

Servoy Model Tool documentation

This document explains basic usage of the Servoy Model Tool Serclipse plugin.

A fair knowledge of Servoy and the Servoy IDE is required to be able to get the most of this tool: This documentation does not cover the Servoy IDE but the added functionalities the Servoy Model Tool offers to Servoy developers.

For installation of the Servoy Model Tool, please refer to the installation doc.

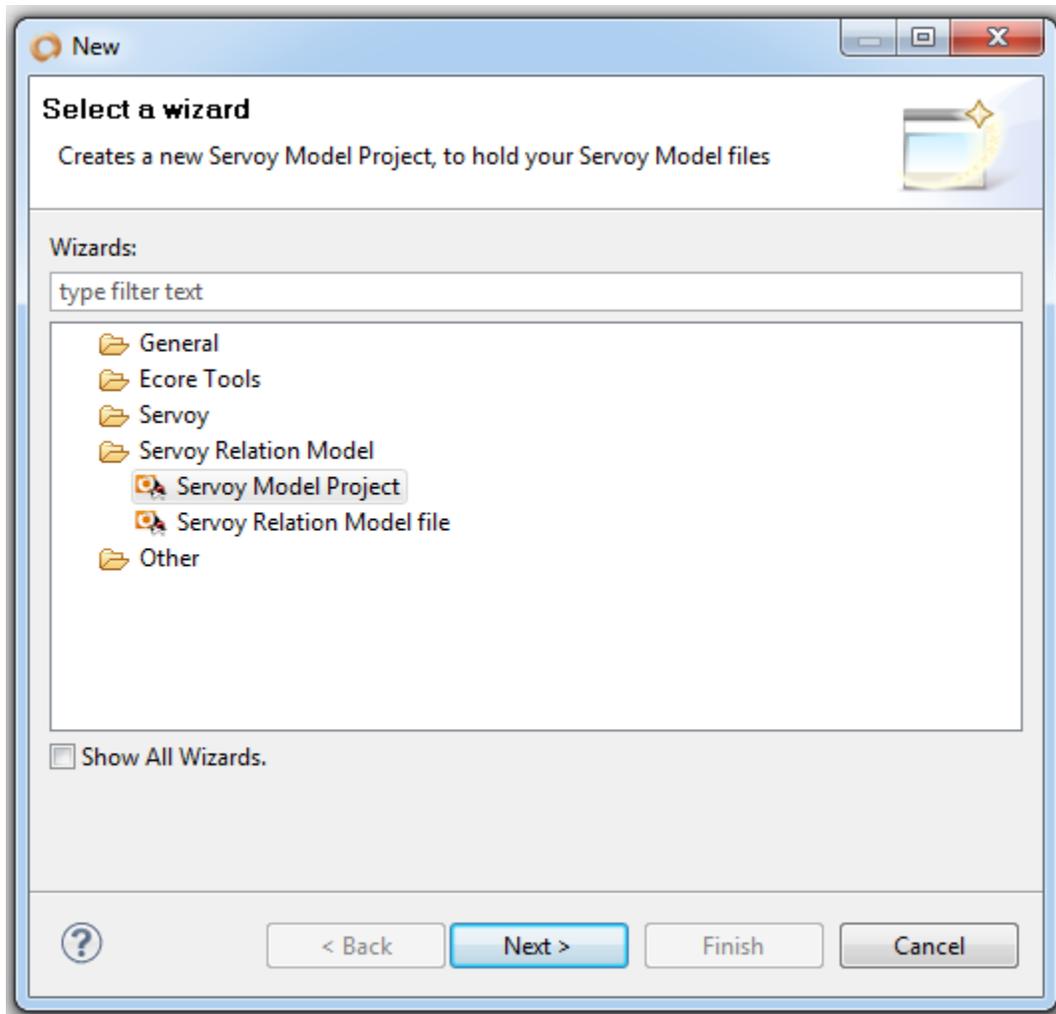
Model Project

You will first need to have some solutions (with tables and relations) in your workspace if you want to build schemas out of it.

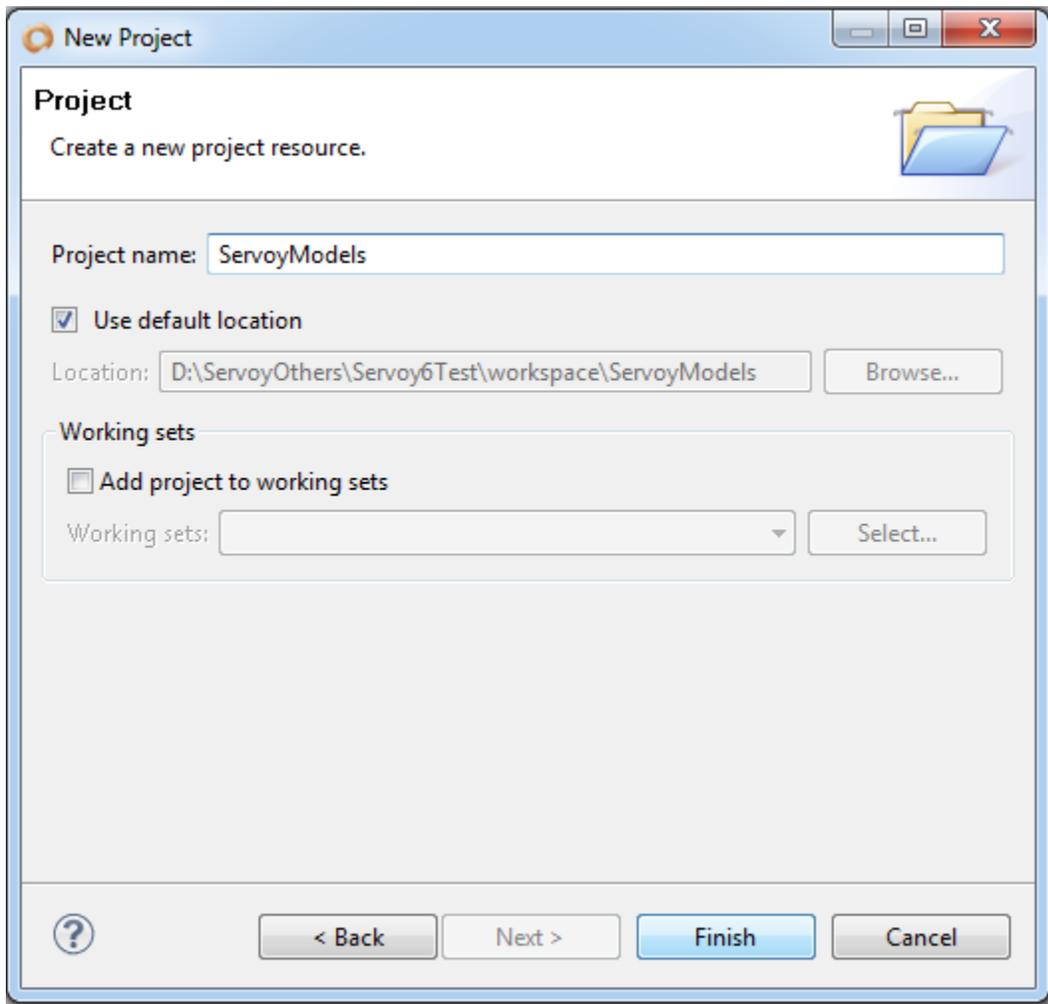
Then you can either create a new "Servoy Model Project" or open the "Servoy Model" perspective to get started.

Create a new Servoy Model project

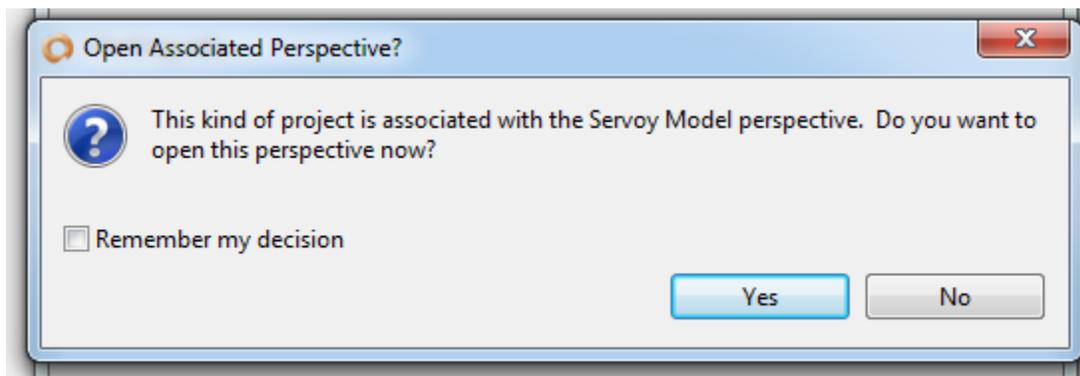
Choose "File > New > Other...", then open the "Servoy Relation Model" node, and choose the "Servoy Model Project" entry here:



Click next and input a name for your new project:

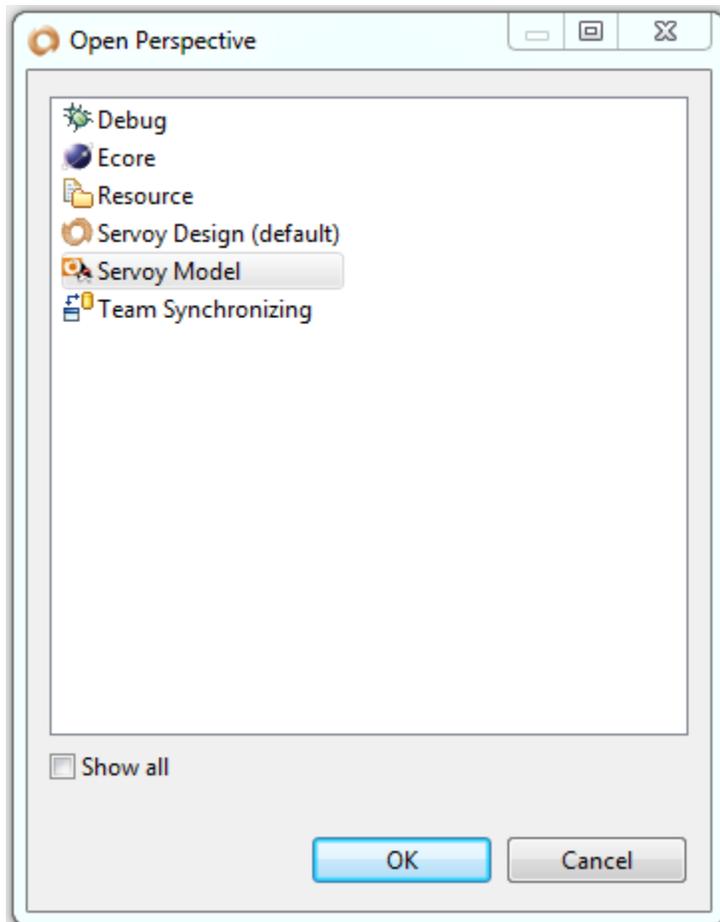


If not opened already, you will be prompted to open the "Servoy Model" perspective, click "Yes":



Open the Servoy Model perspective

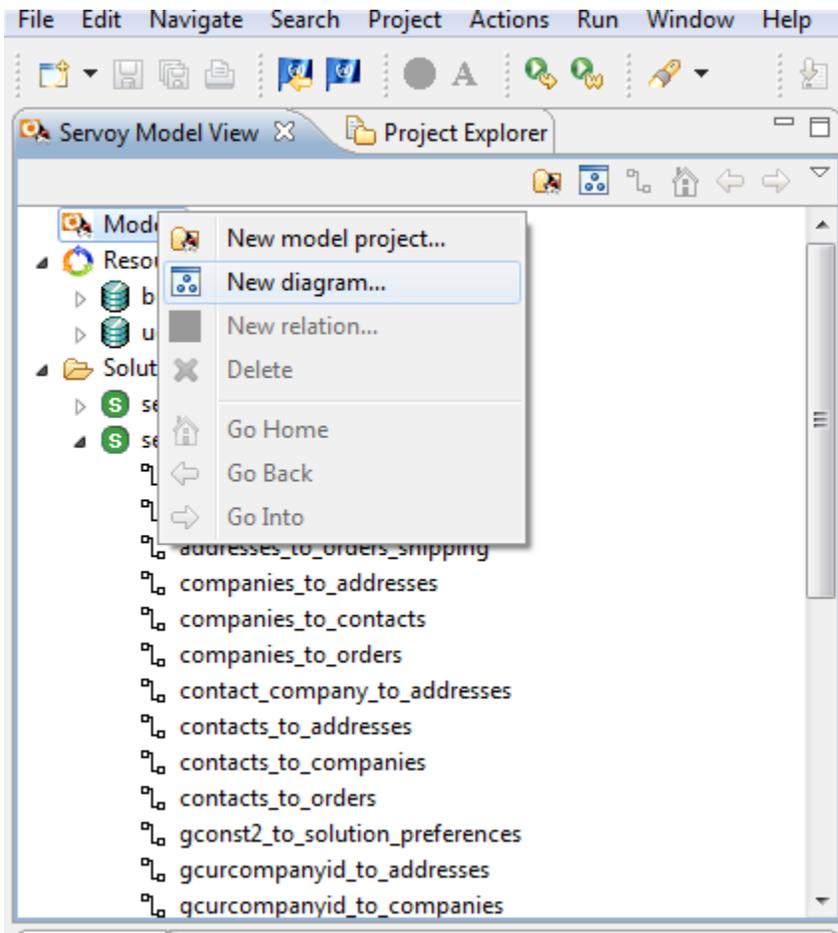
Alternatively, you can directly open the Servoy Model perspective, you will find it under "Window > Open Perspective > Other...", just select it and choose "Open":



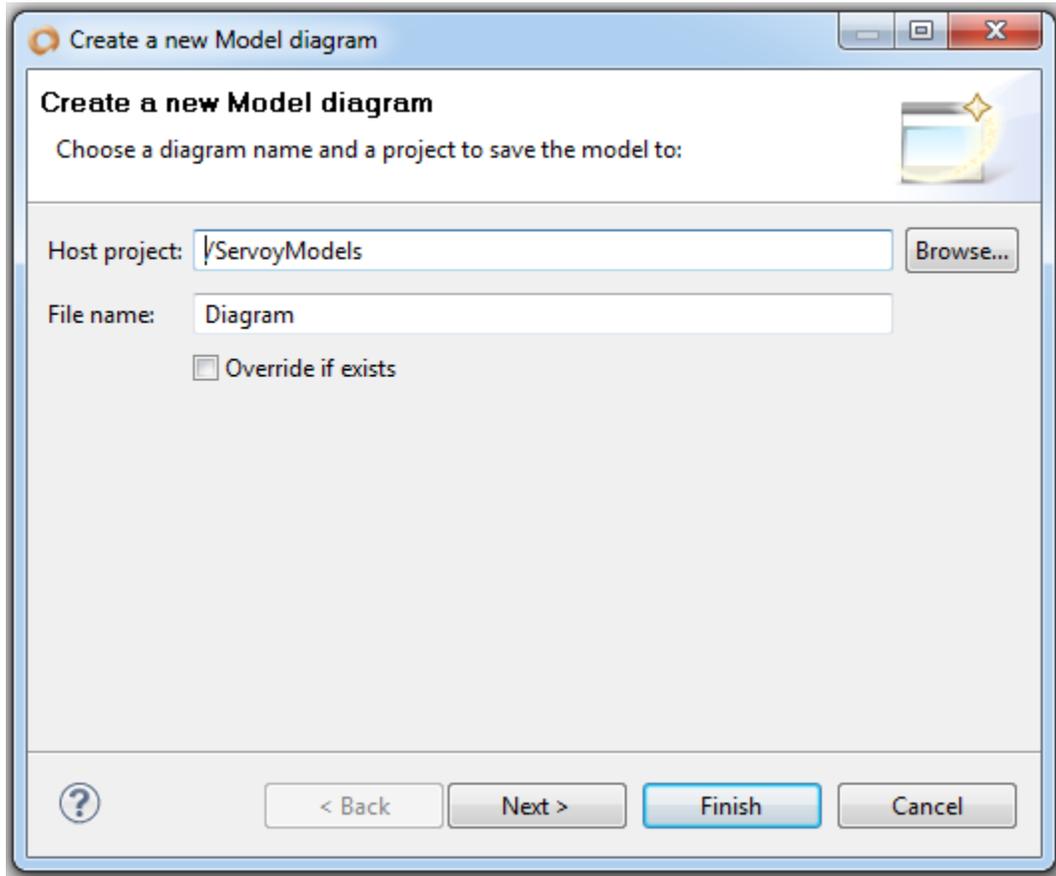
Model Diagram

Create your first diagram

You can do that by choosing "File > New > Other...", opening the "Servoy Relation Model" node, and choosing "Servoy Relation Model file", or by right clicking on the "Models" node in the "Servoy Model View" or by clicking on the icon with 3 little blue dots in the local toolbar of the "Servoy Model View":



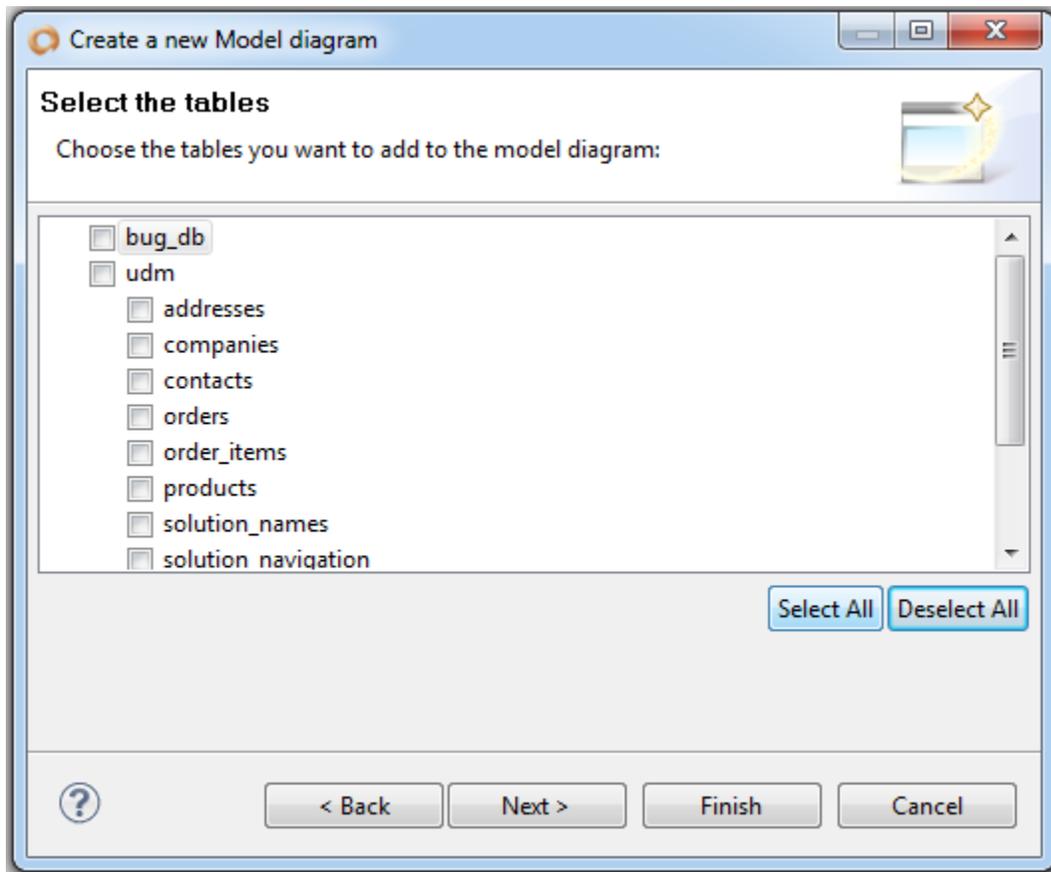
You will be presented with the New Model Diagram wizard's first page, where you will need to choose a host project (a Servoy Model project), and a name for your Diagram):



(by default, the project will be the first project of type "Servoy Model Project" found in your workspace, and the default name of the diagram file will be "Diagram" (the plugin will automatically add an .smodel extension to it).

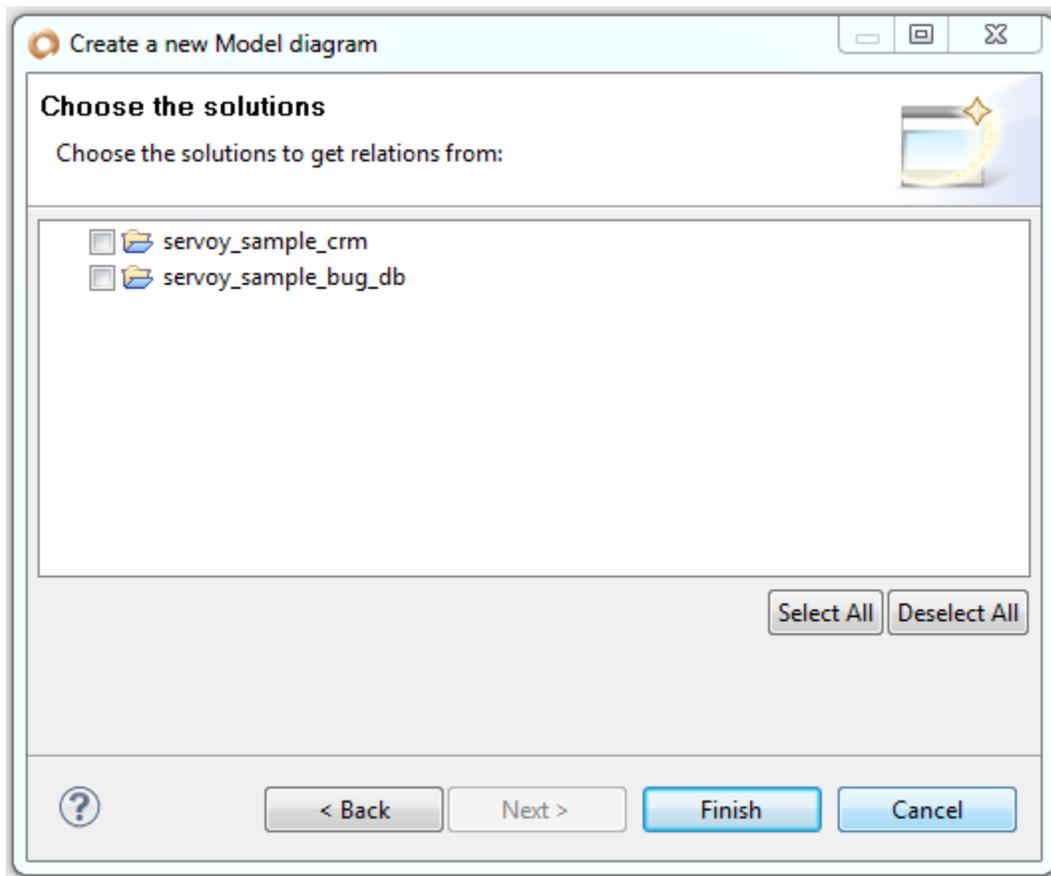
FYI: smodel files are just regular xml files, containing all the graphical information about a diagram along with xml information about the Servoy objects they are related to, they are self-contained and can be versioned in SVN along with your solutions.

You can click finish here if you want to create a new blank diagram, otherwise you can click next, to choose which tables you want to automatically add:

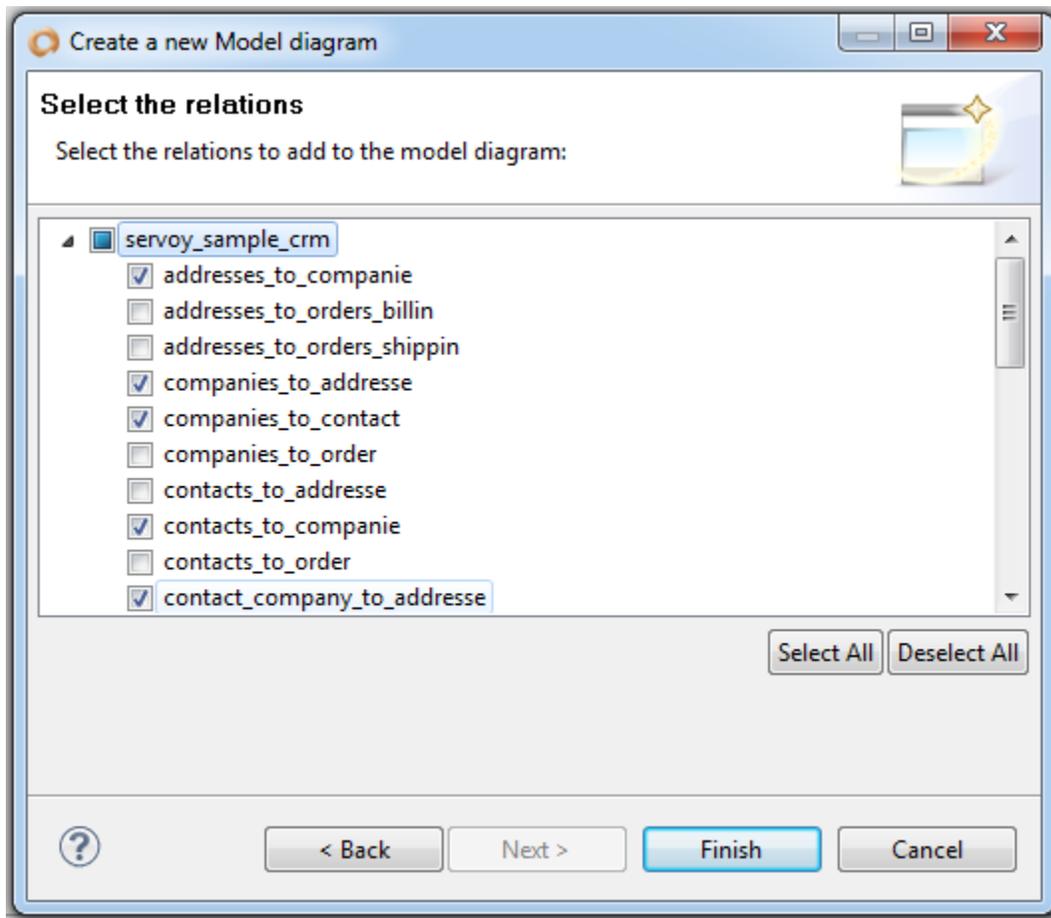


The wizard will list all servers found in the resources projects of your workspace, provided that these contain .dbi files and are enabled, you can select all or only a few, and you can select from multiple server sources as well.

You can stop there if you want or go to the next page to choose the solution(s) you want to retrieve the relationships from:



The wizard will list all the solutions and modules that contains relationships, you can select all or only a few, then you can stop there (and all the relations from these solutions will be used), or go to the next page to choose the relations:



Now click finish and the plugin will generate a diagram for you out of your selections. You will see that, depending on the complexity of the solution and the number of tables/relations and solutions you have selected, the result can be quite crowded:

Drag and Drop

Fortunately adding tables, relations and objects to a diagram is very easy; just select from the "Servoy Model Viewer" and drop on a diagram.

If 'Automatically add tables from relations' is checked in the preferences, you will see that you can simply drag and drop relations and it will automatically add the tables if they are not already in the diagram.

Dragging a column or a global (or scoped variable) onto another column will allow you to create a new relation: you will be asked for a solution to host that relation (if there is more than one solution available), and a check will be done on the automatic name to verify that it doesn't exist already in the scope of your solution, allowing you to type a new name if that's the case.

Most interactions in the diagram are intuitive and work as you will think they should, for example, try moving objects around, right click on objects and you will see contextual popup with various possible actions, pass the mouse over tables, columns and relations and you will see tooltips, when an object is selected, it will also be selected in the Outline view, and its extended properties will be shown in the properties view.

Contextual palette

Tables, Globals/Scoped variables, Notes and Subgraphs have a little contextual palette attached to them. When you put your mouse over one of these objects, you will see a little palette of a maximum of 3 icons which are shortcuts to useful functions:

- **Delete:** to delete an object (a dialog will ask for confirmation)
- **Update:** if the Servoy model (.dbi or .rel) was changed when the diagram was not opened, next time you open the diagram, you will see that you can update the related element using this function (this is true only if the diagram itself has the property "Keep synchronized" set to true)
- **Collapse:** will toggle the collapse state of an object, leaving only the minimum name entity (or a simple "g" for a global)

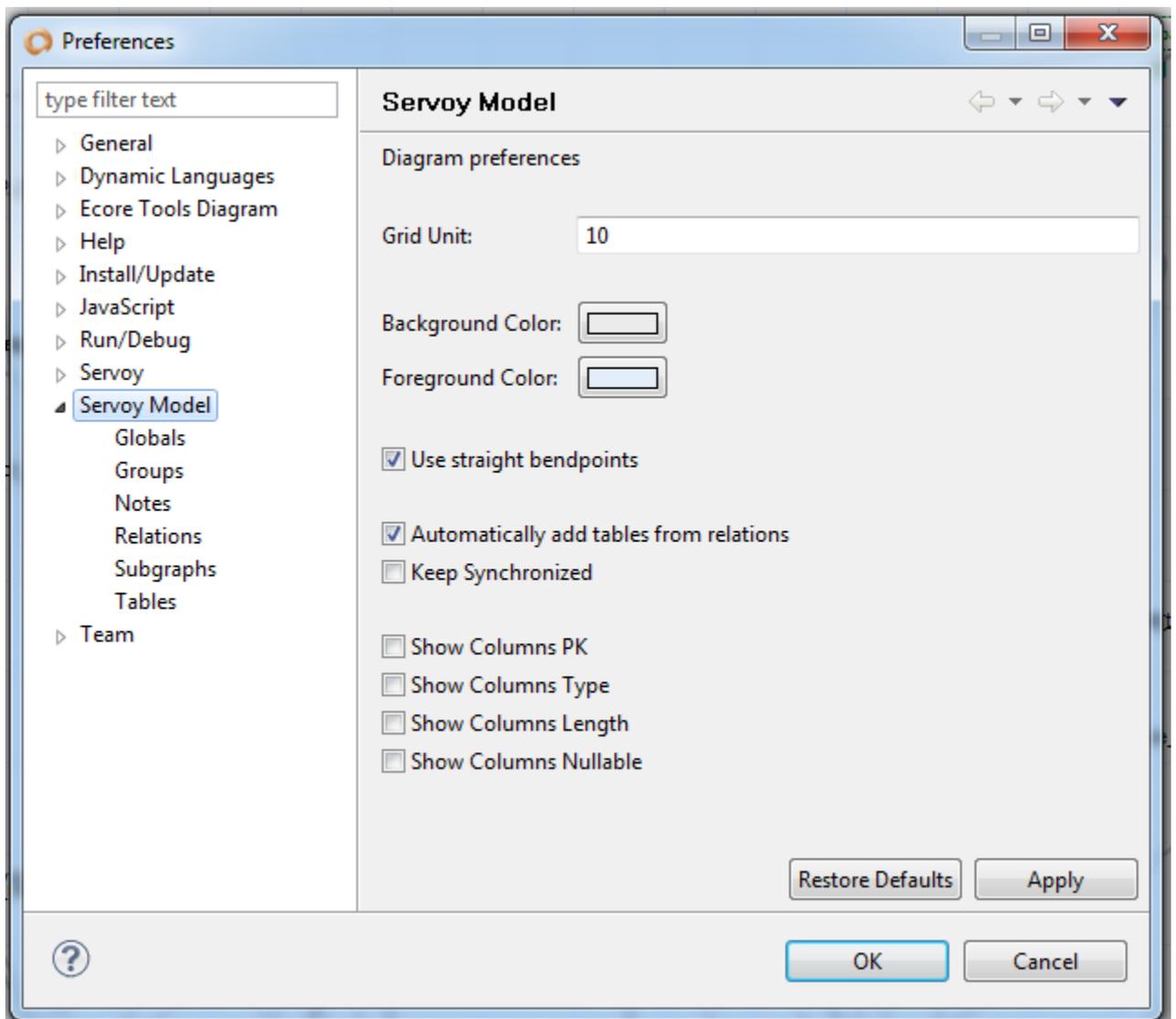
Contextual menus

When you right click on an object in the diagram (or a group of objects), you will get access to a contextual popup menu, which will list various functions:

- **Undo/Redo:** each time you make a change to a diagram, and until you save it each action will be recorded as an undoable action, so you will be able to get back in your changes using 'undo', and forth in your changes using 'redo' - of course the usual shortcuts apply (ctrl/cmd + Z and ctrl/cmd + Y)
- **Print:** depending on what you have selected, you can print only the selected objects or the whole diagram (ctrl/cmd + P works of course)
- **Copy/Paste:** copy/paste works in between diagrams, but beware that you cannot have more than one of the same object in one particular diagram (so you cannot have 2 'addresses' tables for example), so it will not work if you try to copy and paste in the same diagram
- **Update:** does the same as the update icon in the contextual palette (shortcut ctrl/cmd + F5 also works of course)
- **Delete:** same thing as the delete icon in the contextual palette (shortcut DEL or SUPPR key works as well)
- **Auto Resize:** will force auto resize of objects (might not be needed anymore in final version)
- **Toggle collapse:** same as the collapse icon in the contextual palette
- **Toggle sort:** works on tables only, will change the sort of fields from "Creation order index" (the default in Servoy's table editor), to alphabetical
- **Move to subgraph...** will allow you to move selected object to another diagram, allowing you to choose one, or create a new one, and optionally automatically add a subgraph to the current diagram
- **Force Model Refresh** especially useful if your diagram has it's 'Keep Synchronized' flag set to false, and in some rare case where the model would be desynchronized, forces the plugin to read the .dbi and .rel files again and check if something changed.
- **Export diagram:** will export an image of the currently selected object, or the whole diagram, to various image formats (next version will also have SVG export)

Preferences

Each object you can use in a diagram can be individually styled using the properties panel, or style changes can be applied to all opened diagrams and will be used for new diagrams using the preferences. Open the Eclipse preferences and you will find a "Servoy Model" node, with sub nodes for each object that you can use in diagrams. The main "Servoy model" preferences node contains general preferences, style for the diagram itself and a few useful properties:



- **Grid Unit:** allows to define the size of the grid to be displayed
- **Background color:** the color used by the diagram background
- **Foreground color:** the color used by the lines of the grid

- **Use straight bendpoints** (this is a global preference, which cannot be overridden by diagram), set whether to use straight lines or splines for relations, also note that this option will not be applied immediately to opened diagrams. You will need to close and reopen to see the effect of this option (a limitation I will try to overcome in next versions).
- **Automatically add tables from relations:** whether tables will be automatically added when you drop relations from the "Servoy Model View" onto the diagram. If false, a relation might not be added if the relevant source and destination tables are not already in the diagram.
- **Keep synchronized:** if you want your graphs to be automatically synched with any changes made in the Servoy objects (.dbi and .rel files) of your workspace, check that option. If you add a field in a table it will automatically appear in your diagram in the table graphical object, if you delete it, it will be removed, etc.. if you change relations, they will be re-routed automatically as well. If a global was the source of the relation but is not anymore, it will be removed from the diagram when the relation is re-routed unless this global is also used by other relations. You can override this option per diagram in the properties panel, so that you can have diagrams with fixed versions, and others with always the latest changes. (You can also force a refresh of the model at any time using the "Force model refresh" context menu option in the diagram or on a specific object).
- **Show Columns PK**
- **Show Columns Type**
- **Show Columns Length**
- **Show Columns Nullable**

These 4 preferences define whether additional information will be visible in tables per columns.

With these preferences unchecked, a table will look like this:

addresses
phone
modification_user
creation_user
line_3
country
fax
address_type_id
line_4
is_active
zipcode
creation_date
county
line_2
line_5
email
address_id
company_id
modification_date
line_1
state
phone_format
city
icon
test_number

With all these preferences checked, the same table will look like this:

addresses	
phone	TEXT(20) NULL
modification_user	INTEGER NULL
creation_user	INTEGER NULL
line_3	TEXT(200) NULL
country	TEXT(5) NULL
fax	TEXT(20) NULL
address_type_id	INTEGER NULL
line_4	TEXT(200) NULL
is_active	INTEGER NULL
zipcode	TEXT(20) NULL
creation_date	DATETIME NULL
county	TEXT(20) NULL
line_2	TEXT(200) NULL
line_5	TEXT(200) NULL
email	TEXT(200) NULL
address_id	PK INTEGER NOT NULL
company_id	INTEGER NULL
modification_date	DATETIME NULL
line_1	TEXT(200) NULL
state	TEXT(20) NULL
phone_format	TEXT(50) NULL
city	TEXT(200) NULL
icon	MEDIA(2147483647) NULL
test_number	NUMBER(19) NULL

Of course you can check/uncheck any of these properties individually.

And they can also be overridden per table object using the properties panel.

Objects

A diagram can contain a certain number of objects:

- Tables
- Relations
- Globals (or scoped variables in 6.1)
- Groups
- Subgraphs
- Notes

Tables, relations and globals (or scoped variables)

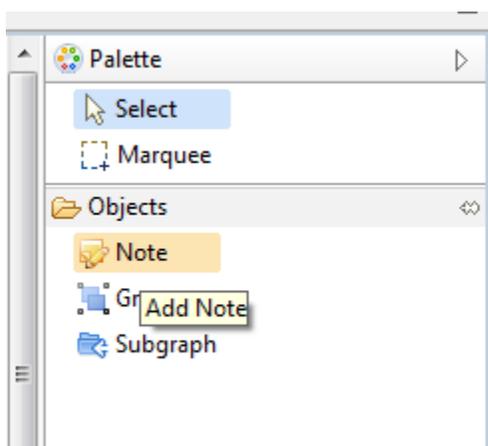
Tables, relations and globals (or scoped variables), are directly coming from Servoy's resources and solution projects, they are created from .dbi and .rel files respectively. They are not directly editable since they are coming from the Servoy model itself. You can double-click on a table, relation or global and it will take you directly to the table editor, relation editor and the js files containing the global where you will be able to edit as usual using Servoy's own editors.

Notes

You can also add Notes to a diagram. Notes are multi line text that you can edit to add comments to the diagram.

You can put any number of notes in a diagram, and they can all be styled differently. By default when you create a note, it will use the style set in the preferences "Note" node. But you can tweak the style of each notes individually using the properties panel.

To create a Note, click in the palette on the "Note" object:



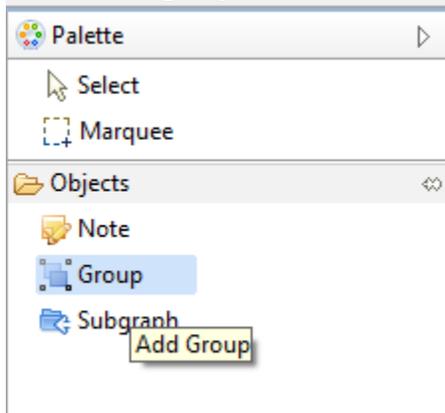
Then click on the diagram (the cursor will change into a little +, showing you that you will add an object), this will put you in "Direct edit" node where you can type the note text directly inside the object.

Groups

You can also create Groups, which is a convenient way to group some entities that are part of the same logical functionality in your solution.

Groups will always display underneath the other objects. You can drag and drop tables, relations etc. to add them to a group and you can resize it to make it fit the underlying objects. Groups are convenient to show that some objects are directly related and do certain things, but they are also an easy way to move many shapes in one go.

To create a group, select the Group object from the palette:



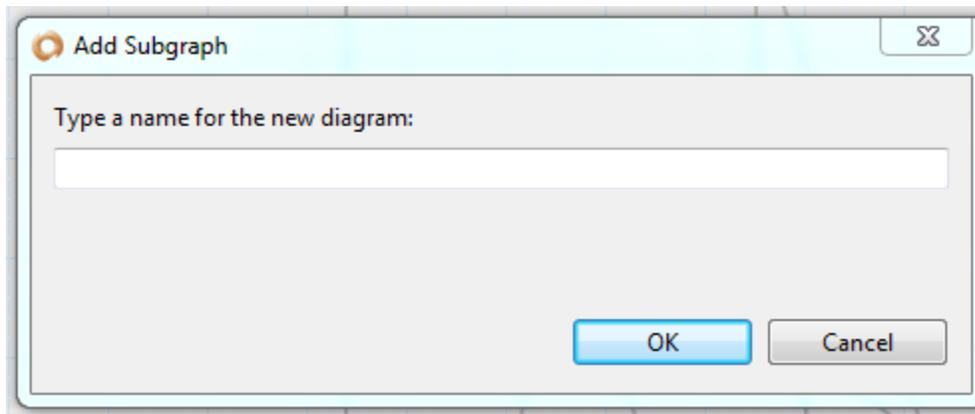
Then drag onto the diagram to define a group zone. After you've dragged you will be put into "Direct Edit" mode where you will be able to add a title to you group, by typing it directly in the new group shape.

Groups will use the preferences set at the application level when you create them but of course you can always override these by using the properties panel.

Subgraphs

Finally one useful object you can have in a diagram is a Subgraph. Think of subgraphs as links to other diagrams. When you double click on a subgraph, it will open the related diagram in the diagram graphical editor.

When you add a subgraph from the Palette tool, it will ask for the name of a diagram:



If that diagram already exist in the Model project, it will be used and linked, otherwise a new diagram will be created with the same name as the diagram. You can also drag and drop another diagram from the "Servoy Model View" onto the diagram surface and it will create a new Subgraph.

Subgraph are useful to navigate in a big solution where many subgraphs are necessary to organize the information.

One use of subgraph is also as a drop target for other objects, you can use subgraphs to move a table from one graph to another, you can move tables, relations, globals, notes and subgraphs from one subgraph to another simply by dragging them and dropping them on a subgraph object.