Perspective

Published 2014-10-28 | (Compatible with SDK 4.5 and 2013 models)

> Prerequisites for Semantic SDK

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The Semantic SDK Perspective consists of the following views.

Perspective Open Menu
is a menu to open directly semantic SDK perspective.

1. Open perspective directly
2. Open perspective typically in Eclipse

Service Registry Menu
is a menu to display graphic information of service registry supported by semantic service server.
Service Explorer
is a window to perform semantic service search.
Properties View
is a view to retrieve service information details
Matching View
is a view to perform semantic service matching.
Validation View
is a view to request a service and to show its response.

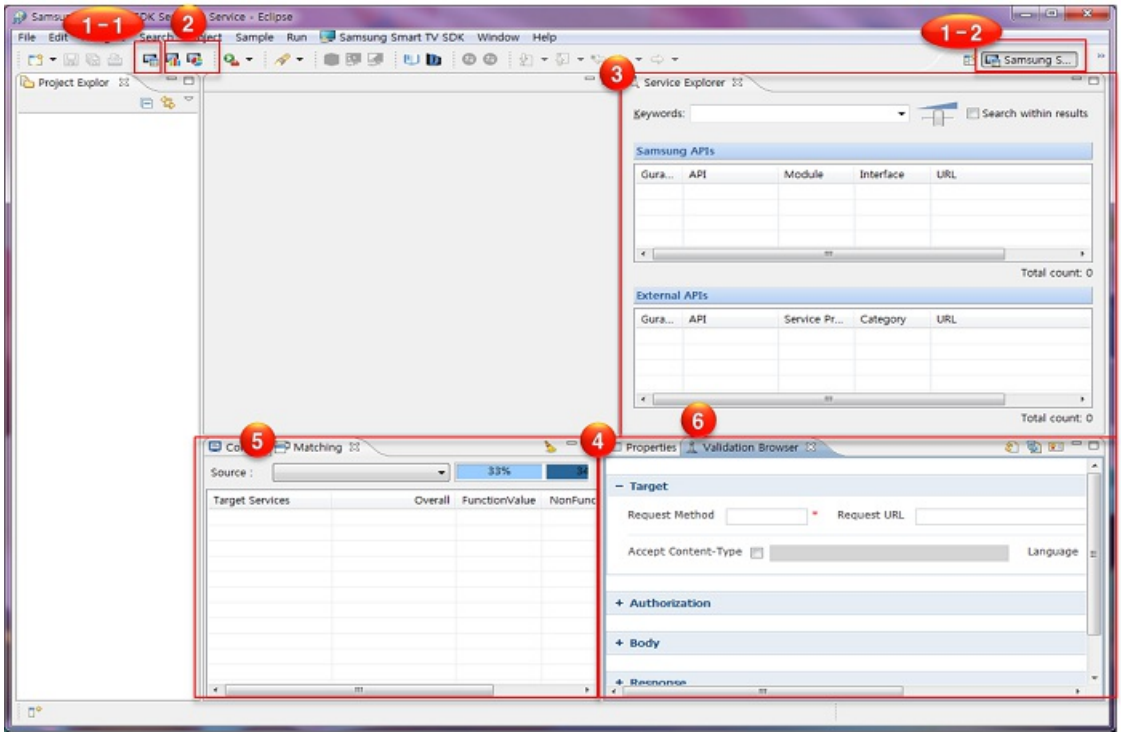

Figure: Semantic SDK perspective layout

Perspective Open Menu

To use the semantic SDK, semantic SDK perspective should be opened. A user has two options to open perspective.

1. Open perspective directly

    1.1 Click the Open Perspective menu ( ) in the menu bar, then semantic SDK perspective opens directly.

2. Open perspective typically in Eclipse

    2.1
    Click the Open Perspective menu ( ) in the menu bar.
    2.2
    Select Other menu, then **Open Perspective** window opens.
    2.3
    Select Smart TV SDK Semantic Service
    2.4
    Click the **OK**.

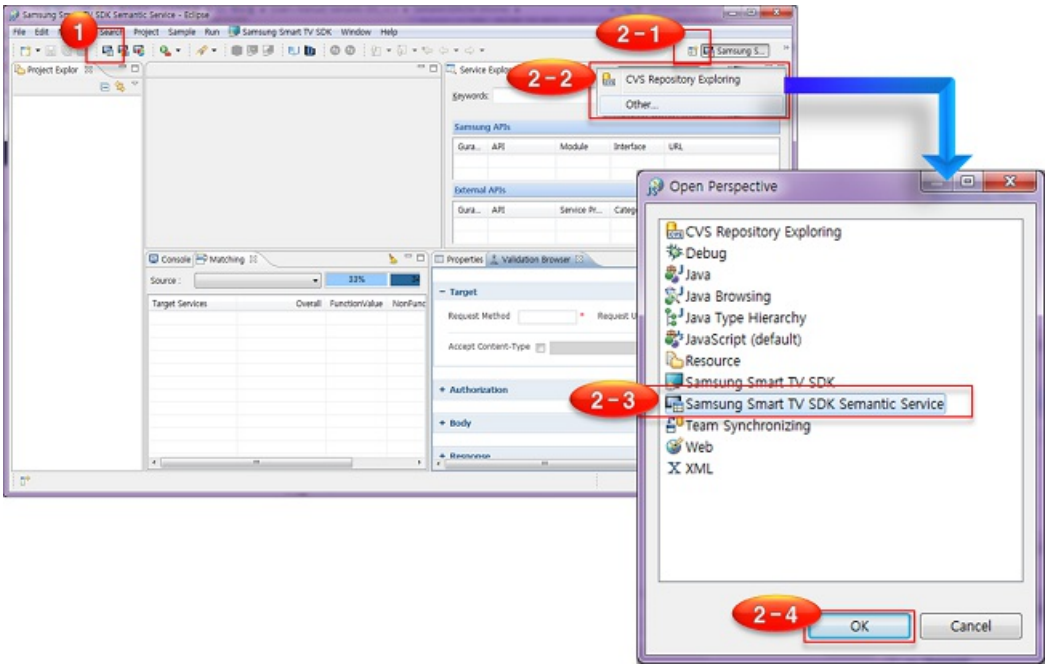

Figure: Setting the Samsung SDK Perspective

Service Registry Menu

It is a menu to display graphically service registry information. See more details in Service Registry Statistics.

Service Explorer

In the Service Explorer, a user can input a keyword and search services related to the given keyword. The results are classified into 3rd party web services or and Samsung SDK library APIs and displayed in the table format. The two ways of searching are provided as follows:

Multi-keyword based semantic service search

If more than one key word is entered, the meaning of the keyword (name, service provider, transmission protocol, etc.) is analyzed and semantic search is performed.

Keyword-based service search

The service can be searched by specifying a particular service attribute, or using the keyword value selected from the tag cloud.

See more details in Semantic Service Discovery and Semantic Service Matching.

Properties View

A user can select one service API among the results of searching, he can see more detail information about the service API in Properties View. The detail information includes authentication, category, description, language, goal, input, output, protocol, service_name, service_provider, service_url, and usage_url. When a user double-clicks the usage_url listed in the **View**, the web URL opens into an internal web browser.

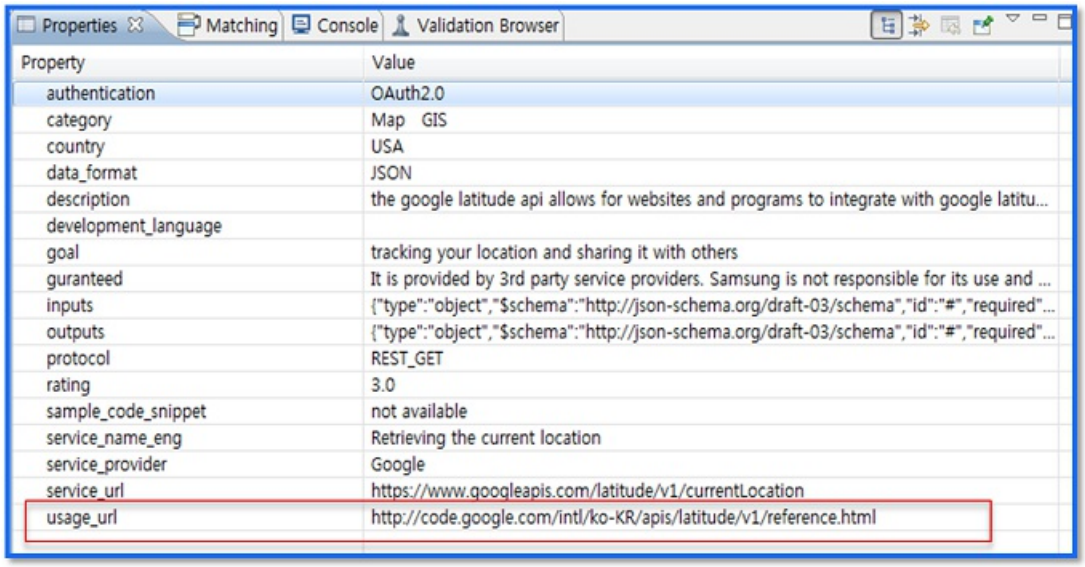

Figure: Properties View screen

Matching View

Matching View provides the matching function for more than two services to support Semantic Service Mashup. The following two matching functions are supported:

Compatible service matching

The compatible service for the service selected in the search results will be searched, and the relation between them will be calculated. The relational diagram among services will be calculated by comparing the functional, non-functional, and I/O information of each service.

Interoperable service matching

The subsequent interoperable service will be searched for the service selected in the search results, and the relation between them will be calculated. The relational diagram among services will be calculated by comparing the functional, non-functional, and I/O information of each service. When the user searches the web service or Samsung SDK API in Service Explorer and selects either Interoperable Matching or Compatible Matching for the found service, the related information will be displayed on screen.

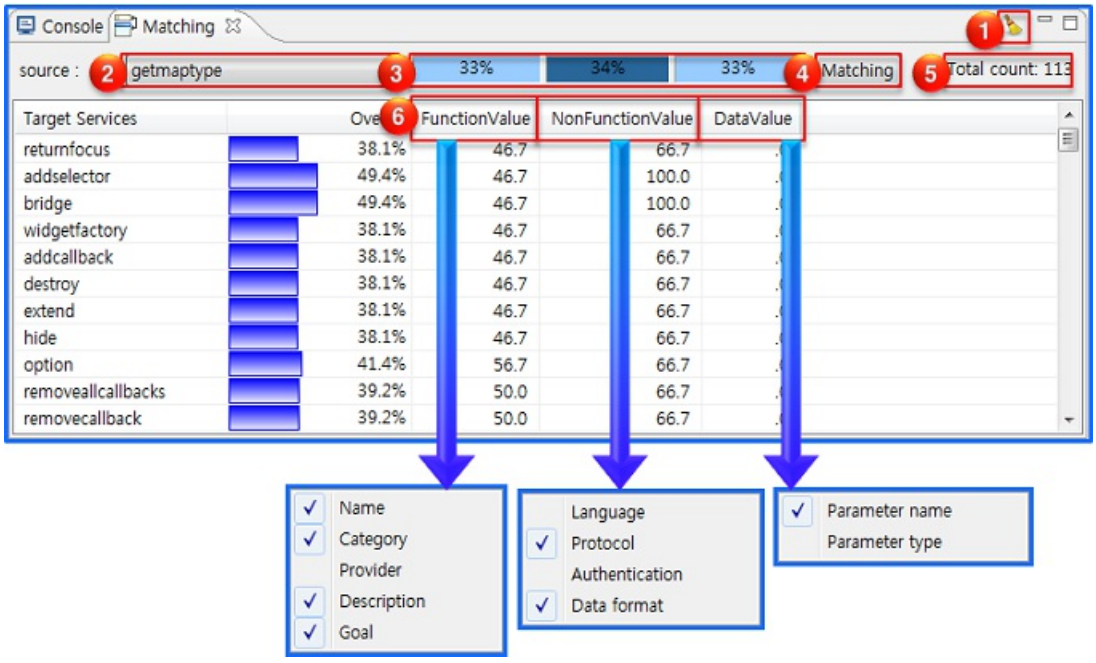

Figure: Matching View screen

The matching information will be displayed in table format in Matching View, and the evaluation of matching will be displayed with a percent and bar graph. In addition, the property of the service shown in Target services will be displayed in Properties View when it is selected. The sample code snippet of the service in black can be dragged and dropped into the editor.

1. The matching screen is initialized when brush icon is clicked.

2. The list of sources stored in a history of matching is displayed. Additionally, when a source service is chosen and matching can be performed again with a modified weight of matching criteria in step 4.
3. The bar graph that shows the weights of the matching criteria (FunctionValue, NonFunctionValue, and DataValue) applied for the current matching results. The weights of the matching criteria can be changed by moving slide bar from left to right, vice versa.
4. Whenever the weight of the matching criteria is changed, matching evaluation can be carried out again with the modified criteria by clicking the Matching button.
5. Total number of target services which were matched with a source will be displayed on Matching View.
6. Right click the mouse button on FunctionaValue, NonFunctionValue, and DataValue, then the current matching criteria are shown and some of them can be unselected or selected. After change of matching criteria, matching evaluation can be carried out again with the modified criteria by clicking the Matching button.

Validation View

In Validation View, a user can invoke the 3 rd party service and shows the execution results. Validation view is available only for 3 rd party service. SDK 4.0 doesn't support this view. There are four I/O fields as follows:

1. Target
2. Body
3. Authentication
4. Response

When values are entered into the Target, Body, and Authentication fields and then press Submit (5), the results is displayed in the Response field.

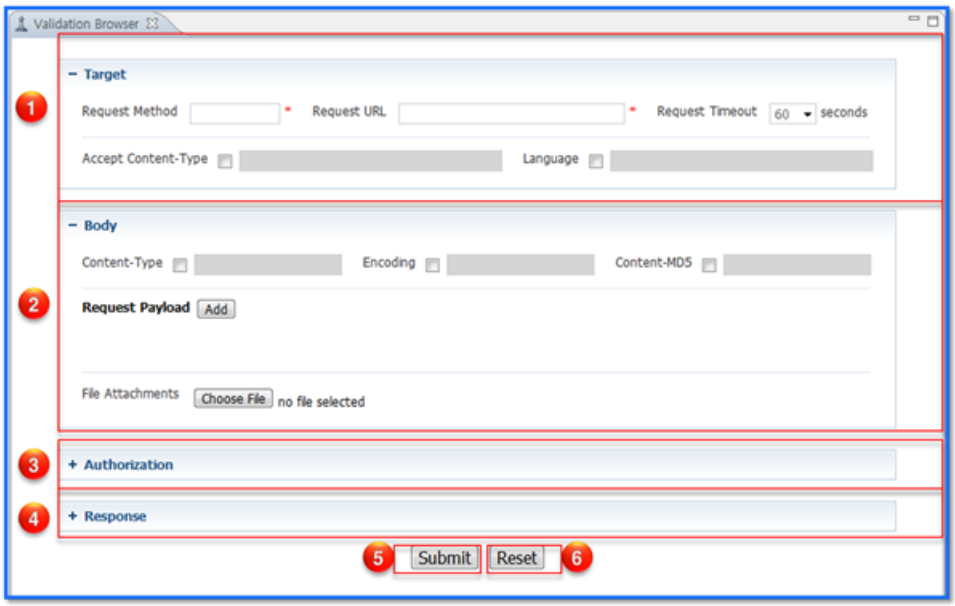

Figure: Validation View