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**Masayuki Sekihara**

November 13, 2013 3 minute read

## SAP Fiori LL11 – Consultants should know about OData troubleshooting

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SAP Fiori Lessons Learned 11

### Consultants should know about OData troubleshooting

#### Background:

SAP Fiori apps are out of the solution but you face several issues because main functions are in backend ERP and each customer has different backend setup/configuration. OData is the communication channel to the backend servers via get/post/put method.

## Lessons Learned:

Understanding OData and backend function are must requirements for consultants.

- Application consultants should learn about OData technical and runtime behavior
- Technical consultants should learn about ERP application functions
- Both application consultants and technical consultants should work together

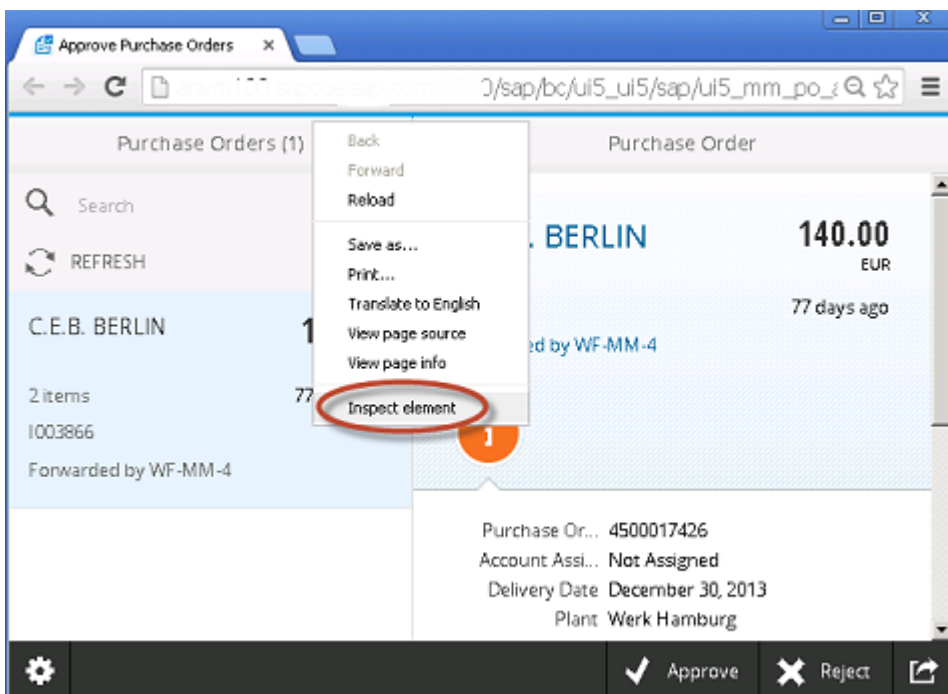
Consultants should know following steps.

### Step 1. Identity the OData service call

1.1 Run the app

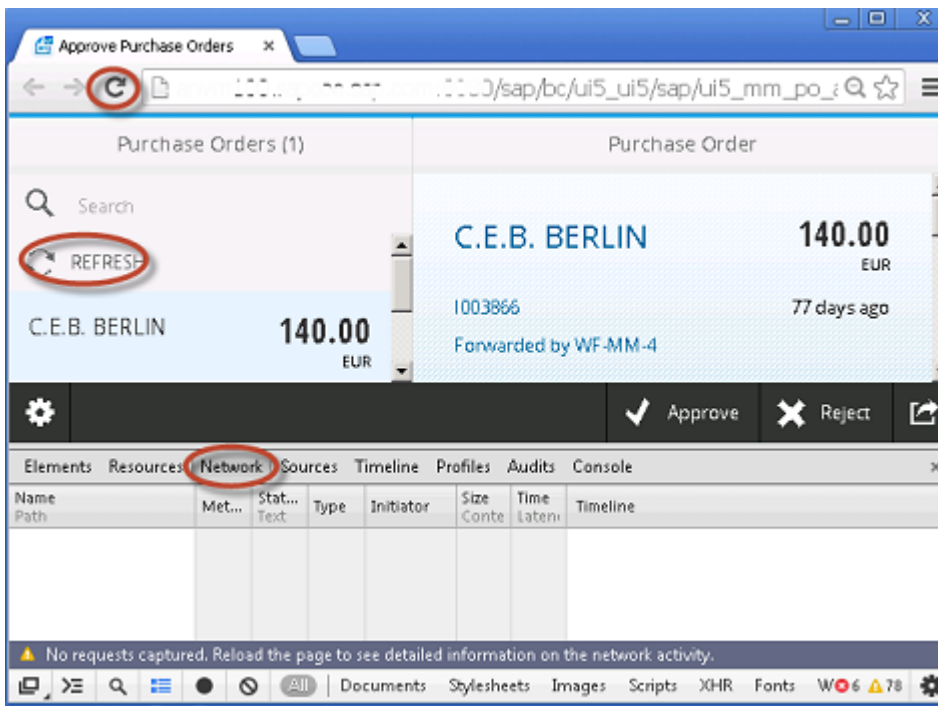
1.2 Inspect element

Right click -> Inspect element (Chrome), F12 (IE), then go to Network tab



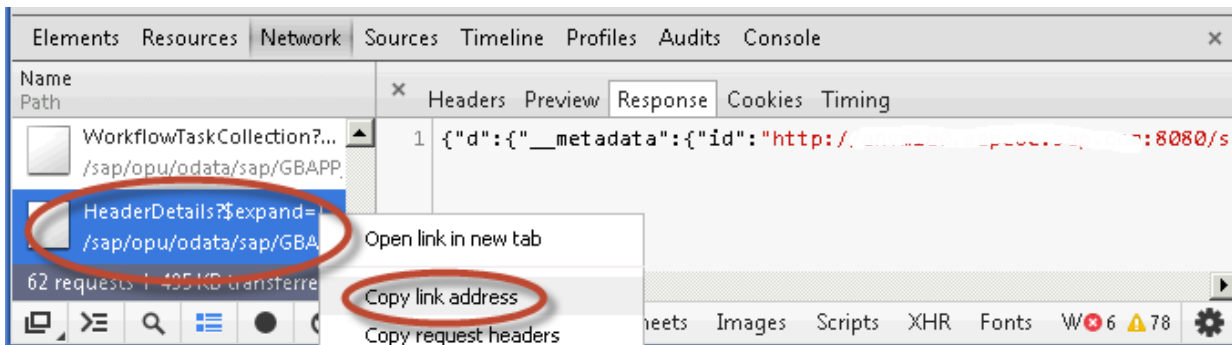
Ignore the warning or error message in the Console tab at this point in time. Focus on OData troubleshooting.

1.3 Refresh the app or browser



#### 1.4 Find the last called OData URI

Scroll down to the bottom of inspect element and find the OData [/sap/opu/odata/sap/..](#) from bottom.



[http://<host>.<domain>:<port>/sap/opu/odata/sap/GBAPP\\_POAPPROVAL;mo/WorkflowTaskCollection\(SAP\\_\\_Origin='ONE\\_800',WorkitemID='000001104681'\)/HeaderDetails?\\$expand=ItemDetails,Notes,Attachments,ItemDetails/Limits](http://<host>.<domain>:<port>/sap/opu/odata/sap/GBAPP_POAPPROVAL;mo/WorkflowTaskCollection(SAP__Origin='ONE_800',WorkitemID='000001104681')/HeaderDetails?$expand=ItemDetails,Notes,Attachments,ItemDetails/Limits)

[http://<host>.<domain>:<port>/sap/opu/odata/sap/GBAPP\\_POAPPROVAL;mo/WorkflowTaskCollection\(SAP\\_\\_Origin='ONE\\_800',WorkitemID='000001104681'\)/HeaderDetails?\\$expand=ItemDetails,Notes,Attachments,ItemDetails/Limits](http://<host>.<domain>:<port>/sap/opu/odata/sap/GBAPP_POAPPROVAL;mo/WorkflowTaskCollection(SAP__Origin='ONE_800',WorkitemID='000001104681')/HeaderDetails?$expand=ItemDetails,Notes,Attachments,ItemDetails/Limits)

### Step 2. Test OData in the Gateway client

#### 2.1 Copy & Paste the OData URI

Transaction: /IWFND/GW\_CLIENT. You should logon with the application user same as Fiori app logon.

### SAP NetWeaver Gateway Client

☒ Execute
 ☐ Select
 ☐ Save
 ☐ Maintain Service
 ☐ Service Implementation
 ☐ Service Metadata
 ☐ Entity Sets

HTTP Method: ☒ GET ☐ POST ☐ PUT ☐ PATCH ☐ MERGE ☐ DELETE

Request URI: /sap/opu/odata/sap/GBAPP\_POAPPROVAL;mo/WorkflowTaskCollection(SAP\_\_Origin='ONE\_800',WorkitemID=

Protocol: ☒ HTTP ☐ HTTPS

Test Group:  Test Case:

## 2.1 Check the OData response

### SAP NetWeaver Gateway Client

☐ Execute
 ☐ Select
 ☐ Save
 ☐ Maintain Service
 ☐ Service Implementation
 ☐ Service Metadata
 ☐ Entity Sets

HTTP Method: ☒ GET ☐ POST ☐ PUT ☐ PATCH ☐ MERGE ☐ DELETE

Request URI: /sap/cpu/odata/sap/GBAPP\_POAPPROVAL;mo/WorkflowTaskCollection(SAP\_\_Origin='ONE\_800',WorkitemID='000001104

Protocol: ☒ HTTP ☐ HTTPS

Test Group:  Test Case:

☐ Response in Browser
 ☐ Error Log
 ☐ Use as Request

#### HTTP Response

Header Name	Value
~status_code	200

```

<?xml version='1.0' encoding='utf-8'>
<d:materialGroupDescription>metal processing</d:materialGroupDescription>
<d:MaterialGroup>881</d:MaterialGroup>
</d:ProductDetails>
<d:DeliveryAddress m:type='GBAPP_POAPPROVAL.DeliveryAddress'>
  <d:Plant>1000</d:Plant>
  <d:PlantName>Werk Hamburg</d:PlantName>
  <d:AddressString>Alsterdorfer Strasse 13 / D-22299 HAMBURG-ALSTERDO
</d:DeliveryAddress>
  
```

If http response is not 200, you may have some connection setting issue.

If http response is 200 but OData service does not return application data, you should go Step.5 debug section.

## Step 3. Check error log

### 3.1 Transaction /IWFND/ERROR\_LOG

### SAP NetWeaver Gateway: Error Log

☐ Re-Select

☐ Error Context
 ☐ Active Source
 ☐ Download to PC
 ☐ Upload from PC

#### Overview

Line	Entr...	Date	Time	User	T100 Error ID	T10...	Error ...	ICF Node	B	Error Text
5	1	13.11.2013	10:25:11	BLACKM	/IWFND/CM_MGW033		1	odata	<input type="checkbox"/>	Fehler beim Parsen o
4	1		10:18:21	MANAGER	/IWFND/CM_MGW033		2	odata	<input type="checkbox"/>	Fehler beim Parsen o
3	1		09:27:14	BLACKM	/IWFND/CM_MGW033		2	odata	<input type="checkbox"/>	Fehler beim Parsen o
2	1		07:23:21	BLACKM	/IWFND/CM_MGW033		1	odata	<input type="checkbox"/>	Error while parsing a
1	1		06:27:22	BLACKM	/IWFND/CM_MGW053		1	odata	<input type="checkbox"/>	Missing customizing;

Select the "Error Context"

<b>Error Context</b>		
Ex...	Name	Value
	..ERROR_CONTEXT	
	..ERROR_INFO	Missing customizing; contact your system administrator
	..SERVICE_INFO	
	...NAMESPACE	/IWFND/
	...VERSION	0001
	...SERVICE_NAME	RMTSAMPLEFLIGHT
	...REQUEST_DIRECTION	Consumer to Gateway
	...AGENT	/IWFND/MGW_RMT

Call Stack helps you to set external break points.

Call Stack				
S...	Event Type	Event	Program	Line...
2...	METHOD	<u>FIND SVC DESTINATION OLD</u>	/IWFND/CL_MGW_DEST_FINDER====CP	80
1...	METHOD	<u>GET MODEL</u>	/IWFND/CL_MGW_MED_MDL_LOAD====CP	70
1...	METHOD	<u>/IWFND/IF MED MDL LOAD~LOAD STRUCTURAL MODEL</u>	/IWFND/CL_MGW_MED_MDL_LOAD====CP	16
1...	METHOD	<u>GET EXTERNAL MODEL</u>	/IWFND/CL_MED_MDL_DB_ACCESS====CP	16
1...	METHOD	<u>GET META DATA FOR EXT MODEL</u>	/IWFND/CL_MED_MDL_DB_ACCESS====CP	13
1...	METHOD	<u>/IWFND/IF MED MDL PERSIST RE~GET META DATA MODEL</u>	/IWFND/CL_MED_MDL_DB_ACCESS====CP	46
1...	METHOD	<u>CREATE CLUSTERED MODEL</u>	/IWFND/CL_MED_MDL_PROVIDER====CP	85
1...	METHOD	<u>GET META MODELS</u>	/IWFND/CL_MED_MDL_PROVIDER====CP	80
1...	METHOD	<u>GET SHARED META MODELS</u>	/IWFND/CL_MED_MDL_PROVIDER====CP	10
1...	METHOD	<u>GET SERVICE GROUP</u>	/IWFND/CL_MED_MDL_PROVIDER====CP	94
1...	METHOD	<u>/IWFND/IF MED PROVIDER~GET SERVICE GROUP</u>	/IWFND/CL_MED_MDL_PROVIDER====CP	3
9	METHOD	<u>GET SERVICE GROUP METADATA</u>	/IWFND/CL_TRANSACTION_HANDLER=CP	15

### 3.2 Transaction /IWFND/APPS\_LOG

### SAP NetWeaver Gateway Application Logs

Technical Information

External ID of the Log	Nu...	Altern ID	GSDO Type	Operation
005056A2046C1EE3938488A02795B2F2	8			
Technical message	8			
/IWFND/MGW_RMT	1			
/IWFND/CL_MGW_DEST_FINDER=====CP	1			
FIND_SVC_DESTINATION_OLD	1			
000002	1			
Metadata access	2			
/IWFND/CL_MGW_MED_MDL_LOAD=====CP	2			
GET_MODEL	2			
000003	1			
000004	1			
OData Lib 1.0 Handler	4			
SAP Netweaver Gateway Logger	1			

Message Text

2 Missing customizing; contact your system administrator

Reference: [Troubleshooting a SAP Netweaver Gateway Service](#)

#### Step 4. Find the Runtime Data Provider class

##### 4.1 Transaction /IWFND/MAINT\_SERVICE

### Activate and Maintain Services

Service Catalog

Type	Technical Service Name	Ver...	Service Description	Ext...
	/IWCNT/EMPLOYEE TIMESHEET	1	Employee Timesheet Recording	EMF
	/IWCNT/SG_ERPSALES	1	Service Document for ERP SALES	ERP
BEP	ZGBAPP_POAPPROVAL	1	SAP Purchase Order Approval (MM-PUR)	GBA
REP	ZGBAPP_PRAPPROVAL	1	SAP Purchase Requisition Approval (MM-PIR)	GR4

ICF Node

Call Browser Gateway Client

System Aliases

Add System Alias Remove System Alias Customizing Service Implementation

## Display Service

Service Information	
Technical Service Name	GBAPP_POAPPROVAL
Service Version	1
Description	SAP Purchase Order Approval (MM-PUR)
External Service Name	GBAPP_POAPPROVAL
Namespace	
Data Provider Class	CL_GBAPP_APV_PO_RDP

#### 4.2 Transaction SE24

Open the Data Provider Class. Go to Property tab.

## Class Builder: Display Class CL\_GBAPP\_APV\_PO\_RDP

Class Interface: CL\_GBAPP\_APV\_PO\_RDP Implemented / Active

Properties | Interfaces | Friends | Attributes | Methods | Events | Types | All

Superclass: /IWBEP/CL\_MGW\_PUSH\_ABS\_DATA ☐ Modeled only

Description: Runtime class for PO approval

Inst. Generation: Public

☐ Final

General Data

☒ Fixed point arithmetic ☒ Unicode checks active

☐ Shared Memory-Enabled

Message Class:

Program status:

Category: General Object Type

Package: GBAPP\_APV\_PO

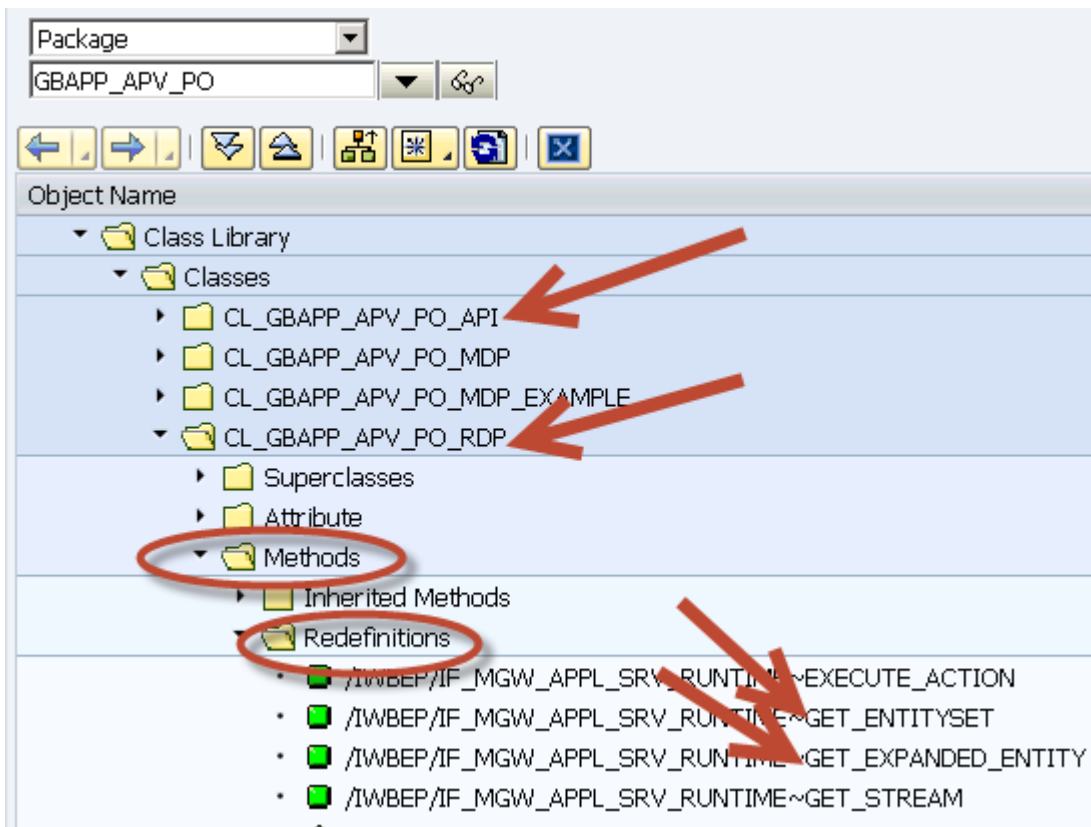
Forward declarations

Type group/Object type

CL\_GBAPP\_APV\_PO\_MDP

#### 4.3 Transaction SE80

Open the package.



Class -> Runtime Data Provider Class -> Method -> Redefinitions

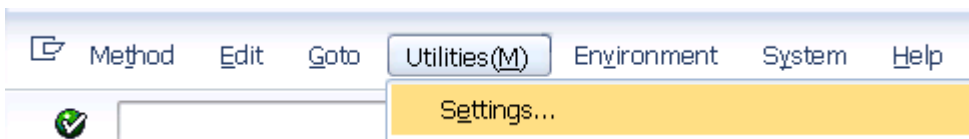
The example OData URI has &expand oprion, so you should look at the method GET\_EXPANDED\_ENTITY.

HTTP Method	Base URL plus	Query String	XML Body	OData Operation	ABAP Method
GET	Nothing			Handled by the Gateway Framework	
GET	Entity Set Name	None or \$filter		QUERY	GET_ENTITYSET
GET	Entity Set Name	Key Predicate		READ	GET_ENTITY
PUT	Entity Set Name	Key Predicate	Yes	UPDATE	UPDATE_ENTITY
POST	Entity Set Name		Yes	CREATE	CREATE_ENTITY
DELETE	Entity Set Name	Key Predicate		DELETE	DELETE_ENTITY
GET/POST	Action Name	Variable parameter format		Custom Action	EXECUTE_ACTION

## Step 5. Set External break points and debug

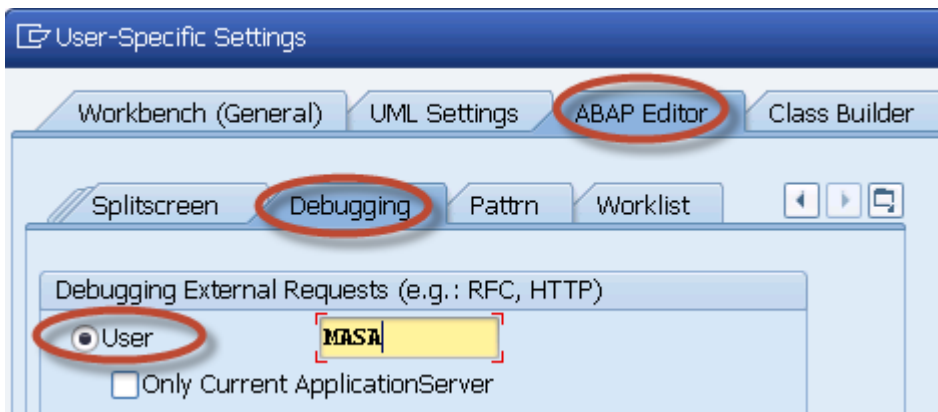
### 5.1 Check the user

Go to Utilities -> Settings

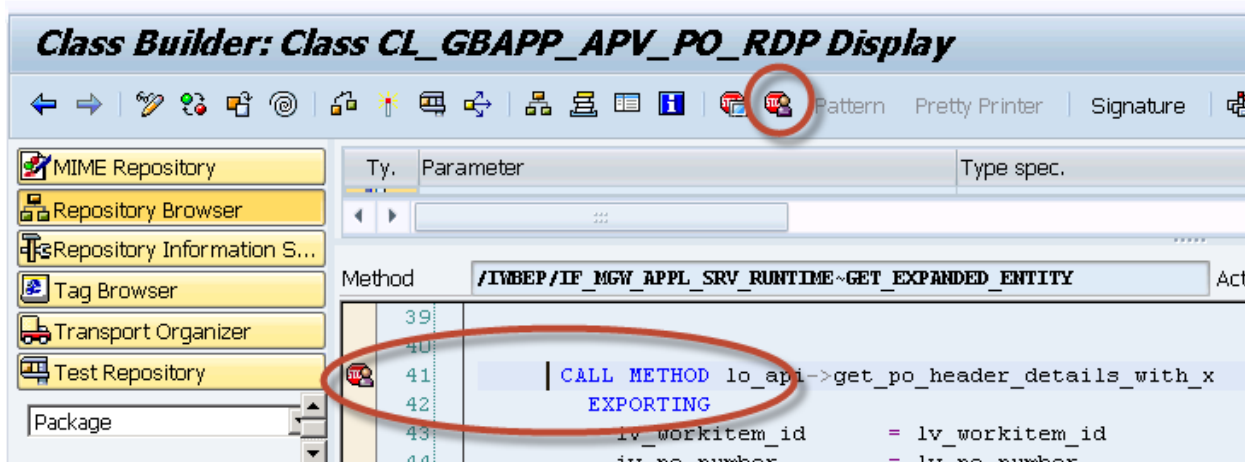


Make sure the user is application user.





## 5.2 Set external break points



## 5.3 Debug

Test the OData URI from Gateway Client. You can now debug the code. Most of case, issue is related with ERP customizing or master data.

Each customer has different customizing setting and master data.

Regards,

Masa

SAP Rapid Innovation Group – RIG

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## Assigned tags

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SAP Fiori | fiori |

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[How to debug the Fiori Back-End ABAP codes](#)

By **Former Member** , Apr 08, 2015

[SAP Fiori – Generic troubleshooting steps](#)

By **Masayuki Sekihara** , Nov 12, 2013

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Syam Babu

November 13, 2013 at 1:28 pm

Excellent Stuff and it's covered GW Debugging also

Thanks,

Syam

Like (0)

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Hemendra Sabharwal

December 29, 2013 at 12:09 pm

Great stuff, thanks for sharing.

Like (0)

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Former Member

December 29, 2013 at 12:15 pm

Excellent stuff Masa

Keep posting more

Cheers 😊

Pradyp

Like (0)

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Former Member

June 26, 2014 at 7:53 am

Super stuff. The most useful stuff I come across for a long time.

Johan

Like (0)

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Former Member

[December 14, 2014 at 6:50 am](#)

very nice. very userfull suff.....t

Tauhid

Like (0)

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Former Member

[January 22, 2015 at 11:27 am](#)

What does it mean if the status code returns 500 when I execute my oData URI in Transaction: /IWFND/GW\_CLIENT instead of 200

Like (0)

---



[Masayuki Sekihara](#) | Post author

[January 23, 2015 at 3:27 am](#)

500 means internal server error. [List of HTTP status codes – Wikipedia, the free encyclopedia](#). Most of cases, system connection has not been setup or there was short dump in he backend. Please create new discussion if you need further support. [Start a discussion](#).

Like (0)

---



Former Member

[February 18, 2015 at 9:18 am](#)

Hello Masu,

thanks a lot – great stuff. Helps me a lot for understanding.

Regards Toni

Like (0)

---



Timothy Muchena

March 2, 2015 at 2:49 pm

Hi

Excellent blog

I can see the tiles in Chrome and not in IE. I also can see the OData URI in Chrome and not in IE. Any idea of what might be the cause?

Kind regards

Like (0)

---



Former Member

April 26, 2015 at 10:01 am

thank you! very helpful doc!

Like (0)

---



Former Member

May 13, 2015 at 3:16 pm

Thank you. This helped me to resolve an issue.

Like (0)

---



Deborshi De Sarkar

May 18, 2015 at 2:45 pm

Thanks you...very use full document.

Like (0)

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Former Member

September 22, 2015 at 4:09 am

Thank you! It is a great document.

BTW, is there any list for all LL documents for Fiori?

Like (0)



Michael Appleby

September 22, 2015 at 12:40 pm

SAP Fiori

will take you to the Fiori community Overview page. Check out the All Things SAP Fiori right in the middle. It is where all things Fiori are organized for easy access.

Cheers, Mike

SAP Technology RIG

Like (0)



Jeremy Good

September 22, 2015 at 1:28 pm

As Mike mentioned the more recent "SAP Fiori LL" blogs are located in the SAP Fiori space, and as you've seen with this one, the older blogs are located in the SAP for Mobile space. There is no master list, but you will find them linked on their correlated topic pages in the All Things SAP Fiori document. The title format is consistent, and Masa is the author, so a [creative search](#) might help you.

Like (0)



Yogesh Patel

April 20, 2016 at 3:48 pm

I really like that someone taking time to put this valuable information. This document helped me to resolve some issues.

Regards,

Yogesh

Like (0)



Martin Schlegel

November 22, 2016 at 8:51 am

Hello Masa, thank you for sharing. Martin

Like (0)

---



Former Member

January 5, 2017 at 3:00 pm

Many Many thanks!  
it is very helpful!

Like (0)

---



Srikanth Subramanian

July 17, 2017 at 4:31 pm

Hi Masa,

is there a link for FIORI DEMO Trail version and also to know difference between timesheet entry Version1 & Version 2.

I am using below link and it is not working.

<https://www.sapfioritrial.com/>

Regards,

Srikanth

Like (0)

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Masayuki Sekihara | Post author

July 18, 2017 at 12:01 am

Hi Srikanth, Please post is as a question. <https://answers.sap.com/index.html>

Like (0)

---



Andre Julius

April 20, 2018 at 8:53 am

Hi [Masayuki Sekihara](#),

Thanks for the sharing. In my case, it seems there is some kind of timeout. i.e: when my UI5 trigger my breakpoint in GET\_ENTITYSET, after a while the debug window is gone. Another weird thing is that my debug window appears 2 times. I wonder what cause this. Can enlighten me based on your experience?

Best Regards

Andre Julius

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