



Designing Diagrams with the Alfabet Diagram Designer

Alfabet Reference Manual

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CONVENTIONS USED IN THE DOCUMENTATION

Convention	Meaning
Bold	Used for all elements displayed in the Alfabet interface including, for example, menu items, tabs, buttons, dialog boxes, page view names, and commands. Example: Click Finish when setup is completed.
<i>Italics</i>	Used for emphasis, titles of chapters and manuals. this Example: see the <i>Administration</i> reference manual.
Initial Capitals	Used for attribute or property values. Example: The object state Active describes...
All Capitals	Keyboard keys Example: CTRL+SHIFT
File > Open	Used for menu actions that are to be performed by the user. Example: To exit an application, select File > Exit
< >	Variable user input Example: Create a new user and enter <User Name>. (Replace < > with variable data.)
	This is a note providing additional information.
	This is a note providing procedural information.
	This is a note providing an example.
	This is a note providing warning information.

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Chapter 1: Getting Started with the Alfabet Diagram Designer

Diagrams provide a variety of information about the IT landscapes they visualize. In Alfabet, diagrams can be designed that depict a particular segment of your IT landscape such as the applications that support a business process, all devices in a device group, the platforms in the platform architecture, or the business services requested by a business process.

The Alfabet Diagram Designer is a tool available in Alfabet that allows you to design and edit diagrams for a selected object. For example, the **Standard Application Diagram** page view is available in the object profile for application groups. This view allows an application landscape to be drawn for the selected application group. In the diagram, you could visualize the selected application group as well as other application groups, if necessary. You could display all or some of the applications assigned to the selected application group in the diagram and you could add other applications from other application groups to the selected application group. You cannot create new applications in the context of the Alfabet Diagram Designer but you can create new relationships (for example, you could create new information flows between two applications displayed in the diagram).

The following is possible in the context of the Alfabet Diagram Designer:

- Display the selected object's existing relationships to other objects. For example, display the applications supporting a selected business process.
- Create new relationships for the selected object. For example, create a new application supporting a selected business process.
- Edit the selected object or any other object displayed in the diagram. For example, change the application's start/end dates or define its information flows.
- Delete an object from the diagram or delete it irrevocably from the database.
- Add shapes and other shapes (such as a legend, text, arrows, color, etc.) to provide additional information in the diagram.

All changes made in the context of the Alfabet Diagram Designer are saved to the Alfabet database. To make the changes visible to the user community, you or another user must click the **Update** button in the corresponding diagram page view in Alfabet.

Please note the following regarding diagrams in Alfabet:

- No extra installation or set-up is necessary for the Alfabet Diagram Designer. The Alfabet Diagram Designer component is automatically installed with Alfabet and can be accessed in the Web browser.
- Only users of the type `NamedUser` may access the Alfabet Diagram Designer.
- Like all views in Alfabet, diagrams are subject to access permissions. Please note that the **Open Diagram** button available in diagram page views opens the Alfabet Diagram Designer. This button should only be visible in diagram page views for those user profiles that are responsible for designing diagrams. Your solution designer should ensure that the **Open Diagram** button is hidden in the diagram page views in all other user profiles. For more information about specifying the visibility of the **Open Diagram** button available in diagram page views, see the chapter *Hiding Functionalities in a Page View or Configured Report* in the reference manual *Configuring Alfabet with Alfabet Expand*.
- When you open the Alfabet Diagram Designer via the **Open Diagram** button, it will be displayed in a separate browser tab. You can design the diagram, click the **Save** button, switch to the browser tab displaying the diagram in the diagram view in Alfabet, and click **Update** to refresh the diagram with

the changes made in the Alfabet Diagram Designer. In this way, you can switch back and forth between browser tabs.



Please note that the Alfabet Diagram Designer does not have an independent logout function. You must explicitly close the browser tab rendering the Alfabet Diagram Designer when you are finished designing the diagram. Even if you logout from the Alfabet application, the Alfabet Diagram Designer will remain open. Normal session expiration policies apply to the Alfabet Diagram Designer.



If you attempt to save a diagram that has concurrently been changed by another user, the changes that the other user has made to the diagram may be overwritten when you save the diagram.

- Standard keyboard commands such as CTRL+X for cut, CTRL+C for copy, and CTRL+V for paste can be used in the Alfabet Diagram Designer. Please note that keyboard shortcuts and key sequences that allow the user to move the focus in the interface and carry out tasks without using the mouse are not supported in the Alfabet Diagram Designer.
- Some diagrams such as the **Information Flows Diagram** page view in Alfabet are automatically generated and always display an up-to-date diagram. Dynamically generated diagrams cannot be manually designed or edited. These views provide no access to the Alfabet Diagram Designer. An overview of all diagrams that are not automatically generated and that must be designed in the Alfabet Diagram Designer are listed in the section *Page Views Providing Access to the Alfabet Diagram Designer*.
- Custom diagram item templates may be configured as an alternative visualization of objects in the diagrams that can be designed. For example, if your enterprise has configured object class stereotypes for applications, a custom diagram item template may be designed to visualize each application stereotype. The custom diagram item templates displayed in the **Toolbox Item** pane in the Alfabet Diagram Designer are configured by your solution designer in the configuration tool Alfabet Expand. For more information, see the section *Configuring Custom Diagram Item Templates* in the chapter *Configuring the Diagram Capability* in the reference manual *Configuring Alfabet with Alfabet Expand*.
- Default settings in the Alfabet Diagram Designer are configured by your solution designer in the configuration tool Alfabet Expand. The default settings can be modified in the Alfabet Diagram Designer, as needed. For more information, see the section *Configuring the Default Settings for the Alfabet Diagram Designer* in the chapter *Configuring the Diagram Capability* in the reference manual *Configuring Alfabet with Alfabet Expand*.
- Some functionalities available in the page views in Alfabet displaying diagrams also require configuration. However, these functionalities do not impact the use of the Alfabet Diagram Designer:
 - A diagram view allows preconfigured information to be superimposed on objects in the diagram. Most page views displaying diagrams have a **Diagram View** filter that allows users to select a preconfigured diagram view. To use this feature, diagram views must first be configured in the **Diagram Views** functionality in the **Configuration** module. For more information, see the chapter *Configuring Diagram Views for Diagrams* in the reference manual *Configuring Evaluation and Reference Data in Alfabet*.
 - A diagram view typically contains indicators. To display indicators on the objects in a diagram, evaluation types and their indicator types must first be configured in the **Evaluations and Portfolios** functionality in the **Configuration** module and then assigned to the respective object class in the **Class Configuration** functionality in the **Configuration** module. For more

information, see the chapter *Configuring Evaluations, Prioritization Schemes, and Portfolios* in the reference manual *Configuring Evaluation and Reference Data in Alfabet*.

- A diagram view may contain color rules. Color rules are based on queries that find and color a set of objects in a diagram. Color rules must be configured in the **Color Rules Manager** functionality in the **Configuration** module. For more information about defining a color rule, see the chapter *Configuring Color Rules for Map Views and Diagram Views* in the reference manual *Configuring Evaluation and Reference Data in Alfabet*. Once a color rule is defined, it must be activated for the query to be executed. The query should be re-activated periodically to update the query results and include changes made to the database. The color rule may be activated manually in the **Color Rules Manager** functionality or via a batch process. For more information about activation via a batch process, see the section *Batch Evaluation of Color Rules with RescanColorRules.exe* in the reference manual *System Administration*.
- Additional configuration is also required for some filter fields available in most diagram page views. The attributes available in the **Information Flow Attribute** filter field as well as the options available in the **Diagram Item Size** filter field are configured by your solution designer in the XML object **DiagramInformationFlowDef** in the configuration tool Alfabet Expand. For more information, see the section *Configuring the Sizes of Diagram Items in Automatically Generated Diagrams* in the chapter *Configuring Alfabet Functionalities Implemented in the Solution Environment* in the reference manual *Configuring Alfabet with Alfabet Expand*.



For general information about interpreting and navigating diagrams in Alfabet, see the section *Working with Diagrams* in the reference manual *Getting Started with Alfabet*.

The following information is available:

- [Accessing the Alfabet Diagram Designer](#)
 - [Page Views Providing Access to the Alfabet Diagram Designer](#)
- [Understanding the Interface of the Alfabet Diagram Designer](#)
 - [Setting Up the Diagram](#)
- [Undoing Changes to the Diagram](#)
- [Saving Your Diagram](#)
- [Adding Objects to the Diagram](#)
- [Adding Multiple Objects Based on a Diagram Item Template](#)
- [Creating Connection Items \(Information Flows, Rules, etc.\) in the Diagram](#)
- [Modifying the Decoration Boxes Displayed for Connection Items](#)
- [Deleting and Removing Objects in the Diagram](#)
- [Adding a Diagram Item Multiple Times to the Diagram](#)
- [Substituting Objects in the Diagram](#)
- [Updating the Objects in the Diagram to Include Their Subordinate Objects](#)
- [Generating an Object's Network of Referenced Objects](#)
- [Hiding Entire Object Classes or Individual Objects](#)

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- [Defining an Object's Data](#)
 - [Linking an Object to Another Diagram](#)
 - [Tips for Designing the Layout of the Diagram](#)
 - [Improving the Layout of Connection Items](#)
 - [Adding a Shape, Line, or Image](#)
 - [Moving Objects and Shapes](#)
 - [Aligning Objects and Shapes in the Diagram](#)
 - [Changing the Size of an Object/Shape](#)
 - [Defining Color for Objects/Shapes](#)
 - [Adding Text to the Diagram](#)
 - [Changing the Diagram Item Template That a Diagram Item Is Based On](#)
 - [Updating the Shape of Diagram Items](#)
 - [Changing the Z-Order of Diagram Items](#)
 - [Adding a Legend of the Diagram's Change History to the Diagram](#)
 - [Specifying Settings to Export or Print the Diagram to PPT Format](#)
 - [Printing the Diagram](#)

Accessing the Alfabet Diagram Designer

The Alfabet Diagram Designer component is automatically installed with Alfabet and can be accessed in the Web browser. To design a diagram, users must be able to open the Alfabet Diagram Designer by means of the **Open Diagram** button available in the relevant page views in Alfabet. Access permission to the Alfabet Diagram Designer is controlled via the **Has Access to Diagram Designer** attribute available in the **User** editor. If a checkmark is set for the **Has Access to Diagram Designer** attribute in the **User** editor, the **Open Diagram** button will be displayed in all relevant diagram page views that the user has access to and the user can thus open the Alfabet Diagram Designer to design or edit the diagram. If a checkmark is not set for the **Has Access to Diagram Designer** attribute in the **User** editor, the **Open Diagram** button will be hidden in all diagram page views that the user has access to. In this case, the user can only view the diagram but not alter the design. The default value of the **Has Access to Diagram Designer** attribute is **False**.

The Alfabet Diagram Designer can be accessed via the page views listed in the table in the section *Page Views Providing Access to the Alfabet Diagram Designer*. If no diagram exists, the view will be empty.

To open the Alfabet Diagram Designer:

Diagram Designer will remain open. Normal session expiration policies apply to the Alfabet Diagram Designer.

Page Views Providing Access to the Alfabet Diagram Designer

The following table includes all diagram page views in Alfabet in which one or more diagrams can be manually designed. Some diagrams such as those in the **Information Flows Diagram** page views are dynamically generated and always display up-to-date data. Dynamically generated diagrams cannot be manually designed or edited and are therefore not listed here.

All page views listed below provide access to the Alfabet Diagram Designer.

Page View in Alfabet	Available For	Purpose	See
<i>Standard Application Diagram Page View</i>	Application Application Group Business Data Business Object Business Process ICT Object ICT Object Group Market Product Market Product Group Organization Enterprise Release	Design an application diagram for the selected object class. You can: - Visualize existing application groups, applications, peripherals, and information flows - Assign applications to an application group - Create and visualize new information flows between applications and/or peripherals NOTE: Information flows cannot be created between applications in the context of an enterprise release.	<i>Designing Application Diagrams</i>
<i>Additional Diagrams Page View</i>	Enterprise Release Application Group Application Business Data Business Object ICT Object ICT Object Group	Design multiple custom diagrams for the selected application group. You can: - Visualize existing application groups, applications, peripherals, and information flows - Assign applications to an application group - Create and visualize new information flows between applications and/or peripherals	<i>Designing Application Diagrams</i>

Page View in Alfabet	Available For	Purpose	See
		NOTE: Information flows cannot be created between applications in the context of an enterprise release.	
<i>Deployment Diagrams Page View</i>	Deployment	Design diagrams for deployments displaying their deployment elements as well as relevant networks	
<i>Solution Building Block Diagrams Page View</i>	ICT Object	Design a diagram displaying the solution building blocks defined for an ICT object.	<i>Designing Solution Building Block Diagrams</i>
<i>Solution Maps and Application Diagrams Page View</i>	Project:Stereotype	Design a solution architecture diagram for a selected project. You can: - Visualize solution applications defined for the project - Visualize existing applications and peripherals assigned to the associated project's as-is architecture - Create new solution information flows between solution applications/applications/peripherals	<i>Designing Solution Architecture Diagrams</i>
<i>As-Is Architecture Diagram Page View</i>	Project:Stereotype	Design an as-is diagram displaying the applications and information flows in the selected project's as-is architecture scope. NOTE: You cannot add or create new objects for this diagram in the Alfabet Diagram Designer.	<i>Designing the As-Is Architecture Diagram for a Project</i>
<i>Migration Diagram Page View</i>	Migration	Design a migration diagram. In addition to visualizing existing migration rules, you can also create new migration rules.	<i>Designing Migration Diagrams</i>

Page View in Alfabet	Available For	Purpose	See
<i>Business Processes Diagram</i>	Business Process Model Business Process	Design a business process diagram for the selected business process or business process model. You can: - Visualize existing business processes and existing organizations - Create and visualize new business process information flows - Create and visualize new rules - Create and visualize new roles for an organization in relation to a business process	<i>Designing Business Process Diagrams</i>
<i>Value Stream Diagram Page View</i>	Value Stream	Design value stream diagrams for a selected value stream. You can. - Visualize existing value stream steps, entry and exit conditions, value stream values, enabled domains, and stakeholder organizations and business roles. - Create and visualize new value stream steps.	<i>Designing Value Stream Diagrams</i>
<i>Service Diagrams Page View</i>	Business Process	Design business service diagrams for a selected business process. You can: - Visualize existing business services, business functions, and business objects - Design diagram elements of the type event, activity, sequence flow, message flow, association, gateway, pool, and swim lane. - Link the service diagram to another service diagram via an activity	<i>Designing Service Diagrams</i>
<i>Static Device Diagram Page View</i>	Device Group	Design a device diagram for the selected device group. You can: Visualize existing device groups and devices	<i>Designing Device Landscape Diagrams</i>

Page View in Alfabet	Available For	Purpose	See
		- Assign devices to a device group - Create and visualize new information flows	
<i>Network Diagrams Page View</i>	Network	Design a network diagram. You can visualize networks and the devices assigned to them as well as create new network routes.	<i>Designing Network Diagrams</i>
<i>Location Diagram</i>	Location	Design a location diagram. You can visualize existing locations and devices.	<i>Designing Location Diagrams</i>
<i>Standard Domain Application Diagram</i>	Domain	Design multiple custom application landscapes for a domain. You can: - Visualize existing domains, applications, peripherals, and information flows - Create and visualize new information flows between applications and/or peripherals	<i>Designing Domain Application Diagrams</i>
<i>Standard Domain Function Diagram Page View</i>	Domain	Design multiple custom domain function diagrams for the selected domain. You can: Visualize existing sub-domains and business functions assigned to the selected domain	<i>Designing Domain Function Diagrams</i>
<i>Platform Diagrams Page View</i>	Application Component	Allows you to design a platform diagram. You can: - Visualize existing standard platforms, platform elements, and local components - Visualize platform information flows	<i>Designing Platform Diagrams</i>
<i>Platform Diagrams</i>	Standard Platform	Allows you to design a standard platform diagram. You can:	<i>Designing Standard Platform Diagrams</i>

Page View in Alfabet	Available For	Purpose	See
<i>Page View</i>		- Visualize existing standard platforms and platform elements - Visualize platform information flows	
<i>Navigation Diagram Page View</i>	Framework Group	Design framework diagrams and reference models. Here you can add objects from a variety of classes and design a layout for users.	<i>Designing Framework Group Diagrams</i>
<i>Bookmark Diagram</i>	Bookmark (Storyboards)	Design executive storyboards that contain links (bookmarks) to relevant reports in Alfabet. These diagrams are required to view Alfabet in the Alfabet Mobile Portfolio Manager.	<i>Designing Storyboard Diagrams</i>
<i>Workflow Diagram Page View</i>	Workflows	Design a diagram visualizing the workflow steps in a workflow.	Please note that workflow diagrams are configured in the workflow capability in Alfabet Expand. All information regarding the configuration of a workflow diagram is described in the section <i>Configuring and Visualizing a Workflow in a Diagram</i> in the reference manual <i>Configuring Alfabet with Alfabet Expand</i> .
Custom Diagrams		Design a custom diagram that has been configured by your solution designer.	See <i>Working with Custom Diagrams</i> . Please note that custom diagrams are configured in Alfabet Expand. All information regarding the configuration of a custom diagram is described in the section

Page View in Alfabet	Available For	Purpose	See
			<i>Configuring Custom Diagrams</i> in the reference manual <i>Configuring Alfabet with Alfabet Expand</i> .
Node Arc Reports		Refine the layout of a node arc report that has been configured by your solution designer.	See <i>Refining the Layout of Node Arc Reports</i> . Please note that node arc reports are configured in Alfabet Expand. All information regarding the configuration of a node arc report is described in the section in the reference manual <i>Configuring Alfabet with Alfabet Expand</i> .

Understanding the Interface of the Alfabet Diagram Designer

The following section contains detailed information about the interface of the Alfabet Diagram Designer. You should take some time to familiarize yourself with the various parts of the interface and acquaint yourself with the terminology used in the rest of this manual.

The Alfabet Diagram Designer user interface features 7 major areas.

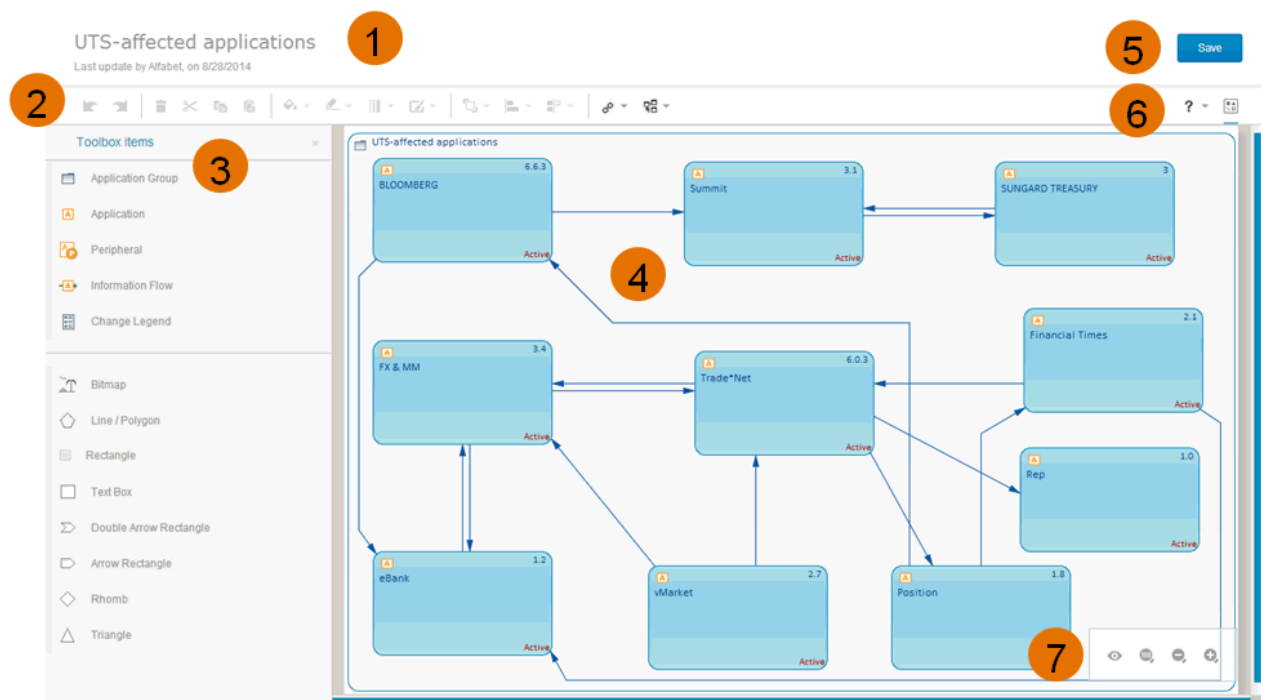


FIGURE: User interface in the Alfabet Diagram Designer

- 1) Header: Displays the name of the object that you are designing the diagram for. The header also displays the name of the user who most recently updated the diagram and the date that it was updated.
- 2) Toolbar: The toolbar contains buttons for accessing several common functions such as **Undo** and **Redo**. Point to each button to view a tooltip. The purpose of the toolbar buttons are explained in the following sections:

	Undo	Undo the last change you made		Redo	Redo the last change you made.
	Delete	Delete the selected object from the database		Cut	Remove the selected object/shape from the diagram
	Copy	Copy the selected object/shape		Paste	Paste the selected object/shape
	Fill Color	Fill the selected object/shape with a solid color		Outline Color	specify the color for the outline of the selected object/shape.
	Line Weight	Specify the weight of the selected line/connection item		Appearance	Specify rounded or shadowed borders for the selected shape/object
	Reorder	Order the selected object/shape in the diagram		Align	Align the edges of multiple select objects/shapes

**Match Size of Items**

Align the sizes of multiple select objects/shapes

**Semantic Actions**

Select an option to add or modify objects in the diagram

**Other Actions**

Select an object to define the diagram layout

- 3) **Toolbox Items:** The toolbox contains all of the objects and shapes that can be placed in the diagram. The top pane displays the icons of the object classes that can be added to the diagram and the bottom pane displays the shapes that can be added to the diagram. Click the toolbox item that you want to add to the diagram. The cursor will display an icon to indicate that the toolbox item is selected. Click an empty space in the diagram to place the toolbox item there. If you are adding a shape, the shape is now visible in the diagram. If you are adding an object to the diagram, the object selector will open, allowing you to search for and select the object that you want to visualize in the diagram. The purpose of the toolbox buttons is explained in the following sections:
- 4) **Canvas:** The canvas is the space in which you place toolbox items and visually design the diagram.
- 5) **Save button:** Click the **Save** button to save the diagram to the database.
- 6) **Help button and Hide Toolbox button:** The **Help** button allows you to open a context-sensitive Help for the diagram you are designing. The **Hide Toolbox** button allows you to collapse and expand the **Toolbox Items** pane.
- 7) **Zoom toolbar:**
 - To adjust the diagram based on the size of your browser window, click the **Fit to Window** button.
 - To return the diagram to its original size, click the **Original Size** button
 - To zoom in to the diagram, click the **Zoom In** button
 - To zoom out of the diagram, click the **Zoom Out** button

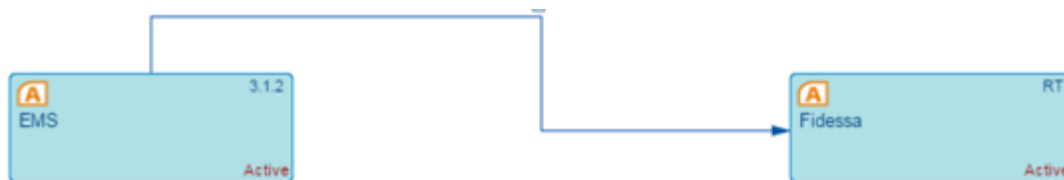
Setting Up the Diagram

Diagram settings allow you to determine the size, format, and orientation of the diagram, whether you want rulers or a grid displayed while designing the diagram, how connection items (for example, information flows) between objects are displayed, whether users should be alerted about semantic implications resulting from diagram layout changes so that changes are not inadvertently made to objects in the Alfabet database, and whether work in progress shall be automatically saved in the event of a session timeout.

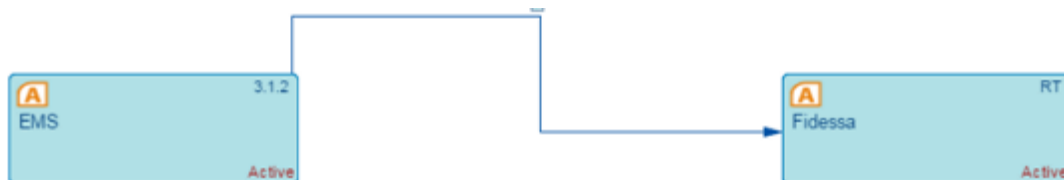
Default diagram settings in the Alfabet Diagram Designer may have already been configured by your solution designer in the configuration tool Alfabet Expand. The settings can be modified, as needed. For more information about the configuration of the default settings, see the section *Configuring the Default Settings for the Alfabet Diagram Designer* in the reference manual *Configuring Alfabet with Alfabet Expand*.

To modify the diagram settings:

- 1) In the toolbar, click **Other Actions**  > **Diagram Settings**. In the editor, define the following:
 - **Center Connection:** Set the checkmark if the end points of connection items should be automatically placed on the center of the diagram item borders. Remove the checkmark if the placement of the end points of connection items should be determined by the user.



Checkmark set for Center Connection attribute

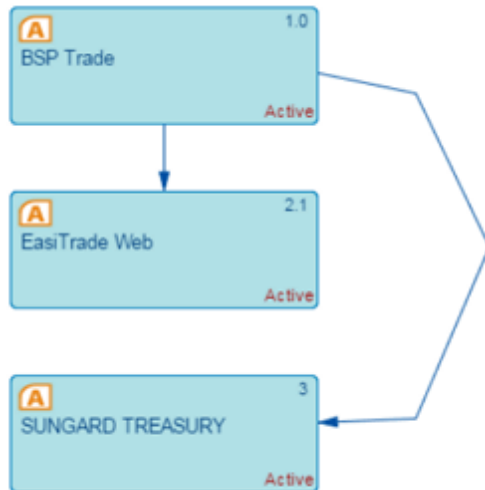


Checkmark removed for Center Connection attribute

- Elbowed Connection:** Set a checkmark if the connection items (information flows, sequence flows, etc.) with an angle must have a 90° angle. Any connection items that you draw will be automatically adjusted to have 90° angles. Furthermore, if the **Elbowed Connection** attribute is selected, any connection items that are automatically added to the diagram (for example, existing information flows between applications) will be automatically added as elbowed lines. Remove the checkmark if the angled connection items must not have 90° angles. This provides you with the freedom to draw connection items with angles that are greater or less than 90°. However, if the **Elbowed Connection** attribute is not selected, any connection items that are automatically added to the diagram (for example, existing information flows between applications) will be automatically added as straight lines. Please note that straight lines cannot be modified later to have an angle.



Checkmark set for Elbowed Connection attribute



Checkmark removed for Elbowed Connection attribute

- **Draw Grid:** Set a checkmark if a grid should be displayed. Remove the checkmark if a grid should not be displayed.
- **Grid Mode:** Set a checkmark if moving and resizing shapes should be based on the grid. Remove the checkmark if moving and resizing shapes should not be based on the grid.
- **Grid Size:** Specify the size of the grid in the size of the unit specified in the **Diagram Size Unit** attribute.
- **Warn for Semantic Layout Changes:** Set a checkmark in the checkbox to display a warning message if semantic changes are made to the diagram. A semantic change would be, for example, moving an application to another application group, thus creating new references.
- **Automatically Rescan on Load:** Set a checkmark in the checkbox to automatically display semantic changes made to an object in a diagram when the diagram is reloaded in the Alfabet user interface or Alfabet Diagram Designer. Clear the checkmark if semantic changes shall only be updated to the diagram when the **Update** button is triggered in the diagram's view in the Alfabet user interface or when the **Refresh Diagram** option in the **Semantic Actions** menu is triggered in the Alfabet Diagram Designer.



The XML attribute `AutomaticallyRescanDiagramOnLoad` in the XML object **DiagramOptions** must be set to `False` if you the **Automatically Rescan on Load** checkbox is selected, and you therefore specify that the semantic changes must be explicitly updated to the diagram.

- **Save Work in Progress** Set a checkmark in the checkbox to save the diagram automatically. The diagram will be saved even if a session timeout occurs. You must specify how frequently the diagrams shall be saved in the **Automatic Save Every <X> Minutes** attribute.
- **Automatic Save Every <X> Minutes:** Enter the number of minutes in order to define how frequently the diagram shall be automatically saved.
- **Landscape:** Set a checkmark if the diagram should use the specified paper size in landscape mode. Remove the checkmark the diagram should use the specified paper size in portrait mode.

- **Format:** Enter one of the following attributes to determine the paper format to be used as the default for diagrams. Permissible options are:
 - A4 210x297: Standard A4 paper size
 - A3 297x420: Standard A3 paper size
 - A2 420x594: Standard A2 paper size
 - A1 594x840: Standard A1 paper size
 - A0 840x1186: Standard A0 paper size
 - Letter: US Letter paper size (216x279 cm or 8.5x11 in)
 - Legal: US Legal paper size (216x356 cm or 8.5x14 in)
 - 11x17: US 11x17 paper size (279x432 cm)
 - IPad2: Optimized for iPad 2 screen resolution.
 - IPad3: Optimized for iPad 3 screen resolution.
 - Custom Format: If you select this format, you must define the **Height** and **Width** attributes
- **Width.** Specify the width of the diagram. This field can only be edited if you have defined Custom Format for the **Format** attribute.
- **Height :** Specify the height of the diagram. This field can only be edited if you have defined Custom Format for the **Format** attribute.
- **Diagram Size Unit :** Specify whether the diagram width and height should be measured in pixel or millimeter. This field is only relevant if you have defined Custom Format for the **Format** attribute.

2) Click the **OK** button to save the diagram settings.

Undoing Changes to the Diagram

Undo  and **Redo**  buttons are available in the toolbar to revert the diagram to a previous state or advance the diagram to a more current state. Please note however that the **Undo** and **Redo** actions are only relevant for changes to the layout of the diagram. If you add a database object to the diagram or create a connection item, for example, the history of changes made to the diagram is cleared and the **Undo** and **Redo** buttons will be greyed out to indicate that the stack has been cleared and that there is currently no change history.

Saving Your Diagram

Whenever you open the diagram, the **Save** button will be displayed in the Alfabet Diagram Designer. The **Save** button allows you to graphically update the diagram if relevant changes have been made to the objects in the diagram. Furthermore, once the diagram has been designed, you should save your changes by clicking the **Save** button in the Alfabet Diagram Designer. The changes must be saved before you can close the browser tab displaying the Alfabet Diagram Designer.



If you attempt to save a diagram that has concurrently been changed by another user, the changes that they have made to the diagram may be overwritten when you save the diagram.

To make the saved diagram visible to the user community, return to the diagram page view in Alfabet and click the **Update** button. The updated diagram will be displayed in the page view.

Adding Objects to the Diagram

All object classes that may be added to the diagram are displayed in the top section of the **Toolbox Items** pane. This section displays diagram item templates that allow you to add objects to the diagram. Typically, you will see diagram item templates for standard object classes. You can add any objects from these object classes that have already been defined in Alfabet to the diagram. For example, in an application diagram,

you would typically see diagram item templates for **Application Group** , **Application** , **Peripheral** , and **Information Flow** . You can add any application groups, applications, and peripherals that already exist in the Alfabet database to the diagram.

Connection items such as information flows are an exception. Unlike other object classes, connection items can also be created within the context of the diagram. This is described in more detail in the section *Creating Connection Items (Information Flows, Rules, etc.) in the Diagram*.

Connection items that already exist between objects that you add to the diagram will be automatically added to the diagram. For example, if you add two applications to a diagram and an information flow has been defined between the applications, the information flow will be automatically added to the diagram. Furthermore, if the information flow has been defined between an application and a local component defined for an application displayed in the diagram, this information flow will be automatically added to the diagram. Please note however that in this case, the information flow will be displayed as connecting the two applications. The local component will not be visible in the diagram unless it is explicitly added to the diagram, as described in the section *Updating the Objects in the Diagram to Include Their Subordinate Objects*.

In addition to the standard icons for object classes that you see in the **Toolbox Items** pane, you may also see other icons. These are custom diagram item templates that have been configured by your solution designer. Custom diagram item templates provide a customized visualization of an object class. Custom diagram item templates could be implemented, for example, if your enterprise has configured object class stereotypes for applications. In this case, a different custom diagram item template might be configured for each application stereotype with a different set of attributes for each stereotype as well as a different icon, shape, color, and text for each custom diagram item template. You can point to the icon in the **Toolbox Items** pane to display a tooltip providing more information about the purpose of the standard or custom diagram item.

When you add objects to the diagram, existing connection items between the objects will be automatically added to the diagram. For example, if you add applications to the diagram in the context of the Alfabet Diagram Designer, any information flows that exist between the applications will be automatically added to the diagram. These information flows can be changed in terms of their color or placement.



Please note the following regarding the display of diagram item templates:

- Connection items as well as the borders of other diagram item templates are displayed as solid lines in the context of the Alfabet Diagram Designer, regardless of the design of the diagram item template that the connection item is based on. For example, if the diagram

item template specifies a dotted or dashed line for a connection item, a solid line will be displayed for the connection item in the Alfabet Diagram Designer. The connection item will be correctly rendered as specified in the diagram item template in the context of the diagram in the Alfabet interface.

- The connection items that are automatically added may be straight lines or lines with 90° angles, depending on the setting of the **Elbowed Connection** attribute in the **Diagram Settings** editor. Please note that once a connection item is added as a straight line, it cannot be changed to an angled line. For more information, see the section *Setting Up the Diagram*.

To add an object existing in the Alfabet database to the diagram:

- 1) In the **Toolbox Items** pane, click the object class that you want to add to the diagram.
- 2) Click the canvas area to place the object in the diagram.
- 3) The object selector opens. Define search parameters, as needed, and select the object(s) you want to add to the diagram. You can add multiple objects simultaneously.



The selector that opens when adding an object to the diagram is typically determined by the configuration of the **Selector Definition** attribute of the relevant class setting associated with the user profile that the user is logged in with. Custom selectors assigned to a class setting will globally replace the standard selector except when a hard-coded selector is required. For more information about configuring a class setting, see the section *Configuring Class Settings for Object Classes and Object Class Stereotypes* in the reference manual *Configuring Alfabet with Alfabet Expand*.

- 4) Click **OK** to close the editor and add the selected object to the diagram. Please note the following:
 - If multiple objects have been added simultaneously to the diagram, they will all be selected. Click anywhere in the canvas area to deselect the object(s). Once multiple object(s) are no longer selected, you can move and further edit an individual object.
 - If connection items exist between objects that have been added to the diagram, the connection items will be automatically displayed as arrows between those objects. See the section *Creating Connection Items (Information Flows, Rules, etc.) in the Diagram* in order to further refine the visual layout of connection items.
- 5) Repeat the process in order to add other objects to the diagram.
- 6) For any object displayed in the diagram, you can navigate to its object profile by clicking **Semantic Actions**  > **Open Object Profile** and further define it there if you have the relevant access permissions.
- 7) Change the visualization of the diagram item, if necessary. The following is possible:
 - To change the size of the object in the diagram, click the object to display its handles and drag a corner handle to the appropriate size. Please note that if your enterprise tends to provide long names for objects, you should ensure that the length of the object in the diagram compensates for this or that the height is large enough so that a long name can be distributed across two lines.
 - To move a diagram item in the diagram, click-and-drag the diagram item.
 - Click the **Outline Color**  button and select the relevant color.
 - Click the **Line Weight**  button and select the relevant weight.

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- 8) Click the **Save** button to save the connection item to the Alfabet database. For more information about improving the design of the diagram, see the section *Tips for Designing the Layout of the Diagram*.

Adding Multiple Objects Based on a Diagram Item Template

You can efficiently add multiple objects based on a diagram item template to the diagram using the **Lock Toolbox Item** capability. IF the **Lock Toolbox Item** capability is selected, you can add multiple objects based on any diagram item template selected in the table.

- 1) In the toolbar, click **Other Actions**  > **Lock Toolbox Item**. A checkmark will be displayed next to the **Lock Toolbox Item** option if it is activated.
- 2) In the **Toolbox Items** pane, select the diagram item template in the **Toolbox Items** pane to add objects based on that diagram item template to the diagram.
- 3) Click the canvas area to place the object in the diagram.
- 4) The object selector opens. Select the object(s) you want to add to the diagram and click **OK** to close the editor and add the selected object to the diagram
- 5) To add additional objects based on this diagram item template, click anywhere in the canvas area to open the object selector, and select additional objects based on the diagram item template. You can repeat this procedure to add multiple objects based on the locked diagram item template.
- 6) To add objects based on a different diagram item template, select a diagram item template in the **Toolbox Items** pane to add objects based on that diagram item template to the diagram. Repeat the procedure described in step 4-5.

Creating Connection Items (Information Flows, Rules, etc.) in the Diagram

Connection items are the lines that represent information flows, migration rules, roles, etc. Between objects displayed in the diagram. Any new information flows, migration rules, roles, etc. that you create in the diagram will be saved to the Alfabet database. Please note the following about connection items in diagrams:

- You may see the standard icons such as the **Information Flow**  icon representing the connection items in the **Toolbox Items** pane, but you may also see icons that have been configured by your enterprise. These are custom diagram item templates that have been configured by your solution designer that provide alternative means to visualize the connection items. Point to the icon in the **Toolbox Items** pane to display a tooltip providing more information about the purpose of the diagram item.
- You can draw straight lines or complex lines with many angles for new information flows. Whether the angles must be 90° angles is determined by the specification of the **Elbowed Connection** attribute in the **Diagram Settings** editor. Any connection items that are automatically added will also be displayed based on the setting of the **Elbowed Connection** attribute. Please note that once a connection item has been added as a straight line, it cannot be changed to an angled line. For more information, see the section *Setting Up the Diagram*.

-
- You can change the color and line weight of each connection item. Please keep the following in mind:
 - Standard connection items are displayed with a solid line.
 - A connection item based on a custom diagram item template will also be displayed as a solid line in the context of the Alfabet Diagram Designer, regardless of the different line styles (dashed, dotted, dash dotted, dash dot dotted) of the diagram item template that the connection item is based on. For example, if the diagram item template specifies a dotted or dashed line for the connection item, a solid line will be displayed for the connection item in the Alfabet Diagram Designer. The connection item will be correctly rendered as specified in the diagram item template in the context of the diagram in the Alfabet interface.
 - Attributes can be displayed on connection items in the diagrams in the context of the Alfabet interface. However, this is defined by the user in the diagram's page view. The standard and custom attributes that may be displayed on the connection items as well as such issues as the default position, color, and size of the decoration boxes are configured by your solution designer in the XML object **DiagramInformationFlowDef** in the configuration tool Alfabet Expand. For more information, see the section *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* in the reference manual *Configuring Alfabet with Alfabet Expand*.

Please note that a drag-and-drop action will not produce the connection item. To create a connection item, you must click the source object, click for each intermittent point that represents the angle of the connection item, and click the target object of the connection item.

- 1) In the **Toolbox Items** pane, click the connection item (for example, Information Flow). The following is possible:
 - To create a straight connection item in the diagram:
 - 1) Click the source object in the diagram.
 - 2) Click the target object in the diagram.
 - To create connection item with angles in the diagram:
 - 1) Click the source object in the diagram.
 - 2) Click in the diagram to create each angle. Repeat for each angle in the line.
 - 3) Click the target object in the diagram.
 - To create a connection item with angles when the source/target objects are located in another diagram item:



This is relevant if, for example, you have diagram items representing the source and target applications located inside a diagram item representing an application group. You must hold the SHIFT key when creating the angles in order to ignore the underlying application group. If this is not done, an error message will be displayed indicating that a connection item cannot be created between an application and an application group.

- 1) Click the source object in the diagram.
- 2) SHIFT and click the underlying diagram item to create each angle. Repeat for each angle in the line.
- 3) Click the target object in the diagram.

-
- 4) An editor will open in which you can define the new connection item. For example, if you are adding an information flow between applications, the **Information Flow** editor will open. Enter information into each field, as required and click **OK** to save your changes. The new connection item is displayed in the diagram.
 - 5) To adjust the positioning of the connection item, click a handle at the start, end, or angle point of the connection item and drag to the correct location in the diagram. Elbowed information flows in close vicinity to each other will be adjusted so that the segment of the elbowed information flow connecting to the moved node will not overlap with other information flows connecting to the same node. Retaining layouts for elbowed information flows is limited to small changes. In particular, the moves must not change the relative position of elbows in diagrams.
 - 6) Change the visualization of the connection item, if necessary. The following is possible:
 - Click the **Outline Color**  button and select the relevant color.
 - Click the **Line Weight**  button and select the relevant weight.
 - 7) Click the **Save** button to save the connection item to the Alfabet database. For more information about improving the design of the diagram, see the section *Tips for Designing the Layout of the Diagram*.

Modifying the Decoration Boxes Displayed for Connection Items

In diagrams, users can often specify attribute information to be shown on connection items in the Alfabet interface. For example, in the *Standard Application Diagram Page View*, users viewing the diagram can define the **Information Flow Attribute** field to display an attribute (such as **Connection Type** or **Interface System Name**) on each information flow.

The attribute information is displayed in a rectangle called a decoration box. Typically, the decoration boxes are automatically generated if an attribute is specified in the diagram view. These decoration boxes are typically placed directly on top of the connection item and are displayed with the visualization configured by the solution designer via the XML object **DiagramInformationFlowDef** in the configuration tool Alfabet Expand.

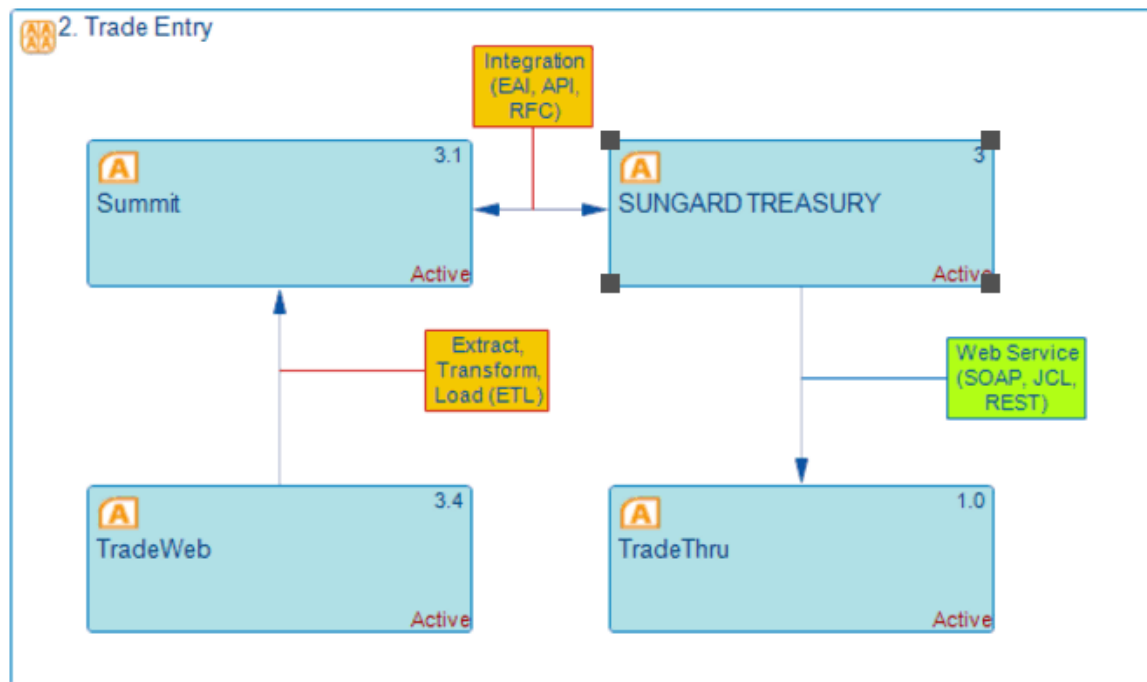


FIGURE: Decoration boxes configured

In the context of the Alfabet Diagram Designer, however, the user designing the diagram can explicitly define the decoration box for a connection item and determine its placement, color, and font properties. If the diagram designer moves the decoration box so that it is not located directly on the connection item, a line connecting the connection item to the decoration box will be automatically drawn. The visualization can be modified as needed and the font properties of the decoration can be changed so that particular decoration boxes are emphasized in the diagram. The following is possible:

- To add a decoration box to an information flow, click the information flow and click **Other Actions**  > **Attach Decoration Box**. The decoration box is displayed on the selected information flow. To add decoration boxes to multiple information flows simultaneously, select the information flows while pressing CTRL + SHIFT and click **Other Actions**  > **Attach Decoration Box**.



Please note that if two information flows are placed on top of each other, only one decoration box can be configured in diagram designer.
- To move the decoration box next to the connection item, click-and-drag the decoration box away from the connection item. A line connecting the decoration box with the connection item will be created automatically.
- To modify one decoration box, click the decoration box. To modify multiple decoration boxes simultaneously, click multiple information flows while pressing CTRL + SHIFT. The following changes are possible:
 - To change the border and connecting line of the decoration box, click the **Outline Color**  button and select the relevant color. The border color is preconfigured in the XML object **DiagramInformationFlowDef** in the configuration tool Alfabet Expand. For more information, see the section *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* in the reference manual *Configuring Alfabet with Alfabet Expand*.

- To change the weight of the border of the decoration box, click the **Line Weight**  button and select the relevant weight.



Please note that any line weights above 1 pt are shown as a dotted line in the Alfabet interface. This is due to limitations with HTML5.

- To fill the decoration box with a color, click the **Fill Color**  button and select the relevant color.
- To change the font size, orientation, and color, click **Other Actions**  > **Attach Decoration Box**. Define the **Font Properties** editor as needed and click **OK**:
- To change the orientation of the decoration box, click **Other Actions**  > **Rotate Box**. Rotate option allows the diagram designer to rotate the text vertically or horizontally as needed.
- Click the **Save** button to save the decoration box to the Alfabet database.

Deleting and Removing Objects in the Diagram

The Alfabet Diagram Designer provides a **Delete**  and **Cut**  capability:

- The **Delete**  button allows you to delete an object that has been created in the context of the Alfabet Diagram Designer. This is limited primarily to connection items such as information flows. Please note that objects such as applications and peripherals that have been added to the diagram cannot be deleted from the diagram. They can only be removed from the diagram via the **Cut**  button.
- The **Cut**  button allows you to remove an object from the diagram (such as applications, peripherals, etc.) as well as removed any shapes that have been added to the diagram. The **Cut**  button will be disabled if you select a connection item. Connection items can only be removed if their connecting node (application, peripheral, etc) is also selected for the cut action. Any objects that have been removed via the **Cut**  button are saved to a clipboard and can be returned to the diagram via the **Paste**  button.

Adding a Diagram Item Multiple Times to the Diagram

The Alfabet Diagram Designer provides a functionality that allows you to lock the toolbox so that you can add a selected object or shape multiple times to the diagram without needing to reselect that object/shape in the toolbox. This is particularly useful, for example, when adding connection items or text boxes to the diagram. To lock the toolbox, select **Other Actions**  > **Lock Toolbox Item**. Select an object or shape in the **Toolbox Items** pane and click in the diagram to add it. Click in the diagram again to add another instance of the same type of object or shape. Repeat until all objects/shapes of this type have been added to the diagram.

To change the type of object/shape, select a different icon in the **Toolbox Items** pane. To remove the lock on the toolbox, select **Other Actions**  and remove the checkmark next to the **Lock Toolbox Item** option.

Substituting Objects in the Diagram

You can select an object displayed in the diagram and replace it with another object. The object that you choose to add to the diagram must be of the same object class as the object that you are replacing. For example, you could replace an application with another application version or variant. Any connection items or other relationships associated with the object that you remove will also be removed from the diagram. Likewise, any connection items associated with the object that you are adding will be also added to the diagram.

To substitute one object with another object of the same class:

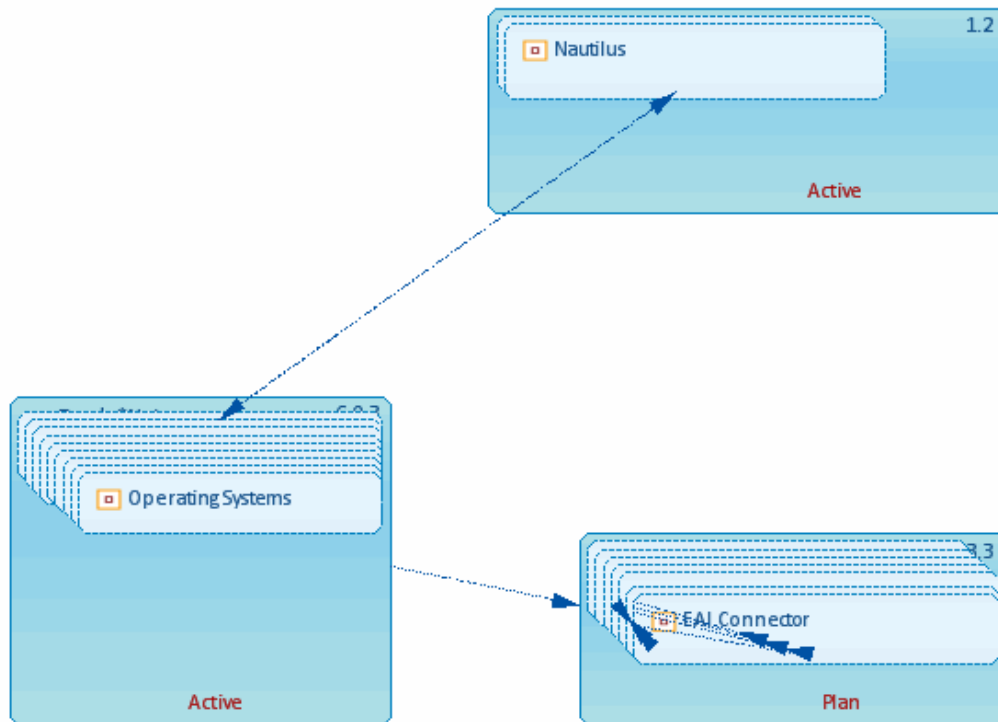
- 1) In the diagram, click the object that you want to replace with another object.
- 2) In the toolbar, click **Semantic Actions**  > **Substitute**.
- 3) The object selector opens. Enter search criteria, as needed, and click **Search**.
- 4) Click the object that you want to add to the diagram and click **OK**. The original object is replaced with the object you selected in the object selector. For more information about improving the design of the diagram, see the section *Tips for Designing the Layout of the Diagram*.

Updating the Objects in the Diagram to Include Their Subordinate Objects



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

Each chapter in this reference manual includes a table listing the referenced objects that can be added to the diagram via the **Update** actions.



The options available in the **Semantic Actions**  menu that allow you to automatically add subordinate objects to the diagram are:

- **Update Subordinates for Object:** Select an object in the diagram and select this option to add the referenced objects to the selected object. When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram
 - For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
 - Select either **Organize by Rows** or **Organize by Columns** to define whether the objects should be organized in rows or in columns.
 - Enter a number in the **Count** field to define how many rows or columns should be displayed.
 - For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.
- **Update Subordinates for All Objects:** Select this option to add all referenced objects of all objects displayed in the diagram. Any objects referencing those already displayed in the diagram will be added to the diagram. Please note that the settings defined in the **Update Group** editor available via the **Update Subordinates for Object** option will be applied.
- **Update Subordinates for All Objects Recursively:** Select this option to add all referenced objects of all objects displayed in the diagram as well as the objects added via this function to the diagram. Any objects referencing those already displayed in the diagram will be added to the diagram. If these added objects have subordinate objects, these will also be added to the diagram, and so forth. The update action will proceed until the lowest level in the hierarchy is reached. All objects will be placed

on top of each other in the diagram and you will need to manually distribute them in the diagram. Please note that the settings defined in the **Update Group** editor available via the **Update Subordinates for Object** option will be applied.

For more information about improving the design of the diagram, see the section *Tips for Designing the Layout of the Diagram*.

Generating an Object's Network of Referenced Objects

Objects visualized in your diagram may have connection items to other objects that are not visualized in the diagram. By means of the **Generate Network** option, you can add the objects to the diagram that are associated with a selected object by means of connection items. When you add the objects, you define the number of levels of objects to include in the network as well as the type of connections you want to display. The connection items as well as their source/target objects will be added to the diagram.

Using this option means that the diagram will be generated anew and any previous formatting may be lost and replaced with an automatically generated layout. Please note that it is recommended that the **Max. Network Depth** attribute be set to 1 or 2 in order to keep the diagram manageable.

The diagram network is generated in the following sequence:

- 1) The objects selected in the diagram and the group definitions will be used to build the network of implicitly selected objects.
- 2) For the found objects in the first step, the connected objects will be found via the definition(s) selected in the **Include Connection Types to Build Network** field.
- 3) For the connected objects found in the second step, connections will be drawn for those objects that have both a source and target object in the diagram.



If you select an application (App_0), set the **Max. Network Depth** attribute to 1 and the **Include Connection Types to Build Network** to Application > Application when you execute the **Generate Network** option, the following would be added to the diagram: the information flows between App_0 and applications (AppLevel_1) and the information flows to the local components defined for the applications (AppLevel_1). Please note that the local components will first be added to the diagram when the **Max. Network Depth** attribute is set to 2 (which would include subordinate objects of the application).



Please note that only the objects that are specified as visible via the **Hide Selected Objects** and **Show All Hidden Objects** options in the **Other Actions**  menu can be added to and displayed in the diagram. For more information, see the section *Hiding Entire Object Classes or Individual Objects*.

To generate the net for a selected object:

- 1) In the diagram, select the object whose network you want to generate.
- 2) In the toolbar, select **Other Actions**  > **Generate Network**.
- 3) In the **Generate Network** editor, define the following fields, as needed:
 - **Objects' Vertical Distance**: Define the vertical distance between the objects that are to be placed in the diagram.



The unit of measurement will depend on the cultures implemented in your Alfabet solution. For more information about the configuration of cultures, see the section *Specifying the Cultures Relevant to Your Enterprise* in the chapter *Localization and Multi-Language Support for the Alfabet Interface* in the reference manual *Configuring Alfabet with Alfabet Expand*.

- **Objects' Horizontal Distance:** Define the horizontal distance between the objects that are to be placed in the diagram.
 - **Object Placement:** Define whether the objects are to be positioned horizontally or vertically to the selected object.
 - **Max. Network Depth:** Define how far-reaching the network should extend. Set to 1 to place objects directly associated with the object selected in the diagram. Set to 2 to place objects associated with the objects on level 1. Set to 3 to place objects associated with the objects on level 2, etc.
 - **Include Connection Types To Build Network:** Deselect the type of connections that should not be included for finding objects to place on the diagram.
 - **Build Network Traversing Backwards:** Select to display objects that have information flows incoming to the selected database object in the diagram. If the Reverse checkbox is selected, only the information flows incoming from the selected database object will be visualized. If the Reverse checkbox is not selected, only the information flows outgoing from the selected database object will be visualized. The Reverse checkbox is not selected by default.
- 4) Click **OK** to add the objects and their associated connection items to the diagram. For more information about improving the design of the diagram, see the section *Hiding Entire Object Classes or Individual Objects*.

Hiding Entire Object Classes or Individual Objects

By default, all object classes and relationships predefined by Software AG for a specific diagram will be displayed. However, you can selectively hide some of this information. In this way, a large and complex diagram can be scaled down to become manageable and relevant to a specific user group. The following is possible:

- Hide an entire class of objects, for example all information flows and local components. If you select to hide an object class, all objects of that class and their dependent relationships will be hidden. For example, if you hide the object class Application Groups, then all application groups as well as their applications and their information flows will also be hidden.
- Hide individual objects in the diagram, for example, the applications that are not really relevant for the purpose of the diagram. You can select specific objects in the diagram and remove them visually from the diagram. If you hide an object, that object as well as its dependent relationships will be hidden in the diagram. For example, you can choose to hide a specific application group. In this case, the application group and any subordinate applications as well as their information flows will be hidden in the diagram. The hidden objects will not be visible in the diagram displayed in Alfabet.
- Hide all connection items for a specific object. For example, you can choose to hide all information flows for a specified application. In this case, the information flows will be hidden but the application will be displayed in the diagram.

Objects associated with a hidden object class will not be displayed in the diagram in Alfabet for any user accessing the diagram. You can return the object class to the diagram via the Alfabet Diagram Designer at any time, thus making the relevant objects visible again in the diagram page view.

To hide object classes in the diagram:

- 1) Click **Other Actions**  > **View Settings**. The **View Settings** editor opens. It displays all object classes and relationships that can be hidden in the diagram. Relationships between objects are indicated by an arrow (-->). For example, Application --> Application indicates information flows from an application to another application, and Application --> Peripheral indicates information flows from an application to a peripheral.
- 2) All objects and relationships that are currently specified as visible in the diagram are selected. Deselect any object class or relationship that you want to hide in the diagram.
- 3) Click **OK**. The objects are no longer visible in the diagram.
- 4) You can return the object class or relationship to the diagram at any time by **Other Actions**  > **View Settings** and setting the relevant object class to visible.



Please note that you cannot return objects assigned to a hidden object class via the option **Other Actions**  > **Show All Hidden Objects**. Also, if you later execute the **Generate Network** or **Refresh Diagram** functionalities (which ease the addition of related objects to the diagram), only the object classes and relationships that are specified to be visible will be added to the diagram. For example, if some information flows have a source or target object that is a peripheral and peripherals are hidden from the diagram, then these information flows will not be displayed even though their source and target applications are displayed in the diagram.

To hide a specific object in the diagram:

- 1) Select the object in the diagram that you want to hide.
- 2) Click **Other Actions**  > **Hide Selected Objects**. The selected object and its referenced objects are no longer visible in the diagram.
- 3) You can return the object class or relationship to the diagram at any time by **Other Actions**  > **Show All Hidden Objects**.



Please note that if you generate the object's network via the **Generate Network** option, relevant connection items and objects will be added even if the diagram is configured to hide the respective objects. This ensures that you can control the results produced by the **Generate Network** option. Once the network objects have been added to the diagram, they can be hidden as described above.

To hide all connection items for a specific object in the diagram:

- 1) Select the object in the diagram that has the connection items that you want to hide.
- 2) Click **Other Actions**  > **Hide Objects Connections**. The connection items associated with the selected object are no longer visible in the diagram.
- 3) You can return the connection items to the diagram at any time by selecting the object and selecting **Other Actions**  > **Show Objects' Hidden Connections**.



Please note that if you generate the object's network via the **Generate Network** option, relevant connection items and objects will be added even if the diagram is configured to

hide the respective objects. This ensures that you can control the results produced by the **Generate Network** option. Once the network objects have been added to the diagram, they can be hidden as described above.

Defining an Object's Data

To open an object's editor in order to define its basic data, click **Semantic Actions**  > **Open Editor**. To navigate to an object's object profile and further define the object data in page views, click **Semantic Actions**  > **Open Object Profile**.

Linking an Object to Another Diagram

Objects displayed in standard and custom diagrams may provide linkage to other diagrams. Only one diagram may be linked per diagram object and only diagram types that are permissible for the selected node may be specified. If an object in a diagram has been configured to be linked to another diagram, the user

can click the dark blue **Navigate**  icon on the lower-right corner of the diagram object. The name of the target diagram and its base object will be displayed in the tooltip for the **Navigate**  icon. Please note that navigation to diagrams is not supported for connections.

To specify a standard or custom diagram as a navigation target for a selected node in the diagram, select the object in the Alfabet Diagram Designer and click **Semantic Actions** > **Define Associated Diagram**. In the selector that opens, select a diagram type in the **Select Diagram Definition** field. Only diagram types that are permissible for the selected node will be displayed. Based on the diagram definition, a relevant diagram can be selected as the target of navigation for the diagram object. To remove the diagram navigation definition from the node, click **Semantic Actions** > **Remove Associated Diagram**.



For custom diagrams, the permissible diagram connection must be specified for a custom diagram definition via the **Diagram Connections** node has been added to the **Custom Diagram Definitions** node in Alfabet Expand. The solution designer can create a new connected diagram configuration object and specify the relevant custom diagram definitions for navigation in the **Diagram Definition** attribute and the configured report that opens the diagram in the **View Link** attribute. For more information, see the section *Configuring Custom Diagrams* in the reference manual *Configuring Alfabet with Alfabet Expand*.

Tips for Designing the Layout of the Diagram

The Alfabet Diagram Designer provides a number of means to control and enhance the layout of the diagram. A diagram may quickly become very complex, especially if you are using such functionalities as the **Generate Network**, **Update...**, or **Refresh Diagram**. Using these options means that the diagram will be generated anew and any previous formatting may be lost and replaced with an automatically generated layout. The diagram may display new objects that need to be resized or repositioned or connection items that are overlapping or displayed as a confusing network.

The more objects displayed in the diagram, the more complex is the task of designing the landscape so that it is easy for users to understand. Therefore, it is recommended that you limit the number of objects and connection items to a manageable amount.

The Alfabet Diagram Designer provides a number of means to add additional information to the diagram as well as visually enhance it. You can move any object or shape in the diagram as well as changes its size, and add color, borders, shadow, text, etc. The following information is available:

- [Improving the Layout of Connection Items](#)
- [Adding a Shape, Line, or Image](#)
- [Moving Objects and Shapes](#)
- [Aligning Objects and Shapes in the Diagram](#)
- [Changing the Size of an Object/Shape](#)
- [Defining Color for Objects/Shapes](#)
- [Adding Text to the Diagram](#)
- [Changing the Diagram Item Template That a Diagram Item Is Based On](#)
- [Updating the Shape of Diagram Items](#)
- [Changing the Z-Order of Diagram Items](#)

Improving the Layout of Connection Items

Sometimes you may have a confusing network of connection items such as information flows, or you may want to move the connection items so that they are easier to understand visually. The following may help to improve the layout of the connection items:

- Click each connection item to see where the source and target objects are. The handles of the connection item allow you to identify the source and target objects of the connection item.
- Move the source or target object of a connection item.
- Grab a handle at the end of the connection item and drag the end handle to a different side of the object to move the end of the connection item.
- Grab a handle at an angle of the connection item and drag the angle to reposition the adjacent sections of the connection item.
- If multiple connection items share the same object as either the source or target object, you can collapse these connection items so that they are displayed as one connection item with an arrow at each end indicating that one object is the target object for one connection item and the other object is the target object for the other connection item. To do so, click **Semantic Actions**  > **Collapse Similar Connections**. The connection items will be displayed as one line with arrows at both ends.
- If multiple connection items are collapsed into one connection, click **Semantic Actions**  > **Expand Similar Connections** to expand the collapsed connection items and visualize each individual connection item.

Adding a Shape, Line, or Image

You can add any shape that is located in the **Toolbox Items** pane in the Alfabet Diagram Designer. After a shape is placed in the diagram, you can later modify it by moving it in the diagram, changing its size, and adding color, borders, shadow, text, etc.

To add a shape to the diagram:

- 1) In the **Toolbox Items** pane, click the shape that you want to add to the diagram. Please keep the following in mind:
 - **Line, Polygon:** To draw a line or custom shape, click the polygon shape in the toolbox item pane.
 - To create a line, click in the diagram to start the line, move the pointer and double-click to finish the line.
 - To create a custom shape, click in the diagram to start the shape, move the pointer and click to place the first angle in the custom shape, repeating this until all lines have been drawn for the custom shape. Double-click to finish the custom shape.
 - **Rectangle, Triangle, Rhombus, Ellipse/Circle, Arrow Rectangle, Double Arrow Rectangle, Pool, and Text Box:** Click the relevant shape and drag until it is the correct size. The shape is displayed with a text box in which you can enter text.
 - **Image:** Any BMP, GIF, JPG, JPE, PNG, DIB, or ICO (icon) file that you want to add to a diagram must first be uploaded to the **Internal Document Selector**. To add an image file to the diagram, click the **Image**  icon and click in the canvas area. The **Internal Document Selector** will open. Select the file and click **OK**. The graphic image is added to the diagram based on its original size. For more information about uploading files to the **Internal Document Selector**, see the section *Uploading Documents and Managing User Permissions to Document Folders in the Internal Document Selector* in the reference manual *User and Solution Administration*.
- 2) You can further define the shape by changing its color, size, position, or adding text.
- 3) To change the orientation of the rectangle, ellipse, or text box, click **Other Actions**  > **Rotate Box**.
- 4) Repeat the process in order to add other shapes to the diagram, as needed and click the **Save** button.

Moving Objects and Shapes

You can move any object or shape that is in the diagram.

To move an object or shape to a different spot in the diagram, click it and drag it to the appropriate place.

To move several objects and/or shapes simultaneously, click objects/shapes while holding the CTRL key. Move the group to the appropriate place. After the group has been moved, click an empty space in the canvas area to deselect the objects/shapes.

Aligning Objects and Shapes in the Diagram

You can align objects and shapes in order to improve the visual organization of the information. To define the alignment of objects/shapes, click each object/shape that you want to align. Click the **Align** button in the toolbar and select the relevant option.

Changing the Size of an Object/Shape

You can change the default size of any objects and shapes that are in the diagram. In some cases, you may want an object or a shape to cover the entire diagram. For example, you may want an application group to be as large as the canvas area in order to visualize its applications in the application group. Or, you may want to cover the diagram with a rectangle shape which you can then define a color for in order to create a colored background for the diagram.

Another consideration regarding the size of objects in the diagram is the object data that might be displayed on the object. For example, if your enterprise tends to provide long names for objects, you should ensure that the length of the object compensates for this or that the height is large enough so that a long name can be distributed across two lines. If diagram views are configured for your solution, significantly more information including indicator icons may be displayed on the objects. In this case, a minimum of 40 mm is recommended. For more information about the data that may be displayed in the context of a diagram view, see the chapter *Configuring Diagram Views for Diagrams* in the reference manual *Configuring Evaluation and Reference Data in Alfabet*.

To increase the size of an object /shape, click the object to display its handles. Drag a corner handle to the appropriate size.

You can simultaneously define the size for multiple objects/shapes. To specify the size of multiple objects/shapes simultaneously, click each object/shape that you want to size and click the **Match Size of Items** button in the toolbar and select the relevant option.

Defining Color for Objects/Shapes

As you design your diagram, you may want to define color for various objects, connection items, decoration boxes, and shapes in order to make the information more accessible and visually appealing. You can define the color as an RGB value or a color code.



Please note that color rules may be implemented in the diagram via a diagram view selected for the diagram. In this case, the objects will be colored based on defined queries. If color rules are implemented in a diagram, the legend in the diagram will provide information about the coloring of the objects. For more information about the configuration of color rules, see the chapter *Configuring Color Rules for Map Views and Diagram Views* in the reference manual *Configuring Evaluation and Reference Data in Alfabet*.

To change the color of an object, connection items decoration box, and shape in the diagram, select the object and click the **Fill Color** button:

- Select a color displayed in the selection box.
- Set a checkmark next to **No Fill** if the object/shape should be transparent.

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- Select **More Fill Colors** to specify the color using the color palette or by entering RGB values or a color code. Click **OK** to save the custom color.

Adding Text to the Diagram

You can add text to the diagram as well as to any object or shape in the diagram. In the **Toolbox Items**

pane, click the **Text Box**  icon and click in the diagram or the relevant object/shape. Keep the following in mind:

- Double-click the text box to enter text.
- If necessary, you can define the attributes of the text displayed. Select the text box and click **Other Actions**  > **Edit Text Attributes**. In the dialog, define the following as needed:
 - **Font:** Displays the font defined in the **Application Font** attribute of the GUI scheme associated with the user profile.
 - **Size:** Enter the font size.
 - **Bold:** Set a checkmark to display the text in bold.
 - **Italic:** Set a checkmark to display the text in italic.
 - **Horizontal Alignment:** Select the horizontal alignment of the text in the text box.
 - **Vertical Alignment:** Select the vertical alignment of the text in the text box.
 - **Text Orientation:** Select the direction that the text should be displayed.
 - **Word Wrap:** Set a checkmark if the line should be broken between words. If no checkmark is set, the lines may break within a word.
 - **Color:** Specify the color of the text.
- Click the text box to display its handles. Drag a hand to increase or decrease the size of the text box. Please keep in mind that if the text box is on an object, other object data such as object names or information configure via diagram views may also be displayed on the object. See the section *Changing the Size of an Object/Shape*.
- You can either add color to the text box or make it transparent. See the section *Defining Color for Objects/Shapes*.

Changing the Diagram Item Template That a Diagram Item Is Based On

The **Change Diagram Item Template** option allows you to select one or more diagram items in the diagram and change the diagram item template that the diagram item is based on. To do so, select a diagram item in the diagram and click **Other Actions** > **Change Diagram Item Template**. In the Select Diagram Item Template editor, select the diagram item template that you want to base the diagram item on and click **OK**.

The **Change Diagram Item Template** option will only be available for nodes and connections in custom diagrams if the **Enable Change to Diagram Item Template** attribute is enabled for the node or connection in the context of the custom diagram configuration. For more information, see the section *Configuring Custom Diagrams* in the reference manual *Configuring Alfabet with Alfabet Expand*.

Updating the Shape of Diagram Items

The **Reset Original Shapes** option allows you to select one or more diagram items in the diagram and update the shape of older diagram items to the look-and-feel of diagram items introduced with Alfabet release 9.10. For example, the gradient shading of diagram objects has been removed and the rounding of corners decreased. To do so, select a diagram item in the diagram and click **Other Actions > Reset Original Shapes**.

Changing the Z-Order of Diagram Items

In the diagram, you can define the Z-order by using the **Move to Front** and **Move to Back** options to place the objects in front of/behind other diagram items and shapes in the diagram. If you do this, the Z-order is determined by the user. It is also possible to use the **Standard Reorder** option in order to automatically define the Z-order of the diagram items in the diagram. To do so, click **Other Actions > Standard Reorder**. The diagram items will be reordered along the Z-dimension as follows:

- 1) Grouping shapes (such as pools)
- 2) Connection shapes (such as lines)
- 3) Diagram items, starting with grouping nodes (application groups), followed by subordinate objects, etc.

Once the standard reorder has been executed, you can use the **Move to Front** and **Move to Back** options to refine the visualization.

Adding a Legend of the Diagram's Change History to the Diagram

You can add a legend to a diagram in order to capture the name of the user who last modified the diagram, the date of the modification, and a comment provided by the user about the modification. The legend can be placed anywhere on the diagram and will then be displayed on the diagram in the Alfabet Diagram Designer as well as on the diagram displayed in the relevant page view in Alfabet

To create a legend for the diagram

- 1) In the **Toolbox Items** pane, click the **Change Legend**  icon and click in the canvas. The legend is displayed in the diagram and can be moved, as needed.
- 2) Click the **Save** button. The **Save** action opens the **Change Comment** editor. Enter text providing relevant information about the modification to the diagram and click **OK**. You can edit the comment at any time by saving the diagram or double-clicking the legend

Specifying Settings to Export or Print the Diagram to PPT Format

Users can export diagrams directly to a Microsoft® PowerPoint® format via the **Export** menu in the Alfabet user interface. This allows users to easily integrate the data in presentations for your enterprise. Users must have Microsoft PowerPoint installed on your machine in order to view and process the PPT file. Users can include a summary of the filter settings in the export, which will be exported to a separate slide. The legend will also be exported to a separate slide in the PPT file.

The export of data to Microsoft® PowerPoint® ensures that visualizations are exported in their actual size by scaling on the natural definition of a report. If a graph is bigger than a single slide, the graph will be automatically split across multiple slides upon export. Arrows will be added to the margins of the slides to provide help with understanding the layout of the slide content as well as during presentation navigation.

For an excessively large view such as a diagram, the view will first be split horizontally across multiple pages and then vertically. The default slicing between pages will attempt to avoid cutting through objects in the visualization. Arrows will be added to the margins of the page to indicate that a page continues either vertically or horizontally and to directly link to the subsequent page in either horizontal or vertical direction.

For more information about the export capability available in the Alfabet user interface, see the section *Exporting Datasets, Diagrams, Matrix Reports, and Gantt Charts as PPT* in the reference manual *Getting Started with Alfabet*.

To define the diagram for export to PPT:

- 1) In the toolbar, click **Other Actions > Page Split Settings**.
- 2) In the editor that opens, define the following:
 - **View Page Split.** Select the checkbox to add the lines where the diagram is split to the output. This makes excessively large diagrams easier to understand in their printed/exported format.
 - **Top Margin:** Enter an integer in the unit specified in the **Diagram Size Unit** field to specify the top margin.
 - **Left Margin:** Enter an integer in the unit specified in the **Diagram Size Unit** field to specify the left margin.
 - **Right Margin:** Enter an integer in the unit specified in the **Diagram Size Unit** field to specify the right margin.
 - **Bottom Margin:** Enter an integer in the unit specified in the **Diagram Size Unit** field to specify the bottom margin.
 - **Landscape:** Select the checkbox if the diagram should have landscape orientation. Clear the checkbox if the diagram should have portrait orientation.
 - **Format:** Select the relevant formation options to render the output of the diagram.
 - **Width:** Enter an integer in the unit specified in the **Diagram Size Unit** field to specify the width of the diagram.
 - **Height:** Enter an integer in the unit specified in the **Diagram Size Unit** field to specify the height of the diagram.
 - **Diagram Size Unit:** Specify the unit of measurement that applies to the margin and width/height specifications.
- 3) Click **OK** to save your settings or click **Cancel** to close without saving.

Printing the Diagram

Diagrams cannot be printed in the Alfabet Diagram Designer. To print a diagram, close the Alfabet Diagram Designer in order to return to the diagram's page view in Alfabet. For more information about printing a

diagram in Alfabet, see the section *Working with Diagrams* in the reference manual *Getting Started with Alfabet*.

Chapter 2: Designing Application Diagrams

The Alfabet Diagram Designer allows you to design application landscapes for a variety of object classes. You can design a diagram by visualizing all relevant application groups, applications, peripherals, information flows, and local components for the object that you are designing the diagram for.



The following procedure describes how to design a diagram that can be displayed in Alfabet in either the *Standard Application Diagram Page View* or *Additional Diagrams Page View*. Please keep the following in mind when designing a diagram for these views:

- The *Standard Application Diagram Page View* is available for application groups, applications, business data, business objects, business processes, ICT objects, ICT object groups, market products, market product groups, and organizations. Each object can have only one standard application diagram.
- The *Additional Diagrams Page View* is available for application groups, applications, business data, business objects, business processes, ICT objects, and ICT object groups. This view allows multiple application landscape diagrams to be designed per object.

Before you design the diagram, all relevant application groups, applications, peripherals, and local components should be defined in Alfabet. If you add two applications to a diagram and an information flow has been defined between the applications, the information flow will be automatically added to the diagram. Furthermore, if the information flow has been defined between an application and a local component defined for an application displayed in the diagram, this information flow will be automatically added to the diagram. Please note however that in this case, the information flow will be displayed as connecting the two applications. The local component will not be visible in the diagram unless it is explicitly added to the diagram, as described in the section *Updating the Objects in the Diagram to Include Their Subordinate Objects*.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing an application diagram:

- [Adding an Application Group](#)
- [Adding Applications and/or Peripherals](#)
- [Adding an Application to an Application Group](#)
- [Creating New Information Flows between Applications and/or Peripherals](#)
- [Automatically Adding Referenced Objects for Applications and Application Groups](#)
- [Substituting an Application and/or Application Group](#)
- [Showing Aggregated Information Flows Between Application Groups](#)
- [Generating the Network for an Application, Peripheral, or Local Component](#)

Adding an Application Group

You can add as many existing application groups as needed to visualize the application landscape.

- 1) In the toolbox items pane, click the **Application Group**  icon and click in the diagram.
- 2) The object selector opens. Define search parameters, as needed, and select the application group(s) you want to add to the diagram. After you click **OK** in the object selector, the application group is displayed in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant application groups.
- 4) Click the **Save** button to save your changes.

If you plan to visualize applications in the application group you have just added, it is recommended that you increase the size of the application group in the diagram. If you are only visualizing one application group in the diagram, you can even enlarge the application group to cover the entire diagram workspace. For more information about increasing the size of an object in the diagram, see the section *Changing the Size of an Object/Shape*.

Adding Applications and/or Peripherals

You can add existing applications and/or peripherals to visualize the application landscape. Any information flows existing between applications and/or peripherals are automatically added to the diagram. If information flows are defined for the local components of applications displayed in the diagram, these information flows will also be displayed for the applications. The information flows are displayed as blue arrows between the objects.

- 1) In the toolbox items pane, click either the **Application**  icon or **Peripheral**  icon and click in the canvas area.
- 2) The object selector opens. Define search parameters, as needed, and select the application(s)/peripheral(s) you want to add to the diagram. After you click **OK** in the object selector, the application(s)/peripheral(s) are displayed in the diagram. Existing information flows are automatically visualized in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant applications/peripherals.
- 4) Click the **Save** button to save your changes.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Adding an Application to an Application Group

You can add an existing application to an application group in the Alfabet Diagram Designer. When you save the diagram, the relationship will be saved in the Alfabet database and the application will reference the application group.

To add an application to an application group:

- 1) Increase the size of the application group in the diagram so that there is enough room for the applications/peripherals that will be added. If you are only visualizing one application group in the diagram, you can even enlarge the application group to cover the entire diagram workspace. For more information about increasing the size of an object in the diagram, see the section *Changing the Size of an Object/Shape*.
- 2) In the toolbox items pane, click the **Application**  icon and click in the application group that you want to display it in.
- 3) The object selector opens. Define search parameters, as needed, and select the application(s) you want to add to the diagram. After you click **OK** in the object selector, the application(s) are displayed in the diagram. Existing information flows are automatically visualized in the diagram.
- 4) Repeat the process, as needed, in order to add the relevant applications.
- 5) Click the **Save** button to save your changes.

Creating New Information Flows between Applications and/or Peripherals

You can create and visualize new information flows between applications and/or peripherals. Any new information flows that you create are saved to the Alfabet database and can be viewed and edited by users in Alfabet with relevant access permissions.



Please note that you may **NOT** create information flows if you are designing a standard application diagram for an enterprise release. For more information about the **Enterprise Release** capability, see the section *Capture Enterprise Releases* in the reference manual *IT Planning Complete*.



When you create new information flows, you should first define how the information flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the information flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the information flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of information flows should be determined by the user. Remove the checkmark if the end points of information flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

- 1) In the toolbox items pane, click the **Information Flow**  icon.
- 2) Click the source application/peripheral in the diagram.
- 3) Click the target application/peripheral in the diagram. An editor will open in which you can define the new information flow. For example, if you are adding an information flow between applications, the **Information Flow** editor will open.



Please note that 3 separate clicks are required to create the information flow. A drag-and-drop action will not produce the information flow.

- 4) Enter information into each field, as required.

Basic Data tab:

- **ID:** Alfabet assigns a unique identification number to each object in the inventory. This number cannot be edited.
- **Name:** Displays the information flow's name. The naming convention is as follows: <Source Object> > <Target Object>.
- **Short Name:** Enter the information flow's short name.
- **Version:** Enter the version number. The version number should be unique.
- **Object State:** Displays the object state of the information flow in the enterprise. The object state distinguishes between objects that are actively used, planned to be used, or have been used in the past. An information flow may only be defined to have an active state if its source and target applications have an active object state. The information flow must have a retired object state if either the source or target application has a retired state.



The names of the object states **Retired**, **Active**, and **Plan** may deviate in your Alfabet product from the standard names. Object state names are configured for a specified object class by your solution designer in the configuration tool Alfabet Expand. For more information, see the section *Configuring Object State Definitions for Object Classes* in the reference manual *Configuring Alfabet with Alfabet Expand*. For general information about object states, see the section *Understanding Object States* in the reference manual *Getting Started with Alfabet*.

- **Release Status:** Select a release status. The release status is used to support the planning process and describes different phases in the approval process.



The set of release statuses available for an object class are configured by your solution designer in the configuration tool Alfabet Expand. For more information, see the section *Configuring Release Status Definitions for Object Classes* in the reference manual *Configuring Alfabet with Alfabet Expand*. For general information about release statuses, see the section *Understanding Release Statuses* in the reference manual *Getting Started with Alfabet*.

- **Start Date:** Enter the start date of the information flow in the format appropriate to your culture settings or select the start date in the calendar. The start date should not be earlier than the latest start date of either the source or target object.



If you attempt to create an information flow with source and target objects whose start and end dates do not intersect, the information flow dates will not be valid. Whether invalid information flows can be created – that is, whether information flows can be created if the source/ target objects do not have intersecting start/end dates is determined by the **Validate Information Flow Dates** attribute in your user settings. If the checkbox for the **Validate Information Flow Dates** attribute is selected (`=True`), then an error message will occur if you try to create an information flow for source and target objects that do not have intersecting dates and you will not be able to create the invalid information flow. If the checkbox for the **Validate Information Flow Dates** attribute is not selected (`=False`), then the information flow can be created. In this case, the start date of the information flow will be the earliest date defined for the source or target application/peripheral and the end date will be the latest date defined for the source or target application/peripheral. Invalid information flow dates will be highlighted red in the **Information Flows** page view and should be corrected via the **Align Start/End Dates** functionality. For more information, see the section *Defining Your User Settings in Alfabet* in the reference manual *Getting Started with Alfabet*.

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- **End Date:** Enter the end date of the information flow in the format appropriate to your culture settings or select the end date in the calendar. The end date should not be after the earliest end date of either the source or target object.
 - **Name Suffix:** Enter a suffix to be appended to the name of the information flow. This will help to distinguish between information flows with the same pair of source/target objects.
 - **From (Source):** Displays the source object of the information flow. If necessary, open the drop-down menu to select a local component as the source object of the information flow. All local components defined for the source application will be displayed. A dash is displayed before the name of each local component and the component type is displayed in parenthesis after the name of the local component. For example: <-ComponentName (ComponentType)>. The component type information can help you identify which business components provide or consume the information transferred by the information flow.
 - **To (Target):** Displays the target object of the information flow. If necessary, open the drop-down menu to select a local component as the target object of the information flow. All local components defined for the target application will be displayed. A dash is displayed before the name of each local component and the component type is displayed in parenthesis after the name of the local component. The component type information can help you identify which business components provide or consume the information transferred by the information flow.
 - **Connection Type:** The connection type describes the transfer mode (for example, batch) for information flows between objects. Select a connection type in the drop-down list.
 - **Connection Method:** The connection method describes the transfer method (for example, TCP/IP) for information flows between objects. Select a connection method in the drop-down list.
 - **Connection Frequency:** The connection frequency describes how often (for example, monthly) the information flows between objects are used. Select a connection frequency in the drop-down list.
 - **Connection Data Format:** The connection data format describes the data format (for example, XML) used for data transfer via a specific information flow. Select a connection data format in the drop-down list.
 - **Description:** Enter a meaningful description that will clarify the purpose of the information flow.

Authorized Access tab:

- **Authorized User:** Click the **Search** icon to assign an authorized user to the selected object. The authorized user will have Read/Write access permissions to the object and is authorized to maintain the object in Alfabet.
- **Authorized User Groups:** Select the checkbox to assign Read/Write access permissions to all users in the selected user group. For more detailed information about the concept of access permissions, see the section *Understanding Access Permissions in Alfabet* in the reference manual *Getting Started with Alfabet*.

Target Business Service tab:

- **Target Business Service:** The business service provided by the outgoing information flow's target application/component. The drop-down list displays all business services defined for

the target object. Select the business service that is the target business service for the selected information flow.



If the target object is a local component, only the business services offered by the local component will be available. It is not possible to select the business services that have been defined for the application that the local component is associated with.

- **Target Business Service Operations:** The operations required to provide the target business service. If a business service is selected above, you can select the operations that are required to provide the selected business service.



Operations are defined for the business function that the selected business service is based. For more information about defining operations, see the *Business Function Operations Page View* for a business function.

Source Interface tab:

- **Interface Component:** Select a local component as the interface system for the selected information flow. The field displays all local components defined for the source application or component. Please note that technical services can only be specified for a local component with the **Type** attribute set to **Service**.
- **Technical Services:** Select one or more technical services needed by the source interface component. Technical services will only be displayed if they have been defined for the local component selected in the **Interface Component** field.
- **Technical Service Operations:** Select the technical service operations that detail how the technical service is to be provided in order to support the source interface component.

Target Interface tab:

- **Interface Component:** Select a local component as the interface system for the selected information flow. The field displays all local components defined for the target application or component. Please note that technical services can only be specified for a local component with the **Type** attribute set to **Service**.
 - **Technical Services:** Select one or more technical services needed by the target interface component. Technical services will only be displayed if they have been defined for the local component selected in the **Interface Component** field.
 - **Operations:** Select the technical service operations that detail how the technical service is to be provided in order to support the target interface component.
- 5) Click **OK** to save your changes. The new information flow is displayed in the diagram. Click the **Save** button to save the information flow to the Alfabet database.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Automatically Adding Referenced Objects for Applications and Application Groups

There are several methods available to automatically add existing objects that are referenced by the application groups or applications displayed in the diagram. The following referenced objects can be updated in the diagram.

Selected Object	Referenced Objects
Application Group	Subordinate Application Groups, Applications
Application	Local Components (Component Modules)

The referenced objects will be added in the visualizations of the application or application group that you are updating. It is recommended that you increase the size of the application/application group in the diagram to improve the layout of the added objects. For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*.



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

The following options are available in the **Semantic Actions**  menu to automatically add referenced objects to the diagram.

- **Update Subordinates for Object:** Select an application group or application in the diagram and select this option to add its referenced objects.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
- Select either **Organize by Rows** or **Organize by Columns** to define whether the objects should be organized in rows or in columns.
- Enter a number in the **Count** field to define how many rows or columns should be displayed.
- For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.

- **Update Subordinates for All Object:** Select this option to add the referenced objects of the application groups and applications displayed in the diagram. Any objects referencing those already displayed in the diagram will be added to the diagram.
- **Update Subordinates for All Recursively:** Select this option to add the referenced objects of all application groups and applications displayed in the diagram as well as the objects added via this function to the diagram. Objects immediately referenced by those already displayed in the diagram will be added to the diagram. If these added application groups and applications have referenced objects, these will also be added to the diagram, and so forth. The update action will proceed until the lowest level in the hierarchy is reached. The referenced objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram. For help in rearranging the added objects, see the section *Tips for Designing the Layout of the Diagram*.

Substituting an Application and/or Application Group

You can remove an application or application group in the diagram and substitute it with another application or application group. The object that you choose to add to the diagram must be of the same object class as the object that you are replacing.

Any information flows or local components associated with the application that you replace will also be removed from the diagram. If an application that is added to the diagram has information flows or local components, the information flows or local components will not be added via the **Substitute** functionality. These objects must be added to the diagram via an **Update...** functionality.

- 1) In the diagram, click the application or application group that you want to replace with another application or application group.
- 2) In the toolbar, click **Semantic Actions**  > **Substitute**.
- 3) The object selector opens. Enter search criteria, as needed, and click **Search**.
- 4) Click the application or application group that you want to add to the diagram and click **OK**. The original application or application group is replaced with the application or application group you selected in the object selector.

Showing Aggregated Information Flows Between Application Groups

If you are displaying application groups in an application landscape diagram, you can visualize that applications in an application group have incoming or outgoing information flows to applications in another application group. To do so, you can aggregate the information flows to the level of the application group to visualize the information flows between application groups.

To show aggregated information flows between two or more application groups in the diagram:

- 1) In the toolbar, click **Other Actions**  > **View Settings**. All objects and relationships that are defined to be visible in the diagram are selected per default.
- 2) To aggregate the information flows between applications in the application groups to the application group level, ensure that a checkmark is set for the option **SEMANTICCLASS --> SEMANTICCLASS** and that the checkmark is cleared for the option **Application**.

- 3) Click **OK**. A blue arrow is visualized showing the aggregated incoming and/or outgoing information flows between the application groups.



Hide the aggregated information flows at any time by clearing the checkmark for the option **SEMANTICCLASS --> SEMANTICCLASS** option and setting the checkmark for the option **Application**.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Generating the Network for an Application, Peripheral, or Local Component

Application, peripherals, and local components visualized in your diagram may have information flows to other applications, peripherals, and local components that are not visualized in the diagram. By means of the **Generate Network** functionality, you can select an application, peripheral, or local component in the diagram and, depending on your settings, add the applications, peripherals, and local components that are referenced by means of information flows. Please note that if information flows between an application and a local component defined for an application displayed in the diagram, this information flow will be automatically added to the diagram. Please note however that in this case, the information flow will be displayed as connecting the two applications. The local component will not be visible in the diagram unless it is explicitly added to the diagram, as described in the section *Updating the Objects in the Diagram to Include Their Subordinate Objects*.

You can define how far-reaching the network should extend as well as whether incoming and/or outgoing information flows should be displayed. When you generate the network for a selected object in the diagram, the information flows as well as the referenced applications, peripherals, and local components will be added to the diagram. Once the **Generate Network** functionality has been executed, you will typically need to refine the visualization of the diagram. For more information, see *Tips for Designing the Layout of the Diagram*.

To generate the network for a selected application peripheral, or local component:

- 1) In the diagram, select the application, peripheral, or local component whose network you want to generate.
- 2) In the toolbar, select **Other Actions**  > **Generate Network**.
- 3) In the **Generate Network** editor, define the following fields, as needed:

- **Objects' Vertical Distance:** Define the vertical distance between the objects that are to be placed in the diagram.



The unit of measurement will depend on the cultures implemented in your Alfabet solution. For more information about the configuration of cultures, see the section *Specifying the Cultures Relevant to Your Enterprise* in the chapter *Localization and Multi-Language Support for the Alfabet Interface* in the reference manual *Configuring Alfabet with Alfabet Expand*.

- **Objects' Horizontal Distance:** Define the horizontal distance between the objects that are to be placed in the diagram.

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- **Object Placement:** Define whether the objects are to be positioned horizontally or vertically to the selected object.
 - **Max. Network Depth:** Define how far-reaching the network should extend. Set to 1 to place objects directly associated with the object selected in the diagram. Set to 2 to place objects associated with the objects on level 1. Set to 3 to place objects associated with the objects on level 2, etc.
 - **Include Connection Types To Build Network:** Deselect the type of connections that should not be included for finding objects to place on the diagram.
 - **Build Network Traversing Backwards:** Select to display objects that have information flows incoming to the selected database object in the diagram. If the Reverse checkbox is selected, only the information flows incoming from the selected database object will be visualized. If the Reverse checkbox is not selected, only the information flows outgoing from the selected database object will be visualized. The Reverse checkbox is not selected by default.
- 4) Click **OK** to add the objects and their associated information flows to the diagram.

Chapter 3: Designing Solution Building Block Diagrams

The Alfabet Diagram Designer allows you to design a solution building block diagram which visualizes solution building blocks and peripherals. Any information flows existing between solution building blocks are automatically generated when the solution building blocks are added to the diagram. The information flows appear as blue arrows between the objects.

You can design multiple solution building block diagrams for a selected ICT object. The diagrams are then accessible in Alfabet in the *Solution Building Block Diagrams Page View* for the relevant ICT object.

Before you design the diagram, all relevant solution building blocks and peripherals should be defined in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following information is available:

- [Adding Solution Building Blocks and/or Peripherals](#)
- [Creating New Solution Building Block Information Flows](#)
- [Substituting a Solution Building Block and/or Peripheral](#)
- [Generating the Network for a Solution Building Block or Peripheral](#)

Adding Solution Building Blocks and/or Peripherals

You can add existing solution building blocks and/or peripherals to visualize the solution building block landscape. Any solution building block information flows existing between solution building blocks and/or peripherals are automatically added to the diagram. The information flows are displayed as blue arrows between the objects.

- 1) In the toolbox items pane, click the **Solution Building Block**  or the **Peripheral**  icon and click in the canvas area.
- 2) The object selector opens. Define search parameters, as needed, and select the solution building block/peripheral you want to add to the diagram. After you click **OK** in the object selector, the solution building block/peripheral is displayed in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant solution building blocks/peripherals.
- 4) Click the **Save** button to save your changes.

Creating New Solution Building Block Information Flows

You can create and visualize new information flows between solution building blocks and/or peripherals. The information flows you create are saved to the Alfabet database and can be viewed and edited by users in Alfabet with relevant access permissions.



When you create new solution building block information flows, you should first define how the solution building block information flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the solution building block information flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the solution building block information flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of solution building block information flows should be determined by the user. Remove the checkmark if the end points of solution building block information flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

- 1) In the toolbox items pane, click the **Solution Building Block Information Flow** icon.
- 2) Click the source application/peripheral in the diagram.
- 3) Click the target application/peripheral in the diagram. An editor will open in which you can define the new solution building block information flow. For example, if you are adding a solution building block information flow between applications, the **Solution Building Block Information Flow** editor will open.



Please note that 3 separate clicks are required to create the solution building block information flows. A drag-and-drop action will not produce the solution building block information flow.

- 4) Enter an alias and description for the solution building block information flow, if needed, and click **OK**.
- 5) Click **OK** to save your changes. The new solution building block information flow is added to the Alfabet database. You can now refine the formatting, as needed.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Substituting a Solution Building Block and/or Peripheral

You can remove a solution building block or peripheral in the diagram and substitute it with another solution building block or peripheral. The object that you choose to add to the diagram must be of the same object class as the object that you are replacing.

Any solution building block information flows associated with the solution building block that you remove will also be removed from the diagram. If a solution building block that is added to the diagram has solution building block information flows, the solution building block information flows will not be added via the **Substitute** functionality. These objects must be added to the diagram via an **Update...** functionality.

- 1) In the diagram, click the solution building block or peripheral that you want to replace.
- 2) In the toolbar, click **Semantic Actions**  > **Substitute**.

- 3) The object selector opens. Enter search criteria, as needed, and click **Search**.
- 4) Click the solution building block or peripheral that you want to add to the diagram and click **OK**. The original solution building block or peripheral is replaced with the solution building block or peripheral you selected in the object selector.

Generating the Network for a Solution Building Block or Peripheral

Solution building blocks and peripherals visualized in your diagram may have solution building block information flows to other solution building blocks and peripherals that are not visualized in the diagram. By means of the **Generate Network** functionality, you can select a solution building block or peripheral in the diagram and add the solution building blocks or peripherals that are referenced by means of solution building block information flows.

You can define how far-reaching the network should extend as well as whether incoming and/or outgoing information flows should be displayed. When you generate the network for a selected object in the diagram, the solution building block information flows as well as the referenced solution building blocks and peripherals will be added to the diagram. Once the **Generate Network** functionality has been executed, you will typically need to refine the visualization of the diagram. For more information, see *Tips for Designing the Layout of the Diagram*.

To generate the network for a selected solution building block or peripheral:

- 1) In the diagram, select the solution building block or peripheral whose network you want to generate.
- 2) In the toolbar, select **Other Actions**  > **Generate Network**.
- 3) In the **Generate Network** editor, define the following fields, as needed:
 - **Objects' Vertical Distance:** Define the vertical distance between the objects that are to be placed in the diagram.

The unit of measurement will depend on the cultures implemented in your Alfabet solution. For more information about the configuration of cultures, see the section *Specifying the Cultures Relevant to Your Enterprise* in the chapter *Localization and Multi-Language Support for the Alfabet Interface* in the reference manual *Configuring Alfabet with Alfabet Expand*.
 - **Objects' Horizontal Distance:** Define the horizontal distance between the objects that are to be placed in the diagram.
 - **Object Placement:** Define whether the objects are to be positioned horizontally or vertically to the selected object.
 - **Max. Network Depth:** Define how far-reaching the network should extend. Set to 1 to place objects directly associated with the object selected in the diagram. Set to 2 to place objects associated with the objects on level 1. Set to 3 to place objects associated with the objects on level 2, etc.
 - **Include Connection Types To Build Network:** Deselect the type of connections that should not be included for finding objects to place on the diagram.
 - **Build Network Traversing Backwards:** Select to display objects that have information flows incoming to the selected database object in the diagram. If the Reverse checkbox is selected,

only the information flows incoming from the selected database object will be visualized. If the Reverse checkbox is not selected, only the information flows outgoing from the selected database object will be visualized. The Reverse checkbox is not selected by default.

- 4) Click **OK** to add the objects and their associated information flows to the diagram.

Chapter 4: Designing the As-Is Architecture Diagram for a Project

The Alfabet Diagram Designer allows you to visualize the architectural scope for a selected project. The diagram will only display the applications, local components, peripherals, and information flows already defined in Alfabet in the *Affected Architecture Page View* for the selected project.

In the Alfabet Diagram Designer, you can design the layout of the applications, peripherals and information flows defined for the as-is architecture of the selected project. The applications, peripherals, and information flows assigned to the architectural scope of the diagram will be automatically displayed in the diagram. You can add the local components defined for the applications via the **Update...** functionalities. You can design only one as-is architecture diagram for a selected project. The diagram can then be viewed in Alfabet in the *As-Is Architecture Diagram Page View* by users with access to the selected project.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* to understand the many possibilities to simplify the display of a complex network of information flows and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

You can update the applications in the diagram to include their referenced local components. You should first increase the size of the applications that you are updating in order to improve the layout of the added local components. For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*. The following options are available in the **Semantic Actions**  menu to automatically add the referenced local components to the diagram.



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

- **Update Subordinates for Object:** Select an application in the diagram and select this option to add its referenced objects.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
- Select either **Organize by Rows** or **Organize by Columns** to define whether the objects should be organized in rows or in columns.
- Enter a number in the **Count** field to define how many rows or columns should be displayed.
- For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.

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- **Update Subordinates for All Objects:** Select this option to add the referenced objects of all applications displayed in the diagram. Any objects referencing those already displayed in the diagram will be added to the diagram.
 - **Update Subordinates for All Objects Recursively:** Select this option to add the referenced objects of all applications displayed in the diagram as well as the objects added via this function to the diagram. Objects immediately referenced by those already displayed in the diagram will be added to the diagram. If these added applications have referenced objects, these will also be added to the diagram, and so forth. The update action will proceed until the lowest level in the hierarchy is reached. The referenced objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram. For help in rearranging the added objects, see the section *Tips for Designing the Layout of the Diagram*.

Chapter 5: Designing Solution Architecture Diagrams

The Alfabet Diagram Designer allows you to design multiple proposed application landscapes for the planned to-be architecture associated with a project. Only applications, information flows and peripherals defined for the as-is architecture as well as the solution applications, solution peripherals, and solution information flows defined for the to-be architecture of the selected project scenario may be displayed in the solution architecture diagram. You can add local components defined for the applications and solution components defined for solution applications via the **Update...** functionalities. Information flows with the same source and target applications or solution applications will be automatically stacked on top of each other. They can be visually rearranged, if necessary.

You can design multiple solution architecture diagrams for a selected project. The diagrams are accessible in Alfabet via the *Solution Maps and Application Diagrams Page View*.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a solution architecture diagram:

- [Adding Solution Applications, Applications, Solution Peripheral or Peripherals to the Diagram](#)
- [Creating New Solution Applications](#)
- [Creating New Solution Information Flows between \(Solution\) Applications and/or Peripherals](#)
- [Automatically Adding Referenced Objects for Solution Applications and Applications](#)
- [Substituting a Solution Application or Application](#)

Adding Solution Applications, Applications, Solution Peripheral or Peripherals to the Diagram

You can add solution applications, applications, solution peripherals, and peripherals to be visualized in the solution architecture diagram. Any information flows existing between solution applications, applications, solution peripherals, and peripherals are automatically generated when the objects are added to the diagram. Inventory information flows appear as blue arrows between the objects and solution information flows appears as purple connection items.



The following can be added to the solution architecture diagram:

- Applications or peripherals from the project's affected architecture that are unchanged.
- Information flows between applications.
- Solution peripherals that are defined as **New**, **New Version**, or **Updating**

- Solution applications that are defined as **New**, **New Version**, **Updating**, or **Retired**
- Solution information flows between applications and solution applications that are defined as **New**, **New Version**, **Updating**. Please note that a single solution information flow that has a source and target solution application that is set to **Retired** will be displayed. However, if multiple (two or more) solution information flows have source and target solution applications that are set to **Retired**, the solution information flows will NOT be displayed.

- 1) In the toolbox items pane, click either the **Application**  icon to add a solution application or inventory application or **Peripheral**  icon and click in the canvas area.
- 2) The object selector opens. Define search parameters, as needed, and select the application(s)/peripheral(s) you want to add to the diagram. If you are adding solution applications or applications, you can identify them based on their prefix `App_Sol` or `App`. After you click **OK** in the object selector, the applications and peripherals are displayed in the diagram. Existing information flows are automatically visualized in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant applications/peripherals.
- 4) Click the **Save** button to save your changes.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Creating New Solution Applications

You can create and visualize new solution applications in the diagram. The solution applications you create are saved to the Alfabet database and can be viewed and edited by users with relevant access permissions.

- 1) In the toolbox items pane, click the **Solution Application**  icon.
- 2) Click in the diagram where you want to place the solution application. The **Solution Application** editor opens.
- 3) Enter information into each field, as required.

Basic Data tab:

- **ID:** Alfabet assigns a unique identification number to each object in the inventory. This number cannot be edited.
- **Name:** Enter a unique name for the solution application. The name and version number should be unique.
- **Short Name:** Enter the application's short name.
- **Version:** Enter the version number for the solution application. The name and version number should be unique.



A version number can have a maximum of 16 characters. Because additional characters are automatically concatenated to the version number when a subsequent

version is created, it is recommended that you enter a version number with as few characters as possible.

- **Start Date:** Enter the start date of the solution application in the format appropriate to your culture settings or select the start date in the calendar.
- **End Date:** Enter the end date of the solution application in the appropriate format or select the end date in the calendar.



The start and end dates constitute the active period of the object in the object's lifecycle. For more information about the definition and general configuration of an object's lifecycle and the various lifecycle phases, see the section *Understanding Lifecycles* in the reference manual *Getting Started with Alfabet*.

- **ICT Object:** An ICT object can be assigned to a solution application for budgetary purposes. You can select from any of the ICT objects assigned to the as-is architecture of the relevant project or associated with any of the applications assigned to the as-is architecture of the project. If the solution application is created as a planned successor of an application assigned to the as-is architecture, then the ICT object associated with the base application will be assigned per default to the solution application.
- **Domain:** Select the domain that is proposed as the primary domain for the selected solution application.
- **Description:** If necessary, enter a meaningful description that will clarify the purpose of the solution application.
- **Icon:** Select a custom icon to represent the solution application in diagrams, matrix views, and custom explorers. Icons must first be uploaded by your solution designer to the icon gallery in Alfabet Expand. For more information, see the section *Adding and Maintaining Icons for the Alfabet Interface* in the reference manual *Configuring Alfabet with Alfabet Expand*.

Authorized Access tab:

- **Authorized User:** Click the **Search** icon to assign an authorized user to the selected object. The authorized user will have Read/Write access permissions to the object and is authorized to maintain the object in Alfabet.
 - **Authorized User Groups:** Select the checkbox to assign Read/Write access permissions to all users in the selected user group. For more detailed information about the concept of access permissions, see the section *Understanding Access Permissions in Alfabet* in the reference manual *Getting Started with Alfabet*.
- 4) Click **OK** to save your changes. The new solution application is displayed in the diagram. Click the **Save** button to save the solution application to the Alfabet database.

Creating New Solution Information Flows between (Solution) Applications and/or Peripherals

All information flows defined between existing applications in the defined in the as-is architecture will be automatically displayed in the diagram. You can create and visualize new solution information flows between solution applications, applications, solution peripherals, and peripherals. The solution information

flows you create are saved to the Alfabet database and can be viewed and edited by users with relevant access permissions.

Please note that information flows between the same applications in the as-is architecture will be automatically stacked on top of each other. This is also true for solution information flows between the same solution applications. Stacked information flows are displayed as one line between applications. To make each individual information flow visible in the diagram, click the endpoint of the top information flow and drag it to another spot on the source or target application.



When you create new solution information flows, you should first define how the solution information flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the solution information flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the solution information flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of solution information flows should be determined by the user. Remove the checkmark if the end points of solution information flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

- 1) In the toolbox items pane, click the **Solution Information Flow**  icon.
- 2) Click the source application or peripheral in the diagram.
- 3) Click the target application or peripheral in the diagram. An editor will open in which you can define the new solution information flow. The **Solution Information Flow** editor opens.



Please note that 3 separate clicks are required to create the solution information flow. A drag-and-drop action will not produce the solution information flow.

- 4) Enter information into each field, as required.

Basic Data tab:

- **ID:** Alfabet assigns a unique identification number to each object in the inventory. This number cannot be edited.
- **Name:** Displays the solution information flow's name. The naming convention is as follows: <Source Application/Peripheral> >> <Target Application/Peripheral>.
- **Version:** Enter the version number. The solution information flow's name and version number should be unique.
- **Short Name:** Enter a short name for the solution information flow.
- **Start Date:** Enter the start date of the solution information flow in the format appropriate to your culture settings or select the start date in the calendar. The start date may not be earlier than the latest start date of either the source or target object.



If you attempt to create an information flow with source and target objects whose start and end dates do not intersect, the information flow dates will not be valid. Whether invalid information flows can be created - that is, whether information flows can be created if the source/ target objects do not have intersecting start/end dates is determined by the **Validate Information Flow Dates** attribute in your user settings. If the checkbox for the **Validate Information Flow Dates** attribute is selected (=True), then an error message will occur if you try to create an information flow for source and target objects that do not have intersecting dates and you will not be able to create the invalid information flow. If the checkbox for the

Validate Information Flow Dates attribute is not selected (=False), then the information flow can be created. In this case, the start date of the information flow will be the earliest date defined for the source or target application/peripheral and the end date will be the latest date defined for the source or target application/peripheral. Invalid information flow dates will be highlighted red in the **Information Flows** page view and should be corrected via the **Align Start/End Dates** functionality. For more information, see the section *Defining Your User Settings in Alfabet* in the reference manual *Getting Started with Alfabet*.

- **End Date:** Enter the end date of the solution information flow in the appropriate format or select the end date in the calendar. The end date may not be after the earliest end date of either the source or target object.
- **Name Suffix:** Enter a suffix to be appended to the name of the information flow. This will help to distinguish between information flows with the same pair of source/target objects.
- **From (Source):** Select the source application/peripheral of the solution information flow. All applications/peripherals included in the scope of the to-be architecture are displayed.



To specify a local component/solution local component as the source of the solution information flow, save the new solution information flow and reopen the editor. Open the **From (Source)** drop-down menu to select a local component/solution local component as the source object of the solution information flow. All local components defined for the source application/component will be displayed. A dash is displayed before the name of each local component and the component type is displayed in parenthesis after the name of the local component. For example: <-ComponentName (ComponentType)>. The component type information can help you identify which business components provide or consume the information transferred by the solution information flow.

- **To (Target):** Select the target application/peripheral of the solution information flow. All applications/peripherals included in the scope of the to-be architecture are displayed.



To specify a local component/solution local component as the target of the solution information flow, save the new solution information flow and reopen the editor. Open the **To (Target)** drop-down menu to select a local component/solution local component as the target object of the solution information flow. All local components defined for the target application/component will be displayed. A dash is displayed before the name of each local component and the component type is displayed in parenthesis after the name of the local component. For example: <-ComponentName (ComponentType)>. The component type information can help you identify which business components provide or consume the information transferred by the solution information flow.

- **Connection Type:** The connection type describes the transfer mode (for example, batch) for solution information flows between applications or components. Select a connection type in the drop-down list.
- **Connection Method:** The connection method describes the transfer method (for example, TCP/IP) for solution information flows. Select a connection method in the drop-down list.
- **Connection Frequency:** The connection frequency describes how often (for example, monthly) the solution information flows are used. Select a connection frequency in the drop-down list.

- **Connection Data Format:** The connection data format describes the data format (for example, XML) used for data transfer via a specific solution information flow. Select a connection data format in the drop-down list.
- **Description:** Enter a meaningful description that will clarify the purpose of the solution information flow.

Authorized Access tab:

- **Authorized User:** Click the **Search** icon to assign an authorized user to the selected object. The authorized user will have Read/Write access permissions to the object and is authorized to maintain the object in Alfabet.
- **Authorized User Groups:** Select the checkbox to assign Read/Write access permissions to all users in the selected user group.



For more detailed information about the concept of access permissions, see the section *Understanding Access Permissions in Alfabet* in the reference manual *Getting Started with Alfabet*.

Target Business Service tab:

- **Target Business Service:** The target business service provided by the outgoing information flow's target application/component. The drop-down list displays all business services defined for the target object. Select the business service that is the target service for the selected information flow.



If the target object is a local component, only the business services offered by the local component will be available. It is not possible to select the business services that have been defined for the application that the local component is associated with.

- **Target Business Service Operations:** Target service operations required to provide a business service. If a business service is selected above, you can select the operations that are required to provide the selected business service.



Operations are defined for the business function that the selected business service is based. For more information about defining operations, see the *Business Function Operations Page View* for a business function.

- 5) Click **OK** to save your changes. The new solution information flow is displayed in the diagram. Click the **Save** button to save the solution information flow to the Alfabet database.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Automatically Adding Referenced Objects for Solution Applications and Applications

There are several methods available to automatically add existing objects that are referenced by the solution applications or applications displayed in the diagram. The following referenced objects can be updated in the diagram.

Selected Object	Referenced Objects
Solution Application	Solution Local Components
Application	Local Components (Component Modules)

The referenced objects will be added in the visualizations of the solution application or application that you are updating. It is recommended that you increase the size of the solution application/application in the diagram to improve the layout of the added objects. For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*.



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

The following options are available in the **Semantic Actions**  menu to automatically add referenced objects to the diagram.

- **Update Subordinates for Object:** Select a solution application or application in the diagram and select this option to add its referenced objects.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
- Select either **Organize by Rows** or **Organize by Columns** to define whether the objects should be organized in rows or in columns.
- Enter a number in the **Count** field to define how many rows or columns should be displayed.
- For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.

- **Update Subordinates for All Objects:** Select this option to add the referenced objects of all solution applications or applications displayed in the diagram. Any objects referencing those already displayed in the diagram will be added to the diagram.
- **Update Subordinates for All Objects Recursively:** Select this option to add the referenced objects of all solution applications or applications displayed in the diagram as well as the objects added via this function to the diagram. Objects immediately referenced by those already displayed in the diagram will be added to the diagram. If these added solution applications or applications have referenced objects, these will also be added to the diagram, and so forth. The update action will proceed until the lowest level in the hierarchy is reached. The referenced objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram. For help in rearranging the added objects, see the section *Tips for Designing the Layout of the Diagram*.

Substituting a Solution Application or Application

You can remove a solution application or application visualized in the diagram and replace it with another solution application or application variant. The object that you choose to add to the diagram must be of the same object class as the object that you are replacing.

Any information flows or local components associated with the solution application or application that you replace will also be removed from the diagram. If a solution application or application that is added to the diagram has information flows or local components, the information flows or local components will not be added via the **Substitute** functionality. These objects must be added to the diagram via an **Update...** functionality.

Any information flows or local components associated with the solution application or application that you remove will also be removed from the diagram.



Any solution applications, applications, or peripherals that you want to add to the diagram must already be defined for the project in the *Affected Architecture Page View* of the selected project.

- 1) In the diagram, click the solution application or application that you want to replace with another solution application or application.
- 2) In the toolbar, click **Semantic Actions**  > **Substitute**.
- 3) The object selector opens. Enter search criteria, as needed, and click **Search**.
- 4) Click the solution application or application that you want to add to the diagram and click **OK**. The original solution application or application is replaced with the solution application or application you selected in the object selector.

Chapter 6: Designing Migration Diagrams

The Alfabet Diagram Designer allows you to design migration diagrams. You can design a diagram by visualizing all relevant applications, solution building block, and/or ICT objects to be migrated as well as their migration rules. You can design only one migration diagram for a selected migration. The migration diagram will be displayed in Alfabet in the *Migration Diagram Page View*.

Before you design the diagram, all relevant applications, solution building blocks, and ICT objects should be defined in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a migration diagram:

- [Adding the Source and Target Objects of the Migration](#)
- [Creating a Migration Rule between Migration Objects](#)

Adding the Source and Target Objects of the Migration

A migration rule allows you to plan the steps required for a migration. Each migration rule constitutes one step in the migration process. A migration may constitute multiple migration rules and thus have many intermediate objects in the long-term migration. The migration rule describes the applications, solution building blocks, and/or ICT objects that constitute the predecessor and successor objects of each step as well as the date that the step should be completed. Multiple migration rules may be required to document all incremental steps required for the migration



For example, an enterprise wants to migrate App1 to App4 by the completion date of January 1, 2010. One migration rule defines the migration of App1 (the source object) to App2 (the target object) to be completed by Jan. 1, 2009, another migration rule defines the migration of App2 (the source object) to App3 (the target object) to be completed by May 1, 2009, and a final migration rule defines the migration from App3 (the source object) to App4 (the target object) to be completed by Jan 1, 2010, thus completing the migration of App1 to App4

To define migration rules, you must first add the existing applications, solution building blocks, and ICT objects to the migration diagram. You should add both the source or target objects of the migration. Once the source and target objects have been added to the diagram, you can define the migration rules that specify the migration from a source object should (that should be replaced) and the target object (this will replace the source object). It is possible to migrate several different source objects to the same target object as well as to migrate a single source object to multiple target objects.



Existing migration rules that have already been defined in the *Migration Rules Page View* are not automatically visualized in the diagram. You must manually add the migration rules between

source and target objects to the diagram. Any new migration rules you define here will be displayed in the *Migration Rules Page View*.

To add source and target objects of the migration and define their migration rules:

- 1) To add a predecessor, intermediate, or successor migration object to the migration diagram in the migration, click the **Migration Node**  icon in the toolbox item pane and click in the canvas area.
- 2) The object selector opens. Click the **Migration Objects** tab and select **Applications**, **Solution Building Blocks**, or **ICT Objects** in the **Search For** field. In the table, select the relevant predecessor, intermediate, or successor object in the planned migration. After you click **OK** in the object selector, the object is placed on the spot where you clicked in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant objects.
- 4) Click the **Save** button to save your changes.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Creating a Migration Rule between Migration Objects

A migration rule is one step in the set of incremental steps required to realize a planned migration. A migration rule describes the transition from a predecessor object to a successor object in the step as well as the target date for the completion of the step. Predecessor and successor objects may be applications, solution building blocks, and/or ICT objects.

You can create new migration rules between the migration objects displayed in the diagram. The migration rules you create are saved to the Alfabet database and can be viewed and edited by users with relevant access permissions.



When you create new migration rules, you should first define how the migration rules should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the migration rules should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the migration rules should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of migration rules should be determined by the user. Remove the checkmark if the end points of migration rules should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

To create a migration rule:

- 1) In the toolbox item pane, click the **Migration Rule**  icon.
- 2) Click the application/solution building block/ICT object in the diagram that you want to define as the predecessor object of the migration rule
- 3) Click the application/solution building block/ICT object that you want to define as the successor object of the migration rule. The **Migration Rule** editor opens.



Please note that 3 separate clicks are required to create the migration rule. A drag-and-drop action will not produce the migration rule.

- 4) Enter the information into each field, as required.

Basic Data tab:

- **Source Object:** Click the **Search**  icon and in the selector that opens, select the relevant class in the **Search For** field to define the application, solution building block, ICT object, component, standard platform, or vendor product that is the source object of the migration rule. The source object is the predecessor object that is being substituted by the target object.
- **Target Object:** Click the **Search**  icon and in the selector that opens, select the relevant class in the **Search For** field to define the application, solution building block, ICT object, component, standard platform, or vendor product that is the target object of the migration rule. The target object is the successor object that is substituting the source object.
- **Completion Date:** Define the target date when this migration rule should be completed.
- **Description:** Enter a meaningful description about the migration rule.

Source Business Services tab: Displays the business services that are defined for the source application, solution building block, ICT object, or component. Select the business services that the source object will no longer provide as a result of the migration.

Target Business Services tab: Displays the business services that are defined for the target application, solution building block, or ICT object, or component. Select the business services that the target object will provide as a result of the migration.

Source Components tab: Displays the local components that are defined for the source application. Select the local components that the source application will no longer provide as a result of the migration.

Target Components tab: Displays the local components that are defined for the target application. Select the local components that the target application will provide as a result of the migration.

- 5) Click **OK** to save your changes. The new migration rule is added to the Alfabet database.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Chapter 7: Designing Business Process Diagrams

The Alfabet Diagram Designer allows you to design business process diagrams for a business process model or a business process. You can design a diagram by visualizing all relevant business process models and/or business processes and their business process rules as well as the business process information flows to each other or to organizations.

Only one diagram can be designed per selected business process or business process model. The diagram can then be displayed in Alfabet in the *Business Processes Diagram* to users with access permissions to the selected business process model or business process.

Before you design the diagram, all relevant business process models, business processes, and organizations should be defined in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a business process landscape diagram:

- [Adding a Business Process and/or Organization to the Business Process Diagram](#)
- [Creating New Business Process Information Flows Between Business Processes](#)
- [Substituting a Business Process and/or Organization in the Business Process Diagram](#)
- [Creating Rules between Business Processes](#)
- [Defining an Organization's Role for a Business Process](#)

Adding a Business Process and/or Organization to the Business Process Diagram

You can add business processes and/or organizations to visualize the business process landscape. Any business process information flows existing between business processes and/or organizations are automatically generated when the business processes and/or organizations are added to the diagram. The business process information flows appear as blue arrows between the objects.

- 1) In the toolbox items pane, click either the **Business Process**  icon or **Organization**  icon and click in the canvas area.
- 2) The object selector opens. Define search parameters, as needed, and select the business process or organization that you want to add to the diagram. After you click **OK** in the object selector, the business process/organization is displayed in the diagram. Existing business process information flows are automatically visualized in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant business processes/organizations.

- 4) Click the **Save** button to save your changes.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Creating New Business Process Information Flows Between Business Processes

You can create new business process information flows between business processes. The business process information flows you create are saved to the Alfabet database and can be viewed and edited by users with relevant access permissions.



When you create new business process information flows, you should first define how the business process information flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the business process information flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the business process information flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of business process information flows should be determined by the user. Remove the checkmark if the end points of business process information flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

To create a business process information flow:

- 1) In the toolbox item pane, click the **Information Flow**  icon.
- 2) Click the business process in the diagram that you want to define as the predecessor object of the business process information flow.
- 3) Click the business process that you want to define as the successor object of the business process information flow. The **Business Process Information Flow** editor opens.



Please note that 3 separate clicks are required to create the business process information flow. A drag-and-drop action will not produce the business process information flow.

- 4) Enter the information into each field, as required.

Basic Data tab:

- **Short Name:** Enter a short name for the business process information flow.
 - **Name:** Enter a name for the business process information flow.
 - **Description:** Enter a meaningful description that will clarify the purpose of the business process information flow.
- 5) Click **OK** to save your changes. The new business process information flow is added to the Alfabet database.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Substituting a Business Process and/or Organization in the Business Process Diagram

You can remove a business process or organization in the diagram and substitute it with another business process or organization. The object that you choose to add to the diagram must be of the same object class as the object that you are replacing.

Any business process information flows associated with the business process that you remove will also be removed from the diagram. If a business process that is added to the diagram has business process information flows, the business process information flows will not be added via the **Substitute** functionality. These objects must be added to the diagram via an **Update...** functionality.

- 1) In the diagram, click the business process or organization that you want to replace.
- 2) In the toolbar, click **Semantic Actions**  > **Substitute**.
- 3) The object selector opens. Enter search criteria, as needed, and click **Search**.
- 4) Click the business process or organization that you want to add to the diagram and click **OK**. The original business process or organization is replaced with the business process or organization you selected in the object selector.

Creating Rules between Business Processes

You can create and visualize new rules between business processes. A rule is a condition that describes how business processes are connected to one another. Rules are only displayed in business process landscape diagrams. Available rule types include AND, OR, XOR, Synchronisator, and Connector.



When you create new business process information flows, you should first define how the business process information flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the business process information flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the business process information flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of business process information flows should be determined by the user. Remove the checkmark if the end points of business process information flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

To create a rule:

- 1) In the toolbox item pane, click the **Rule**  icon
- 2) Click the business process in the diagram that you want to define as the predecessor business process of the rule.
- 3) Click the business process that you want to define as the successor business process of the rule. The **Business Process Rule** editor opens.



Please note that 3 separate clicks are required to create the rule. A drag-and-drop action will not produce the rule.

- 4) Enter the information into each field, as required, and click **OK**.
- 5) Click **OK** to save your changes. The new rule is added to the Alfabet database.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Defining an Organization's Role for a Business Process

A role defines the functional relationship or responsibility that a user or organization has to an object. A role is based upon a configured role type that is configured for an object class. Roles are defined for informational purposes only and provide detail about users or organizations that may have information about or a stake in the object. The definition of a role for an object does not impact access permissions.

You can create and visualize a role that an organization has for a business process. A role defines the functional relationship that an organization has to a business process.



Roles are based on role types that are configured in the **Configuration** module. Roles are used for the purpose of documentation and analysis only. For more information about the configuration of role types, see the section *Configuring Role Types to Define Roles in the Responsibilities Page View* in the reference manual *Configuring Evaluation and Reference Data in Alfabet*.



When you create new business process information flows, you should first define how the business process information flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the business process information flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the business process information flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of business process information flows should be determined by the user. Remove the checkmark if the end points of business process information flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

To create a role:

- 1) In the toolbox item pane, click the **Role**  icon
- 2) Click the organization in the diagram that you want to define as the providing organization of the role.
- 3) Click the business process that the organization provides the role to. The **Role** editor opens.



Please note that 3 separate clicks are required to create the role. A drag-and-drop action will not produce the role.

- 4) Enter the information into each field, as required, and click **OK**.
- 5) Click **OK** to save your changes. The new role is added to the Alfabet database.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Chapter 8: Designing Service Diagrams

The Alfabet Diagram Designer allows you to design business process service diagrams for a business process or application. You can design a diagram by visualizing all relevant dependencies between its sub-processes (activities) or business services requested by the business process.

The design of service diagrams in Alfabet follows BPMN conventions. A service diagram may contain diagram elements of the types event or activity, simple connectors of the types sequence flow, message flow, or association, complex connectors of the type gateway as well as boundary elements of the type pool or swim lane. In addition, business objects, business data, business services, and business functions can also be visualized in a service diagram. Additionally, business services and business functions can be connected to other service diagram elements by associations. A service diagram can reference another service diagram by a link associated with an activity.

A business process can have multiple service diagrams. However, each service diagram can be defined for only one business process. The diagrams can then be displayed in Alfabet in the *Service Diagrams Page View* to users with access permissions to the selected business process.

Before you design the diagram, all relevant business processes, business services, business functions, and business objects should be defined in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a business process landscape diagram:

- [Creating a Pool with Swim Lanes for the Service Diagram](#)
- [Adding an Activity to the Services Diagram](#)
- [Adding an Event to the Services Diagram](#)
- [Adding a Business Service, Business Function, or Business Object to the Services Diagram](#)
- [Connecting an Activity and Event via a Sequence Flow](#)
- [Connecting an Activity and Event via a Message Flow](#)
- [Connecting an Activity with a Business Service or Business Function via an Association](#)
- [Connecting Activities via a Gateway](#)
- [Substituting a Business Function or Business Object in the Services Diagram](#)
- [Linking to Other Service Diagrams](#)
- [Updating a Selected Activity and Its References in the Service Diagram](#)

Creating a Pool with Swim Lanes for the Service Diagram

To create a business process service diagram, you must first create a pool with swim lanes. A pool is a boundary element in a service diagram that serves as a framework for the service diagram elements that visualize a single business process. The service diagram elements that represent internal activities are placed within the boundaries of a pool. External activities or events, like a start or end event, are typically placed outside the boundaries of the pool.

A pool can consist of a few swim lanes that represent the different agents conducting the business process visualized by the service diagram. A swim lane is a boundary element in a service diagram that serves to separate different agents that perform activities. An agent can be a role played by a person or an application providing a business service that is requested by the business process visualized in the service diagram. Activities, events of the type **Intermediate Event**, and sequence flows can be placed within the boundaries of swim lanes. A message flow can connect activities from different swim lanes.

To create a pool with swim lanes:

- 1) In the toolbox item pane, click the **Pool**  icon and click a blank space in the diagram and drag the pool so that it covers most of the canvas.
- 2) Click the pool and select **Semantic Actions**  > **Open Editor** to open the **Pool Properties** editor. Define the following properties, as needed:
 - **Title Text:** Enter the text to be displayed in the pool header.
 - **Title Position:** Select where the pool header should be placed.
 - **Title Color:** Select a color for the pool header and lane headers.
 - **Title Height:** Specify the height for the pool header.
 - **Grid Pen Width:** Specify the width of the borders of the pool header and swim lanes.
 - **Lane Height:** Specify the height for the lane header.
 - **Lane Font:** Click the **Change** button to open the **Font Properties** editor to adjust the font size for the text in the lane headers. Click **OK** to save the font properties.
 - **Lanes:** This field lists the names of all lanes defined for the pool. To add a lane, click the **Add** button. In the **Pool Lane** editor, you will see the entry *New Column* in the **Text** field. Replace the entry with the header text for the lane. Define the width and color of the lanes and click **OK** to save the lane definition. (You can also manually adjust the size of the lanes later in the diagram.) Continue this procedure until you have defined all swim lanes for the pool. Click **OK**.
- 3) You will see the pool with swim lanes. To manually adjust the size of each lane, drag the line separating the lanes to the appropriate width.
- 4) Click the **Save** button to save the diagram.

Adding an Activity to the Services Diagram

An activity is an element in a service diagram that visualizes a task that represents a business process at a granular level. An activity can be directly associated with an agent that performs the task, such as a specified role conducting the business process or an application providing a business service requested to support the task.

An activity typically has a predecessor and successor activity that are connected to that activity through sequence flows. More complex connections between activities are also possible by means of gateways.

An activity can also be connected to an event of the type **Intermediate Event** that occurs while the activity is being carried out. An event of the type **Start Event** typically triggers an activity. An activity can conclude in an event that is of type **End Event**.

To add an activity to the diagram:

- 1) In the toolbox item pane, click the **Activity**  icon and click a blank space in the diagram.
- 2) In the dialog box that opens, enter a name and any other needed information, as needed.
 - **Name:** Enter a name for the activity.
 - **Description:** Enter a meaningful description that will clarify the purpose of the activity.
 - **Navigation Diagram:** Select another business process service diagram that the activity links to.



For more information about linking the selected object to another diagram, see *Linking to Other Service Diagrams*.

- 3) Click **OK** to save the information or click **Cancel** to exit without saving.

Adding an Event to the Services Diagram

An event is something that happens before, during, or after a business process is conducted. An event can be set in motion by triggers such as a message, rule, or error. An event can be connected to an activity through connectors such as sequence flows.

There are three different types of events:

- A start event is an event that happens before a business process is conducted. A start event triggers a business process and is connected to the first activity of a service diagram, typically by means of a sequence flow.
- An intermediate event is an event that happens while a business process is being conducted. An intermediate event is typically situated between activities and connected to them by means of service diagram connectors.
- An end event is an event that happens after a business process is conducted and the business process outcome is achieved. An end event is connected to the last activity of a service diagram, typically by means of a sequence flow.

To add an event to the diagram:

- 1) In the toolbox item pane, click either the **Start Event**  icon, **Intermediate Event**  icon, or **End Event**  icon, depending on the event type that you want to visualize, and click a blank space in the diagram.
- 2) In the dialog box that opens, define the following as needed:
 - **Type:** Displays the event type.

- **Trigger:** Select the mechanism that sets the event in motion.
- **Name:** Enter a name for the event.
- **Description:** Enter a meaningful description that will clarify the purpose of the event.
- **Navigation Diagram:** Select another business process service diagram that the event links to.



For more information about linking the selected object to another diagram, see *Linking to Other Service Diagrams*.

- 3) Click **OK** to save the information or click **Cancel** to exit without saving.

Adding a Business Service, Business Function, or Business Object to the Services Diagram

You can add business services, business functions, or business objects to the diagram. Please keep the following in mind:

- Add a business service to visualize the business services requested by the selected business process. A business service can be connected to an activity via a message flow or sequence flow or to a business function via an association.
- Add a business function that the selected business process references. A business function can be connected to a business service via an association.
- Add a business object to represent the information transferred by a message flow. A business object can be connected to an activity or event via a message flow. When designing the diagram, the business object should be placed between the activities or events that are connected by the message flow.

To add a business service, business function, or business object to the diagram:

- 1) In the toolbox item pane, click either the **Business Service**  icon, **Business Function**  icon, or **Business Object**  icon and click a blank space in the diagram.



If you are adding business functions or business objects, all business functions or business objects in the Alfabet database are available for selection. In the case of business services, only the business services that are requested by the selected business process are available for selection.

- 2) In the dialog box that opens, select the object that you want to add to the diagram.
- 3) Click **OK** to save the information or click **Cancel** to exit without saving.

Connecting an Activity and Event via a Sequence Flow

A sequence flow is a connector in a service diagram that connects an activity and event within the same swim lane. A sequence flow indicates the order in which the activities are conducted. In other words, an activity relates to its predecessor activity and its successor activity by means of sequence flows.



When you create new sequence flows, you should first define how the sequence flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the sequence flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the sequence flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of sequence flows should be determined by the user. Remove the checkmark if the end points of sequence flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save your settings.

To create a sequence flow:

- 1) In the toolbox item pane, click the **Sequence Flow**  icon
- 2) Click the activity/event in the diagram that you want to define as the predecessor activity/event.
- 3) Click the activity/event that you want to define as the successor activity/event. The **Sequence Flow** editor opens.



Please note that 3 separate clicks are required to create the sequence flow. A drag-and-drop action will not produce the sequence flow.

- 4) Enter the name and description of the sequence flow and click **OK**.
- 5) Click **OK** to save your changes. The new sequence flow is added to the Alfabet database.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Connecting an Activity and Event via a Message Flow

A message flow is a connector in a service diagram that indicates that information is transferred between the agents represented by swim lanes or between activities having the same agent. A message flow can connect an activity and event across different swim lanes (of different pools) or two activities in the same swim lane, when a business object is transferred between two activities.



When you create new message flows, you should first define how the message flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the message flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the message flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of message flows should be determined by the user. Remove the checkmark if the end points of message flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save your settings.

To create a message flow:

- 1) In the toolbox item pane, click the **Message Flow**  icon
- 2) Click the activity/event in the diagram that you want to define as the predecessor activity/event.
- 3) Click the activity/event that you want to define as the successor activity/event. The **Message Flow** editor opens.



Please note that 3 separate clicks are required to create the message flow. A drag-and-drop action will not produce the message flow.

- 4) Enter the name and description of the message flow and click **OK**.



To visualize the business object transferred by the message flow, the business object should be placed between the two activities and be connected to both activities. For more information, see *Adding a Business Service, Business Function, or Business Object to the Services Diagram*.

- 5) Click **OK** to save your changes. The new message flow is added to the Alfabet database.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Connecting an Activity with a Business Service or Business Function via an Association

An association is a connector in a service diagram that displays the relationship between a service diagram element and an architecture element that is referenced by that element. An association is the logical connection from an element in a service diagram to the inventory object. Typically, an association connects a business service requested by a business process or a business function that the requested business service references.



When you create new associations, you should first define how the associations should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the associations should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the associations should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of associations should be determined by the user. Remove the checkmark if the end points of associations should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save your settings.

To create an association:

- 1) In the toolbox item pane, click the **Association**  icon
- 2) Click the activity in the diagram that you want to define as the source of the reference.
- 3) Click the business service/business function that you want the activity to reference. The **Association** editor opens.



Please note that 3 separate clicks are required to create the association. A drag-and-drop action will not produce the association.

- 4) Enter the name and description of the association and click **OK**.
- 5) Click **OK** to save your changes. The new association is added to the Alfabet database.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Connecting Activities via a Gateway

A gateway is a connector in a service diagram that controls the convergence and divergence of the sequence flows. A gateway is typically placed between two activities whose dependencies cannot be expressed through simple connections. Gateways can also be combined to visualize even more complex dependencies between activities.

Three types of gateways are supported:

- AND gateways connect an activity with a set of activities that need to be conducted simultaneously after the predecessor activity. It visualizes the logical AND operator for the successor activities.
- OR gateways connect an activity with a set of optional activities that can be conducted after the predecessor activity. It visualizes the logical OR operator for the successor activities. This means that a some of the successor activities are conducted. However, in contrast to the AND gateway, not all of them are necessarily conducted.
- XOR gateways connect an activity with a set of competing activities, one of which must be conducted after the predecessor activity. It visualizes the logical XOR operator for the successor activities. This means that only one of the successor activities is conducted due to a certain condition. An XOR gateway is typically used to visualize a decision tree with a yes/no answer. The choice of the successor activity is dependent on the answer to the question represented by the XOR gateway.

To create a gateway:

- 1) In the toolbox item pane, click the **Gateway**  icon.
- 2) Click a blank space in the diagram. You will see a dialog box in which you can define the new gateway.
- 3) Enter a name and define the type of gateway you want to visualize and click **OK**.
- 4) Drag the gateway and place it on the sequence flow that it defines.
- 5) Click **OK** to save your changes. The new gateway is added to the Alfabet database.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Substituting a Business Function or Business Object in the Services Diagram

You can remove a business function or business object in the diagram and substitute it with another business function or business process. The object that you choose to add to the diagram must be of the same object class as the object that you are replacing.

Any associations or message flows associated with the business process that you remove will also be removed from the diagram.

- 1) In the diagram, click the business function or business object that you want to replace.
- 2) In the toolbar, click **Semantic Actions**  > **Substitute**.
- 3) The object selector opens. Enter search criteria, as needed, and click **Search**.
- 4) Click the business function or business object that you want to add to the diagram and click **OK**. The original business function or business object is replaced with the business function or business object you selected in the object selector.

Linking to Other Service Diagrams

You can link activities or events to other existing service diagrams, allowing a user to directly navigate from the activity or event to another diagram. An activity or event that has a link to another diagram will have a small plus (+) sign in the lower left corner.



The user can click the object in the *Service Diagrams Page View* and click the **Drill-Down to Object Diagram** button to open the linked diagram.

To link an activity or event to another service diagram, double-click the activity or event to open its editor. Next to the **Navigation Diagram** field, click the **Search** icon and select the business process service diagram that you want to link to. Click **OK** to close the editor.

Updating a Selected Activity and Its References in the Service Diagram

The option **Update Subordinates for Object** is available in the **Semantic Actions**  menu to automatically add referenced objects to the diagram. Please note that using this option means that the diagram will be generated anew and any previous formatting may be lost and replaced with an automatically generated layout. The following objects referenced by a selected activity can be added to and updated in the diagram.

Selected Object	Referenced Objects
Activity	Events, Gateways, Business Functions, Operations, Business Services

The referenced objects will be added in the visualization of the activity that you are updating. It is recommended that you increase the size of the activity in the diagram to improve the layout of the added objects.

For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
- Select either Organize by Rows or Organize by Columns to define whether the objects should be organized in rows or in columns.
- Enter a number in the **Count** field to define how many rows or columns should be displayed.
- For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

Chapter 9: Designing Device Landscape Diagrams

The Alfabet Diagram Designer allows you to design a device diagram for a selected device group by visualizing all relevant device groups and/or devices as well as their information flows and relationships.

You can design only one device diagram for a selected device group. The diagram can then be displayed in Alfabet in the *Static Device Diagram Page View*.

Before you design the diagram, all relevant device groups and devices should be defined in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a device diagram:

- [Adding a Device Group to the Diagram](#)
- [Adding Devices to the Diagram](#)
- [Creating New Information Flows between Devices](#)
- [Automatically Updating the Device Diagram and Adding Referenced Objects](#)
- [Substituting a Device and/or Device Group in the Device Landscape](#)

Adding a Device Group to the Diagram

You can add as many existing device groups as needed to visualize the device landscape.

- 1) In the toolbox items pane, click the **Device Group**  icon and click in the diagram.
- 2) The object selector opens. Define search parameters, as needed, and select the device group(s) you want to add to the diagram. After you click **OK** in the object selector, the device group is displayed in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant device groups.
- 4) Click the **Save** button to save your changes.

If you plan to visualize devices in the device group you have just added, it is recommended that you increase the size of the device group in the diagram. If you are only visualizing one device group in the diagram, you can even enlarge the device group to cover the entire diagram workspace. For more information about increasing the size of an object in the diagram, see the section *Changing the Size of an Object/Shape*.

Adding Devices to the Diagram

You can add existing devices to the diagram to visualize the device landscape. Any information flows existing between devices are automatically added to the diagram. The information flows are displayed as blue arrows between the devices.

You can also add a device directly to a device group displayed in the diagram. When you save the diagram, the relationship will be saved in the Alfabet database and the device will reference the device group.

- 1) In the toolbox items pane, click either the **Device**  icon or click in the canvas area.
- 2) The object selector opens. Define search parameters, as needed, and select the device(s) you want to add to the diagram. After you click **OK** in the object selector, the device(s) are displayed in the diagram. Existing information flows are automatically visualized in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant devices.
- 4) Click the **Save** button to save your changes.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Creating New Information Flows between Devices

You can create and visualize new information flows between devices. Any new information flows you create are saved to the Alfabet database and can be viewed and edited by users in Alfabet with relevant access permissions.



When you create new information flows, you should first define how the information flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the information flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the information flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of information flows should be determined by the user. Remove the checkmark if the end points of information flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

- 1) In the toolbox items pane, click the **Information Flow**  icon.
- 2) Click the source device in the diagram.
- 3) Click the target device in the diagram. An editor will open in which you can define the new information flow. For example, if you are adding an information flow between devices, the **Information Flow** editor will open.



Please note that 3 separate clicks are required to create the information flow. A drag-and-drop action will not produce the information flow.

- 4) Enter information into each field, as required.

Basic Data tab:

- **ID:** Alfabet assigns a unique identification number to each object in the inventory. This number cannot be edited.
- **Name:** Displays the information flow's name. The naming convention is as follows: <Source Object> > <Target Object>.
- **Short Name:** Enter the information flow's short name.
- **Version:** Enter the version number. The version number should be unique.
- **Object State:** Displays the object state of the information flow in the enterprise. The object state distinguishes between objects that are actively used, planned to be used, or have been used in the past. An information flow may only be defined to have an active state if its source and target applications have an active object state. The information flow must have a retired object state if either the source or target application has a retired state.



The names of the object states **Retired**, **Active**, and **Plan** may deviate in your Alfabet product from the standard names. Object state names are configured for a specified object class by your solution designer in the configuration tool Alfabet Expand. For more information, see the section *Configuring Object State Definitions for Object Classes* in the reference manual *Configuring Alfabet with Alfabet Expand*. For general information about object states, see the section *Understanding Object States* in the reference manual *Getting Started with Alfabet*.

- **Release Status:** Select a release status. The release status is used to support the planning process and describes different phases in the approval process.



The set of release statuses available for an object class are configured by your solution designer in the configuration tool Alfabet Expand. For more information, see the section *Configuring Release Status Definitions for Object Classes* in the reference manual *Configuring Alfabet with Alfabet Expand*. For general information about release statuses, see the section *Understanding Release Statuses* in the reference manual *Getting Started with Alfabet*.

- **Start Date:** Enter the start date of the information flow in the format appropriate to your culture settings or select the start date in the calendar. The start date should not be earlier than the latest start date of either the source or target object.



If you attempt to create an information flow with source and target objects whose start and end dates do not intersect, the information flow dates will not be valid. Whether invalid information flows can be created – that is, whether information flows can be created if the source/ target objects do not have intersecting start/end dates is determined by the **Validate Information Flow Dates** attribute in your user settings. If the checkbox for the **Validate Information Flow Dates** attribute is selected (`=True`), then an error message will occur if you try to create an information flow for source and target objects that do not have intersecting dates and you will not be able to create the invalid information flow. If the checkbox for the **Validate Information Flow Dates** attribute is not selected (`=False`), then the information flow can be created. In this case, the start date of the information flow will be the earliest date defined for the source or target application/peripheral and the end date will be the latest date defined for the source or target application/peripheral. Invalid information flow dates will be highlighted red in the **Information Flows** page view and should be corrected via the **Align Start/End Dates** functionality. For more information, see the section *Defining Your User Settings in Alfabet* in the reference manual *Getting Started with Alfabet*.

- **End Date:** Enter the end date of the information flow in the format appropriate to your culture settings or select the end date in the calendar. The end date should not be after the earliest end date of either the source or target object.
- **Name Suffix:** Enter a suffix to be appended to the name of the information flow. This will help to distinguish between information flows with the same pair of source/target objects.
- **From (Source):** Displays the source object of the information flow. If necessary, open the drop-down menu to select a local component as the source object of the information flow. All local components defined for the source application will be displayed. A dash is displayed before the name of each local component and the component type is displayed in parenthesis after the name of the local component. For example: <-ComponentName (ComponentType)>. The component type information can help you identify which business components provide or consume the information transferred by the information flow.
- **To (Target):** Displays the target object of the information flow. If necessary, open the drop-down menu to select a local component as the target object of the information flow. All local components defined for the target application will be displayed. A dash is displayed before the name of each local component and the component type is displayed in parenthesis after the name of the local component. The component type information can help you identify which business components provide or consume the information transferred by the information flow.
- **Connection Type:** The connection type describes the transfer mode (for example, batch) for information flows between objects. Select a connection type in the drop-down list.
- **Connection Method:** The connection method describes the transfer method (for example, TCP/IP) for information flows between objects. Select a connection method in the drop-down list.
- **Connection Frequency:** The connection frequency describes how often (for example, monthly) the information flows between objects are used. Select a connection frequency in the drop-down list.
- **Connection Data Format:** The connection data format describes the data format (for example, XML) used for data transfer via a specific information flow. Select a connection data format in the drop-down list.
- **Description:** Enter a meaningful description that will clarify the purpose of the information flow.

Authorized Access tab:

- **Authorized User:** Click the **Search** icon to assign an authorized user to the selected object. The authorized user will have Read/Write access permissions to the object and is authorized to maintain the object in Alfabet.
- **Authorized User Groups:** Select the checkbox to assign Read/Write access permissions to all users in the selected user group. For more detailed information about the concept of access permissions, see the section *Understanding Access Permissions in Alfabet* in the reference manual *Getting Started with Alfabet*.

Target Business Service tab:

- **Target Business Service:** The business service provided by the outgoing information flow's target application/component. The drop-down list displays all business services defined for

the target object. Select the business service that is the target business service for the selected information flow.



If the target object is a local component, only the business services offered by the local component will be available. It is not possible to select the business services that have been defined for the application that the local component is associated with.

- **Target Business Service Operations:** The operations required to provide the target business service. If a business service is selected above, you can select the operations that are required to provide the selected business service.



Operations are defined for the business function that the selected business service is based. For more information about defining operations, see the *Business Function Operations Page View* for a business function.

Source Interface tab:

- **Interface Component:** Select a local component as the interface system for the selected information flow. The field displays all local components defined for the source application or component. Please note that technical services can only be specified for a local component with the **Type** attribute set to **Service**.
- **Technical Services:** Select one or more technical services needed by the source interface component. Technical services will only be displayed if they have been defined for the local component selected in the **Interface Component** field.
- **Technical Service Operations:** Select the technical service operations that detail how the technical service is to be provided in order to support the source interface component.

Target Interface tab:

- **Interface Component:** Select a local component as the interface system for the selected information flow. The field displays all local components defined for the target application or component. Please note that technical services can only be specified for a local component with the **Type** attribute set to **Service**.
 - **Technical Services:** Select one or more technical services needed by the target interface component. Technical services will only be displayed if they have been defined for the local component selected in the **Interface Component** field.
 - **Operations:** Select the technical service operations that detail how the technical service is to be provided in order to support the target interface component.
- 5) Click **OK** to save your changes. The new information flow is displayed in the diagram. Click the **Save** button to save the information flow to the Alfabet database.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Automatically Updating the Device Diagram and Adding Referenced Objects

There are a number of methods available to automatically add existing objects that are referenced by the device groups displayed in the diagram. The following referenced objects can be updated in the diagram.

Selected Object	Referenced Objects
Device Group	Subordinate Device Groups, Devices

The referenced objects will be added in the visualizations of the device group that you are updating. It is recommended that you increase the size of the device group in the diagram to improve the layout of the added objects. For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*.

 The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

The following options are available in the **Semantic Actions**  menu to automatically add referenced objects to the diagram.

- **Update Subordinates for Object:** Select a device group in the diagram and select this option to add its referenced objects.

 When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
 - Select either **Organize by Rows** or **Organize by Columns** to define whether the objects should be organized in rows or in columns.
 - Enter a number in the **Count** field to define how many rows or columns should be displayed.
 - For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.
- **Update Subordinates for All Objects:** Select this option to add the referenced objects of all device groups displayed in the diagram. Any objects referencing those already displayed in the diagram will be added to the diagram.

-
- **Update Subordinates for All Objects Recursively:** Select this option to add the referenced objects of all device groups displayed in the diagram as well as the objects added via this function to the diagram. Objects immediately referenced by those already displayed in the diagram will be added to the diagram. If these added device groups have referenced objects, these will also be added to the diagram, and so forth. The update action will proceed until the lowest level in the hierarchy is reached. The referenced objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram. For help in rearranging the added objects, see the section *Tips for Designing the Layout of the Diagram*.

Substituting a Device and/or Device Group in the Device Landscape

You can remove a device or device group in the diagram and substitute it with another device or device group. The object that you choose to add to the diagram must be of the same object class as the object that you are replacing.

Any information flows associated with the device that you replace will also be removed from the diagram. If a device that is added to the diagram has information flows, the information flows will not be added via the **Substitute** functionality. These objects must be added to the diagram via an **Update...** functionality.

- 1) In the diagram, click the device or device group that you want to replace with another device or device group.
- 2) In the toolbar, click **Semantic Actions**  > **Substitute**.
- 3) The object selector opens. Enter search criteria, as needed, and click **Search**.
- 4) Click the device or device group that you want to add to the diagram and click **OK**. The original device or device group is replaced with the device or device group you selected in the object selector.

Designing Network Diagrams

The Alfabet Diagram Designer allows you to design network diagrams in which you can visualize all relevant sub-networks and the devices they belong to as well as the network routes that route the networks or devices to another network. The following connection items may be displayed in the diagram:

- Red arrows represent the network routes that have been defined between networks as well as between networks and devices. The arrow starts with the source network and points to the network/device that is the target of the network route.
- Blue arrows visualize the assignment of devices to a network. The arrow starts with the device and points to the network that the device is assigned to.
- Green arrows visualize the hierarchical relationship between networks. The arrow starts with the subordinate network and points to the parent network.

Before you design the diagram, all relevant networks and devices should be defined in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that

exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when defining a network diagram:

- [Adding Networks and Devices to the Diagram](#)
- [Creating New Network Routes Between Networks and Devices](#)
- [Automatically Updating the Network Diagram and Adding Referenced Objects](#)
- [Substituting a Network or Device in the Device Landscape](#)

Adding Networks and Devices to the Diagram

You can add networks and devices to visualize the network diagram. Any network routes existing between networks and other networks or networks and devices are automatically generated when the devices are added to the diagram. Any network routes existing between networks and other networks devices are automatically generated when the devices are added to the diagram. The network routes appear as red connection items between the networks and devices. Blue connection items visualize the assignment of devices to a network.

- 1) In the toolbox items pane, click either the **Network**  or **Device**  icon and click a blank space in the diagram.
- 2) The object selector opens. Define search parameters, as needed, and select the network(s) or device(s) you want to add to the diagram. After you click **OK** in the object selector, the network/device is displayed in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant network(s) or device(s).
- 4) Click the **Save** button to save your changes.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Creating New Network Routes Between Networks and Devices

You can create and visualize new network routes between networks and other networks and networks and devices. Any new network routes you create are saved to the Alfabet database and can be viewed and edited by users in Alfabet with relevant access permissions. The new network routes will be displayed as red arrows between networks as well as between networks and devices. Blue arrows may be automatically added to the diagram and visualize the assignment of devices to a network.



When you create new network routes, you should first define how the network routes should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the network routes should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the network routes should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of network routes should be determined by the user. Remove the checkmark if the end points of network routes should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

- 1) In the toolbox items pane, click the **Network Route**  icon.
- 2) Click the source network or device in the diagram.
- 3) Click the target network or device in the diagram. (A network route cannot be created between two devices.) The **Network Route** editor will open in which you can define the new network route.



Please note that 3 separate clicks are required to create the network route. A drag-and-drop action will not produce the network route.

- 4) Enter information into each field, as required.

Basic Data tab:

- **Object State:** Displays the object state of the network in the enterprise. The object state distinguishes between objects that are actively used, planned to be used, or have been used in the past.
- **Release Status:** Select a predefined release status. The release status is used to support the planning process and describes different phases in the approval process.



The set of release statuses available for an object class are configured by your solution designer in the configuration tool Alfabet Expand. For more information, see the section *Configuring Release Status Definitions for Object Classes* in the reference manual *Configuring Alfabet with Alfabet Expand*. For general information about release statuses, see the section *Understanding Release Statuses* in the reference manual *Getting Started with Alfabet*.

- **Start Date:** Enter the start date of the network route in the appropriate format or select the start date in the calendar.
- **End Date:** Enter the end date of the network route in the appropriate format or select the end date in the calendar.



The start and end dates constitute the active period of the object in the object's lifecycle. For more information about the definition and general configuration of an object's lifecycle and the various lifecycle phases, see the section *Understanding Lifecycles* in the reference manual *Getting Started with Alfabet*.

- **Source:** Displays the network or device that is the source of the network route.
- **Destination:** Select the network that is the destination of the network route.
- **Router:** Displays the router that the network route uses. A router is a device for which the **Device Type** attribute is specified as **Router**.



Network routes are based on physical devices of the type **Router**. If no routers are displayed in the **Router** field, the relevant routers must be assigned to the network you are working with. Please note that the relevant physical devices of the type **Router** must first be assigned to the network in the *Network Devices Page View* before the network routes can be defined.

- **Description:** Enter a meaningful description that will clarify the purpose of the network route.

Authorized Access tab:

- **Authorized User:**

Click the **Search** icon to assign an authorized user to the selected object. The authorized user will have Read/Write access permissions to the object and is authorized to maintain the object in Alfabet.

- **Authorized User Groups:**

Select one or more checkboxes to assign Read/Write access permissions to all users in a selected user group.



For more detailed information about the concept of access permissions, see the section *Understanding Access Permissions in Alfabet* in the reference manual *Getting Started with Alfabet*.

- 5) Click **OK** to save your changes. The new network route is displayed in the diagram. Click the **Save** button to save the network route to the Alfabet database.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Automatically Updating the Network Diagram and Adding Referenced Objects

There are a number of methods available to automatically add existing objects that are referenced by the networks displayed in the diagram. The following referenced objects can be updated in the diagram.

Selected Object	Referenced Objects
Network	Subordinate Networks

The referenced networks will be added next to the visualizations of the network that you are updating, and a green arrow will display the relationship between the subordinate network (source of connection item) and the parent network (target of connection item).



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

The following options are available in the **Semantic Actions**  menu to automatically add referenced objects to the diagram.

- **Update Subordinates for Objects:** Select a network in the diagram and select this option to add its referenced objects.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
 - Select either **Organize by Rows** or **Organize by Columns** to define whether the objects should be organized in rows or in columns.
 - Enter a number in the **Count** field to define how many rows or columns should be displayed.
 - For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.
- **Update Subordinates for All Objects:** Select this option to add the referenced objects of all networks displayed in the diagram. Any objects referencing those already displayed in the diagram will be added to the diagram.
 - **Update Subordinates for All Objects Recursively:** Select this option to add the referenced objects of all networks displayed in the diagram as well as the objects added via this function to the diagram. Objects immediately referenced by those already displayed in the diagram will be added to the diagram. If these added networks have referenced objects, these will also be added to the diagram, and so forth. The update action will proceed until the lowest level in the hierarchy is reached. The referenced objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram. For help in rearranging the added objects, see the section *Tips for Designing the Layout of the Diagram*.

Substituting a Network or Device in the Device Landscape

You can remove a network or device in the diagram and substitute it with another network or device. The object that you choose to add to the diagram must be of the same object class as the object that you are replacing.

Any connection items associated with the network or device that you replace will also be removed from the diagram. If a network or device that is added to the diagram has network routes to other networks or devices in the diagram, the network routes will be added to the diagram.

- 1) In the diagram, click the network or device that you want to replace with another network or device.
- 2) In the toolbar, click **Semantic Actions**  > **Substitute**.

-
- 3) The object selector opens. Enter search criteria, as needed, and click **Search**.
 - 4) Click the network or device that you want to add to the diagram and click **OK**. The original network or device is replaced with the network or device you selected in the object selector.

Chapter 10: Designing Deployment Diagrams

The Alfabet Diagram Designer allows you to design deployment diagrams in which you can visualize all relevant deployments including their deployment elements and deployment information flows and relevant networks.

You can design multiple deployment diagrams for a selected deployment. The diagram can then be displayed in Alfabet in the *Deployment Diagrams Page View* for users with access to the selected deployment. In the *Deployment Diagrams Page View*, users can also review whether network routes are available for the deployed information flows.

Before you design the diagram, all relevant deployments with their deployment elements and relevant networks should be defined in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

When you first open the Alfabet Diagram Designer, the selected deployment will be displayed with its deployment elements shown inside the deployment.

The following is possible when designing a deployment diagram:

- [Adding Deployments and Networks to the Diagram](#)
- [Adding Referenced Deployment Elements to the Deployment Diagram](#)

Adding Deployments and Networks to the Diagram

You can add deployments and networks to visualize the deployment landscape.

- 1) In the toolbox items pane, click either the **Deployment**  or **Network**  icon and click a blank space in the diagram.
- 2) The object selector opens. Define search parameters, as needed, and select the deployment(s) or network(s) you want to add to the diagram. After you click **OK** in the object selector, the deployment/network is displayed in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant deployment(s) or network(s).
- 4) Click the **Save** button to save your changes.

Adding Referenced Deployment Elements to the Deployment Diagram

You can add deployment elements that have been assigned to the deployment in the *Deployment Structure Page View*.

- 1) In the diagram, click the deployment for which you want to display deployment elements.
- 2) In the toolbar, click **Semantic Actions**  and select one of the following:
 - **Add Subordinates for Object.** The object selector opens. Enter search criteria, as needed, and click **Search**. Click the deployment elements that you want to add to the diagram and click **OK**. The selected deployment elements will be added to the selected deployment.
 - **Update Subordinates for Objects:** Select a deployment in the diagram and select this option to add its referenced objects.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
 - Select either **Organize by Rows** or **Organize by Columns** to define whether the objects should be organized in rows or in columns.
 - Enter a number in the **Count** field to define how many rows or columns should be displayed.
 - For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.
- **Update Subordinates for All Objects:** Select this option to add the referenced objects of all deployments displayed in the diagram. Any deployment elements referencing the deployments displayed in the diagram will be added to the diagram.

Chapter 11: Designing Location Diagrams

The Alfabet Diagram Designer allows you to design location diagrams in which you can visualize all relevant sub-locations and devices assigned to a selected diagram. You can design only one location diagram for a selected location. The diagram can then be displayed in Alfabet in the *Location Diagram* for users with access to the selected location.

Before you design the diagram, all relevant locations and devices should be defined for the location in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a location diagram:

- [Adding Locations and Devices to the Diagram](#)
- [Creating New Information Flows between Devices](#)
- [Automatically Updating the Location Diagram and Adding Referenced Objects](#)
- [Substituting a Device or Location in the Device Landscape](#)

Adding Locations and Devices to the Diagram

You can add locations and devices to visualize the device landscape. Any information flows existing between devices are automatically generated when the devices are added to the diagram. The information flows appear as blue connection items between the objects.

- 1) In the toolbox items pane, click either the **Location**  or **Device**  icon and click a blank space in the diagram.
- 2) The object selector opens. Define search parameters, as needed, and select the location(s) or device(s) you want to add to the diagram. After you click **OK** in the object selector, the location/device is displayed in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant location(s) or device(s).
- 4) Click the **Save** button to save your changes.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Creating New Information Flows between Devices

You can create and visualize new information flows between devices. Any new information flows you create are saved to the Alfabet database and can be viewed and edited by users in Alfabet with relevant access permissions.



When you create new information flows, you should first define how the information flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the information flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the information flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of information flows should be determined by the user. Remove the checkmark if the end points of information flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

- 1) In the toolbox items pane, click the **Information Flow**  icon.
- 2) Click the source device in the diagram.
- 3) Click the target device in the diagram. An editor will open in which you can define the new information flow. For example, if you are adding an information flow between devices, the **Information Flow** editor will open.



Please note that 3 separate clicks are required to create the information flow. A drag-and-drop action will not produce the information flow.

- 4) Enter information into each field, as required.

Basic Data tab:

- **ID:** Alfabet assigns a unique identification number to each object in the inventory. This number cannot be edited.
- **Name:** Displays the information flow's name. The naming convention is as follows: <Source Object> > <Target Object>.
- **Short Name:** Enter the information flow's short name.
- **Version:** Enter the version number. The version number should be unique.
- **Object State:** Displays the object state of the information flow in the enterprise. The object state distinguishes between objects that are actively used, planned to be used, or have been used in the past. An information flow may only be defined to have an active state if its source and target applications have an active object state. The information flow must have a retired object state if either the source or target application has a retired state.



The names of the object states **Retired**, **Active**, and **Plan** may deviate in your Alfabet product from the standard names. Object state names are configured for a specified object class by your solution designer in the configuration tool Alfabet Expand. For more information, see the section *Configuring Object State Definitions for Object Classes* in the reference manual *Configuring Alfabet with Alfabet Expand*. For general information about object states, see the section *Understanding Object States* in the reference manual *Getting Started with Alfabet*.

- **Release Status:** Select a release status. The release status is used to support the planning process and describes different phases in the approval process.



The set of release statuses available for an object class are configured by your solution designer in the configuration tool Alfabet Expand. For more information, see the section *Configuring Release Status Definitions for Object Classes* in the reference manual *Configuring Alfabet with Alfabet Expand*. For general information about release statuses, see the section *Understanding Release Statuses* in the reference manual *Getting Started with Alfabet*.

- **Start Date:** Enter the start date of the information flow in the format appropriate to your culture settings or select the start date in the calendar. The start date should not be earlier than the latest start date of either the source or target object.



If you attempt to create an information flow with source and target objects whose start and end dates do not intersect, the information flow dates will not be valid. Whether invalid information flows can be created – that is, whether information flows can be created if the source/ target objects do not have intersecting start/end dates is determined by the **Validate Information Flow Dates** attribute in your user settings. If the checkbox for the **Validate Information Flow Dates** attribute is selected (`=True`), then an error message will occur if you try to create an information flow for source and target objects that do not have intersecting dates and you will not be able to create the invalid information flow. If the checkbox for the **Validate Information Flow Dates** attribute is not selected (`=False`), then the information flow can be created. In this case, the start date of the information flow will be the earliest date defined for the source or target application/peripheral and the end date will be the latest date defined for the source or target application/peripheral. Invalid information flow dates will be highlighted red in the **Information Flows** page view and should be corrected via the **Align Start/End Dates** functionality. For more information, see the section *Defining Your User Settings in Alfabet* in the reference manual *Getting Started with Alfabet*.

- **End Date:** Enter the end date of the information flow in the format appropriate to your culture settings or select the end date in the calendar. The end date should not be after the earliest end date of either the source or target object.
- **Name Suffix:** Enter a suffix to be appended to the name of the information flow. This will help to distinguish between information flows with the same pair of source/target objects.
- **From (Source):** Displays the source object of the information flow. If necessary, open the drop-down menu to select a local component as the source object of the information flow. All local components defined for the source application will be displayed. A dash is displayed before the name of each local component and the component type is displayed in parenthesis after the name of the local component. For example: <-ComponentName (ComponentType)>. The component type information can help you identify which business components provide or consume the information transferred by the information flow.
- **To (Target):** Displays the target object of the information flow. If necessary, open the drop-down menu to select a local component as the target object of the information flow. All local components defined for the target application will be displayed. A dash is displayed before the name of each local component and the component type is displayed in parenthesis after the name of the local component. The component type information can help you identify which business components provide or consume the information transferred by the information flow.
- **Connection Type:** The connection type describes the transfer mode (for example, batch) for information flows between objects. Select a connection type in the drop-down list.

- **Connection Method:** The connection method describes the transfer method (for example, TCP/IP) for information flows between objects. Select a connection method in the drop-down list.
- **Connection Frequency:** The connection frequency describes how often (for example, monthly) the information flows between objects are used. Select a connection frequency in the drop-down list.
- **Connection Data Format:** The connection data format describes the data format (for example, XML) used for data transfer via a specific information flow. Select a connection data format in the drop-down list.
- **Description:** Enter a meaningful description that will clarify the purpose of the information flow.

Authorized Access tab:

- **Authorized User:** Click the **Search** icon to assign an authorized user to the selected object. The authorized user will have Read/Write access permissions to the object and is authorized to maintain the object in Alfabet.
- **Authorized User Groups:** Select the checkbox to assign Read/Write access permissions to all users in the selected user group. For more detailed information about the concept of access permissions, see the section *Understanding Access Permissions in Alfabet* in the reference manual *Getting Started with Alfabet*.

Target Business Service tab:

- **Target Business Service:** The business service provided by the outgoing information flow's target application/component. The drop-down list displays all business services defined for the target object. Select the business service that is the target business service for the selected information flow.
-  If the target object is a local component, only the business services offered by the local component will be available. It is not possible to select the business services that have been defined for the application that the local component is associated with.
- **Target Business Service Operations:** The operations required to provide the target business service. If a business service is selected above, you can select the operations that are required to provide the selected business service.



Operations are defined for the business function that the selected business service is based. For more information about defining operations, see the *Business Function Operations Page View* for a business function.

Source Interface tab:

- **Interface Component:** Select a local component as the interface system for the selected information flow. The field displays all local components defined for the source application or component. Please note that technical services can only be specified for a local component with the **Type** attribute set to **Service**.

- **Technical Services:** Select one or more technical services needed by the source interface component. Technical services will only be displayed if they have been defined for the local component selected in the **Interface Component** field.
- **Technical Service Operations:** Select the technical service operations that detail how the technical service is to be provided in order to support the source interface component.

Target Interface tab:

- **Interface Component:** Select a local component as the interface system for the selected information flow. The field displays all local components defined for the target application or component. Please note that technical services can only be specified for a local component with the **Type** attribute set to **Service**.
 - **Technical Services:** Select one or more technical services needed by the target interface component. Technical services will only be displayed if they have been defined for the local component selected in the **Interface Component** field.
 - **Operations:** Select the technical service operations that detail how the technical service is to be provided in order to support the target interface component.
- 5) Click **OK** to save your changes. The new information flow is displayed in the diagram. Click the **Save** button to save the information flow to the Alfabet database.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Automatically Updating the Location Diagram and Adding Referenced Objects

There are a number of methods available to automatically add existing objects that are referenced by the locations displayed in the diagram. The following referenced objects can be updated in the diagram.

Selected Object	Referenced Objects
Location	Subordinate Locations, Devices

The referenced objects will be added in the visualizations of the location that you are updating. It is recommended that you increase the size of the location in the diagram to improve the layout of the added objects. For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*.



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

The following options are available in the **Semantic Actions**  menu to automatically add referenced objects to the diagram.

- **Update Subordinates for Objects:** Select a location in the diagram and select this option to add its referenced objects.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
 - Select either **Organize by Rows** or **Organize by Columns** to define whether the objects should be organized in rows or in columns.
 - Enter a number in the **Count** field to define how many rows or columns should be displayed.
 - For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.
- **Update Subordinates for All Objects:** Select this option to add the referenced objects of all locations displayed in the diagram. Any objects referencing those already displayed in the diagram will be added to the diagram.
 - **Update Subordinates for All Objects Recursively:** Select this option to add the referenced objects of all locations displayed in the diagram as well as the objects added via this function to the diagram. Objects immediately referenced by those already displayed in the diagram will be added to the diagram. If these added locations have referenced objects, these will also be added to the diagram, and so forth. The update action will proceed until the lowest level in the hierarchy is reached. The referenced objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram. For help in rearranging the added objects, see the section *Tips for Designing the Layout of the Diagram*.

Substituting a Device or Location in the Device Landscape

You can remove a device or location in the diagram and substitute it with another device or location. The object that you choose to add to the diagram must be of the same object class as the object that you are replacing.

Any information flows associated with the device that you replace will also be removed from the diagram. If a device that is added to the diagram has information flows, the information flows will not be added via the **Substitute** functionality. These objects must be added to the diagram via an **Update...** functionality.

- 1) In the diagram, click the device or location that you want to replace with another device or location.
- 2) In the toolbar, click **Semantic Actions**  > **Substitute**.

-
- 3) The object selector opens. Enter search criteria, as needed, and click **Search**.
 - 4) Click the device or location that you want to add to the diagram and click **OK**. The original device or location is replaced with the device or location you selected in the object selector.

Chapter 12: Designing Domain Application Diagrams

The Alfabet Diagram Designer allows you to design domain diagrams in which you can visualize application, peripherals, information flows, and local components for a selected domain. You can design multiple domain application diagrams for a selected domain. A domain application diagram is accessible in Alfabet in the *Standard Domain Application Diagram* or in the *Additional Domain Application Diagrams Page View* for users with access to the selected domain.



The following procedure describes how to design a diagram that can be displayed in Alfabet in either the *Standard Domain Application Diagram* or *Additional Domain Function Diagrams Page View*. Please keep the following in mind when designing a diagram for these views:

- The *Standard Domain Application Diagram* is available for a selected domain. Each domain can have only one domain application diagram.
- The *Additional Domain Application Diagrams Page View* is also available for a selected domain. This view allows multiple domain application diagrams to be designed per object.

Before you design the diagram, all relevant applications, peripherals, and local components should be defined in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a domain applications diagram:

- [Adding Domains to the Domain Application Diagram](#)
- [Adding an Application/Peripheral to a Domain](#)
- [Automatically Adding Referenced Objects for Applications and Domains](#)
- [Substituting an Application or Domain](#)
- [Creating New Information Flows between Applications and/or Peripherals](#)
- [Generating the Network of an Application, Peripheral, or Local Component](#)

Adding Domains to the Domain Application Diagram

You can add as many subordinate domains of the selected domain as needed to visualize the domain application landscape.

- 1) In the toolbox items pane, click the **Domain**  icon and click a blank space in the diagram.

- 2) The object selector opens. Define search parameters, as needed, and select the domain(s) you want to add to the diagram. If domain stereotypes have been defined, the stereotype will be listed in the **Stereotype** column. After you click **OK** in the object selector, the domain will be placed on the spot where you clicked in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant domains.



To add a subordinate domain to a domain displayed in the diagram, click the **Do-main**  icon and click in the domain. If domain stereotypes have been configured for your solution, you must ensure that it is permissible to add the subordinate domain to the domain.

- 4) Click the **Save** button to save your changes.

Adding an Application/Peripheral to a Domain

You can add existing applications and/or peripherals to visualize the application landscape. Any information flows existing between applications and/or peripherals are automatically added to the diagram. The information flows are displayed as blue arrows between the objects.

- 1) In the toolbox items pane, click either the **Application**  icon or **Peripheral**  icon and click in the canvas area.
- 2) The object selector opens. Define search parameters, as needed, and select the application(s)/peripheral(s) you want to add to the diagram. After you click **OK** in the object selector, the application(s)/peripheral(s) are displayed in the diagram. Existing information flows are automatically visualized in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant applications/peripherals.
- 4) Click the **Save** button to save your changes.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Automatically Adding Referenced Objects for Applications and Domains

There are a number of methods available to automatically add existing objects that are referenced by the domain or applications displayed in the diagram. The following referenced objects can be updated in the diagram.

Selected Object	Referenced Objects
Domain	Subordinate Domains, Applications

Selected Object	Referenced Objects
Application	Local Components (Component Modules)

The referenced objects will be added in the visualizations of the application or domain that you are updating. It is recommended that you increase the size of the application/domain in the diagram to improve the layout of the added objects. For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*.



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

The following options are available in the **Semantic Actions**  menu to automatically add referenced objects to the diagram.

- **Update Subordinates for Object:** Select an domain or application in the diagram and select this option to add its referenced objects.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
 - Select either Organize by Rows or Organize by Columns to define whether the objects should be organized in rows or in columns.
 - Enter a number in the **Count** field to define how many rows or columns should be displayed.
 - For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.
- **Update Subordinates for All Objects:** Select this option to add the referenced objects of all domains and applications displayed in the diagram. Any objects referencing those already displayed in the diagram will be added to the diagram.
 - **Update Subordinates for All Objects Recursively:** Select this option to add the referenced objects of all domains and applications displayed in the diagram as well as the objects added via this function to the diagram. Objects immediately referenced by those already displayed in the diagram will be added to the diagram. If these added domains and applications have referenced objects, these will also be added to the diagram, and so forth. The update action will proceed until the lowest level in the hierarchy is reached. The referenced objects will be placed on top of each other in the

diagram and you will need to manually distribute them in the diagram. For help in rearranging the added objects, see the section *Tips for Designing the Layout of the Diagram*.

Substituting an Application or Domain

You can remove an application or domain in the diagram and substitute it with another application or domain. The object that you choose to add to the diagram must be of the same object class as the object that you are replacing.

Any information flows or local components associated with the application that you replace will also be removed from the diagram. If an application that is added to the diagram has information flows or local components, the information flows or local components will not be added via the **Substitute** functionality. These objects must be added to the diagram via an **Update...** functionality.

- 1) In the diagram, click the application or domain that you want to replace with another application or domain.
- 2) In the toolbar, click **Semantic Actions**  > **Substitute**.
- 3) The object selector opens. Enter search criteria, as needed, and click **Search**.
- 4) Click the application or domain that you want to add to the diagram and click **OK**. The original application or domain is replaced with the application or domain you selected in the object selector.

Creating New Information Flows between Applications and/or Peripherals

You can create and visualize new information flows between applications and/or peripherals. Any new information flows that you create are saved to the Alfabet database and can be viewed and edited by users in Alfabet with relevant access permissions.



When you create new information flows, you should first define how the information flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the information flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the information flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of information flows should be determined by the user. Remove the checkmark if the end points of information flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

- 1) In the toolbox items pane, click the **Information Flow**  icon.
- 2) Click the source application/peripheral in the diagram.
- 3) Click the target application/peripheral in the diagram. An editor will open in which you can define the new information flow. For example, if you are adding an information flow between applications, the **Information Flow** editor will open.



Please note that 3 separate clicks are required to create the information flow. A drag-and-drop action will not produce the information flow.

-
- 4) Enter information into each field, as required.

Basic Data tab:

- **ID:** Alfabet assigns a unique identification number to each object in the inventory. This number cannot be edited.
- **Name:** Displays the information flow's name. The naming convention is as follows: <Source Object> > <Target Object>.
- **Short Name:** Enter the information flow's short name.
- **Version:** Enter the version number. The version number should be unique.
- **Object State:** Displays the object state of the information flow in the enterprise. The object state distinguishes between objects that are actively used, planned to be used, or have been used in the past. An information flow may only be defined to have an active state if its source and target applications have an active object state. The information flow must have a retired object state if either the source or target application has a retired state.



The names of the object states **Retired**, **Active**, and **Plan** may deviate in your Alfabet product from the standard names. Object state names are configured for a specified object class by your solution designer in the configuration tool Alfabet Expand. For more information, see the section *Configuring Object State Definitions for Object Classes* in the reference manual *Configuring Alfabet with Alfabet Expand*. For general information about object states, see the section *Understanding Object States* in the reference manual *Getting Started with Alfabet*.

- **Release Status:** Select a release status. The release status is used to support the planning process and describes different phases in the approval process.



The set of release statuses available for an object class are configured by your solution designer in the configuration tool Alfabet Expand. For more information, see the section *Configuring Release Status Definitions for Object Classes* in the reference manual *Configuring Alfabet with Alfabet Expand*. For general information about release statuses, see the section *Understanding Release Statuses* in the reference manual *Getting Started with Alfabet*.

- **Start Date:** Enter the start date of the information flow in the format appropriate to your culture settings or select the start date in the calendar. The start date should not be earlier than the latest start date of either the source or target object.



If you attempt to create an information flow with source and target objects whose start and end dates do not intersect, the information flow dates will not be valid. Whether invalid information flows can be created – that is, whether information flows can be created if the source/ target objects do not have intersecting start/end dates is determined by the **Validate Information Flow Dates** attribute in your user settings. If the checkbox for the **Validate Information Flow Dates** attribute is selected (`=True`), then an error message will occur if you try to create an information flow for source and target objects that do not have intersecting dates and you will not be able to create the invalid information flow. If the checkbox for the **Validate Information Flow Dates** attribute is not selected (`=False`), then the information flow can be created. In this case, the start date of the information flow will be the earliest date defined for the source or target application/peripheral and the end date will be the latest date defined for the source or target application/peripheral. Invalid information flow dates will be highlighted red in the **Information Flows** page view and should be corrected via the **Align Start/End Dates** functionality. For more

information, see the section *Defining Your User Settings in Alfabet* in the reference manual *Getting Started with Alfabet*.

- **End Date:** Enter the end date of the information flow in the format appropriate to your culture settings or select the end date in the calendar. The end date should not be after the earliest end date of either the source or target object.
- **Name Suffix:** Enter a suffix to be appended to the name of the information flow. This will help to distinguish between information flows with the same pair of source/target objects.
- **From (Source):** Displays the source object of the information flow. If necessary, open the drop-down menu to select a local component as the source object of the information flow. All local components defined for the source application will be displayed. A dash is displayed before the name of each local component and the component type is displayed in parenthesis after the name of the local component. For example: <-ComponentName (ComponentType)>. The component type information can help you identify which business components provide or consume the information transferred by the information flow.
- **To (Target):** Displays the target object of the information flow. If necessary, open the drop-down menu to select a local component as the target object of the information flow. All local components defined for the target application will be displayed. A dash is displayed before the name of each local component and the component type is displayed in parenthesis after the name of the local component. The component type information can help you identify which business components provide or consume the information transferred by the information flow.
- **Connection Type:** The connection type describes the transfer mode (for example, batch) for information flows between objects. Select a connection type in the drop-down list.
- **Connection Method:** The connection method describes the transfer method (for example, TCP/IP) for information flows between objects. Select a connection method in the drop-down list.
- **Connection Frequency:** The connection frequency describes how often (for example, monthly) the information flows between objects are used. Select a connection frequency in the drop-down list.
- **Connection Data Format:** The connection data format describes the data format (for example, XML) used for data transfer via a specific information flow. Select a connection data format in the drop-down list.
- **Description:** Enter a meaningful description that will clarify the purpose of the information flow.

Authorized Access tab:

- **Authorized User:** Click the **Search** icon to assign an authorized user to the selected object. The authorized user will have Read/Write access permissions to the object and is authorized to maintain the object in Alfabet.
- **Authorized User Groups:** Select the checkbox to assign Read/Write access permissions to all users in the selected user group. For more detailed information about the concept of access permissions, see the section *Understanding Access Permissions in Alfabet* in the reference manual *Getting Started with Alfabet*.

Target Business Service tab:

- **Target Business Service:** The business service provided by the outgoing information flow's target application/component. The drop-down list displays all business services defined for the target object. Select the business service that is the target business service for the selected information flow.



If the target object is a local component, only the business services offered by the local component will be available. It is not possible to select the business services that have been defined for the application that the local component is associated with.

- **Target Business Service Operations:** The operations required to provide the target business service. If a business service is selected above, you can select the operations that are required to provide the selected business service.



Operations are defined for the business function that the selected business service is based. For more information about defining operations, see the *Business Function Operations Page View* for a business function.

Source Interface tab:

- **Interface Component:** Select a local component as the interface system for the selected information flow. The field displays all local components defined for the source application or component. Please note that technical services can only be specified for a local component with the **Type** attribute set to **Service**.
- **Technical Services:** Select one or more technical services needed by the source interface component. Technical services will only be displayed if they have been defined for the local component selected in the **Interface Component** field.
- **Technical Service Operations:** Select the technical service operations that detail how the technical service is to be provided in order to support the source interface component.

Target Interface tab:

- **Interface Component:** Select a local component as the interface system for the selected information flow. The field displays all local components defined for the target application or component. Please note that technical services can only be specified for a local component with the **Type** attribute set to **Service**.
 - **Technical Services:** Select one or more technical services needed by the target interface component. Technical services will only be displayed if they have been defined for the local component selected in the **Interface Component** field.
 - **Operations:** Select the technical service operations that detail how the technical service is to be provided in order to support the target interface component.
- 5) Click **OK** to save your changes. The new information flow is displayed in the diagram. Click the **Save** button to save the information flow to the Alfabet database.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Generating the Network of an Application, Peripheral, or Local Component

Application, peripherals, and local components visualized in your diagram may have information flows to other applications, peripherals, and local components that are not visualized in the diagram. By means of the **Generate Network** functionality, you can select an application, peripheral, or local component in the diagram and add the applications, peripherals, and local components that are referenced by means of information flows.

You can define how far-reaching the network should extend as well as whether incoming and/or outgoing information flows should be displayed. When you generate the network for a selected object in the diagram, the information flows as well as the referenced applications, peripherals, and local components will be added to the diagram. Once the **Generate Network** functionality has been executed, you will typically need to refine the visualization of the diagram. For more information, see *Tips for Designing the Layout of the Diagram*.

To generate the network for a selected application peripheral, or local component:

- 1) In the diagram, select the application, peripheral, or local component whose network you want to generate.
- 2) In the toolbar, select **Other Actions**  > **Generate Network**.
- 3) In the **Generate Network** editor, define the following fields, as needed:
 - **Objects' Vertical Distance:** Define the vertical distance between the objects that are to be placed in the diagram.

The unit of measurement will depend on the cultures implemented in your Alfabet solution. For more information about the configuration of cultures, see the section *Specifying the Cultures Relevant to Your Enterprise* in the chapter *Localization and Multi-Language Support for the Alfabet Interface* in the reference manual *Configuring Alfabet with Alfabet Expand*.
 - **Objects' Horizontal Distance:** Define the horizontal distance between the objects that are to be placed in the diagram.
 - **Object Placement:** Define whether the objects are to be positioned horizontally or vertically to the selected object.
 - **Max. Network Depth:** Define how far-reaching the network should extend. Set to 1 to place objects directly associated with the object selected in the diagram. Set to 2 to place objects associated with the objects on level 1. Set to 3 to place objects associated with the objects on level 2, etc.
 - **Include Connection Types to Build Network:** Deselect the type of connections that should not be included for finding objects to place on the diagram.
 - **Build Network Traversing Backwards:** Select to display objects that have information flows incoming to the selected database object in the diagram. If the Reverse checkbox is selected, only the information flows incoming from the selected database object will be visualized. If the Reverse checkbox is not selected, only the information flows outgoing from the selected database object will be visualized. The Reverse checkbox is not selected by default.
- 4) Click **OK** to add the objects and their associated information flows to the diagram.

Chapter 13: Designing Domain Function Diagrams

The Alfabet Diagram Designer allows you to design domain diagram in which you can visualize domains (and sub-domains) and their business functions for a selected domain. You can design multiple domain function diagrams for a selected domain. A domain function diagram is accessible in Alfabet in the *Standard Domain Function Diagram Page View* or in the *Additional Domain Function Diagrams Page View* for users with access to the selected domain.



The following procedure describes how to design a diagram that can be displayed in Alfabet in either the *Standard Domain Function Diagram Page View* or *Additional Domain Function Diagrams Page View*. Please keep the following in mind when designing a diagram for these views:

- The *Standard Domain Function Diagram Page View* is available for a selected domain. Each domain can have only one domain function diagram.
- The *Additional Domain Function Diagrams Page View* is also available for a selected domain. This view allows multiple domain function diagrams to be designed per object.

Before you design the diagram, all relevant domains and business functions should be defined in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a domain function diagram:

- [Adding a Sub-Domain or Business Function to the Domain Function Diagram](#)
- [Automatically Updating the Domain Diagram and Adding Referenced Objects](#)

Adding a Sub-Domain or Business Function to the Domain Function Diagram

You can add existing sub-domains or business functions to the selected diagram.

- 1) In the toolbox items pane, click either the **Domain**  icon or **Business Function** icon and click in an existing domain .
- 2) The object selector opens. Define search parameters, as needed, and select the domain(s) or business function(s) you want to add to the diagram. After you click **OK** in the object selector, the domain or business function is displayed in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant domain(s) or business function(s).
- 4) Click the **Save** button to save your changes.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Automatically Updating the Domain Diagram and Adding Referenced Objects

There are a number of methods available to automatically add existing objects that are referenced by the domains displayed in the diagram. The following referenced objects can be updated in the diagram.

Selected Object	Referenced Objects
Domain	Subordinate Domains, Business Functions

The referenced objects will be added in the visualizations of the domain that you are updating. It is recommended that you increase the size of the domain in the diagram to improve the layout of the added objects. For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*.



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

The following options are available in the **Semantic Actions**  menu to automatically add referenced objects to the diagram.

- **Update Subordinates for Object:** Select a domain in the diagram and select this option to add its referenced objects.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
- Select either **Organize by Rows** or **Organize by Columns** to define whether the objects should be organized in rows or in columns.
- Enter a number in the **Count** field to define how many rows or columns should be displayed.
- For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with

the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.

- **Update Subordinates for All Objects:** Select this option to add the referenced objects of all domains displayed in the diagram. Any objects referencing those already displayed in the diagram will be added to the diagram.
- **Update Subordinates for All Objects Recursively:** Select this option to add the referenced objects of all domains displayed in the diagram as well as the objects added via this function to the diagram. Objects immediately referenced by those already displayed in the diagram will be added to the diagram. If these added domains have referenced objects, these will also be added to the diagram, and so forth. The update action will proceed until the lowest level in the hierarchy is reached. The referenced objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram. For help in rearranging the added objects, see the section *Tips for Designing the Layout of the Diagram*.

Chapter 14: Designing Platform Diagrams

The Alfabet Diagram Designer allows you to design platform diagrams for an application or component. You can design a diagram by visualizing all relevant platform elements, local components, and standard platforms as well as the communication between platforms, which are visualized by means of platform information flows.

You can design multiple platform diagrams for a selected application or component. The platform diagrams can then be displayed in Alfabet in the *Platform Diagrams Page View* for the relevant application or component.

Before you design the diagram, all relevant platform elements, local components, and standard platforms should be defined in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a platform diagram:

- [Adding a Local Component, Platform Element, or Standard Platform to the Diagram](#)
- [Creating Platform Information Flows Between Standard Platforms and/or Platform Elements](#)
- [Automatically Updating the Platform Diagram and Adding Referenced Objects](#)

Adding a Local Component, Platform Element, or Standard Platform to the Diagram

You can add local components, platform elements, or standard platforms to be visualized in the diagram. Any platform elements that you want to visualize in the diagram, must be defined in the *Technical Platform Elements Page* of the application or component you are currently working with. You can add any standard platforms that have been added to the selected platform via the *Technical Platform Elements Page*.

- 1) In the toolbar, click either the **Standard Platform**  icon or **Platform Elements**  icon and click a blank space in the diagram.
- 2) The object selector opens. Define search parameters, as needed, and select the standard platform(s) or platform element(s) you want to add to the diagram. After you click **OK** in the object selector, the standard platform(s) or platform element(s) are displayed in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant standard platform(s) or platform element(s).
- 4) To edit a standard platform or platform element, double-click it to open its editor.
- 5) Click the **Save** button to save your changes.

Creating Platform Information Flows Between Standard Platforms and/or Platform Elements

You can create and visualize new information flows between platform elements, thus representing the communication between components. Any new information flows that you create are saved to the Alfabet database and can be viewed and edited by users in Alfabet with relevant access permissions.



When you create new information flows, you should first define how the information flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the information flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the information flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of information flows should be determined by the user. Remove the checkmark if the end points of information flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

- 1) In the toolbox items pane, click the **Platform Information Flow**  icon.
- 2) Click the source standard platform or platform element in the diagram.
- 3) Click the target standard platform or platform element in the diagram. An editor will open in which you can define the new information flow. For example, if you are adding an information flow between applications, the **Information Flow** editor will open.



Please note that 3 separate clicks are required to create the information flow. A drag-and-drop action will not produce the information flow.

- 4) Enter information into each field, as required.
- 5) Click **OK** to save your changes. The new information flow is displayed in the diagram. Click the **Save** button to save the information flow to the Alfabet database.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Automatically Updating the Platform Diagram and Adding Referenced Objects

There are a number of methods available to automatically add existing standard platform elements that are referenced by the standard platforms displayed in the diagram. Please note that you can only update the standard platform embedded in the selected standard platform. Any additional standard platforms embedded at lower levels in the platform hierarchy will not be added to the diagram.

It is recommended that you increase the size of the standard platforms or platform elements in the diagram to improve the layout of the added objects. For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*.



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For

more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

The following options are available in the **Semantic Actions**  menu to automatically add referenced objects to the diagram.

- **Update Subordinates for Object:** Select a standard platform in the diagram and select this option to add its referenced standard platforms and standard platform elements.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
 - Select either Organize by Rows or Organize by Columns to define whether the objects should be organized in rows or in columns.
 - Enter a number in the **Count** field to define how many rows or columns should be displayed.
 - For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.
- **Update Subordinates for All Objects:** Select this option to add the referenced standard platforms and standard platform elements of all standard platforms displayed in the diagram.

Chapter 15: Designing Standard Platform Diagrams

The Alfabet Diagram Designer allows you to design platform diagrams for a standard platform. You can design a diagram by visualizing all relevant standard platform elements and standard platforms as well as the communication between platforms, which are visualized by means of platform information flows. You can design multiple platform diagrams for a selected standard platform which are then accessible in the *Platform Diagrams Page View* for the selected standard platform.

Before you design the diagram, all relevant standard platform elements and standard platforms should be defined in Alfabet.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a standard platform diagram:

- [Adding a Standard Platform Element or Standard Platform to the Diagram](#)
- [Creating Standard Platform Information Flows Between Standard Platforms and/or Platform Elements](#)
- [Automatically Updating the Standard Platform Diagram and Adding Referenced Objects](#)

Adding a Standard Platform Element or Standard Platform to the Diagram

You can add standard platform elements or standard platforms to be visualized in the diagram. Any standard platform elements that you want to visualize in the diagram, must be defined in the *Standard Platform Elements Page View* of the standard platform you are currently working with. You can add any standard platforms that have been added to the selected standard platform via the *Standard Platform Elements Page View*.

- 1) In the toolbar, click either the **Standard Platform**  icon or **Platform Elements**  icon and click a blank space in the diagram.
- 2) The object selector opens. Define search parameters, as needed, and select the standard platform(s) or platform element(s) you want to add to the diagram. After you click **OK** in the object selector, the standard platform(s) or platform element(s) are displayed in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant standard platform(s) or platform element(s).
- 4) To edit a standard platform or standard platform element, double-click it to open its editor.
- 5) Click the **Save** button to save your changes.

Creating Standard Platform Information Flows Between Standard Platforms and/or Platform Elements

You can create and visualize new information flows between platform information flows between standard platforms and platform elements, thus representing the communication between platforms. Any new information flows that you create are saved to the Alfabet database and can be viewed and edited by users in Alfabet with relevant access permissions.



When you create new information flows, you should first define how the information flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the information flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the information flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of information flows should be determined by the user. Remove the checkmark if the end points of information flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.

- 1) In the toolbox items pane, click the **Platform IF**  icon.
- 2) Click the source standard platform or platform element in the diagram.
- 3) Click the target standard platform or platform element in the diagram. An editor will open in which you can define the new information flow.



Please note that 3 separate clicks are required to create the information flow. A drag-and-drop action will not produce the information flow.

- 4) Enter information into each field, as required.
- 5) Click **OK** to save your changes. The new information flow is displayed in the diagram. Click the **Save** button to save the information flow to the Alfabet database.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

Automatically Updating the Standard Platform Diagram and Adding Referenced Objects

There are a number of methods available to automatically add existing standard platform elements that are referenced by the standard platforms displayed in the diagram. Please note that you can only update the standard platform embedded in the selected standard platform. Any additional standard platforms embedded at lower levels in the platform hierarchy will not be added to the diagram.

It is recommended that you increase the size of the standard platforms or platform elements in the diagram to improve the layout of the added objects. For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*.



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For

more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

The following options are available in the **Semantic Actions**  menu to automatically add referenced objects to the diagram.

- **Update Subordinates for Object:** Select a standard platform in the diagram and select this option to add its referenced standard platforms and standard platform elements.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
 - Select either Organize by Rows or Organize by Columns to define whether the objects should be organized in rows or in columns.
 - Enter a number in the **Count** field to define how many rows or columns should be displayed.
 - For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.
- **Update Subordinates for All Objects:** Select this option to add the referenced standard platforms and standard platform elements of all standard platforms displayed in the diagram.

Chapter 16: Designing Value Stream Diagrams

Value streams address the needs of agile enterprises in their strategic portfolio management practice as they face rapid digital transformation, faster development of new technology solutions, and the need to synchronize the plan of action between business and IT. Value streams allow "value" in terms of the usefulness, advantage, or benefit of IT solutions to be articulated and measured in the business architecture. Non-monetary examples of value are, for example, the successful delivery of a product or service or access to up-to-date information to make better business decisions.

The Alfabet Diagram Designer allows you to design a value stream diagram showing the series of value stream steps that are relevant to implement solutions that provide a continued flow of value to the enterprise. The diagram may visualize the stakeholder organizations and their domains and business capabilities that are leveraged by the value stream step as well as the value stream step conditions required to enter or exit a value stream.

You can design one value stream diagram for a selected value stream which is then accessible in the *Value Stream Diagram Page View* for the selected value stream.

Before you design the diagram, all relevant value stream steps should be defined in Alfabet. When you first open the diagram in the Alfabet Diagram Designer, all existing value stream steps will be displayed in the Alfabet Diagram Designer. The value stream steps will be organized in a linear from left-to-right flow and sequenced in the order defined in the *Value Stream Steps Page View* and value stream flows will be automatically added indicating the sequence.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a value stream diagram:

- [Adding New Value Stream Steps to the Diagram](#)
- [Creating New Value Stream Step Flows Between Value Stream Steps](#)
- [Adding Value Stream Conditions and Value Stream Values to a Value Stream Step](#)
- [Adding Domains/Business Capability to the Value Stream Diagram](#)
- [Specifying the Domains Business Capabilities That Are Supported by a Value Stream Step](#)
- [Adding Organizations to the Value Stream Diagram](#)
- [Creating a Relationship Between Stakeholders/Business Roles and Value Stream Steps](#)
- [Generating the Network of a Value Stream Step](#)

Adding New Value Stream Steps to the Diagram

You can create new value stream steps for the selected value stream. Alternatively, you can also create a value stream step that references a business process. Once a value stream step has been added to the diagram, you can specify its position in the sequence of value stream steps by creating a **Value Stream Step Flow** as described in the section *Creating New Value Stream Step Flows Between Value Stream Steps*.

- 1) In the toolbox items pane, click either the **Value Stream Step** or **Value Stream Step by Business Process** icon and click in the canvas area.



If you have selected **Value Stream Step by Business Process**, the selector will open. Select the business process that the value stream shall reference and click **OK**.

- 2) The **Value Stream Step** editor opens..

Basic Data tab:

- **ID:** Alfabet assigns a unique identification number to each value stream step in the inventory. This number cannot be edited.
- **Name:** Enter a unique name for the value stream step.
- **Business Process:** If relevant, select a business process that the value stream step shall be derived from.
- **Description:** Enter a meaningful description that will clarify the purpose of the value stream step.

Authorized Access tab:

- **Authorized User:**

Click the **Search** icon to assign an authorized user to the selected value stream step. The authorized user will have Read/Write access permissions to the value stream step and is authorized to maintain the value stream step in Alfabet.

- **Authorized User Groups:**

Select one or more checkboxes to assign Read/Write access permissions to all users in a selected user group.



For more detailed information about the concept of access permissions, see the section *Understanding Access Permissions in Alfabet* in the reference manual *Getting Started with Alfabet*.

- 3) Repeat the process, as needed, in order to add the relevant value stream steps.
- 4) Click the **Save** button to save your changes.

Creating New Value Stream Step Flows Between Value Stream Steps

You can create new value stream step flows between value stream steps. The value stream step flows you create are saved to the Alfabet database. The value stream step flow specifies the sequence of the value stream steps. Any changes you make to the sequence of value stream steps in the context of the Alfabet Diagram Designer will be reflected in the *Value Stream Steps Page View*.



When you create new value stream step flows, you should first define how the value stream step flows should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the value stream step flows should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the value stream step flows should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of value stream step flows should be determined by the user. Remove the checkmark if the end points of value stream step flows should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

To create a value stream step flows:

- 1) In the toolbox item pane, click the **Value Stream Step Flow**  icon.
- 2) Click the value stream step in the diagram that you want to define as the predecessor object of the value stream step flow.
- 3) Click the value stream step that you want to define as the successor object of the value stream step flow. The new value stream step flow is added to the diagram and the sequence definition of the value stream steps is added to the Alfabet database



Please note that 3 separate clicks are required to create the value stream step flow. A drag-and-drop action will not produce the value stream step flow.

Adding Value Stream Conditions and Value Stream Values to a Value Stream Step

If value stream step conditions and value stream values have been created for value stream steps, you can add them to the diagram.

The referenced entry conditions, exit conditions, and value stream values will be added in the visualizations of the value stream step that you are updating. It is recommended that you increase the size of the value stream step in the diagram to improve the layout of the added objects. For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*.



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For

more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

The following options are available in the **Semantic Actions**  menu to automatically add referenced objects to the diagram.

- **Update Subordinates for Object:** Select a value stream step in the diagram and select this option to add its entry conditions, exit conditions, and value stream values.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
 - Select either Organize by Rows or Organize by Columns to define whether the objects should be organized in rows or in columns.
 - Enter a number in the **Count** field to define how many rows or columns should be displayed.
 - For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.
- **Update Subordinates for All Objects:** Select this option to add the referenced entry conditions, exit conditions, and value stream values of all value stream steps displayed in the diagram.

Adding Domains/Business Capability to the Value Stream Diagram

You can add as many domains or business capabilities as needed to the value stream diagram. Once a domain/business capability has been added, you can create a reference between the domain/business capability and value stream step via the **Enabled Domain** diagram item as described in the section *Specifying the Domains Business Capabilities That Are Supported by a Value Stream Step*.

- 1) In the toolbox items pane, click the **Domain**  icon and click a blank space in the diagram.
- 2) The object selector opens. Define search parameters, as needed, and select the domain(s) you want to add to the diagram. If domain stereotypes have been defined, the stereotype will be listed in the **Stereotype** column. After you click **OK** in the object selector, the domain will be placed on the spot where you clicked in the diagram.
- 3) Repeat the process, as needed, in order to add the relevant domains.
- 4) Click the **Save** button to save your changes.

Specifying the Domains Business Capabilities That Are Supported by a Value Stream Step

You can create connection items between domains or business capabilities and value stream steps via the **Enabled Domain** diagram item. The connection items indicate that the domain/business capability is supported by the value stream step. The connection items are displayed per default as green arrows but the color can be modified as needed. The references you create are saved to the Alfabet database.



When you create connection items, you should first define how the connection items should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the connection items should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the connection items should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of connection items should be determined by the user. Remove the checkmark if the end points of connection items should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.



For more information about how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

To create a connection item indicating that a value stream step supports a domain or business capability:

- 1) In the toolbox item pane, click the **Enabled Domain**  icon.
- 2) Click the value stream step in the diagram that you want to define as the source of the relationship.
- 3) Click the domain or business capability that you want to define as the domain/business capability that is enabled by the source value stream step. The enabled domain connection is added to the diagram.



Please note that 3 separate clicks are required to create the connection item. A drag-and-drop action will not produce the connection item.

Adding Organizations to the Value Stream Diagram

You can add organizations to the value stream steps in order to visualize the stakeholder organizations or the organizations that have a business role for the value stream step. Once an organization has been added, you can create a reference between the organization and value stream step via the **Stakeholder Relationship** diagram item as described in the section *Creating a Relationship Between Stakeholders/Business Roles and Value Stream Steps*

- 1) In the toolbox items pane, click either the **Stakeholder**  icon to add a stakeholder organization or the **Business Role** icon to add an organization with a business role for the value stream step. Click in the canvas area.
- 2) The object selector opens. Define search parameters, as needed, and select the organization that you want to add to the diagram. After you click **OK** in the object selector, the organization is displayed in the diagram.

- 3) Repeat the process, as needed, in order to add the relevant organizations.
- 4) Click the **Save** button to save your changes.

Creating a Relationship Between Stakeholders/Business Roles and Value Stream Steps



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

You can create connection items between organizations and value stream steps via the **Stakeholder** diagram item. The connection items indicate that the organizations is a stakeholder in the value stream step. If the source organization is a business role, the connection time indicates that the business role has a relationship to the values stream step. The connection items are displayed per default as red arrows but the color can be modified as needed. The references you create are saved to the Alfabet database.



When you create connection items, you should first define how the connection items should be created. To do so, click **Other Actions**  > **Diagram Settings**. In the dialog, set a checkmark in the **Elbowed Connection** checkbox if the connection items should be drawn as an elbow line (allowing for one or more angles). Remove the checkmark if the connection items should be created as a straight line (no angles). Set a checkmark in the **Center Connection** checkbox if the end points of connection items should be determined by the user. Remove the checkmark if the end points of connection items should always be drawn from the center of one diagram object to the center of the other diagram object. Click **OK** to save the settings.



For more information about to how to refine the display of the connection items, see the section *Improving the Layout of Connection Items*.

To create a stakeholder relationship indicating that an organization is a stakeholder of a value stream step:

- 1) In the toolbox item pane, click the **Stakeholder Relation**  icon.
- 2) Click the organization in the diagram that you want to define as the stakeholder of the value stream step.
- 3) Click the value stream step that is the target of the stakeholder relationship. The stakeholder relation connection is added to the diagram.



Please note that 3 separate clicks are required to create the connection item. A drag-and-drop action will not produce the connection item.

Generating the Network of a Value Stream Step

Value stream steps visualized in your diagram may have other values stream steps, enabled domains, and stakeholder organizations that have been defined for the selected value stream step that are not visualized in the diagram. By means of the **Generate Network** functionality, you can select a value stream step in the

diagram and add the values stream steps, enabled domains, and stakeholder organizations that have relationships defined to the selected value stream step.

You can define how far-reaching the network should extend. When you generate the network for a selected value stream step in the diagram, the connection items as well as the referenced values stream steps, enabled domains, and stakeholder organizations will be added to the diagram. Once the **Generate Network** functionality has been executed, you will typically need to refine the visualization of the diagram. For more information, see *Tips for Designing the Layout of the Diagram*.

1) In the diagram, select the value stream step whose network you want to generate.

2) In the toolbar, select **Other Actions**  > **Generate Network**.

3) In the **Generate Network** editor, define the following fields, as needed:

- **Objects' Vertical Distance:** Define the vertical distance between the objects that are to be placed in the diagram.



The unit of measurement will depend on the cultures implemented in your Alfabet solution. For more information about the configuration of cultures, see the section *Specifying the Cultures Relevant to Your Enterprise* in the chapter *Localization and Multi-Language Support for the Alfabet Interface* in the reference manual *Configuring Alfabet with Alfabet Expand*.

- **Objects' Horizontal Distance:** Define the horizontal distance between the objects that are to be placed in the diagram.
 - **Object Placement:** Define whether the objects are to be positioned horizontally or vertically to the selected object.
 - **Max. Network Depth:** Define how far-reaching the network should extend. Set to 1 to place objects directly associated with the object selected in the diagram. Set to 2 to place objects associated with the objects on level 1. Set to 3 to place objects associated with the objects on level 2, etc.
 - **Include Connection Types To Build Network:** Deselect the type of connections that should not be included for finding objects to place on the diagram.
 - **Build Network Traversing Backwards:** Select to display objects that have information flows incoming to the selected database object in the diagram. If the Reverse checkbox is selected, only the information flows incoming from the selected database object will be visualized. If the Reverse checkbox is not selected, only the information flows outgoing from the selected database object will be visualized. The Reverse checkbox is not selected by default.
- 4) Click **OK** to add the objects and their associated connection items to the diagram.

Chapter 17: Designing Framework Group Diagrams

The Alfabet Diagram Designer allows you to design the diagram for a framework or reference model that users can navigate to access data. In Alfabet, a framework is a hierarchically structured collection of framework groups in which a user can navigate through the levels of the framework structure. Framework diagrams are typically viewed by a large number of users that may have no direct access to the inventory of objects in Alfabet. For example, your enterprise might implement a standard framework like Zachmann or TOGAF® or a reference model that is domain specific, such as a business architecture with its business data and usage or a warehouse management system and its technical components.

Before a framework diagram can be designed in the Alfabet Diagram Designer, the framework must first be defined in Alfabet by means of framework groups. A framework group is a container to structure objects from different object classes in order to view, analyze, and communicate the company's enterprise architecture. A framework group may have subordinate framework groups that also contain objects. Before you design the diagram, all relevant objects should be assigned to the framework groups that you plan to include in the diagram. For more information about defining framework groups and assigning objects to framework groups, see the chapter *Defining and Navigating with Your Corporate Frameworks* in the reference manual *Getting Started with Alfabet*.

You can design only one diagram for a selected framework group. The diagram can be displayed in the **Navigation Diagram** page view.

Because designing the diagram layout is a very involved process, you should read the chapter *Getting Started with the Alfabet Diagram Designer* in order to understand the many possibilities to add objects that exist in the Alfabet database to the diagram, simplify the display of a complex network of connection items, and refine the visualization of the diagram with a legend, shapes color, images, texts, etc.

Please note that the more objects that are displayed in the diagram, the more complex will be the task of designing the diagram so that it is easy for the user community to understand. Some functionalities such as the **Update...** or **Generate Network** functionalities may result in a very complicated diagram with a confusing web of connection items. In this case, you should refer to the section *Improving the Layout of Connection Items*.

The following is possible when designing a framework diagram:

- [Adding Objects to the Framework Group Diagram](#)
- [Substituting Visualized Objects in the Diagram](#)

Adding Objects to the Framework Group Diagram

Typically, the framework group that you are working with will be displayed in the diagram. Before you design the diagram, all relevant objects as well as to any subordinate framework groups that you want to include in the diagram should be assigned to the selected framework group.

You can update the framework group in the diagram and add the objects directly assigned to the framework group as well as any subordinate framework groups defined for the framework group. You should first increase the size of the framework group that you are updating in order to improve the layout of the added objects. For more information about increasing the size of a diagram element, see *Changing the Size of an Object/Shape*.



The number of nodes created in a diagram via the **Add Subordinates for Object** or the **Update Subordinates...** functionalities may be limited in order to improve performance. This limit may be specified by your solution designer via the XML object **DiagramInformationFlowDef**. For more information, see the *Configuring the Visualization of Connection Items and Subordinate Object in Diagrams* section in the reference manual *Designing IT Landscape Diagrams in Alfabet*.

The following options are available in the **Semantic Action** menu to automatically add the referenced objects and subordinate framework groups to the diagram.

- **Update Subordinates for Object:** Select a framework group in the diagram and select this option to add its referenced objects.



When you select this, the **Update Group** editor will open. Define the following as needed and click **OK**. The objects will be added to the diagram

- For the **Group Table Layout** attribute, set the checkbox to specify the automatic formatting of objects. If you do not select the checkbox **Group Table Layout**, all objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram.
 - Select either **Organize by Rows** or **Organize by Columns** to define whether the objects should be organized in rows or in columns.
 - Enter a number in the **Count** field to define how many rows or columns should be displayed.
 - For the **Reapply Table Layout on Rendering Diagram** attribute, set the checkbox to specify that the layout should be rescanned upon the **Update...** action. If the checkbox is not selected, the current layout will not be updated with the table layout definition. In this case, the current layout of referenced objects including the positioning or removal of reference objects will not be changed.
- **Update Subordinates for All Objects:** Select this option to add the referenced objects of all subordinate framework groups displayed in the diagram. The objects referencing the framework groups already displayed in the diagram will be added to the diagram.
 - **Update Subordinates for All Objects Recursively:** Select this option to add the referenced objects of all applications displayed in the diagram as well as the objects added via this function to the diagram. Objects immediately referenced by those already displayed in the diagram will be added to the diagram. If these added applications have referenced objects, these will also be added to the diagram, and so forth. The update action will proceed until the lowest level in the hierarchy is reached. The referenced objects will be placed on top of each other in the diagram and you will need to manually distribute them in the diagram. For help in rearranging the added objects, see the section *Tips for Designing the Layout of the Diagram*.

Substituting Visualized Objects in the Diagram

You can remove one object in the diagram and replace it with another object from the same object class. For example, you could replace an application with another application version or variant. The object that you choose to add to the diagram must be of the same object class as the object that you are replacing.

Any objects associated with a framework group that you replace will also be removed from the diagram. I

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- 1) In the diagram, click the framework group or object that you want to replace with another framework group or object.
 - 2) In the toolbar, click **Semantic Actions**  > **Substitute**.
 - 3) The object selector opens. Enter search criteria, as needed, and click **Search**.
 - 4) Click the framework group or object that you want to add to the diagram and click **OK**. The original framework group or object is replaced with the framework group or object you selected in the object selector.

Chapter 18: Designing Storyboard Diagrams

The Alfabet Diagram Designer allows storyboard diagrams which serve as a portal-like environment that allows users to easily access data and relevant information for their tasks. For example, storyboards may be defined for various stakeholders in the enterprise such as CIOs and business managers as well as users who have concrete aspects of the IT inventory that they are responsible for.

Dashboard: Desks - Finance and Risk
Dashboard

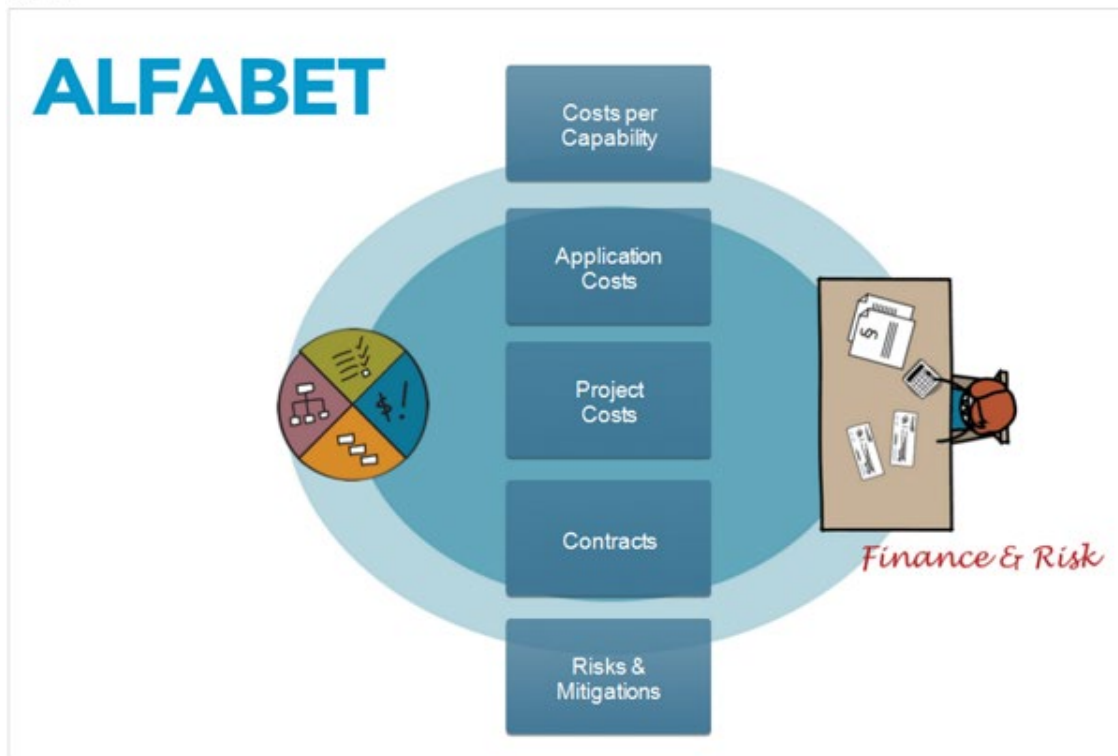


FIGURE: Storyboard diagram with 5 bookmarks

The Alfabet Diagram Designer allows you to create and design storyboards for various kinds of users from CIOs to business managers to IT responsible. The storyboard is a diagram made up of a set of visual links that allow users to navigate directly to the information they need. The storyboard typically consists of bookmarks that target objects in explorers, object profiles (or object cockpits), page views, or configured reports. A storyboard may also have links to other storyboards, ARIS diagrams, websites or documents. Each storyboard must be explicitly assigned to the individual users that will have access to it in the **Storyboard Management** functionality. The storyboard may even be assigned as a start page for specified users. This is described in more detail in the chapter *Working with Storyboards* in the reference manual *Getting Started with Alfabet*.

Before you can design the storyboard, you must ensure that all bookmarks, ARIS diagram links, and other storyboards that are to be available in the dashboard have been created. You can add as many bookmarks/links as needed to provide navigation. A standard default setting should be defined for any existing filters in views targeted by a bookmark.



Please keep the following in mind when defining and accessing bookmarks:

- A bookmark created for an explorer is a reference to a position in an explorer. The explorer hierarchy is dynamically computed at runtime. If the structure of the explorer changes, the link may no longer be valid. For example, if new intermediary levels have been added to

an explorer since the bookmark was created, the path saved for the bookmark will no longer be accurate and the bookmarked location may not be found.

- Please note that some explorers and views cannot be bookmarked. For example, bookmarks cannot be created for functionalities used for administrative purposes that are available via an administrative user profile or configuration functionalities that are not associated with objects governed by access permissions. If the functionality or view may not be bookmarked, the **Create Bookmark** capability will be disabled.
- The user profile that you are logged in with when you create the bookmark is the user profile used to initially open the bookmark. Thus, if a bookmark is shared with other users via a storyboard, for example, then those users accessing an Alfabet functionality via the dashboard will access the functionality with the user profile associated with the bookmark implemented in the storyboard. For more information about working with storyboards, see the chapter *Working with Storyboards*.

The links can be visually designed using any of the visual design elements available in Alfabet Diagram Designer. Typically, you will add one or more graphic image(s) to the storyboard diagram and place bookmarks or links to ARIS diagrams or other storyboard diagrams behind the image(s) so that users can click the image to trigger the link. This is not mandatory however. The bookmarks and links can be placed directly in the storyboard diagram and visually designed as needed. Please note that the **Change Legend** toolbox item cannot be added to a storyboard diagram.

To design a storyboard diagram:

- 1) Add existing bookmarks, links to ARIS diagrams or other storyboards as well as Web links and documents to the diagram:
 - To add a link that navigates to another storyboard diagram, click the **Storyboard** icon  in the **Toolbox Items** pane and click a blank space in the diagram. The object selector opens. Define search parameters, as needed, and select the storyboard diagram(s) you want to add to the diagram. After you click **OK** in the object selector, a yellow rectangle is placed in the diagram.
 - To add a Web link that opens a website or an externally-stored document, click the **Web Link** icon  in the **Toolbox Items** pane and click a blank space in the diagram. The URL editor opens. Define the following fields and click **OK**:
 - **Title:** Enter the text that should be displayed for the Web link. The text should help users understand why the URL is available.
 - **URL:** Enter the complete URL starting with `http://`, or click the **Browse** button to navigate to a directory where a document is located that you want to link to. The URL link may contain up to 511 characters.
 - **Category:** Optionally select the document category that the URL should be assigned to.
 - To add a link that opens a bookmarked object profile/object cockpit, explorer, or view, click the **Bookmark** icon  in the **Toolbox Items** pane and click a blank space in the diagram. In the object selector, define search parameters, as needed, and select the bookmark(s) you want to add to the diagram. After you click **OK** in the object selector, a white rectangle is placed in the diagram.

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- To add a link to ARIS diagrams in ARIS, click the **ARIS Diagram Link** icon  in the **Toolbox Items** pane and click a blank space in the diagram. In the object selector, define search parameters, as needed, and select the ARIS diagram link(s) you want to add to the diagram. After you click **OK** in the object selector, a white rectangle is placed in the diagram.



Please note that other browse hierarchies may be defined by your solution designers. For more information, see the section *Configuring a Custom Selector for Search Functionalities* in the reference manual *Configuring Alfabet with Alfabet Expand*.

- 2) Repeat the previous steps, as needed, in order to add the relevant links to the storyboard diagram.
- 3) Design the visualizations of the links with text, color, images, etc., as needed. For example, to hide the links behind images, click the **Image** icon , click a blank space in the diagram, and select an existing image to visualize the bookmark/link and place it in the diagram. Move the bookmark/link on top of the image and drag it to the size of the image. Click **Reorder > Send to Back** to hide the link behind the image. For more information about other design possibilities, see the section *Tips for Designing the Layout of the Diagram*.
- 4) Click the **Save** button to save your changes.
- 5) Return to the browser tab displaying the **Storyboard Diagram** page view and click the **Update** button to view the design. Please note that you cannot navigate via the links in this view. To navigate to the views targeted by the links, go to the **Storyboards** functionality and select the relevant storyboard  in the explorer.

Chapter 19: Working with Custom Diagrams

Custom diagrams may be configured by your solution designer that allow you to design and view diagrams that visualize objects and references between objects that are not addressed by the standard diagrams. For example, a custom diagram could be configured to display standard platforms and applications with connection items that represent the references between the standard platforms and applications. Your solution designer will configure the object classes including connection items that may be included in the diagram, the object classes and connection items that may be created in the diagram, the visualization of those object classes and connection items, and the shapes that are available for drawing purposes.

The complete infrastructure available for standard diagrams including filters and toolbar buttons will be available for custom diagrams in the Alfabet user interface. Users with relevant access permissions to the Alfabet Diagram Designer can edit the custom diagrams.



The configuration of custom diagrams is a complex process and is described in the section *Configuring Custom Diagrams* in the reference manual *Configuring Alfabet with Alfabet Expand*. Please note that a configured report must be configured that displays the diagram to the user and provides the button for opening the Alfabet Diagram Designer and editing the diagram. A configured report may will be assigned to the object profile or object cockpit of the base object class. Two types of configured reports may be implemented:

- The configured report allows a diagram to be create one as the main standard diagram for the object. The diagram will be available in the configured diagram view report that has been added to the object profile or object cockpit of the object class. The configured diagram view report is designed to display the standard diagram only. The Alfabet Diagram Designer can be opened via the **Open Diagram** button in order to design the custom diagram.
- The configured diagram list report allows multiple diagrams to be created for the object. The user can create diagrams via the **New** button in the toolbar of the configured report. The user must select the custom diagram definition he/she wants to use for the new diagram. The new diagram will be added to the tabular view and can be double-clicked to open the configured diagram view report. The configured diagram view report is designed to display any custom diagram based on the selected custom diagram definition. The Alfabet Diagram Designer can be opened via the **Open Diagram** button in order to design the custom diagram.

26605 Custom diagrams may be deleted if necessary. If the diagram is available as a custom diagram for an object, the **Delete** button will be available directly in the configured diagram view report opening the diagram. If the diagram has been created in a configured diagram list report, the **Delete** button will be available in the toolbar of the diagram list report only. In this case, the custom diagram view report opening the diagram will not have a **Delete** button.

Typically, a new diagram based on a custom diagram definition will be empty and must be defined from scratch by the user opening the diagram in the diagram designer. However, rules may be configured for the custom diagram definition that automatically add default objects to the diagram when it is created. The default objects can only be added automatically to diagrams when the diagram is first created. Once a diagram has been created, all updates to the number and kind of default objects in the Alfabet database must be added by a user designing the diagram in the Alfabet Diagram Designer. The existing design will be maintained when the default objects are added. Default objects already added to the diagram will not be added again and will remain in the position and design already defined for them in the diagram.

To add default objects to a new diagram:

- 1) In the toolbar, click **Semantic Actions**  > **Add Default Objects**.

2) In the **Generate Default Objects** editor, define the following:

- **Objects' Vertical Distance:** Define the vertical distance between the objects that are to be placed in the diagram.



The unit of measurement will depend on the cultures implemented in your Alfabet solution. For more information about the configuration of cultures, see the section *Specifying the Cultures Relevant to Your Enterprise* in the chapter *Localization and Multi-Language Support for the Alfabet Interface* in the reference manual *Configuring Alfabet with Alfabet Expand*.

- **Objects' Horizontal Distance:** Define the horizontal distance between the objects that are to be placed in the diagram.
- **Object Placement:** Define whether the objects are to be positioned horizontally or vertically to the selected object.
- **Include Queries to Add Default Objects:** Select the queries that shall be executed to add the default objects to the custom diagram.

3) Click **OK** to add the objects and their associated information flows to the diagram.

4) Custom diagrams can be designed similar to standard diagrams. Please refer to the chapter *Getting Started with the Alfabet Diagram Designer* for basic information about designing diagrams in the Alfabet Diagram Designer. Click the **Help** button to find general information about designing diagrams for the standard diagram definition used as the basis for the custom diagram.

Refining the Layout of Node Arc Reports

Node arc reports are configured reports that are based on the design elements and layouts of standard Alfabet diagrams. The boxes displayed in the node arc report to represent objects are based on configured diagram item templates.



For more information about configuring node arc reports, see the section *Node Arc Reports* in the reference manual *Configuring Alfabet with Alfabet Expand*.

- A **Change Layout** button is available in node arc reports that allows the report to be opened in the Alfabet Diagram Designer. The layout of the report can be modified in the Alfabet Diagram Designer including changes to the size, alignment, coloring, and styling of the objects in the report. For more information about changing the visualization of the node arc report, see the sections *Aligning Objects and Shapes in the Diagram*, *Changing the Size of an Object/Shape* and *Defining Color for Objects/Shapes*.



Please note that if objects are not found any longer via the query of the node arc reports, the objects and the connections of the objects to other objects will be automatically removed from the rendering of the report. New nodes cannot be added to the node arc report nor can nodes be explicitly removed from the node arc report by the user in the context of the Alfabet Diagram Designer.

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