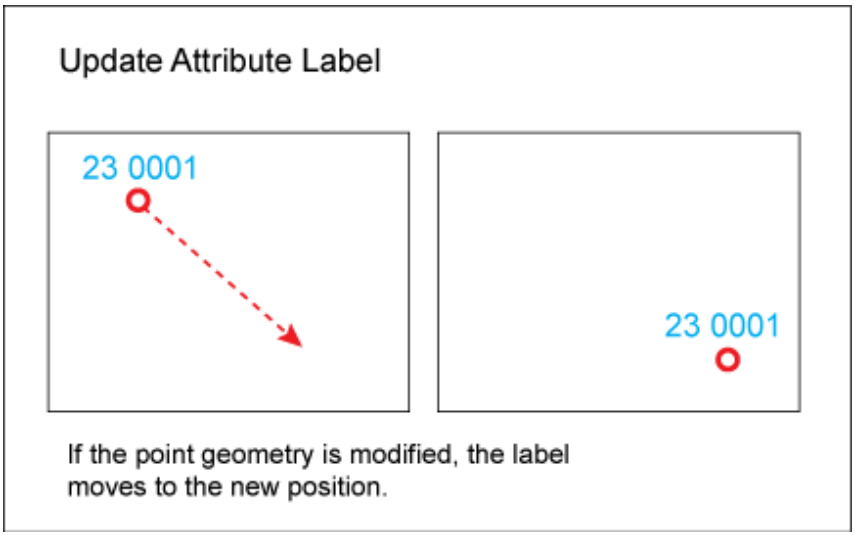
DeleteAttribute_AD

Name	**DeleteAttribute_AD**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.GeometryFeatureRules
Type	Client-side Member of a rule group. TB_RULE_GROUP.ID = 8007. After Delete (AD). Is System. Is Row.
Description	Deletes attributes when their last geometry is deleted.

UpdateAttributeLabel rule group

The feature rules in the UpdateAttributeLabel rule group update label features when a geometry feature is updated. The rule group applies to Utility geometry feature classes.

- UpdateAttributeLabel_BU
- UpdateAttributeLabel_AU
- UpdateAttributeLabel_BD
- UpdateAttributeLabel_AD



UpdateAttributeLabel_BU

Name	**UpdateAttributeLabel_BU**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.GeometryFeatureRules
Type	Client-side Member of a rule group. Before Update (BU).

	Is System. Is Row.
Description	Updates the label attached to an attribute when the geometry is updated.
Execute Column	GEOM

UpdateAttributeLabel_AU

Name	**UpdateAttributeLabel_AU**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.GeometryFeatureRules
Type	Client-side Member of a rule group. TB_RULE_GROUP.ID = 8008. After Update (AU). Is System. Is Row.
Description	Updates the label attached to an attribute when the geometry is updated.

UpdateAttributeLabel_BD

Name	**UpdateAttributeLabel_BD**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.GeometryFeatureRules
Type	Client-side Member of a rule group. TB_RULE_GROUP.ID = 8008. Before Delete (BD). Is System. Is Row.

Description	Updates the label attached to an attribute when the geometry is updated.

UpdateAttributeLabel_AD

Name	**UpdateAttributeLabel_AD**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.GeometryFeatureRules
Type	Client-side Member of a rule group. TB_RULE_GROUP.ID = 8008. Before Delete (BD). Is System. Is Row.
Description	Updates the label attached to an attribute when the geometry is updated.

CheckStartEndNode

CheckStartEndNode applies to Utility line feature classes. When a utility line feature is created, this feature rule determines whether a start node and an end node exist. If either node is missing, the rule aborts the creation of the line feature and displays a message.

Refer to the CreateStartEndNode on page 44 feature rule, which creates missing utility line feature start and end nodes.

Name	**CheckStartEndNode**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityLineFeatureRules
Type	Client-side Before Insert (BI). Before Update (BU) Is System. Is Row.

Description	Checks for start and end nodes, and informs user and cancel if either does not exist.
Execute Column	GEOM

CreateStartEndNode

CreateStartEndNode applies to Utility line feature classes. When a utility line feature is created, the feature rule checks whether there is a start node and an end node. If either is missing, the feature rule creates a utiltiy point.

See also <CheckStartEndNode>

When you create a utility model using Topobase Administrator, which feature rules will be assigned automatically ? Do we recommend that Administrators check whether they want to use the Check... or the Create... rule ?
Xref to example in the water help.
Add a note that there is another feature rule available that only checks for the missing nodes.

NOTE Use the feature rule parameter to specify the attribute feature class that is used to create the utility point.

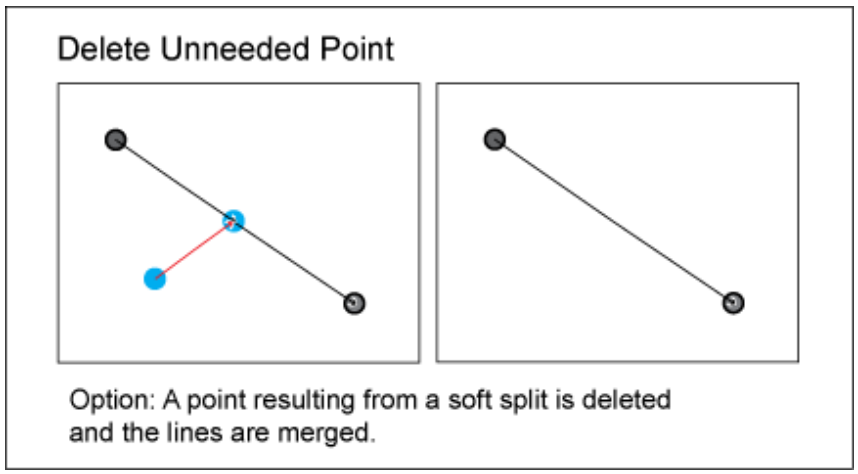
Name	**CreateStartEndNode**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityLineFeatureRules
Type	Client-side After Insert (AI). Is System. Is Row.
Description	Creates start and end node if they do not exist.
Parameters	P1: AttributeFClass feature class:Specifies the name of the attribute feature class used to create new point utility features.

DeleteUnneededNodes rule group

The feature rules in the DeleteUnneededNodes rule group clean up utility lines. The rule group applies to Utility line feature classes.

- DeleteUnneededNodes_BD
- DeleteUnneededNodes_AD

After a line is deleted, the rule group deletes points that do not have lines connected to them.



DeleteUnneededNodes_BD

Name	**DeleteUnneededNodes_BD**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityLineFeatureRules
Type	Client-side Before Delete (BD). Member of a rule group. TB_RULE_GROUP.ID = 8009. Is System. Is Row.

Description	Deletes start and end nodes if they are no longer needed.

DeleteUnneededNodes_AD

Name	**DeleteUnneededNodes_AD**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityLineFeatureRules
Type	Client-side After Delete (AD). Member of a rule group. TB_RULE_GROUP.ID = 8009. Is System. Is Row.
Description	Deletes start and end nodes if they are no longer needed.
Parameters	P1: DeleteSoftSplitters. Default is NO. Specifies whether the points which resulted from a soft split should be deleted and the lines merged, similar to the AutoExtractSoftSplit feature rule. P2: AskUser. Default is YES. Specifies whether the user is asked if the unneeded points should be deleted. If the parameter is NO, they are deleted without user interaction.

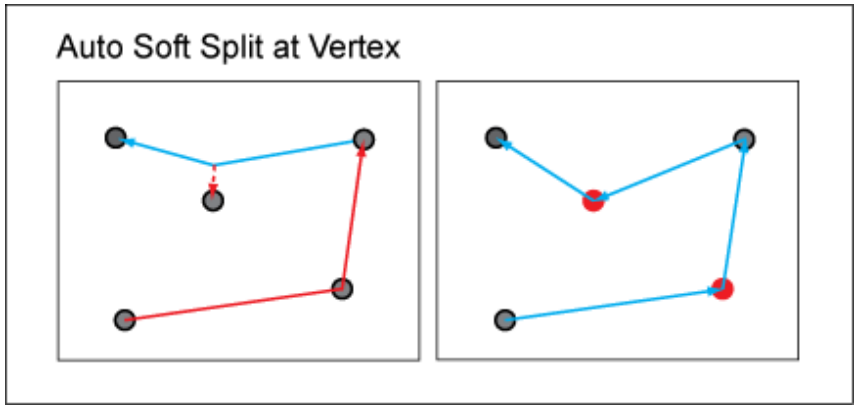
AutoSoftSplitAtVertex rule group

The feature rules in the AutoSoftSplitAtVertex rule group split a line at a vertex when it is at the same location as a utility point.

NOTE For this to occur, the feature rule group AutoSoftSplitLines rule group on page 53 must be enabled on the point feature class.

- AutoSoftSplitAtVertex_BIU
- AutoSoftSplitAtVertex_AIU

The rule group applies to Utility line feature classes.



AutoSoftSplitAtVertex_BIU

Name	**AutoSoftSplitAtVertex_BIU**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityLineFeatureRules
Type	Client-side Before Insert (BI); Before Update (BU). Member of a rule group. TB_RULE_GROUP.ID = 8010. Is System. Is Row.
Description	Looks for utility points at the vertices and soft splits the line if some are found. This feature rule only works if the AutoSoftSplitLines feature rule group is enabled for the corresponding utility point feature class.

Execute Column	GEOM

AutoSoftSplitAtVertex_AIU

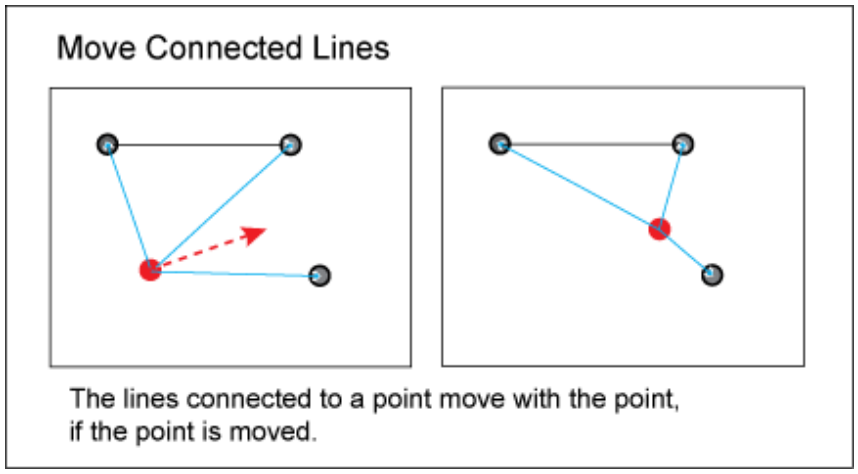
Name	**AutoSoftSplitAtVertex_AIU**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityLineFeatureRules
Type	Client-side After Insert (AI); After Update (AU). Member of a rule group. TB_RULE_GROUP.ID = 8010. Is System. Is Row.
Description	Looks for utility points at the vertices and soft splits the line if some are found. This feature rule only works when the 'AutoSoftSplitLines' feature rule group is active on the corresponding utility point.

MoveConnectedLines rule group

The feature rules in the MoveConnectedLines rule group move lines connected to a point when the point is moved, such that the line and the point stay connected.

- MoveConnectedLines_BU
- MoveConnectedLines_AU

The rule group applies to Utility point feature classes.



NOTE If you activate the MoveConnectedLines rule group, you must disable the AutoExtractSoftSplit_BU and AutoExtractSoftSplit_AU feature rules.

MoveConnectedLines_BU

Name	**MoveConnectedLines_BU**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityPointFeature-Rules
Type	Client-side Before Update (BU). Member of a rule group. TB_RULE_GROUP.ID = 8011. Is System. Is Row.
Description	Moves connected lines with the point so that they remain connected.
Execute Column	GEOM

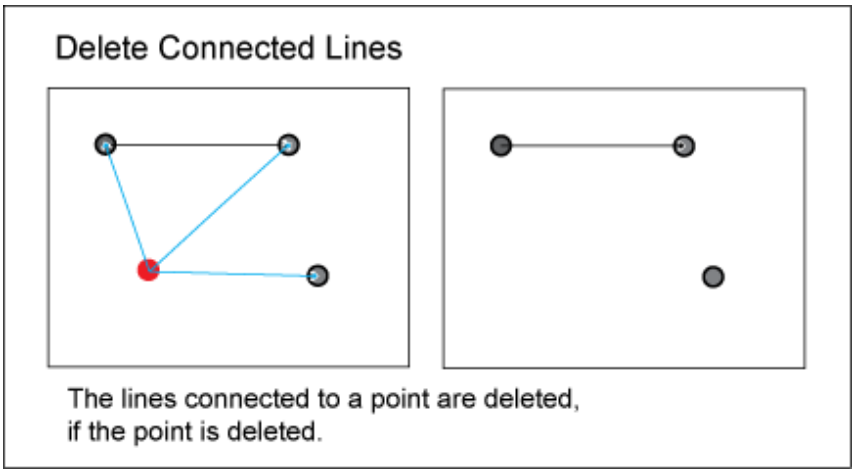
MoveConnectedLines_AU

Name	**MoveConnectedLines_AU**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityPointFeature-Rules
Type	Client-side After update (AU). Member of a rule group. TB_RULE_GROUP.ID = 8011. Is System. Is Row.
Description	Moves connected lines with the point so that they remain connected.

DeleteConnectedLines rule group

The feature rules in the DeleteConnectedLines rule group delete lines connected to a point when the point is deleted.

- DeleteConnectedLines_BD
- DeleteConnectedLines_AD



The rule group applies to Utility point feature classes.

DeleteConnectedLines_BD

Name	**DeleteConnectedLines_BD**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityPointFeature-Rules
Type	Client-side Before Delete (BD). Member of a rule group. TB_RULE_GROUP.ID = 8012. Is System. Is Row.
Description	Deletes connected lines when a point is deleted.

DeleteConnectedLines_AD

Name	**DeleteConnectedLines_AD**
Location	Assembly: Topobase.Utilities.dll

	Classname: FeatureRules.UtilityPointFeature-Rules
Type	Client-side After Delete (AD). Member of a rule group. TB_RULE_GROUP.ID = 8012. Is System. Is Row.
Description	Deletes connected lines when a point is deleted.
Parameters	P1: AskUser. Default is YES. Specifies whether the user is asked if the unneeded points should be deleted. If the parameter is NO, they are deleted without user interaction.

CancelDeleteUtilityPoint

CancelDeleteUtilityPoint applies applies to all Utility feature classes (line, point, attribute). The feature rule prevents the deletion of utility points.

Name	**CancelDeleteUtilityPoint**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityPointFeature-Rules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Cancels deleting of utility points.
Parameters	P1: ShowMessage. Default is YES.

	Specifies whether the user gets a message stating that deleting features of the utility point feature class is disabled.

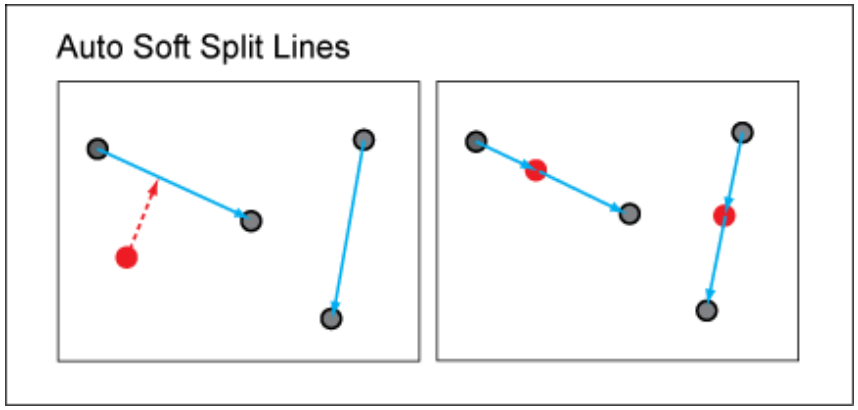
AutoSoftSplitLines rule group

The feature rules in the AutoSoftSplitLines rule group soft-split a line when a point is moved to the line, or inserted onto the line.

You can select or clear these two cases individually using the before/after update (point is moved) and the before/after insert (point is inserted) check boxes. After a soft split, the two new lines share the same attribute feature.

- AutoSoftSplitLines_BIU
- AutoSoftSplitLines_AIU

The rule group applies to Utility point feature classes.



AutoSoftSplitLines_BIU

Name	**AutoSoftSplitLines_BIU**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityPointFeature-Rules

Type	Client-side Before Insert (BI). Before Update (BU). Member of a rule group. TB_RULE_GROUP.ID = 8013. Is System. Is Row.
Description	Automatically snaps points to closest line and soft split the line.
Parameters	P1: SnapTolerance. Default is 0.0005. Specifies how close the point must be to a line to activate the trigger. P2: MoveFeature. Default is POINT. If this parameter is POINT, the point is moved to the line, if the position is not exactly on the line but within tolerance. If the parameter is LINE, the line is moved to the point instead. P3: AttributeFCs. Default is empty. Specifies a feature class. If this parameter is empty the rule affects all points. If an attribute feature class name is given, the rule is only active for this feature class. Multiple feature classes should be separated by a comma.
Execute Column	GEOM

AutoSoftSplitLines_AIU

Name	**AutoSoftSplitLines_AIU**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityPointFeature-Rules
Type	Client-side After Insert (AI). After Update (AU). Member of a rule group. TB_RULE_GROUP.ID = 8013. Is System. Is Row.

Description	Automatically snaps points to closest line and soft split the line.
Execute Column	GEOM

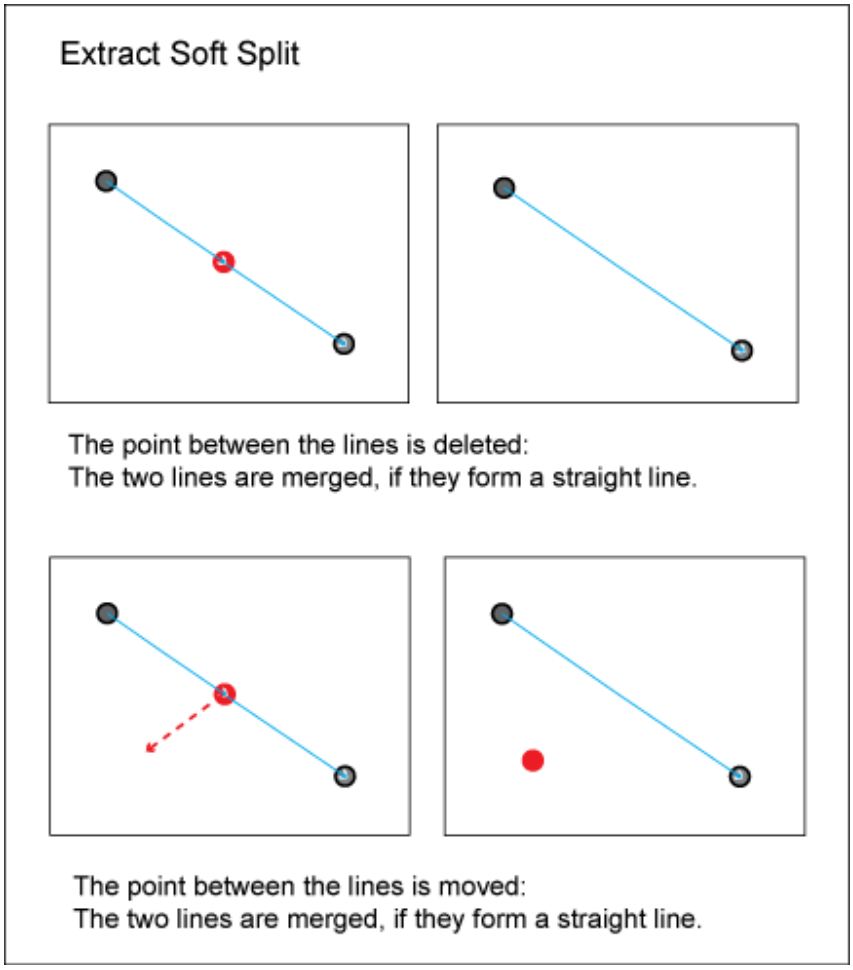
AutoExtractSoftSplit rule group

The feature rules in the AutoExtractSoftSplit rule group merge utility lines.

- AutoExtractSoftSplit_BD
- AutoExtractSoftSplit_AD
- AutoExtractSoftSplit_BU
- AutoExtractSoftSplit_AU

Case 1—Merges lines when the point between them is deleted. In the following case: They share the same attribute. The geometries are such that the two lines could be the result of a soft split.

Case 2—Merges lines when the point between them is moved away. In the following case: They share the same attribute feature. The geometries are such that the two lines could be the result of a soft split. This action disconnects the lines from the moved point.



The rule group applies to Utility point feature classes.

AutoExtractSoftSplit_BD

Name	**AutoExtractSoftSplit_BD**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityPointFeature-Rules

Type	Client-side Before Delete (BD). Member of a rule group. TB_RULE_GROUP.ID = 8014. Is System. Is Row.
Description	Joins soft splitted lines if the point is deleted.

AutoExtractSoftSplit_AD

Name	**AutoExtractSoftSplit_AD**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityPointFeature-Rules
Type	Client-side After Delete (AD). Member of a rule group. TB_RULE_GROUP.ID = 8014. Is System. Is Row.
Description	Joins soft splitted lines if the point is deleted.

AutoExtractSoftSplit_BU

NOTE If you activate the MoveConnectedLines rule group on page 48 group, disable AutoExtractSoftSplit_BU and AutoExtractSoftSplit_AU.

Name	**AutoExtractSoftSplit_BU**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityPointFeature-Rules
Type	Client-side Before Update (BU).

	Member of a rule group. TB_RULE_GROUP.ID = 8014. Is System. Is Row.
Description	Joins soft splitted lines if the point is deleted.

AutoExtractSoftSplit_AU

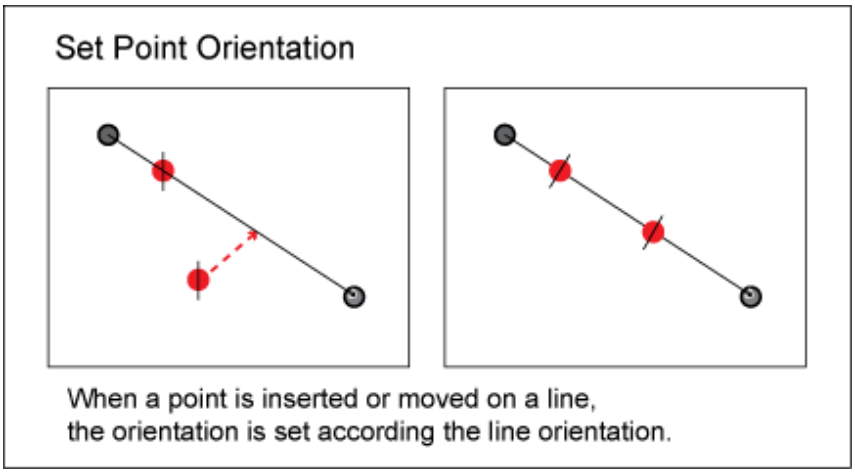
NOTE If you activate the MoveConnectedLines rule group on page 48 group, disable AutoExtractSoftSplit_BU and AutoExtractSoftSplit_AU.

Name	**AutoExtractSoftSplit_AU**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityPointFeature-Rules
Type	Client-side After Update (AU). Member of a rule group. TB_RULE_GROUP.ID = 8014. Is System. Is Row.
Description	Joins soft splitted lines if the point is deleted.

SetPointOrientation rule group

The feature rules in the SetPointOrientation rule group specify that when a point is inserted or moved onto a line, the orientation of the point matches the line orientation.

- SetPointOrientation_BI
- SetPointOrientation_BU



The rule group applies to Utility point feature classes.

SetPointOrientation_BI

Name	**SetPointOrientation_BI**
Location	Assembly: Topobase.Utilities.dll Classname: FeatureRules.UtilityPointFeature-Rules
Type	Client-side Before Insert (BI). Member of a rule group. TB_RULE_GROUP.ID = 8015. Is System. Is Row.
Description	Adjusts the orientation of a point inserted on a line.

SetPointOrientation_BU

Name	**SetPointOrientation_BU**
Location	Assembly: Topobase.Utilities.dll

	Classname: FeatureRules.UtilityPointFeature-Rules
Type	Client-side Before Update (BU). Member of a rule group. TB_RULE_GROUP.ID = 8015. Is System. Is Row.
Description	Adjusts the orientation of a point inserted on a line.
Execute Column	GEOM

Extension Feature Rules

For the basic feature rules, see Basic Feature Rules on page 4.

COGO—The feature rules for the COGO extension are part of the basic feature rules.

Templates—The feature rules for the Templates extension are part of the basic feature rules.

Profiles—The Profile extension does not use any specific feature rules.

Plot feature rules

When you add the Plot extension to a document, client-side Plot feature rules are created and assigned automatically to the plot feature classes (PLT_*).

IMPORTANT Do not disable any of the Plot feature rules.

A plot can either be created using a plot template, or a blank sheet. The plot template specifies attributes that cannot be modified in the plot created from that template. Feature rules maintain conformity with the templates. A template-based plot stores the relation to the template in the PLT_PLOT.FID_PARENT_TEMPLATE attribute.

When you create or edit a plot, or a plot template, the plot features and the GIS features are drawn in the AutoCAD model space. Feature rules control any

modification on a plot feature and ensure that related features are updated appropriately.

PLT_PreventInsertOnTemlateInstances_BI

PLT_PreventInsertOnTemlateInstances_BI makes sure that a template-based plot cannot be modified by inserting another plot feature. That means, the plot cannot be modified in a way that it differs from its template.

Name	**PLT_PreventInsertOnTemlateInstances_BI**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	For template-based plots, prevents insertion of plot features.
Execute Column	GEOM
Parameters	P1: ParentTable_x. P2: Child Attribute_x. P3: P4: Optionally, the parameters specify up to 5 pairs of related feature classes that are checked by the feature rule.
Example	If the plot template does not comprise a north arrow, you are not allowed to insert a north arrow.

The feature rule applies to plot feature classes such as PLT_PLOT_IMAGE, PLT_PLOT_LEGEND, PLT_PLOT_NA, PLT_PLOT_SCALEBAR, PLT_PLOT_DECORATION, PLT_PLOT_MAP.

Optionally, the feature rule parameters specify the feature classes that are checked. Each pair of parameters specifies a parent table name, and a child attribute name. Use the parameters to improve performance.

For example, the north arrow PLT_PLOT_NA is directly related to PLT_PLOT. Then, the following parameters are specified.

- PARENT_TABLE_1: PLT_PLOT
- CHILD_ATTRIBUTE_1: FID_PARENT_PLOT

For example, the decoration labels are not directly related the PLT_PLOT, but they are related to the decoration, and the decoration is related to PLT_PLOT. Then, the following parameters are specified.

- PARENT_TABLE_1: PLT_PLOT_DECORATION
- CHILD_ATTRIBUTE_1: FID_PARENT (PLT_PLOT_DECORATION_TBL)
- PARENT_TABLE_2: PLT_PLOT
- CHILD_ATTRIBUTE_2: FID_PARENT_PLOT (PLT_PLOT_DECORATION)

NOTE If you create additional user defined plot feature classes, you assign the feature rule to keep the plot template and the plot consistent. Use the parameters to specify the parent feature class and the child feature classes.

PLT_PreventEditGeometryOnTemlateInstances_BU

PLT_PreventEditGeometryOnTemlateInstances_BU makes sure that plot features that have been created using a plot template cannot be modified. That means, the plot cannot be modified in a way that it differs from its template.

The feature rule is applied when you modify the geometry, or the orientation of a plot feature.

Name	**PLT_PreventEditGeometryOnTemlateInstances_BU**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side

	Before Update (BU). Is System. Is Row.
Description	For template-based plots, prevents geometry modifications on plot features.
Parameters	P1: ParentTable_x. P2: Child Attribute_x. P3: P4: Optionally, the parameters specify up to 5 pairs of related feature classes that are checked by the feature rule.
Example	You cannot move or rotate the north arrow.

The feature rule applies to plot feature classes such as PLT_PLOT_IMAGE, PLT_PLOT_LEGEND, PLT_PLOT_NA, PLT_PLOT_SCALEBAR, PLT_PLOT_DECORATION, PLT_PLOT_MAP.

Optionally, the feature rule parameters specify the feature classes that are checked. Each pair of parameters specifies a parent table name, and a child attribute name. Use the parameters to improve performance. See also PLT_PreventInsertOnTemlateInstances_BI on page 61.

PLT_PreventEditAttributesOnTemlateInstances_BU

PLT_PreventEditAttributesOnTemlateInstances_BU makes sure that attributes of plot features that have been created using a plot template cannot be modified.

NOTE By default this feature rule is not assigned to any plot feature class, so you are allowed to edit some descriptive attributes, such as PLT_PLOT.PLOT_NAME.

Name	**PLT_PreventEditAttributesOnTemlateInstances_BU**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules

Type	Client-side Before Update (BU). Is System. Is Row.
Description	For template-based plots, prevents any modifications of plot features, including geometry.
Execute Column	GEOM
Parameters	P1: ParentTable_x. P2: Child Attribute_x. P3: P4: Optionally, the parameters specify up to 5 pairs of related feature classes that are checked by the feature rule.

PLT_PreventDeleteOnTemlateInstances_BD

PLT_PreventDeleteOnTemlateInstances_BD makes sure that plot features that have been created using a plot template cannot be deleted. That means, the plot cannot be modified in a way that it differs from its template.

Name	**PLT_PreventDeleteOnTemlateInstances_BD**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	For template-based plots, prevents deletion of plot features.
Parameters	P1: ParentTable_x. P2: Child Attribute_x.

	P3: P4: Optionally, the parameters specify up to 5 pairs of related feature classes that are checked by the feature rule.
Example	You cannot delete the north arrow, if the plot template comprises a north arrow.

The feature rule applies to plot feature classes such as PLT_PLOT_IMAGE, PLT_PLOT_LEGEND, PLT_PLOT_NA, PLT_PLOT_SCALEBAR, PLT_PLOT_DECORATION, PLT_PLOT_MAP.

Optionally, the feature rule parameters specify the feature classes that are checked. Each pair of parameters specifies a parent table name, and a child attribute name. Use the parameters to improve performance. See also PLT_PreventInsertOnTemlateInstances_BI on page 61.

PLT_SetFixedPosition_AIU

When you define a plot feature, such as a north arrow, you can specify a fixed position relative to the paper borders. The feature rule PLT_SetFixedPosition_AIU updates the feature geometry of plot features, so the fixed position will be preserved.

Name	**PLT_SetFixedPosition_AIU**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side After Insert (AI). After Update (AU). Is System. Is Row.
Description	Updates the geometry, and preserves the fixed position of labels, image, legend, north arrow, scale bar.

The feature rule applies to PLT_PLOT_IMAGE, PLT_PLOT_LEGEND, PLT_PLOT_NA, PLT_PLOT_SCALEBAR, PLT_PLOT_MAP,

PLT_PLOT_DECORATION. These feature classes have the following attributes that specify the fixed position. The fixed position can only be preserved, if all attributes are filled.

- HORIZONTAL_OFFSET
- VERTICAL_OFFSET
- ID_VERTICAL_POSITION: Relation to PLT_PLOT_VPOSITION_TBD
- ID_HORIZONTAL_POSITION: Relation to PLT_PLOT_HPOSITION_TBD

NOTE The feature rule can be applied to any additional plot feature class that is directly or indirectly related to PLT_PLOT, and that has the required attributes.

PLT_ValidateMapPlaceHolder_BIU

PLT_ValidateMapPlaceHolder_BIU validates the geometry of a map placeholder PLT_PLOT_MAP. If the map placeholder is not a rectangle, the feature rule sets the map placeholder to a rectangle, but does not modify the scale of the map.

The feature rule applies to PLT_PLOT_MAP.

Name	**PLT_ValidateMapPlaceHolder_BIU**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Validates the map placeholder, and verifies conformity with its template, if any.
Dependency	The feature rule only works if the feature rule MoveModelInsertionPoint_AIU is enabled; see also PLT_MoveModelInsertionPoint_AIU on page 67.

PLT_MoveModelInsertionPoint_AIU

PLT_MoveModelInsertionPoint_AIU realigns the plot capture point and the world insertion point of the primary map placeholder. For example, you move the placeholder rectangle using Topobase Edit Mode. Then, the current plot capture should stay the same, and he relative position of all other plot features should change instead.

The feature rule applies to PLT_PLOT_MAP.

Name	**PLT_MoveModelInsertionPoint_AIU**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side After Insert (AI). After Update (AU). Is System. Is Row.
Description	Realigns the plot insertion point and the model insertion point of the primary map placeholder, if they do not match.
Dependency	The feature rule only works if the feature rule PLT_ValidateMapPlaceholder_BIU is enabled; see also PLT_ValidateMapPlaceHolder_BIU on page 66.

PLT_PreventDeleteMainMapPlaceholder_BD

PLT_PreventDeleteMainMapPlaceholder_BD prevents the deletion of the primary map placeholder, if secondary map placeholders exist.

The feature rule applies to PLT_PLOT_MAP.

Name	**PLT_PreventDeleteMainMapPlaceholder_BD**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules

Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Prevents the deletion of the primary map placeholder, if at least one secondary map placeholder exist.

PLT_UpdatePlotCover rule group

The feature rules in the PLT_UpdatePlotCover rule group mark a plot so that its cover feature will be updated after the primary map has been deleted. In this case, the hole in the plot cover will be removed.

The feature rule applies to PLT_PLOT_MAP.

PLT_UpdatePlotCover_BD

Name	**PLT_UpdatePlotCover_BD**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Updates the plot cover after a map placeholder has been deleted.

PLT_UpdatePlotCover_AD

Name	**PLT_UpdatePlotCover_AD**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules

Type	Client-side After Delete (AD). Is System. Is Row.
Description	Updates the plot cover after a map placeholder has been deleted.

PLT_PreventDeleteOfRootGroup_BD

PLT_PreventDeleteOfRootGroup_BD prevents the deletion of the root plot group that has been created during the initial structure update.

The feature rule applies to PLT_PLOT_GROUP.

Name	**PLT_PreventDeleteOfRootGroup_BD**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Prevents deletion of the root plot folder that has been created during the initial structure update.

PLT_PreventUpdateOfRootGroup_BU

PLT_PreventUpdateOfRootGroup_BU prevents updating the root plot group that has been created during the initial structure update.

The feature rule applies to PLT_PLOT_GROUP.

Name	**PLT_PreventUpdateOfRootGroup_BU**
Location	Assembly: Topobase.Plot.Data.dll

	Classname: FeatureRules.FeatureRules
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Prevents updating the root plot folder that has been created during the initial structure update.

PLT_ValidatePlotGroup_BIU

PLT_ValidatePlotGroup_BIU performs validity checks, when a PLT_PLOT_GROUP record is inserted or updated.

The feature rule applies to PLT_PLOT_GROUP.

Name	**PLT_ValidatePlotGroup_BIU**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Checks the PLT_PLOT_GROUP record to be inserted or for validity.

PLT_CreateMainPlotCover_AIU

PLT_CreateMainPlotCover_AIU creates a plot cover feature on plot creation and updates the cover, if the plot has been modified.

The feature rule applies to PLT_PLOT.

Name	**PLT_CreateMainPlotCover_AIU**

Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side After Insert (AI). After Update (AU). Is System. Is Row.
Description	Creates the main plot cover after the plot has been created.

PLT_ValidatePlot_BIU

PLT_ValidatePlot_BIU performs validity checks, when a PLT_PLOT record is inserted or upadated. The check comprises both the attributes, and conformity of a plot with its template.

The feature rule applies to PLT_PLOT.

Name	**PLT_ValidatePlot_BIU**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Checks the PLT_PLOT record to be inserted or updated for validity.

PLT_DetachPlotInstance_BD

When you delete a feature of a plot template, the PLT_DetachPlotInstance_BD feature rule detaches all plot instances from the template, and sets FID_PARENT_TEMPLATE to NULL.

The feature rule applies to PLT_PLOT.

Name	**PLT_DetachPlotInstance_BD**
Location	Assembly: Topobase.Plot.Data.dll Classname: FeatureRules.FeatureRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Detaches any plots from a template before it is being deleted.

Topobase Feature Rules by Module

This section lists the feature rules by module.

Topobase Electric CE

Basic Feature Rules

See Basic Feature Rules on page 4

Electric CE Feature Rules

The Electric CE module uses server-side feature rules to maintain the system tables.

EL_CreateSegmentCrossSection rule group

The feature rules in the EL_CreateSegmentCrossSection rule group create cross sections in accordance with your chosen segment model.

- EL_CreateSegmentCrossSection_BU
- EL_CreateSegmentCrossSection_AU

EL_CreateSegmentCrossSection_BU

You can associate this feature rule with the **EL_SEGMENT** feature class.

Name	**EL_CreateSegmentCrossSection_BU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Creates a cross section according to the segment model you have selected.
Dependency	Rule group member
Execute Column	FID_TEMPLATE
Parameters	P1: Template is mandatory. Default: YES

EL_CreateSegmentCrossSection_AU

You can associate this feature rule with the **EL_SEGMENT** feature class.

Name	**EL_CreateSegmentCrossSection_AU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side After Update (AU). Is System. Is Row.
Description	Creates a cross section according to the segment model you have selected.

Dependency	Rule group member

EL_DeleteStructureLine_BD

The EL_DeleteStructureLine_BD feature rule deletes a structural line and any related features of type attribute, for example a segment conductor or a duct conductor.

You can associate this feature rule with the **EL_STR_LINE** feature class.

Name	**EL_DeleteStructureLine_BD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Delete structure line and related attribute feature.

EL_DeleteSegment_BD

The EL_DeleteSegment_BD feature rule saves all feature IDs related to a segment and deletes them when the segment is deleted.

You can associate this feature rule with the **EL_SEGMENT** feature class.

Name	**EL_DeleteSegment_BD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`

Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Deletes the segment and all related features.

EL_MoveDuctInCrossSection_BU

The EL_MoveDuctInCrossSection_BU feature rule determines whether it is valid to move a cross section duct from one snap point to another. If the move is valid, the feature rule updates the relation between the cross section duct and the new snap point.

You can associate this feature rule with the **EL_CS_DUCT** feature class.

Name	**EL_MoveDuctInCrossSection_BU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Updates the association between the cross section duct and snap point when the cross section duct is moved inside a cross section.
Execute Column	GEOM

EL_CreateDuctCrossSection rule group

The feature rules in the EL_CreateDuctCrossSection rule group create duct cross sections in accordance with your chosen duct model.

- EL_CreateDuctCrossSection_BU

- EL_CreateDuctCrossSection_BI

EL_CreateDuctCrossSection_BU

You can associate this feature rule with the **EL_DUCT** feature class.

Name	**EL_CreateDuctCrossSection_BU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Creates the layout to display the conductors in a duct according to the selected duct model.
Dependency	Rule group member
Execute Column	FID_TEMPLATE

EL_CreateDuctCrossSection_BI

You can associate this feature rule with the **EL_CS_DUCT** feature class.

Name	**EL_CreateDuctCrossSection_BI**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Insert (BI). Is System. Is Row.

Description	Creates the layout to display the conductors in a duct according to the selected duct model.
Dependency	Rule group member

EL_CreateDevice_AI

The EL_CreateDevice_AI feature rule creates a device and then automatically updates its structure, if the structure exists.

You can associate this feature rule eith the **EL_POINT** feature class.

Name	**EL_CreateDevice_AI**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side After Insert (AI). Is System. Is Row.
Description	Creates a device and automatically updates its external structure if it exists.

EL_CreateConductor_AI

The EL_CreateConductor_AI feature rule creates a conductor and then automatically updates its structure, if the structure exists.

You can associate this feature rule with the **EL_LINE** feature class.

Name	**EL_CreateConductor_AI**
Location	Assembly: `Topobase.Modules.ElectricCE.dll`

	Classname: `FeatureRules`
Type	Client-side After Insert (AI). Is System. Is Row.
Description	Creates a conductor and automatically updates its external structure if it exists.

EL_ForbidDuplicateDevice_BIU

The EL_ForbidDuplicateDevice_BIU feature rule prevents the creation of devices that have the same geometry as the feature class with which this rule is associated.

You can add this feature rule to feature classes of type **Point**.

Name	**EL_ForbidDuplicateDevice_BIU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Insert Update (BIU). Is System. Is Row.
Description	Forbid devices that have the same geometry.
Execute Column	GEOM

EL_MoveConductorInCrossSection_BU

The EL_MoveConductorInCrossSection_BU feature rule determines whether moving a conductor from one duct to another is valid. If the move is permitted, the rule removes the unassigned snap point in the old duct and creates an

unassigned snap point in the new duct. The rule then updates associations between related features.

You can associate this feature rule with the **EL_CS_CONDUCTOR** feature class.

Name	**EL_MoveConductorInCrossSection_BU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Updates the association between the cross section conductor and snap point when the cross section conductor is moved inside a cross section.
Execute Column	GEOM

EL_ScaleCrossSection_BU

The EL_ScaleSection_BU feature rule resizes a cross section when the value of the CS_ORIGIN.SCALE attribute changes. If the value of CS_ORIGIN.SCALE is less than 1, the cross section is scaled smaller than its original size. If the value of CS_ORIGIN.SCALE is greater than 1, the cross section is scaled larger than its original size.

You can associate this feature rule with the **EL_CS_ORIGIN** feature class.

Name	**EL_ScaleCrossSection_BU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side

	Before Update (BU). Is System. Is Row.
Description	Scale the cross section according to the value of CS_ORIGIN.SCALE.
Execute Column	SCALE

EL_MoveCsLegendDecoration_BU

[dwh::17.Sep -- Does this rule create and/or update a legend line or just move an existing line?]
The EL_MoveCsLegendDecoration_BU feature rule determines whether a legend decoration has to be created or if one already exists. The rule then creates or updates the legend decoration according to the position of the CS_ORIGIN.

This feature rules moves the legend line associated with a cross section when the cross section is moved.

You can associate this feature rule with the **EL_CS_ORIGIN** feature classe.

Name	**EL_MoveCsLegendDecoration_BU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Move legend decoration line according to the cross section origin.
Execute Column	GEOM

EL_MoveAccordingSnappoint_BU

The EL_MoveAccordingSnappoint_BU feature rule moves features that have FID_SNAPPOINT attribues to a new snap point and updates the geometry and orientation of the features accordingly.

You associate this feature rule with the **EL_SNAPPOINT** feature class.

Name	**EL_MoveAccordingSanppoint_BU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Move cross section elements according to their related snap points.
Execute Column	GEOM

EL_MoveAccordingSegment rule group

The feature rules in the EL_MoveAccordingSegment rule group move the conductors, ducts, and cross sections of a segment to their new locations when the geometry of the segment has been updated.

This rule group contains the following feature rules:

- EL_MoveAccordingSegment_BU
- EL_MoveAccordingSegment_AU

EL_MoveAccordingSegment_BU

You can associate this feature rule with the **EL_STR_LINE** feature class.

Name	**EL_MoveAccordingSegment_BU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Move the conductors, ducts, and cross sections of a segment to their new locations when the geometry of a segment is updated..
Execute Column	GEOM

EL_MoveAccordingSegment_AU

You can associate this feature rule with the **EL_STR_LINE** feature class.

Name	**EL_MoveAccordingSegment_AU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side After Update (BU). Is System. Is Row.
Description	Move the conductors, ducts, and cross sections of a segment to their new locations when the geometry of a segment is updated..

EL_DeleteCSConductor rule group

The feature rules in the EL_DeleteCSConductor rule group delete the conductors and their associated table entries when a cross section conductor is deleted.

- EL_DeleteCSConductor_BD
- EL_DeleteCSConductor_AD

EL_DeleteCSConductor_BD

You can associate this feature rule with the **EL_CS_CONDUCTOR** feature class.

Name	**EL_DeleteCSConductor_BD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Deletes the represented conductor and all dependent features when a conductor in a cross section is deleted.
Dependency	Rule group member

EL_DeleteCSConductor_AD

You can associate this feature rule with the **EL_CS_CONDUCTOR** feature class.

NOTE This feature rule must be triggered before the Template Feature Rule UpdateTemplateInstances_BD.

Name	**EL_DeleteCSConductor_AD**

Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side After Delete (AD). Is System. Is Row.
Description	Deletes the represented conductor and all dependent features when a conductor in a cross section is deleted.
Dependency	Rule group member

EL_DeleteElLine_BD

The EL_DeleteElLine_BD feature rule deletes conductors and cross section conductors, segment conductors, and duct conductors if EL_LINE is a utility feature of a conductor.

You can associate this feature rule with the **EL_LINE** feature class..

Name	**EL_DeleteElLine_BD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Deletes conductors and cross section conductors if EL_Line is a utility feature of conductors.

EL_DeleteConductor rule group

The feature rules in the EL_DeleteConductor rule group delete conductors and their associated relationship table entries when a cross section conductor is deleted.

- EL_DeleteConductor_BD
- EL_DeleteConductor_AD

EL_DeleteConductor_BD

You can associate this feature rule with the **EL_CONDUCTOR** feature class.

NOTE

This feature rule must be triggered before TemplateFeatureRule UpdatesTemplateInstances_BD.

Name	**EL_DeleteConductor_BD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Deletes the conductor and all related cross section conductors.
Dependency	Rule group member

EL_DeleteConductor_AD

You can associate this feature rule with the **EL_CONDUCTOR** feature class.

Name	**EL_DeleteConductor_AD**

Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side After Delete (AD). Is System. Is Row.
Description	Deletes the conductor and all related cross section conductors.
Dependency	Rule group member

EL_DeleteCSDuct rule group

The following feature rules belong to the EL_DeleteCSDuct rule group.

- EL_DeleteConductor_BD
- EL_DeleteCSDuct_AD

EL_DeleteCSDuct_BD

The EL_DeleteCSDuct_BD feature rule determines whether there are sufficient unassigned snap points in a cross section for the ducts and innner conductors represented by the CSDuct to which the rule applies. If there are insufficient unassigned snap points, the deletion of the the CSDuct is not permittted.

You can associate this feature rule with the **EL_CS_DUCT** feature class.

Name	**EL_DeleteCSDuct_BD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.

Description	Deletes the represented duct and all related cross section ducts.
Dependency	Rule group member

EL_DeleteCSDuct_AD

The EL_DeleteCSDuct_AD feature rule deletes the CSDuct, and the corresponding duct, to which the rule applies .

You can associate this feature rule with the **EL_CS_DUCT** feature class.

Name	**EL_DeleteCSDuct_AD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side After Delete (AD). Is System. Is Row.
Description	Deletes the represented duct and all related cross section ducts.
Dependency	Rule group member

EL_DeleteDuct rule group

The feature rules in the EL_DeleteCSDuct rule group move all conductors contained in a duct to the next unassigned snap point of a cross section and delete the duct.

- EL_DeleteDuct_BD
- EL_DeleteDuct_AD

EL_DeleteDuct_BD

You can associate this feature rule with the **EL_DUCT** feature class.

Name	**EL_DeleteDuct_BD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Moves all containing conductors to the next free unassigned snap point of the cross section and deletes the duct.
Dependency	Rule group member

EL_DeleteDuct_AD

You can associate this feature rule with the **EL_DUCT** feature class.

Name	**EL_DeleteDuct_AD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side After Delete (AD). Is System. Is Row.
Description	Moves all containing conductors to the next free unassigned snap point of the cross section and deletes the duct.
Dependency	Rule group member

EL_DeleteDuctArea rule group

The feature rules in the EL_DeleteDuctArea rule group feature delete related ducts.

- EL_DeleteDuctArea_BD
- EL_DeleteDuctArea_AD

EL_DeleteDuctArea_BD

You can associate this feature rule with the **EL_DUCT_AREA** feature class.

Name	**EL_DeleteDuctArea_BD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Deletes the related duct.
Dependency	Rule group member

EL_DeleteDuctArea_AD

You can associate this feature rule with the **EL_DUCT_AREA** feature class.

Name	**EL_DeleteDuctArea_AD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side After Delete (AD).

	Is System. Is Row.
Description	Deletes the related duct.
Dependency	Rule group member

EL_DeleteStructurePoint_BD

The EL_DeleteStructurePoint_BD feature rule deletes a station internal view for structure point.

You can associate this feature rule with the **EL_STR_POINT** feature class.

Name	**EL_StructurePoint_BD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Deletes station internal for structure point.

EL_CreateSegmentBorders_BI

The EL_CreateSegmentBorders_BI feature rule creates two separate border features that represent the width of the segment.

You can associate this feature rule with the **EL_SEGMENT** feature class.

Name	**EL_CreateSegmentBorders_BI**
Location	Assembly: `Topobase.Modules.ElectricCE.dll`

	Classname: `FeatureRules`
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	Creates two segment border featutres that represent the width of the segment.

EL_UpdateSegmentBorders_StrLine_BU

The EL_UpdateSegmentBorders_StrLine_BU feature rule creates two separate border features that represent the width of the segment.

You can associate this feature rule with the **EL_STR_LINE** feature class.

Name	**EL_UpdateSegmentBorders_StrLine__BU**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Creates two segment border features that represent the width of the segment.

EL_UpdateSegmentBorders_Segment_BU

The EL_UpdateSegmentBorders_Segment_BU feature rule creates two separate border features that represent the width of the segment.

You can associate this feature rule with the **EL_SEGMENT** feature class.

Name	**EL_UpdateSegmentBorders_Segment_BU**

Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Creates two segment border featutres that represent the width of the segment.

EL_DeleteSegmentBorders rule group

The feature rules in the EL_DeleteSegmentBorders_BD rule group delete EL_SEGMENT_BORDER features when an EL_SEGMENT feature is deleted.

EL_DeleteSegmentBorders_BD

Name	**EL_DeleteSegmentBorders_BD**
Location	Assembly: Topobase.Modules.ElectricCE.dll Classname: FeatureRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Deletes the segment border featutres that represent the width of the segment.

EL_DeleteSegmentBorders_AD

Name	**EL_DeleteeSegmentBorders_AD**
Location	Assembly: `Topobase.Modules.ElectricCE.dll`

	Classname: `FeatureRules`
Type	Client-side After Delete (AD). Is System. Is Row.
Description	Deletes the segment border featutres that represent the width of the segment.

EL_AutoSplitSegment_AI

The EL_AutoSplitSegment_AI feature rule automatically splits a segment after the insertion of a new structural point.

You can add this feature rule to feature classes of type **Attribute**.

Name	**EL_AutoSplitSegment_AI**
Location	Assembly: `Topobase.Modules.ElectricCE.dll` Classname: `FeatureRules`
Type	Client-side After Insert (AI). Is System. Is Row.
Description	Automatically soft-splits a segment if a structural point feature is created on the segment.

Topobase Electric NA

Basic Feature Rules

See Basic Feature Rules on page 4

Electric NA Feature Rules

The Electric NA module uses server-side feature rules to maintain the system tables.

EL_DeleteSegment rule group

The feature rules in the EL_DeleteSegment rule group delete all features related to a segment.

- EL_DeleteSegment_BD
- EL_DeleteSegment_AD

EL_DeleteSegment_BD

You can add this feature rule to feature classes of type **LineString**.

Name	**EL_DeleteSegment_BD**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Deletes the segment and all related features.
Dependency	Rule group member

EL_DeleteSegment_AD

You can add this feature rule to feature classes of type **LineString**.

Name	**EL_DeleteSegment_AD**

Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side After Delete (AD). Member of a rule group. TB_RULE_GROUP.ID = 8006. Is System. Is Row.
Description	Deletes the segment and all related features.
Dependency	Rule group member

EL_CreateSegmentCrossSection rule group

The feature rules in the EL_CreateSegmentCrossSection rule group create segment cross sections in accordance with your chosen segment model.

- EL_CreateSegmentCrossSection_BU
- EL_CreateSegmentCrossSection_AU

EL_CreateSegmentCrossSection_BU

You can associate this feature rule with the **EL_SEGMENT** feature class.

Name	**EL_CreateSegmentCrossSection_BU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.

Description	Creates a cross section according to the selected segment model.
Dependency	Rule group member
Execute Column	FID_TEMPLATE
Parameters	P1: Template is mandatory. Default: YES

EL_CreateSegmentCrossSection_AU

You can associate this feature rule with the **EL_SEGMENT** feature class.

Name	**EL_CreateSegmentCrossSection_AU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side After Update (AU). Is System. Is Row.
Description	Creates a cross section according to the selected segment model.
Dependency	Rule group member
Execute Column	FID_TEMPLATE

EL_DeleteSegmentCrossSection_BD

The EL_DeleteSegmentCrossSection_BDfeature rule determines whether deleting a cross section is permitted.

Name	**EL_DeleteSegmentCrossSection_BD**

Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Determines if deleteing this cross section is allowed.
Dependency	Rule group member

EL_CreatePoleTowerCrossSection rule group

The feature rules in the EL_CreatePoleTowerCrossSection rule group create pole/tower cross sections in accordance with your chosen data model.

- EL_CreatePoleTower_BU
- EL_CreatePoleTowerSection_AU

EL_CreatePoleTowerCrossSection_BU

You can add this feature rule to feature classes of type **Point**.

Name	**EL_CreatePoleTowerCrossSection_BU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Creates a cross section according to the selected pole/tower model.

Dependency	Rule group member
Execute Column	FID_TEMPLATE

EL_CreatePoleTowerCrossSection_AU

You can add this feature rule to feature classes of type **Point**.

Name	**EL_CreatePoleTowerCrossSection_AU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side After Update (AU). Is System. Is Row.
Description	Creates a cross section according to the selected pole/tower model.
Dependency	Rule group member

EL_CreateDuctCrossSection rule group

The feature rules in the EL_CreateDuctCrossSection rule group create duct cross sections in accordance with your chosen duct model.

- EL_CreateDuctCrossSection_BU
- EL_CreateDuctCrossSection_BI

EL_CreateDuctCrossSection_BU

You can associate this feature rule with the **EL_DUCT** feature class.

Name	**EL_CreateDuctCrossSection_BU**

Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Creates the layout to display conductors in a duct according to the selected duct model.
Dependency	Rule group member
Execute Column	FID_TEMPLATE

EL_CreateDuctCrossSection_BI

You can associate this feature rule with the **EL_CS_DUCT** feature class.

Name	**EL_CreateDuctCrossSection_BI**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Creates the layout to display conductors in a duct according to the selected duct model.
Dependency	Rule group member

EL_MoveAccordingSnappoint_BU

The EL_MoveAccordingSnappoint_BU feature rule moves features that have FID_SNAPPOINT attribues to a new snap point and updates the geometry and orientation of the features accordingly.

You associate this feature rule with the **EL_SNAPPOINT** feature class.

Name	**EL_MoveAccordingSnappoint_BU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Move cross section elements according to their related snap point.
Execute Column	GEOM

EL_RermoveSnappointUnderneath_BD

The EL_RemoveSnappointUnderneath_BD feature rule removes the snap point when a cross section conductor is deleted.

You can add this feature rule to feature classes of type **Point**.

Name	**EL_RemoveSnappointUnderneath_BD**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD).

	Is System. Is Row.
Description	Remove snap point when a cross section conductor is removed.

EL_DeleteSanppoint_BD

The EL_DeleteSnappoint_BD feature rule prevents snap points from being deleted. Snap points are managed by the application.

You can add this feature rule to feature classes of type **Point**.

Name	**EL_DeleteSnappoint_BD**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Prevent user from deleting snap points. Snap points are managed by the application.

EL_DeleteCSConductor rule group

The feature rules in the EL_Delete CSConductor rule group delete conductors and all associated table entries when a cross section conductor is deleted.

- EL_DeleteCSConductor_BD
- EL_DeleteCSConductor_AD

EL_DeleteCSConductor_BD

You can associate this feature rule with the **EL_CS_CONDUCTOR** feature class.

Name	**EL_DeleteCSConductor_BD**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Deletes the represented conductor and all dependent features when a conductor in a cross section is deleted.
Dependency	Rule group member

EL_DeleteCSConductor_AD

You can associate this feature rule with the **EL_CS_CONDUCTOR** feature class.

NOTE This feature rule must be triggered before the Template Feature Rule UpdateTemplateInstances_BD.

Name	**EL_DeleteCSConductor_AD**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side After Delete (AD). Is System. Is Row.

Description	Deletes the represented conductor and all dependent features when a conductor in a cross section is deleted.
Dependency	Rule group member

EL_DeleteConductor rule group

The feature rules in the EL_Delete Conductor rule group feature delete conductors and all associated table entries when cross sections are deleted.

- EL_DeleteConductor_BD
- EL_DeleteConductor_AD

EL_DeleteConductor_BD

You can associate this feature rule with the **EL_CONDUCTOR** feature class.

NOTE This feature rule must be triggered before the Template Feature Rule UpdateTemplateInstances_BD.

Name	**EL_DeleteConductor_BD**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Deletes the conductor and all related cross section conductors.
Dependency	Rule group member

EL_DeleteConductor_AD

You can associate this feature rule with the **EL_CONDUCTOR** feature class.

Name	**EL_DeleteConductor_AD**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side After Delete (AD). Member of a rule group. TB_RULE_GROUP.ID = 8011. Is System. Is Row.
Description	Deletes the conductor and all related cross section conductors.
Dependency	Rule group member

EL_DeleteCSDuct rule group

The EL_DeleteCSDuct rule group contains the following feature rules:

- EL_DeleteCSDuct_BD
- EL_DeleteCSDuct_AD

EL_DeleteCSDuct_BD

The EL_DeleteCSDuct_BD feature rule determines whether there are sufficient unassigned snap points in a cross section for the ducts and innner conductors represented by the CSDuct to which the rule applies. If there are insufficient unassigned snap points, the deletion of the the CSDuct is not permittted.

You can associate this feature rule with the **EL_CS_DUCT** feature class.

Name	**EL_DeleteCSDuct_BD**

Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Member of a rule group. TB_RULE_GROUP.ID = 8012. Is System. Is Row.
Description	Deletes the represented duct and all dependent cross section ducts.
Dependency	Rule group member

EL_CDeleteCSDuct_AD

The EL_DeleteCSDuct_AD feature rule deletes the CSDuct, and the corresponding duct, to which the rule applies .

You can associate this feature rule with the **EL_CS_DUCT** feature class.

NOTE This feature rule must be triggered before the Template Feature Rule UpdateTemplateInstances_BD.

Name	**EL_CDeleteCSDuct_AD**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side After Delete (AD). Member of a rule group. TB_RULE_GROUP.ID = 8012. Is System. Is Row.
Description	Deletes the represented duct and all dependent cross section ducts.

Dependency	Rule group member

EL_DeleteDuct rule group

The following feature rules belong to the EL_DeleteDuct rule group:

- EL_DeleteCSDuct_BD
- EL_DeleteDuct_BD

EL_DeleteDuct_BD

The EL_DeleteDuct_BD feature rule determines whether there are sufficient unassigned snap points in a cross section for the ducts and innner conductors represented by the Duct to which the rule applies. If there are insufficient unassigned snap points, the deletion of the the Duct is not permittted.

You can associate this feature rule with the **EL_DUCT** feature class.

NOTE This feature rule must be triggered before the Template Feature Rule UpdateTemplateInstances_BD.

Name	**EL_DeleteDuct_BD**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Moves all conductors to the next free unassigned snap point of the cross section and deletes the duct.
Dependency	Rule group member

EL_DeleteDuct_AD

The EL_DeleteDuct_AD feature rule deletes the Duct and moves its inner conductors to the unassigned snap points of th e cross section.

You can associate this feature rule with the **EL_DUCT** feature class.

Name	**EL_DeleteDuct_AD**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side After Delete (AD). Is System. Is Row.
Description	Moves all conductors to the next free unassigned snap point of the cross section and deletes the duct.
Dependency	Rule group member

EL_MoveDuctInCrossSection_BU

The EL_MoveDuctInCrossSection_BU feature rule determines wheter it is valid to move a cross section duct from one snap point to another. If the move is permitted, the rule updates the relationship between the snap point and the cross section duct.

You can associate this feature rule with the **EL_CS_DUCT** feature class.

Name	**EL_MoveDuctInCrossSection_BU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side

	BeforeUpdate (BU). Is System. Is Row.
Description	Updates association between cross section duct and snap point when the cross section duct is moved inside the cross section.
Execute Column	GEOM

EL_MoveConductorInCrossSection_BU

The EL_MoveConductorInCrossSection_BU feature rule determines whether it is valid to move a cross section conductor from one duct to another. If the move is permitted, the existing duct is removed, an unassigned snap point is created, and the associations between the features are updated.

You can associate this feature rule with the **EL_CS_CONDUCTOR** feature class.

Name	**EL_MoveConductorInCrossSection_BU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side BeforeUpdate (BU). Is System. Is Row.
Description	Updates association between cross section conductor and snap point when the cross section conductor is moved inside the cross section.
Execute Column	GEOM

EL_ScaleCrossSection_BU

The EL_ScaleSection_BU feature rule resizes a cross section when the value of the CS_ORIGIN.SCALE attribute changes. If the value of CS_ORIGIN.SCALE is less than 1, the cross section is scaled smaller than its original size. If the value of CS_ORIGIN.SCALE is greater than 1, the cross section is scaled larger than its original size.

You can associate this feature rule to the **EL_CS_ORIGIN** feature class.

Name	**EL_ScaleCrossSection_BU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side BeforeUpdate (BU). Is System. Is Row.
Description	Scale cross section according to the value of CS_ORIGIN.SCALE.
Execute Column	SCALE

EL_MoveCsLegendDecoration_BU

The EL_MoveCsLegendDecoration_BU feature rule determines whether a legend decoration exists or whether it has to be created. The rule then updates or creates the legened decoration as necessary in accordance with the position of CS_ORIGIN.

You can associate this feature rule with the **EL_CS_ORIGIN** feature classe.

Name	**EL_MoveCsLegendDecoration_BU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`

Type	Client-side BeforeUpdate (BU). Is System. Is Row.
Description	Move legend decoration line according to the cross section origin.
Execute Column	GEOM

EL_ComputeNextMaintDate_BIU

The EL_ComputeNextMaintDate_BIU feature rule calculates the next maintenance date as a function of the maintenance date and the maintenance period. If the next maintenance date has already been set, the rule does nothing.

You can add this feature rule to feature classes of type **Attribute**.

Name	**EL_ComputeNextMaintDate_BIU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side BeforeInsert Update (BIU). Is System. Is Row.
Description	Computes the next maintenance date based on the current maintenance date and a maintenance period.

EL_ForbidDupliacteDevice_BIU

The EL_ForbidDuplicateDevice_BIU feature rule prevents the creation of devices that have the same geometry as the feature class with which this rule is associated.

You can add this feature rule to feature classes of type **Point**.

Name	**EL_ForbidDuplicateDevice_BIU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side Before Insert Update (BIU). Is System. Is Row.
Description	Forbid devices with the same geometry.
Execute Column	GEOM

EL_MoveAccordingSegment rule group

The feature rules in the EL_MoveAccordingSegmen rule group move cross sections, legends, and related conductors to their new locations before and after the geometry of a segment is updated.

This rule group contains the following rules:

- EL_MoveAccordingSegment_BU
- EL_MoveAccordingSegment_AU

EL_MoveAccordingSegment_BU

You can associate this feature rule with the **EL_STR_LINE** feature class.

Name	**EL_MoveAccordingSegment_BU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side

	Before Update (BU) Is System. Is Row.
Description	Moves the conductors and cross sections of a segment to their new locations when the geometry of a segment is updated.
Execute Column	GEOM

EL_MoveAccordingSegment_AU

You can associate this feature rule with the **EL_STR_LINE** feature class.

Name	**EL_MoveAccordingSegment_AU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `FeatureRules`
Type	Client-side After Update (AU) Is System. Is Row.
Description	Moves the conductors and cross sections of a segment to their new locations when the geometry of a section is updated.
Execute Column	GEOM

ValidateElectricTopology rule group

The ValidateElectricTopology_BI feature rule contains feature rules that determine wether the links between connected features are valid. If the links are broken, the rules fire the CircuitFailure, PhaseFailure, and VoltageFailure events.

- ValidateElectricTopology_BI

- ValidateElectricTopology_BU

ValidateElectricTopology_BI

You can associate this feature rule with the **ELECTRIC_CONN** feature class.

Name	**ValidateElectricTopology_BI**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `Topology.FeatureRules`
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	Validates manual operation of the electrical logical topology (voltage, phase, and state).
Dependency	Rule group member

ValidateElectricTopology_BU

You can associate this feature rule with the **ELECTRIC_CONN** feature class.

Name	**ValidateElectricTopology_BU**
Location	Assembly: `Topobase.Modules.ElectricNA.dll` Classname: `Topology.FeatureRules`
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Validates manual operation of the electrical logical topology (voltage, phase, and state).

Dependency	Rule group member

Topobase Gas

Basic Feature Rules

See Basic Feature Rules on page 4

Gas Feature Rules

Gas client-side feature rules facilitate and control data entry. For example, you optionally enable a feature rule that automatically assigns the pressure zone during digitalization of the gas network.

See also the Topobase Gas User Guide.

GA_ComputeNextMaintDate_BIU

GA_ComputeNextMaintDate_BIU calculates the next maintenance date based on the current maintenance date and maintenance period.

The feature rule applies to attribute feature classes, such as GA_ARMATURE.

Name	**GA_ComputeNextMaintDate_BIU**
Location	Assembly: Topobase.Modules.Gas.dll Classname: Topobase.Modules.Gas.Feature-Rules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Calculates the next maintenance date based on the current maintenance date and maintenance period.

NOTE We recommend that you enable the feature rule, if you want to calculate the maintenance date automatically.

GA_RejectDuplicatePoints_BIU

The feature rule GA_RejectDuplicatePoints_BIU ensures that no gas network points (GA_POINT) or cable control points (GA_C_POINT) can be created in the same location.

NOTE We recommend that you enable the feature rule, if you want to validate that no duplicate points are digitized. For example, to prevent topolology errors.

The feature rule applies to gas utility points (GA_POINT), and to control cable points (GA_C_POINT).

Name	**GA_RejectDuplicatePoints_BIU**
Location	Assembly: Topobase.Modules.Gas.dll Classname: Topobase.Modules.Gas.Feature-Rules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Rejects insert or update when another utility point is located within the radius.
Execute Column	GEOM
Parameters	P1: Radius. Default is 0.0005. Specifies a radius for searching similar points. P2: Other Utility FCs. Specifies other utility point feature classes. Enter multiple feature classes separated by a comma. An empty list affects none. P3: Show Error. Default is YES. Specifies whether to display a message.

Example	Set the parameter P2 to "GA_VALVE, GA_FITTING" to specify that only valves and fittings must not lie within the specified radius.

GA_SetPressureZone_BI

The feature rule GA_SetPressureZone_BI sets the pressure zone <feature class>.FID_PRESSUREZONE for a feature if it is located within a zone. If the feature is located in overlapping zones, you are prompted to select a zone. If you select Yes, you can select a zone. If you select No, the pressure zone value is cleared.

NOTE We recommend that you enable the feature rule, if you want to automatically assign the pressure zone during digitalization.

The feature rule GA_SetPressureZone_BI applies to the attribute feature classes, such as GA_ARMATURE or GA_PIPE.

Name	**GA_SetPressureZone_BI**
Location	Assembly: Topobase.Modules.Gas.dll Classname: Topobase.Modules.Gas.FeatureRules
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	Sets the pressure zone of a feature if it is within such a zone. When more than one zone is found, the feature is assigned to none.
Parameters	P1: Show Zone Selector. Default is YES. Specifies whether a zone selector is shown, if more than one zone is found.
Dependency	The GA_SetPressureZone_BI feature rule applies to the attribute feature classes. There is a re-

lated rule group for the utility point and utility line feature classes. See GA_SetPressureZone_BIU.

NOTE You must enable or disable the GA_SetPressureZone feature rule for both the attribute feature class and the utility feature class.

GA_SetPressureZone_BIU rule group

The GA_SetPressureZone rule group sets the pressure zone of a feature if it is within such a zone.

- GA_SetPressureZone_BIU
- GA_SetPressureZone_AIU

The rule group applies to the utility point or utility line feature classes, such as GA_LINE, GA_POINT, GA_C_LINE, and GA_C_POINT.

GA_SetPressureZone_BIU

Name	**GA_SetPressureZone_BIU**
Location	Assembly: Topobase.Modules.Gas.dll Classname: Topobase.Modules.Gas.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Sets the pressure zone of a feature if it is within such a zone. In update mode, it removes the assignment when no zone is found. When more than one zone is found, the feature is assigned to none.

Execute Column	GEOM
Parameters	P1: Show Zone Selector. Default is YES. Specifies whether a zone selector is shown, if more than one zone is found.
Dependency	Member of a rule group. The GA_SetPressureZone_BIU feature rule applies to the utility point and utility line feature classes. There is a related feature rule for the attribute feature classes. See GA_SetPressureZone_BI on page 116. **NOTE** You must enable or disable the GA_SetPressureZone feature rule for both the attribute feature class and the utility feature class.

GA_SetPressureZone_AIU

Name	**GA_SetPressureZone_AIU**
Location	Assembly: Topobase.Modules.Gas.dll Classname: Topobase.Modules.Gas.FeatureRules
Type	Client-side After Insert (AI). After Update (AU). Is System. Is Row.
Description	Sets the pressure zone of a feature if it is within such a zone. In update mode, it removes the assignment when no zone is found. When more than one zone is found, the feature is assigned to none.
Parameters	P1: Show Zone Selector. Default is YES. Specifies whether a zone selector is shown, if more than one zone is found.

Dependency	Member of a rule group. The GA_SetPressureZone_AIU feature rule applies to the utility point and utility line feature classes. There is a related feature rule for the attribute feature classes. See GA_SetPressureZone_BI on page 116. **NOTE** You must enable or disable the GA_SetPressureZone feature rule for both the attribute feature class and the utility feature class.

GA_SetSupplyZone_BI

The feature rule GA_SetSupplyZone_BI sets the supply zone <feature class>.FID_SUPPLYZONE for a feature if it is located within a zone. If the feature is located in overlapping zones, you are prompted to select a zone. If you select Yes, you can select a zone. If you select No, the supply zone value is cleared.

The feature rule GA_SetSupplyZone_BI applies to the attribute feature class GA_PIPE.

Name	**GA_SetSupplyZone_BI**
Location	Assembly: Topobase.Modules.Gas.dll Classname: Topobase.Modules.Gas.FeatureRules
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	Sets the supply zone of a feature if it is within such a zone. When more than one zone is found, the feature is assigned to none.
Parameters	P1: Show Zone Selector. Default is YES.

	Specifies whether a zone selector is shown, if more than one zone is found.
Dependency	The GA_SetSupplyZone_BI feature rule applies to the attribute line feature classes. There is a related rule group for the utility line feature classes. See GA_SetSupplyZone rule group on page 120. **NOTE** You must enable or disable the GA_SetSupplyZone feature rule for both the attribute feature class and the utility feature class.

GA_SetSupplyZone rule group

The GA_SetSupplyZone rule group sets the supply zone of a feature if it is within such a zone.

- GA_SetSupplyZone_BIU
- GA_SetSupplyZone_AIU

The rule group applies to the utility line feature classes, such as GA_LINE, and GA_C_LINE.

GA_SetSupplyZone_BIU

Name	**GA_SetSupplyZone_BIU**
Location	Assembly: Topobase.Modules.Gas.dll Classname: Topobase.Modules.Gas.Feature-Rules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.

Description	Sets the supply zone of a feature if it is within such a zone. In update mode, it removes the assignment when no zone is found. When more than one zone is found, the feature is assigned to none.
Execute Column	GEOM
Parameters	P1: Show Zone Selector. Default is YES. Specifies whether a zone selector is shown, if more than one zone is found.
Dependency	Member of a rule group. The GA_SetSupplyZone_BIU feature rule applies to the utility line feature classes. There is a related feature rule for the attribute line feature classes. See GA_SetSupplyZone_BI on page 119. **NOTE** You must enable or disable the GA_SetSupplyZone feature rule for both the attribute feature class and the utility feature class.

GA_SetSupplyZone_AIU

Name	**GA_SetSupplyZone_AIU**
Location	Assembly: Topobase.Modules.Gas.dll Classname: Topobase.Modules.Gas.FeatureRules
Type	Client-side After Insert (AI). After Update (AU). Is System. Is Row.
Description	Sets the supply zone of a feature if it is within such a zone. In update mode, it removes the assignment when no zone is found. When

	more than one zone is found, the feature is assigned to none.
Parameters	P1: Show Zone Selector. Default is YES. Specifies whether a zone selector is shown, if more than one zone is found.
Dependency	Member of a rule group. The GA_SetSupplyZone_AIU feature rule applies to the utility line feature classes. There is a related feature rule for the attribute line feature classes. See GA_SetSupplyZone_BI on page 119. **NOTE** You must enable or disable the GA_SetSupplyZone feature rule for both the attribute feature class and the utility feature class.

Topobase Wastewater

Basic Feature Rules

See Basic Feature Rules on page 4

Wastewater Feature Rules

Wastewater client-side feature rules <describe: calculate values that are dependent on each other, such as heights. Assign default values based on ??how is input_step assigned??>

WW_ComputeNextMaintDate_BIU

The feature rule WW_ComputeNextMaintDate_BIU calculates the next maintenance date (MAINTENANCE_NEXT_DATE) based on the current maintenance date (MAINTENANCE_DATE) and the maintenance period (MAINTENANCE_PERIOD).

The feature rule applies to WW_MAINTENANCE.

Name	**WW_ComputeNextMaintDate_BIU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Calculates the next maintenance date based on the current maintenance date and the maintenance period.

WW_CompNbrOfSectionsManhole_AI

For new manholes, the feature rule WW_CompNbrOfSectionsManhole_AI calculates the number of incoming and outgoing sections and stores the number in the attributes NR_INPUT_SECTION and NR_OUTPUT_SECTION.

The feature rule applies to WW_MANHOLE.

Name	**WW_CompNbrOfSectionsManhole_AI**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Insert (BI). Is System. Is Row.
Description	For new manholes, calculates the number of incoming and outgoing sections

WW_CompNbrOfSectionsManhole_AU

The feature rule WW_CompNbrOfSectionsManhole_AU calculates the number of input- and output-sections for a new manhole.

The feature rule applies to <feature classes>

Name	**WW_CompNbrOfSectionsManhole_AU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Update (AU). Is System. Is Row.
Description	Calculates the number of input- and output-sections for a new manhole.
Example	
Dependency	

WW_ComputeNbrOfSections rule group

The WW_ComputeNbrOfSections rule group determines the start points and the end points of the created section and calculates their number of incoming and outgoing sections.

- WW_ComputeNbrOfSections_BIU
- WW_ComputeNbrOfSections_AIU
- WW_ComputeNbrOfSections_BD
- WW_ComputeNbrOfSections_AD

The rule group applies to <feature classes>

WW_ComputeNbrOfSections_BIU

Name	**WW_ComputeNbrOfSections_BIU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Determines the start point, and the end point of the created section and calculates their number of incoming and outgoing sections.
Execute Column	GEOM
Example	
Dependency	Member of a rule group.

WW_ComputeNbrOfSections_AIU

Name	**WW_ComputeNbrOfSections_AIU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Insert (AI). After Update (AU). Is System. Is Row.
Description	Determines the start point, and the end point of the created section and calculates their number of incoming and outgoing sections.

Example	
Dependency	Member of a rule group.

WW_ComputeNbrOfSections_BD

Name	**WW_ComputeNbrOfSections_BD**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	Determines the start point, and the end point of the created section and calculates their number of incoming and outgoing sections.
Example	
Dependency	Member of a rule group.

WW_ComputeNbrOfSections_AD

Name	**WW_ComputeNbrOfSections_AD**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Delete (AD). Is System. Is Row.

Description	Determines the start point, and the end point of the created section and calculates their number of incoming and outgoing sections.
Example	
Dependency	Member of a rule group.

WW_ConnectCover_BIU

The feature rule WW_ConnectCover_BIU connects covers with the point if they are contained in the point's polygon detail.

The feature rule applies to <feature classes>

Name	**WW_ConnectCover_BIU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Connects covers with the point if they are contained in the point's polygon detail.
Execute Column	GEOM
Example	
Dependency	

WW_ConnectCoverPolygon_AIU

The feature rule WW_ConnectCoverPolygon_AIU connects covers with the point if they are contained in the point's polygon detail .

The feature rule applies to <feature classes>

Name	**WW_ConnectCoverPolygon_AIU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Insert (AI). After Update (AU). Is System. Is Row.
Description	Connects covers with the point if they are contained in the point's polygon detail.
Example	
Dependency	

WW_ComputeSubDrainArea_BIU

The feature rule WW_ComputeSubDrainArea_BIU calculates some values of the sub drain area.

The feature rule applies to <feature classes>

Name	**WW_ComputeSubDrainArea_BIU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side

	Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Calculates some values of the sub drain area.
Example	
Dependency	

WW_ConnSectionWashingArea_BI

The feature rule WW_ConnSectionWashingArea_BI connects a section with a washing area with it is contained in the washing area.

The feature rule applies to <feature classes>

Name	**WW_ConnSectionWashingArea_BI**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	Connects a section with a washing area with it is contained in the washing area.
Example	
Dependency	

WW_ConnSectionWashingArea_BU

The feature rule WW_ConnSectionWashingArea_BU connects a section with a washing area with it is contained in the washing area.

The feature rule applies to <feature classes>

Name	**WW_ConnSectionWashingArea_BU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Connects a section with a washing area with it is contained in the washing area.
Execute Column	GEOM
Example	
Dependency	

WW_ConnWashingAreaSection_BIU

The feature rule WW_ConnWashingAreaSection_BIU connects a section with a washing area with it is contained. in the washing area. ???

The feature rule applies to <feature classes>

Name	**WW_ConnWashingAreaSection_BIU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules

Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Connects a section with a washing area with it is contained in the washing area.
Execute Column	GEOM
Example	
Dependency	

WW_ConnSubAreaWDrainArea_BIU

The feature rule WW_ConnSubAreaWDrainArea_BIU connects a sub drain area with the containing drain area.

The feature rule applies to <feature classes>

Name	**WW_ConnSubAreaWDrainArea_BIU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Connects a sub drain area with the containing drain area.
Execute Column	GEOM
Example	

Dependency	

WW_ConnDrainAreaWSubArea_BIU

The feature rule WW_ConnDrainAreaWSubArea_BIU connects a sub drain area with the containing drain area.

The feature rule applies to <feature classes>

Name	**WW_ConnDrainAreaWSubArea_BIU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Connects a sub drain area with the containing drain area.
Execute Column	GEOM
Example	
Dependency	

WW_ComputeSectionElevation_BIU

The feature rule WW_ComputeSectionElevation_BIU calculates some values of the section, its manholes and their covers.

The feature rule applies to <feature classes>

Name	**WW_ComputeSectionElevation_BIU**

Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Calculates some values of the section, its manholes and their covers.
Example	
Dependency	

WW_ConnSubDrainAreaSection_BI

The feature rule WW_ConnSubDrainAreaSection_BI connects a section with a sub drain area if it is contained in the sub drain area.

The feature rule applies to <feature classes>

Name	**WW_ConnSubDrainAreaSection_BI**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	Connects a section with a sub drain area if it is contained in the sub drain area.
Execute Column	GEOM

Example	
Dependency	

WW_ConnSectionSubDrainArea_BI

The feature rule WW_ConnSectionSubDrainArea_BI connects a section with a sub drain area if it is contained in the sub drain area.

The feature rule applies to <feature classes>

Name	**WW_ConnSectionSubDrainArea_BI**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	Connects a section with a sub drain area if it is contained in the sub drain area.
Example	
Dependency	

WW_ConnSubDrainAreaSection_BU

The feature rule WW_ConnSubDrainAreaSection_BU connects a section with a sub drain area if it is contained in the sub drain area.

The feature rule applies to <feature classes>

Name	**WW_ConnSubDrainAreaSection_BU**

Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Update (BU). Is System. Is Row.
Description	Connects a section with a sub drain area if it is contained in the sub drain area.
Execute Column	GEOM
Example	
Dependency	

WW_ConnSubDrainAreaManhole_BIU

The feature rule WW_ConnSubDrainAreaManhole_BIU connects the end manhole of a section with a sub drain area if it is contained in this area.

The feature rule applies to <feature classes>

Name	**WW_ConnSubDrainAreaManhole_BIU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Connects the end manhole of a section with a sub drain area if it is contained in this area.

Execute Column	GEOM
Example	
Dependency	

WW_ConnManholeSubDrainArea_BIU

The feature rule WW_ConnManholeSubDrainArea_BIU Connects the end manhole of a section with a sub drain area if it is contained in this area.

The feature rule applies to <feature classes>

Name	**WW_ConnManholeSubDrainArea_BIU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Connects the end manhole of a section with a sub drain area if it is contained in this area.
Example	
Dependency	

WW_DeleteSectionObservation rule group

The WW_DeleteSectionObservation rule group <describe>.

- WW_DeleteSectionObservation_BD
- WW_DeleteSectionObservation_AD

The rule group applies to <feature classes>

WW_DeleteSectionObservation_BD

Name	**WW_DeleteSectionObservation_BD**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	FeatureRuleDescrDeleteSectionObservation???
Example	
Dependency	Member of a rule group.

WW_DeleteSectionObservation_AD

Name	**WW_DeleteSectionObservation_AD**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	FeatureRuleDescrDeleteSectionObservation???
Example	
Dependency	Member of a rule group.

WW_DeleteManholeObservation rule group

The WW_DeleteManholeObservation rule group <describe>.

- WW_DeleteManholeObservation_BD
- WW_DeleteManholeObservation_AD

The rule group applies to <feature classes>

WW_DeleteManholeObservation_BD

Name	**WW_DeleteManholeObservation_BD**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	FeatureRuleDescrDeleteManholeObservation???
Example	
Dependency	Member of a rule group.

WW_DeleteManholeObservation_AD

Name	**WW_DeleteManholeObservation_AD**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side

	After Delete (AD). Is System. Is Row.
Description	FeatureRuleDescrDeleteManholeObserva-tion???
Example	
Dependency	Member of a rule group.

WW_DeleteSiteObservation rule group

The WW_DeleteSiteObservation rule group <describe>.

- WW_DeleteSiteObservation_BD
- WW_DeleteSiteObservation_AD

The rule group applies to <feature classes>

WW_DeleteSiteObservation_BD

Name	**WW_DeleteSiteObservation_BD**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.Fea-tureRules
Type	Client-side Before Delete (BD). Is System. Is Row.
Description	FeatureRuleDescrDeleteSiteObservation
Example	
Dependency	Member of a rule group.

WW_DeleteSiteObservation_AD

Name	**WW_DeleteSiteObservation_AD**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Delete (AD). Is System. Is Row.
Description	FeatureRuleDescrDeleteSiteObservation
Example	
Dependency	Member of a rule group.

WW_CopyLengthSection_BI

The feature rule WW_CopyLengthSection_BI copies the value of the length attribute of the line feature to the total length attribute of the section feature.

The feature rule applies to <feature classes>

Name	**WW_CopyLengthSection_BI**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	Copies the value of the length attribute of the line feature to the total length attribute of the section feature.

Example	
Dependency	

WW_CopyLengthLine_AU

The feature rule WW_CopyLengthLine_AU copies the value of the length attribute of the line feature to the total length attribute of the section feature.

The feature rule applies to <feature classes>

Name	**WW_CopyLengthLine_AU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Update (AU). Is System. Is Row.
Description	Copies the value of the length attribute of the line feature to the total length attribute of the section feature.
Example	
Dependency	

WW_CopyInputOutputZ_AI

The feature rule WW_CopyInputOutputZ_AI copies the value of the 'Input Z' to the 'Start Z' attribute and the value of the 'Output Z' to the 'End Z' attribute.

The feature rule applies to <feature classes>

Name	**WW_CopyInputOutputZ_AI**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Insert (AI). Is System. Is Row.
Description	Copies the value of the 'Input Z' to the 'Start Z' attribute and the value of the 'Output Z' to the 'End Z' attribute.
Example	
Dependency	

WW_CopyInputOutputZ_BU

The feature rule WW_CopyInputOutputZ_BU copies the value of the 'Input Z' to the 'Start Z' attribute and the value of the 'Output Z' to the 'End Z' attribute.

The feature rule applies to <feature classes>

Name	**WW_CopyInputOutputZ_BU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Update (BU). Is System. Is Row.

Description	Copies the value of the 'Input Z' to the 'Start Z' attribute and the value of the 'Output Z' to the 'End Z' attribute.
Example	
Dependency	

WW_SetFallHeightDefault_AI

The feature rule WW_SetFallHeightDefault_AI assigns the default value to the 'Fall Height' attribute.

The feature rule applies to <feature classes>

Name	**WW_SetFallHeightDefault_AI**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Insert (AI). Is System. Is Row.
Description	Assigns the default value to the 'Fall Height' attribute.
Example	
Dependency	

WW_SetInputStepDefault_AI

The feature rule WW_SetInputStepDefault_AI assigns the default value to the 'Input Step' attribute.

The feature rule applies to <feature classes>

Name	**WW_SetInputStepDefault_AI**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Insert (AI). Is System. Is Row.
Description	Assigns the default value to the 'Input Step' attribute.
Example	
Dependency	

WW_CalcPipeLengthLine_AU

The feature rule WW_CalcPipeLengthLine_AU calculates the value of the pipe length attribute of the section feature.

The feature rule applies to <feature classes>

Name	**WW_CalcPipeLengthLine_AU**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Update (AU). Is System. Is Row.
Description	Calculates the value of the pipe length attribute of the section feature.

Example	
Dependency	

WW_CalcPipeLengthPoint_AI

The feature rule WW_CalcPipeLengthPoint_AI calculates the value of the pipe length attribute of the section feature.

The feature rule applies to <feature classes>

Name	**WW_CalcPipeLengthPoint_AI**
Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side After Insert (AI). Is System. Is Row.
Description	Calculates the value of the pipe length attribute of the section feature.
Example	
Dependency	

WW_CalcPipeLengthSection_BI

The feature rule WW_CalcPipeLengthSection_BI calculates the value of the pipe length attribute of the section feature.

The feature rule applies to <feature classes>

Name	**WW_CalcPipeLengthSection_BI**

Location	Assembly: Topobase.Modules.WasteWater.dll Classname: Topobase.Modules.WasteWater.FeatureRules
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	Calculates the value of the pipe length attribute of the section feature.
Example	
Dependency	

Topobase Water

Basic Feature Rules

See Basic Feature Rules on page 4

Water Feature Rules

Water client-side feature rules facilitate and control data entry. For example, you optionally enable a feature rule that automatically assigns the pressure zone during digitalization of the gas network.

See also the TopobaseWater User Guide.

RejectDuplicatePoints_BIU

The feature rule RejectDuplicatePoints_BIU ensures that no water network points (WA_POINT) or cable control points (WA_C_POINT) can be created in the same location.

NOTE We recommend that you enable the feature rule, if you want to validate that no duplicate points are digitized. For example, to prevent topolology errors.

The feature rule applies to water utility points (WA_POINT), and to control cable points (WA_C_POINT).

Name	**RejectDuplicatePoints_BIU**
Location	Assembly: Topobase.Modules.Water.dll Classname: Topobase.Modules.Water.Feature-Rules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Rejects insert or update when another utility point is located within the radius.
Execute Column	GEOM
Parameters	P1: Radius. Default is 0.0005. Specifies a radius for searching similar points. P2: Other Utility FCs. Specifies other utility point feature classes. Enter multiple feature classes separated by a comma. An empty list affects none. P3: Show Error. Default is YES. Specifies whether to display a message.

SetPressureZone_BI

The feature rule SetPressureZone_BI sets the pressure zone <feature class>.FID_PRESSUREZONE for a feature if it is located within a zone. If the feature is located in overlapping zones, you are prompted to select a zone. If you select Yes, you can select a zone. If you select No, the pressure zone value is cleared.

NOTE We recommend that you enable the feature rule, if you want to automatically assign the pressure zone during digitalization. See also the Topobase Water User Guide, section Pressure Zones.

SetPressureZone_BI applies to attribute feature classes, such as WA_ARMATURE or WA_PIPE.

Name	**SetPressureZone_BI**
Location	Assembly: Topobase.Modules.Water.dll Classname: Topobase.Modules.Water.Feature-Rules
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	Sets the pressure zone of a feature if it is within such a zone. When more than one zone is found, the feature is assigned to none.
Parameters	P1: Show Zone Selector. Default is YES. Specifies whether a zone selector is shown, if more than one zone is found.
Dependency	The SetPressureZone_BI feature rule applies to the attribute feature classes. There is a related rule group for the utility point and utility line feature classes. See SetPressureZone_BIU. **NOTE** You must enable or disable the SetPressureZone feature rule for both the attribute feature class and the utility feature class.

SetPressureZone rule group

The SetPressureZone rule group sets the pressure zone of a feature if it is within such a zone.

- SetPressureZone_BIU
- SetPressureZone_AIU

The rule group applies to the utility point or utility line feature classes, such as WA_LINE, WA_POINT, WA_C_LINE, and WA_C_POINT.

SetPressureZone_BIU

Name	**SetPressureZone_BIU**
Location	Assembly: Topobase.Modules.Water.dll Classname: Topobase.Modules.Water.Feature-Rules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Sets the pressure zone of a feature if it is within such a zone. In update mode, it removes the assignment when no zone is found. When more than one zone is found, the feature is assigned to none.
Execute Column	GEOM
Parameters	P1: Show Zone Selector. Default is YES. Specifies whether a zone selector is shown, if more than one zone is found.
Dependency	Member of a rule group. The SetPressureZone_BIU feature rule applies to the the utility point and utility line feature classes. There is a related feature rule for the attribute feature classes. See SetPressureZone_BI on page 147. **NOTE** You must enable or disable the SetPressureZone feature rule for both the attribute feature class and the utility feature class.

SetPressureZone_AIU

Name	**SetPressureZone_AIU**
Location	Assembly: Topobase.Modules.Water.dll Classname: Topobase.Modules.Water.Feature-Rules
Type	Client-side After Insert (BA). After Update (AU). Is System. Is Row.
Description	Sets the pressure zone of a feature if it is within such a zone. In update mode, it removes the assignment when no zone is found. When more than one zone is found, the feature is assigned to none.
Parameters	P1: Show Zone Selector. Default is YES. Specifies whether a zone selector is shown, if more than one zone is found.
Dependency	Member of a rule group. The SetPressureZone_AIU feature rule applies to the the utility point and utility line feature classes. There is a related feature rule for the attribute feature classes. See GA_SetPressureZone_BI on page 116. **NOTE** You must enable or disable the SetPressureZone feature rule for both the attribute feature class and the utility feature class.

SetSupplyZone_BI

The feature rule SetSupplyZone_BI sets the supply zone <feature class>.FID_SUPPLYZONE for a feature that is located within a zone. If the feature is located in overlapping zones, you are prompted to select a zone. If

you select Yes, you can select a zone. If you select No, the supply zone value is cleared.

NOTE We recommend that you enable the feature rule, if you want to automatically assign the supply zone when you digitize a pipe. See also the Topobase Water User Guide, section Supply Zones.

SetSupplyZone_BI applies to the attribute line feature classes, such as WA_PIPE.

Name	**SetSupplyZone_BI**
Location	Assembly: Topobase.Modules.Water.dll Classname: Topobase.Modules.Water.Feature-Rules
Type	Client-side Before Insert (BI). Is System. Is Row.
Description	Sets the supply zone of a feature if it is within such a zone. When more than one zone is found, the feature is assigned to none.
Parameters	P1: Show Zone Selector. Default is YES. Specifies whether a zone selector is shown, if more than one zone is found.
Dependency	The SetSupplyZone_BI feature rule applies to the attribute feature classes. There is a related rule group for the utility point and utility line feature classes. See SetSupplyZone_BIU. **NOTE** You must enable or disable the SetSupplyZone feature rule for both the attribute feature class and the utility feature class.

SetSupplyZone rule group

The SetSupplyZone rule group sets the supply zone of a feature if it is within such a zone.

- SetSupplyZone_BIU
- SetSupplyZone_AIU

The rule group applies to the utility line feature classes, such as WA_LINE, and WA_C_LINE.

SetSupplyZone_BIU

Name	**SetSupplyZone_BIU**
Location	Assembly: Topobase.Modules.Water.dll Classname: Topobase.Modules.Water.Feature-Rules
Type	Client-side Before Insert (BI). Before Update (BU). Is System. Is Row.
Description	Sets the supply zone of a feature if it is within such a zone. In update mode, it removes the assignment when no zone is found. When more than one zone is found, the feature is assigned to none.
Execute Column	GEOM
Parameters	P1: Show Zone Selector. Default is YES. Specifies whether a zone selector is shown, if more than one zone is found.
Dependency	Member of a rule group. The SetSupplyZone_BIU feature rule applies to the utility line feature classes. There is a related

	feature rule for the attribute line feature classes. See SetSupplyZone_BI on page 150. **NOTE** You must enable or disable the SetSupplyZone feature rule for both the attribute feature class and the utility feature class.

SetSupplyZone_AIU

Name	**SetSupplyZone_AIU**
Location	Assembly: Topobase.Modules.Water.dll Classname: Topobase.Modules.Water.FeatureRules
Type	Client-side After Insert (AI). After Update (AU). Is System. Is Row.
Description	Sets the supply zone of a feature if it is within such a zone. In update mode, it removes the assignment when no zone is found. When more than one zone is found, the feature is assigned to none.
Parameters	P1: Show Zone Selector. Default is YES. Specifies whether a zone selector is shown, if more than one zone is found.
Dependency	Member of a rule group. The SetSupplyZone_AIU feature rule applies to the utility line feature classes. There is a related feature rule for the attribute line feature classes. See SetSupplyZone_BI on page 150. **NOTE** You must enable or disable the SetSupplyZone feature rule for both the attribute feature class and the utility feature class.

Topobase Survey

Basic Feature Rules

See Basic Feature Rules on page 4

Survey Feature Rules

The Survey module uses server-side feature rules to maintain the system tables of the Survey database. For example, when you delete a measurement, the related lines in the network plan are deleted.

IMPORTANT Do not disable or enable any of the Survey feature rules.

Survey Delete NetplanLine

When you delete a measurement, Survey Delete NetplanLine deletes the related lines of the network plan. The feature rule applies to the attribute feature class TB_SUR_MEASURE.

Name	**Survey Delete NetplanLine**
Location	Assembly: - Classname: -
Type	Server-side Before Ddelete (BD). Is System. Is Row.
Description	When you delete a measurement, deletes the related netplan line.

Survey Delete Measure Fieldpoint

When you delete a measurement, Survey Delete Measure Fieldpoint deletes the corresponding field point in the table TB_SUR_FIELD_POINT. The feature rule applies to the attribute feature class TB_SUR_MEASURE.

Name	**Survey Delete Measure Fieldpoint**
Location	Assembly: - Classname: -
Type	Server-side After Ddelete (AD). Is System. Is Row.
Description	When you delete a measurement, deletes the corresponding field point in the table TB_SUR_FIELD_POINT.

Survey Delete Session Fieldpoint

When you delete a session, Survey Delete Session Fieldpoint deletes the corresponding field points. The feature rule applies to the attribute feature class TB_SUR_SESSION.

Name	**Survey Delete Session Fieldpoint**
Location	Assembly: - Classname: -
Type	Server-side After Delete (AD). Is System. Is Row.
Description	When you delete a session, deletes the corresponding field point.

Survey Delete Session File Rule Group

The Survey Delete Session File rule group <describe what is does>.

- Survey Delete Session File Row
- Survey Delete Session File Stm

Survey Delete Session File Row

Name	**Survey Delete Session File Row**
Location	Assembly: - Classname: -
Type	Server-side After Delete (AD). Is System. Is Row.
Description	Deletes the parent featuers in TB_SUR_FILE when no children exist. Part 1: Adds file fid to temp table.
Dependency	Member of a rule group.

Survey Delete Session File Stm

Name	**Survey Delete Session File Stm**
Location	Assembly: - Classname: -
Type	Server-side After Delete (AD). Is System.
Description	Deletes the parent features in TB_SUR_FILE when no children exist. Part 2: Checks with fid

	from temp table if children exist. When no children exist, deletes file item.
Dependency	Member of a rule group.

Survey Del Main FieldPoint Rule Group

The Survey Del Main FieldPoint rule group updates the system table TB_SUR_FIELD_POINT.

- Survey Del Main FieldPoint Row
- Survey Del Main FieldPoint Stm

Survey Del Main FieldPoint Row

Name	**Survey Del Main FieldPoint Row**
Location	Assembly: - Classname: -
Type	Server-side After Delete (AD). Is System. Is row
Description	Updates the child features in TB_SUR_FIELD_POINT when parent feature in the same table no longer exist. Part 1: Adds FID of main point to a temporary table.
Dependency	Member of a rule group.

Survey Del Main FieldPoint Stm

Name	**Survey Del Main FieldPoint Stm**

Location	Assembly: - Classname: -
Type	Server-side After Delete (AD). Is System.
Description	Updates child features in TB_SUR_FIELD_POINT when parent features in the same table no longer exist. Part 2: Checks with FID from temporary table for children to update.
Dependency	Member of a rule group.

Topobase Feature Rules Reference

This section lists Topobase feature rules ordered by name.

Topobase Feature Rules A to L

AutoExtractSoftSplit_AD on page 57

AutoExtractSoftSplit_AU on page 58

AutoExtractSoftSplit_BD on page 56

AutoExtractSoftSplit_BU on page 57

AutoSoftSplitAtVertex_AIU on page 48

AutoSoftSplitAtVertex_BIU on page 47

AutoSoftSplitLines_AIU on page 54

AutoSoftSplitLines_BIU on page 53

CancelDeleteUtilityPoint on page 52

Check Perimeter on page 8

CheckStartEndNode on page 43

Compound Row AD (Polygon) on page 15
Compound Row BI (Polygon) on page 15
Compound Row BU (Polygon) on page 15
Compound Statement AD (Polygon) on page 17
Compound Statement AI (Polygon) on page 16
Compound Statement AU (Polygon) on page 16
CreateStartEndNode on page 44
Delete Child Features on page 5
DeleteAttribute_AD on page 40
DeleteAttribute_BD on page 40
DeleteConnectedLines_AD on page 51
DeleteConnectedLines_BD on page 51
DeleteUnneededNodes_AD on page 46
DeleteUnneededNodes_BD on page 45
DimensionCleanup_AD on page 27
DimensionCleanup_BD on page 27
EL_AutoSplitSegment_AI on page 93
EL_ComputeNextMaintDate_BIU on page 110
EL_CreateConductor_AI on page 77
EL_CreateDevice_AI on page 77
EL_CreateDuctCrossSection_BI on page 76
EL_CreateDuctCrossSection_BU on page 76
EL_CreatePoleTowerCrossSection_AU on page 98
EL_CreatePoleTowerCrossSection_BU on page 97
EL_CreateSegmentBorders_BI on page 90
EL_CreateSegmentCrossSection_AU on page 73
EL_CreateSegmentCrossSection_BU on page 73
EL_DeleteConductor_AD (Electric CE) on page 85
EL_DeleteConductor_BD (Electric CE) on page 85

EL_DeleteConductor_AD (Electric NA) on page 104
EL_DeleteConductor_BD (Electric NA) on page 103
EL_DeleteCSConductor_AD (Electric CE) on page 83
EL_DeleteCSConductor_BD (Electric CE) on page 83
EL_DeleteCSConductor_AD (Electric NA) on page 102
EL_DeleteCSConductor_BD (Electric NA) on page 102
EL_DeleteCSDuct_AD (Electric CE) on page 87
EL_DeleteCSDuct_BD (Electric CE) on page 86
EL_DeleteCSDuct_AD (Electric NA) on page 105
EL_DeleteCSDuct_BD (Electric NA) on page 104
EL_DeleteDuct_AD (Electric CE) on page 88
EL_DeleteDuct_BD (Electric CE) on page 88
EL_DeleteDuct_AD (Electric NA) on page 107
EL_DeleteDuct_BD (Electric NA) on page 106
EL_DeleteDuctArea_AD on page 89
EL_DeleteDuctArea_BD on page 89
EL_DeleteElLine_BD on page 84
EL_DeleteSegment_AD on page 94
EL_DeleteSegment_BD on page 94
EL_DeleteSegment_BD on page 74
EL_DeleteSegmentBorders_AD
EL_DeleteSegmentBorders_BD
EL_DeleteSegmentCrossSection_BD on page 96
EL_DeleteSanppoint_BD on page 101
EL_DeleteStructureLine_BD on page 74
EL_ForbidDuplicateDevice_BIU on page 78
EL_MoveAccordingSegment_AU (Electric CE) on page 82
EL_MoveAccordingSegment_BU (Electric CE) on page 82
EL_MoveAccordingSegment_AU (Electric NA)

EL_MoveAccordingSegment_BU (Electric NA)
EL_MoveAccordingSnappoint_BU (Electric CE) on page 81
EL_MoveAccordingSnappoint_BU (Electric NA) on page 100
EL_MoveConductorInCrossSection_BU (Electric CE) on page 78
EL_MoveConductorInCrossSection_BU (Electric NA) on page 78
EL_MoveCsLegendDecoration_BU (Electric CE) on page 80
EL_MoveCsLegendDecoration_BU (Electric NA) on page 109
EL_MoveDuctInCrosssSection_BU (Electric CE) on page 75
EL_MoveDuctInCrosssSection_BU (Electric NA) on page 107
EL_RermoveSnappointUnderneath_BD on page 100
EL_ScaleCrossSection_BU (Electric CE) on page 79
EL_ScaleCrossSection_BU (Electric NA) on page 109
EL_DeleteStructurePoint_BD on page 90
EL_UpdateSegmentBorders_Segment_BU on page 91
EL_UpdateSegmentBorders_StrLine_BU on page 91
Extract From Collection on page 9
GA_ComputeNextMaintDate_BIU on page 114
GA_RejectDuplicatePoints_BIU on page 115
GA_SetPressureZone_AIU on page 118
GA_SetPressureZone_BI on page 116
GA_SetPressureZone_BIU on page 117
GA_SetSupplyZone_AIU on page 121
GA_SetSupplyZone_BI on page 119
GA_SetSupplyZone_BIU on page 120
Label (LAE) on page 21
Label (LAR) on page 21
Label (LAS) on page 22
Label (LBI) on page 22
LineLength_BIU on page 23

Topobase Feature Rules M to S

MoveConnectedLines_AU on page 50

MoveConnectedLines_BU on page 49

PLT_CreateMainPlotCover_AIU on page 70

PLT_DetachPlotInstance_BD on page 71

PLT_MoveModelInsertionPoint_AIU on page 67

PLT_PreventDeleteMainMapPlaceholder_BD on page 67

PLT_PreventDeleteOfRootGroup_BD on page 69

PLT_PreventDeleteOnTemlateInstances_BD on page 64

PLT_PreventEditAttributesOnTemlateInstances_BU on page 63

PLT_PreventEditGeometryOnTemlateInstances_BU on page 62

PLT_PreventInsertOnTemlateInstances_BI on page 61

PLT_PreventUpdateOfRootGroup_BU on page 69

PLT_SetFixedPosition_AIU on page 65

PLT_UpdatePlotCover_AD

PLT_UpdatePlotCover_BD

PLT_ValidateMapPlaceHolder_BIU on page 66

PLT_ValidatePlot_BIU on page 71

PLT_ValidatePlotGroup_BIU on page 70

PolygonArea_BIU on page 24

RegenerateLabel_AD on page 25

RegenerateLabel_AI on page 25

RegenerateLabel_AU on page 25

RegenerateLabel_BD on page 25

RegenerateLabel_BU on page 25

RejectDuplicatePoints_BIU on page 146

Round Geometry on page 7

SetPointOrientation_BI on page 59

SetPointOrientation_BU on page 59
SetPressureZone_AIU on page 150
SetPressureZone_BI on page 147
SetPressureZone_BIU on page 149
SetSupplyZone_AIU on page 153
SetSupplyZone_BI on page 150
SetSupplyZone_BIU on page 152
SetSystemCreated_BU on page 26
Survey Del Main FieldPoint Row on page 157
Survey Del Main FieldPoint Stm on page 157
Survey Delete Measure Fieldpoint on page 155
Survey Delete NetplanLine on page 154
Survey Delete Session Fieldpoint on page 155
Survey Delete Session File Row on page 156
Survey Delete Session File Stm on page 156

Topobase Feature Rules T to Z

Truncate Area on page 6
Truncate Exact_Area on page 7
UpdateAreaTopoCE_AD
UpdateAreaTopoCE_AI
UpdateAreaTopoCE_AU
UpdateAreaTopoCE_BD
UpdateAreaTopoCE_BU on page 31
UpdateAreaTopoLS_AI
UpdateAreaTopoLS_AD
UpdateAreaTopoLS_AU
UpdateAreaTopoLS_BD

UpdateAreaTopoLS_BU on page 28
UpdateAttributeLabel_AD on page 43
UpdateAttributeLabel_AU on page 42
UpdateAttributeLabel_BD on page 42
UpdateAttributeLabel_BU on page 41
UpdateLogicalTopo_AD
UpdateLogicalTopo_AI
UpdateLogicalTopo_AU
UpdateLogicalTopo_BD
UpdateLogicalTopo_BU on page 34
UpdateTemplateInstances_AD on page 39
UpdateTemplateInstances_AU on page 38
UpdateTemplateInstances_BD on page 38
UpdateTemplateInstances_BU on page 37
Validate Geometry on page 17
Validate Intersection Line AD on page 12
Validate Intersection Line Main on page 12
Validate Intersection Polygon-AD (Locator) on page 11
Validate Intersection Polygon-AD (Spatial) on page 13
Validate Intersection Polygon-Main (Locator) on page 10
Validate Intersection Polygon-Main (Spatial) on page 13
ValidateElectricTopology_BI on page 113
ValidateElectricTopology_BU on page 113
WW_CalcPipeLengthLine_AU on page 144
WW_CalcPipeLengthPoint_AI on page 145
WW_CalcPipeLengthSection_BI on page 145
WW_CompNbrOfSectionsManhole_AI on page 123
WW_CompNbrOfSectionsManhole_AU on page 124
WW_ComputeNbrOfSections_AD on page 126

WW_ComputeNbrOfSections_AIU on page 125
WW_ComputeNbrOfSections_BD on page 126
WW_ComputeNbrOfSections_BIU on page 125
WW_ComputeNextMaintDate_BIU on page 122
WW_ComputeSectionElevation_BIU on page 132
WW_ComputeSubDrainArea_BIU on page 128
WW_ConnDrainAreaWSubArea_BIU on page 132
WW_ConnectCover_BIU on page 127
WW_ConnectCoverPolygon_AIU on page 128
WW_ConnManholeSubDrainArea_BIU on page 136
WW_ConnSectionSubDrainArea_BI on page 134
WW_ConnSectionWashingArea_BI on page 129
WW_ConnSectionWashingArea_BU on page 130
WW_ConnSubAreaWDrainArea_BIU on page 131
WW_ConnSubDrainAreaManhole_BIU on page 135
WW_ConnSubDrainAreaSection_BI on page 133
WW_ConnSubDrainAreaSection_BU on page 134
WW_CopyInputOutputZ_AI on page 141
WW_CopyInputOutputZ_BU on page 142
WW_CopyLengthLine_AU on page 141
WW_CopyLengthSection_BI on page 140
WW_DeleteManholeObservation_AD on page 138
WW_DeleteManholeObservation_AD on page 138
WW_DeleteSectionObservation_AD on page 137
WW_DeleteSectionObservation_BD on page 137
WW_DeleteSiteObservation_AD on page 140
WW_DeleteSiteObservation_BD on page 139
WW_SetFallHeightDefault_AI on page 143
WW_SetInputStepDefault_AI on page 143

Index

F

feature rules 39
    utility model 39

S

split lines 39
    feature rules 39

U

utility model 39
    feature rules 39