

Strictly for internal use

SAP Gateway

One Technology, a World of Experiences

DAY 2B



Day IV Agenda

- ❖ Expand Entity
- ❖ Deep Insert
- ❖ CSRF
- ❖ Batch Operations
- ❖ Trouble Shooting

Expand

\$expand

- ❖ A request with a \$expand query option enables the reading of entries of an entity together with an associated entity.
- ❖ \$expand is the possibility of OData to make 'joins'.
- ❖ Use \$expand insert for more data which contains more than one association call.
- ❖ When \$expand is used the backend framework returns the "inline" data to the hub framework in the form of a table containing a flag which shows whether an "inline" structure is initial or not. Thus you can see whether this "inline" data is initial or not.
- ❖ Sample URI: [http://services.odata.org/OData/OData.svc/Products?\\$expand=Category](http://services.odata.org/OData/OData.svc/Products?$expand=Category)

\$expand Performance Optimization

- ❖ It reduces the roundtrips from client to the SAP Gateway server as well as the SAP Gateway Server to the SAP Business suite. As a result network time is reduced.
- ❖ \$expand reduces SAP NetWeaver Gateway server response time and the consumption of resources.
- ❖ Basic \$expand implementation can reduce the SAP Business Suite times, because the number of database operations and the application logic can be reduced.
- ❖ For parallel calls, we cannot use \$expand

Deep Insert

- ❖ In SAP NetWeaver Gateway, the OData Channel provides deep insert functionality to accommodate the creation of an entity along with its associated entities in one request. The deep insert functionality is provided in ABAP interface /IWBEP/IF_MGW_APPL_SRV_RUNTIME, method CREATE_DEEP_ENTITY
- ❖ Some business objects, such as Sales Orders or Purchase Orders, consist of header and line item data. Thus, when creating such business objects, it makes sense to use hierarchical or nested data in the creation request.
- ❖ We have step-by-step approach published by our team in SAP SDN, refer below link
<http://scn.sap.com/community/gateway/blog/2014/04/27/step-by-step-development-guide-for-createdeepentity-operation>

CSRF

- ❖ It stands for Cross Site Request Forgery.
- ❖ CSRF protection is an additional validation feature enabled in SAP Gateway since Gateway 2.0/SP03 for all data modifying requests (e.g. Create, Update and Delete). This means that a valid CSRF token must first be retrieved using a non-modifying request (e.g. using the GET method).

SAP NetWeaver Gateway offers two CSRF protection mechanisms

CSRF token check

Set as the default CSRF protection mechanism based on the token exchange principle. This is the default for the OData Standard Mode.

CSRF header parameter check

Additional parameter in the HTTP header X-Requested-With=XMLHttpRequest for modifying operations as protection mechanism. This is the default for the Compatibility Mode for SP02.

Trouble Shooting

Error Logs:

Two important Transaction codes which will give more information on most errors.

/IWFND/ERROR_LOG: This provides error log in the hub system. From here you can navigate to a Gateway specific Application log or directly launch it using/IWFND/APPS_LOG.

/IWBEP/ERROR_LOG: This provides the error log in your BEP/Backend system. Again you can navigate to Gateway specific Application Log by going to/IWBEP/VIEW_LOG.

Debugging option at browser Client: sap-ds-debug=true

Example:

<https://sapes1.sapdevcenter.com/sap/opu/odata/IWFND/RMTSAMPLEFLIGHT/FlightCollection?sap-ds-debug=true>

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External Debugging Point

Your last option would be to debug your SAP Gateway service by putting external breakpoints in the ABAP code.

Possibilities based on Versions:

You want to copy an existing NetWeaver Gateway Service or

You want to copy an existing Project in

You want to Copy/Rename an existing Project in Service Builder or Builder

Problem Analysis: All these functionality are supported starting from SP7 only

Any Questions ?

Thanking You