SAP Business One Event Sender Introduction and Optimization

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Agenda
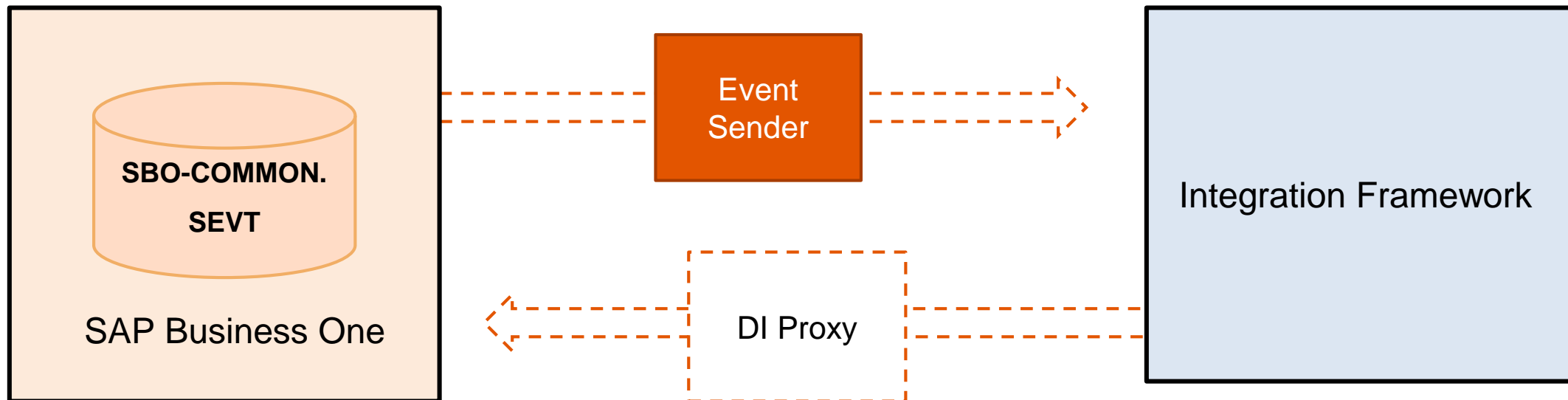
- **Event Sender Component Introduction**

- **Event Sender Setup**

- **B1 Event Filter**

- **B1 Event Filter Generator**

- **B1 Event Subscriber**

- **B1 Event Generator**

- **Troubleshooting Tool**

- **Optimization**

Event Sender Component Introduction

Event Sender Component Introduction

When an SAP Business One user inserts, updates, or deletes data, SAP Business One stores events in *SEVT* table. Event Sender component picks up the events from *SEVT* table and sends events to Integration Framework (B1i).

Event Sender Component Introduction

Prerequisites

- **You have installed SAP Business One, SAP Business One Integration Component (B1i), SAP Business One Event Sender.**

- **You have an active scenario package in B1i listening to the event.**

  - Scenario step inbound channel is SAP Business One, for event xxx.

  - B1 company is assigned as sender company.

  - Scenario package is active.

  - ➔ Demo

Event Sender Setup

Event Sender Setup

Run event sender setup as admin user:

..\SAP\SAP Business One Integration\EventSender\Setup

Event Sender Setup – Step 1/5

Event Sender Setup – Step 2/5

Every 3 sec, ES retrieve and delete data from SEVT table

Each time ES retrieve and delete 10 events from SEVT table

Event Sender Setup – Step 3/5

B1iadmin user must be active
B1i → Maintenance → User Administration → Runtime User

Event Sender Setup – Step 4/5

Set up event filter per company.

Maintain "include object list" or "exclude object list" and "exclude user" to reduce load on server side

Tick the check box when you handle JE events

Event Sender Setup

EventSender setup

Step 5/5: **Summary Information**

Summary

EventSender will fetch events from B1 server :mo-5480d36ee.mo.sap.corp
EventSender will send events to B1i server :localhost
Registered Company :
SBODEMOUS Events Send to --- Default Inbound
210098 Events Send to --- Default Inbound

Cancel   Back   Finish

You must **restart** event sender service after change configuration!
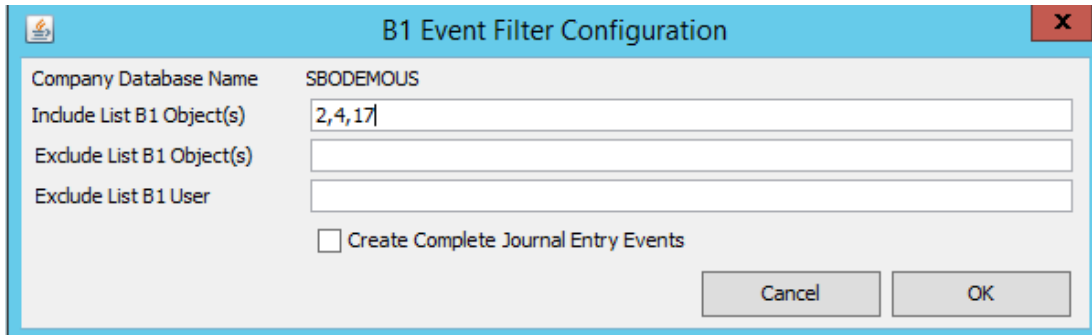
B1 Event Filter

B1 Event Filter - Three Layers of Filter Events

1. Filter event in *SEVT* table

2. Filter event in Event Sender

3. Filter event in B1i

COMMON

SAP Business One

Event Sender

Integration Framework

B1 Event Filter – Test Case 1: filter event in SEVT table

Setting

B1 Event Filter Configuration

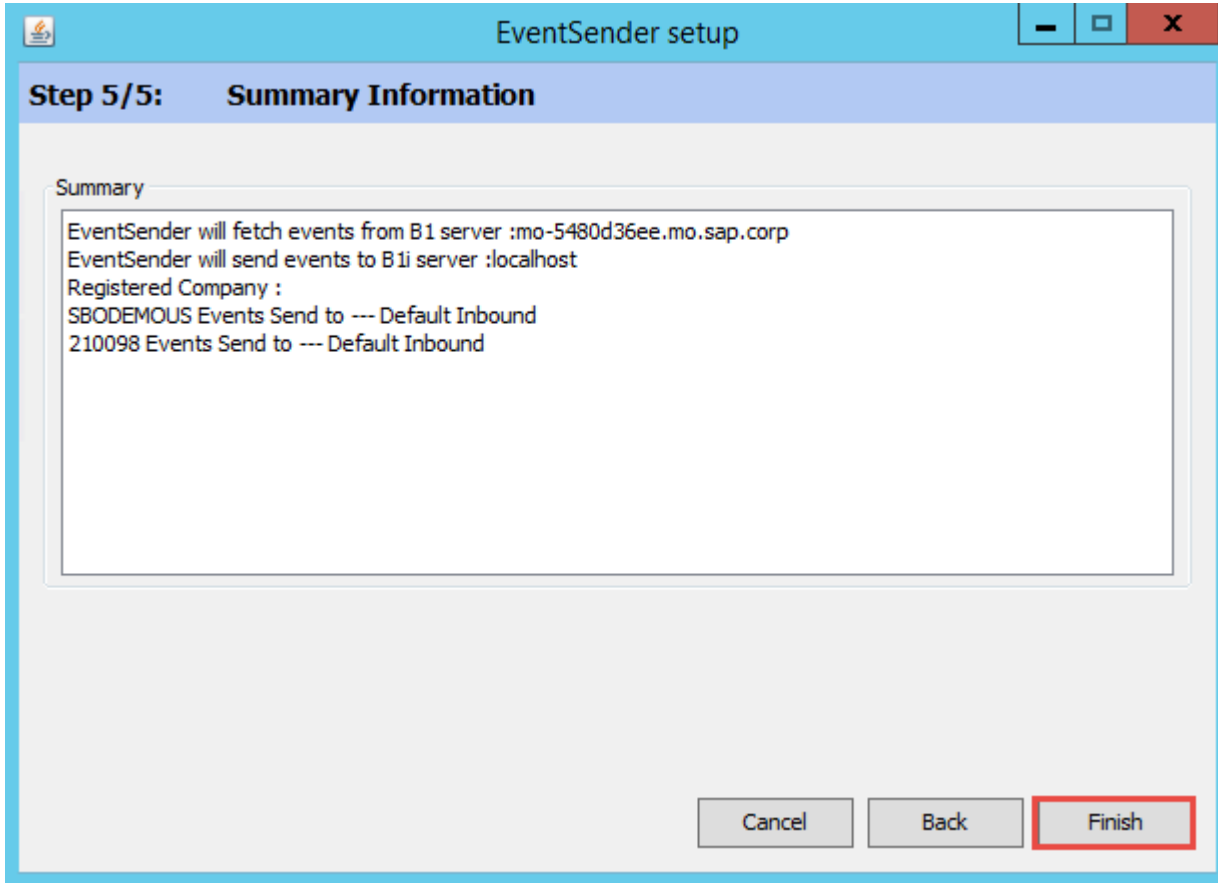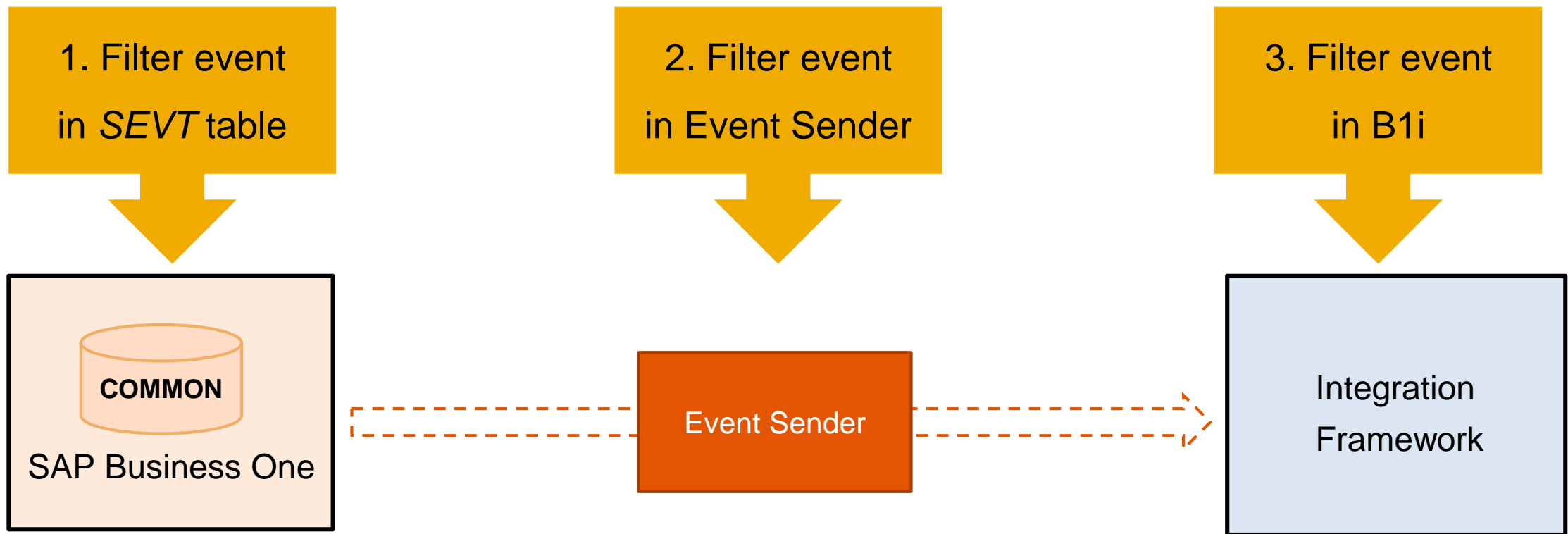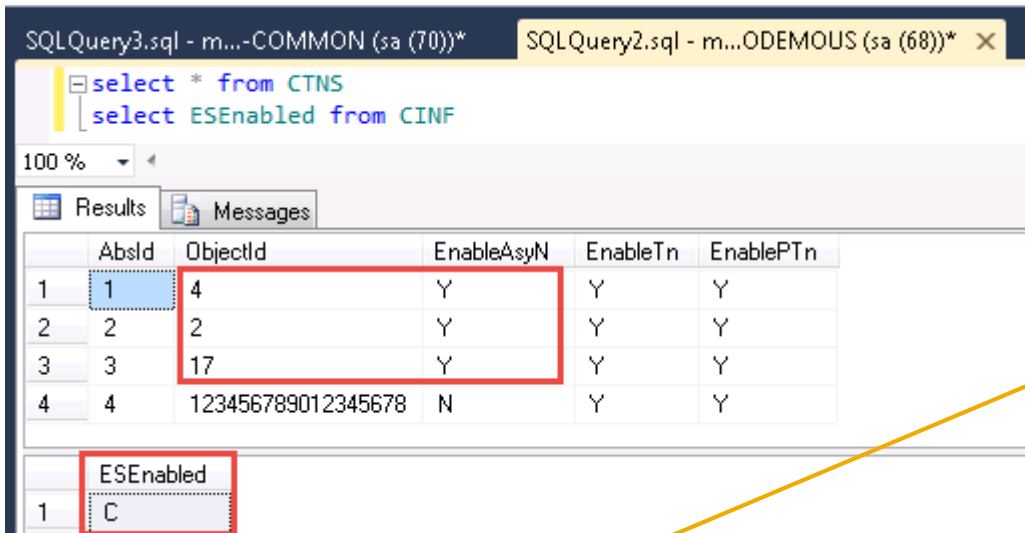|	
Company Database Name	SBODEMOUS
Include List B1 Object(s)	2,4,17
Exclude List B1 Object(s)	
Exclude List B1 User	

☐ Create Complete Journal Entry Events

[Cancel] [OK]

DB Info
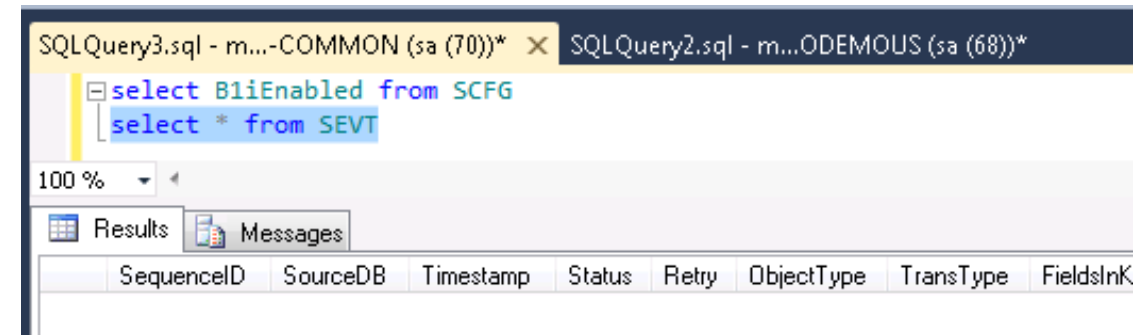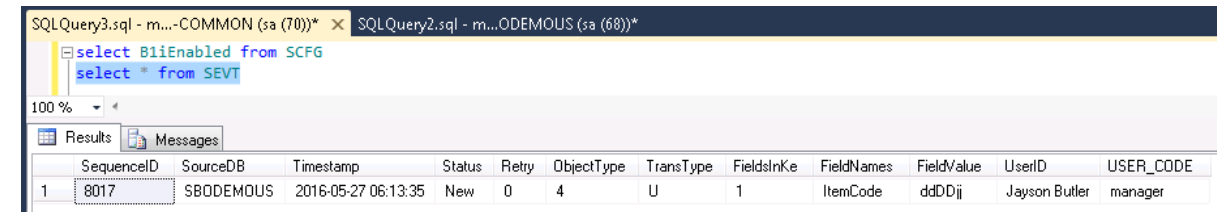

```
select * from CTNS
select ESEnabled from CINF
```

	AbsId	ObjectId	EnableAsyN	EnableTn	EnablePTn
1	1	4	Y	Y	Y
2	2	2	Y	Y	Y
3	3	17	Y	Y	Y
4	4	123456789012345678	N	Y	Y

	ESEnabled
1	C

Test: create event 13, no records inserted to SEVT.


```
select B1iEnabled from SCFG
select * from SEVT
```

SequenceID	SourceDB	Timestamp	Status	Retry	ObjectType	TransType	FieldsInK

Conclusion:

Set "Include List B1 Object(s)" for a company, only the included object events will be generated in SEVT table.

ESEnabled=C: only included events are generated;

ESEnabled=Y: all events are generated in SEVT;

ESEnabled=N: no events are generated in SEVT.

B1 Event Filter – Test Case 2: filter event in SEVT table

Setting

Step 4/5: Choose the Company Databases

DB Info

Test: create any event for SBODEMOUS. No events generated.

Conclusion:

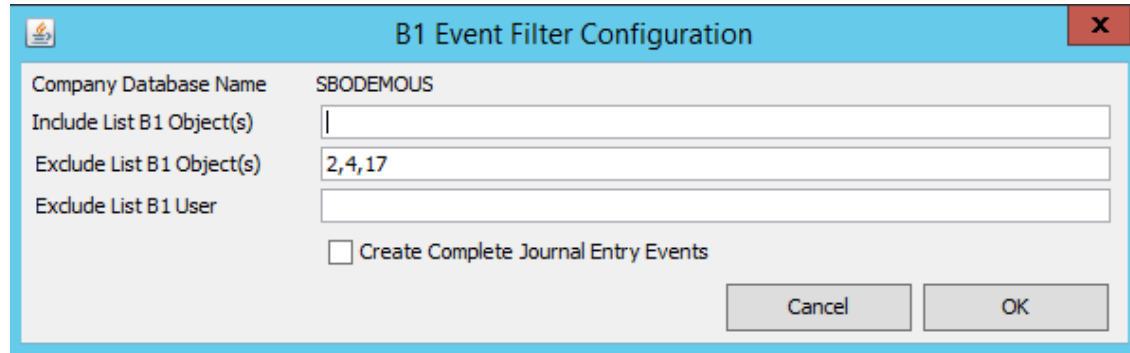**Unselect company from DB list, no event will be generated in SEVT table.**

B1 Event Filter – Test Case 3: filter event in event sender

Setting

DB Info

Test: create event for object 4, event is generated.

Conclusion:

Set "Exclude List B1 Object(s)" in event filter, event for the excluded objects will still be generated in SEVT table, but will be filtered by event sender

B1 Event Filter – Test Case 3: filter event in event sender

Switch on event sender log, you can find the event is filtered:
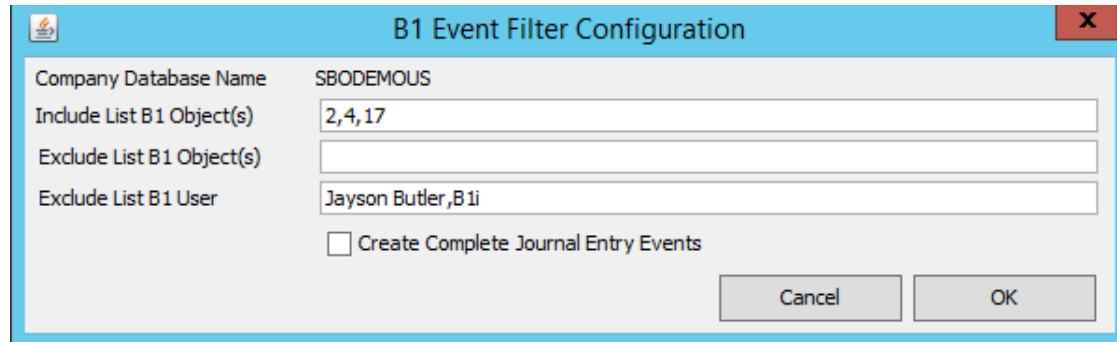
```
May 27, 2016 6:13:49 AM com.sap.b1i.eventsender.EventSender$EventSenderSession doSend
CONFIG: [SBODEMOUS] Event IDs to be sent:8017
May 27, 2016 6:13:49 AM com.sap.b1i.eventsender.EventSender$EventSenderSession doSend
INFO:   These Events Below are filtered:
<b1e:b1event><b1e:eventsource>SBODEMOUS</b1e:eventsource><b1e:objecttype>4</b1e:objecttype><b1e:transactiontype>U</b1e:transactiontype><b1e:user
code>Jayson Butler</b1e:usercode><b1e:userid>manager</b1e:userid><b1e:keys
count="1"><b1e:key><b1e:name>ItemCode</b1e:name><b1e:value>ddDDjj</b1e:value></b1e:key></b1e:keys><b1e:sourcesite>mo-
5480d36ee.mo.sap.corp</b1e:sourcesite><b1e:sourceport>1433</b1e:sourceport><b1e:sourcetype>0</b1e:sourcetype></b1e:b1event>
May 27, 2016 6:13:49 AM com.sap.b1i.eventsender.EventSender$EventSenderSession run
CONFIG: [SBODEMOUS] Wait for seconds for Company on mo-5480d36ee.mo.sap.corp: 1433
```

To switch on event sender log:

1. Open ..SAP\SAP Business One Integration\EventSender\eventsenderlog.txt

2. Change **.level= CONFIG** and save

3. Restart Event Sender service

4. Run scenario and check event sender log: ..\SAP\SAP Business One Integration\EventSender\log

B1 Event Filter – Test Case 4: filter event in event sender

Setting

Conclusion:

Set "Exclude List B1 User" in event filter, event for the excluded users will still be generated in SEVT table, but will be filtered by event sender

Result and event sender log:

	SequenceID	SourceDB	Timestamp	Status	Retry	ObjectType	TransType	FieldsInKe	FieldNames	FieldValue	UserID	USER_CODE
1	8023	SBODEMOUS	2016-05-27 07:26:20	New	0	4	D	1	ItemCode	ddDDjjaadd	Jayson Butler	manager
2	8024	SBODEMOUS	2016-05-27 07:26:20	New	0	4	U	1	ItemCode	testuserfilter	Jayson Butler	manager

INFO: These Events Below are filtered:
<b1e:b1event><b1e:eventsource>SBODEMOUS</b1e:eventsource><b1e:objecttype>4</b1e:objecttype><b1e:transactiontype>D</b1e:transactiontype><b1e:user code>Jayson Butler</b1e:usercode><b1e:userid>manager</b1e:userid><b1e:keys
count="1"><b1e:key><b1e:name>ItemCode</b1e:name><b1e:value>ddDDjjaadd</b1e:value></b1e:key></b1e:keys><b1e:sourcesite>mo-5480d36ee.mo.sap.corp</b1e:sourcesite><b1e:sourceport>1433</b1e:sourceport><b1e:sourcetype>0</b1e:sourcetype></b1e:b1event>
<b1e:b1event><b1e:eventsource>SBODEMOUS</b1e:eventsource><b1e:objecttype>4</b1e:objecttype><b1e:transactiontype>U</b1e:transactiontype><b1e:user code>Jayson Butler</b1e:usercode><b1e:userid>manager</b1e:userid><b1e:keys
count="1"><b1e:key><b1e:name>ItemCode</b1e:name><b1e:value>testuserfilter</b1e:value></b1e:key></b1e:keys><b1e:sourcesite>mo-5480d36ee.mo.sap.corp</b1e:sourcesite><b1e:sourceport>1433</b1e:sourceport><b1e:sourcetype>0</b1e:sourcetype></b1e:b1event>

B1 Event Filter – Test Case 4: filter event in event sender

Note:

To exclude user, you need to enter "**User Name**" instead of "User Code".

```
select U_NAME, USER_CODE from OUSR
```

B1 Event Filter – Test Case 5: filter event in B1i

Setting (*B1i → Maintenance → Cfg B1 Event Filter*)

- By default "B1i User Filter Switched On" is on.
- All events generated by B1i user will not be handled in B1i.
- In Event Monitor, the event by B1i user is displayed in **SUCCESS** section, but scenario step is not triggered.

B1 Event Filter – Test Case 6: filter event in B1i

Setting (*B1i → Maintenance → Cfg B1 Event Filter*)

SAP Business One Event Filter Configuration

B1i User Filter Switched On	☐
Excluded SAP Business One Systems	all B1 Systems
Excluded SAP Business One Objects	4,17
Excluded SAP Business One Tasks	U
Actions	

All events generated by B1i will be filtered except for the events meet the requirements defined in the three fields.

For example, with the parameters defined in above screenshot, events generated by updating item or purchase order by B1i user in all B1 systems will not be filtered in B1i system. All other events created by B1i user will be filtered.

B1 Event Filter – Test Case 6: filter event in B1i

1. Log on B1 with "B1i" user
2. Create a new item
3. B1 Event Monitor displays the event in success section

Message Status: success | Page: 1 (Total 1 pages)

First Page	Previous Page	Next Page	Last Page

Actions	Source Company	Object Id	Object Key(s)	Key Value(s)	Sent Data Time	Target Host	Target B1i Application
✏ ≫	SBODemoUS	4	ItemCode	testb1ifilter01	2016/05/27 07:59:54	local	/VP.0010000104.in_BEAE/com.sap.b1.v

4. Message log does not display any message. Scenario step is not triggered.

Message Log

Matching messages not found

B1 Event Filter - Summary

Three layer of filter events:

1. Filter event in SEVT table

- Unselect company from company list
- Set filter for "include object list" per company

2. Filter event in Event Sender

- Set filter for "Excluded object list" and "Excluded user list"

3. Filter event in B1i

- Set event filter in B1i (*Maintenance → Cfg B1 Event Filter*)
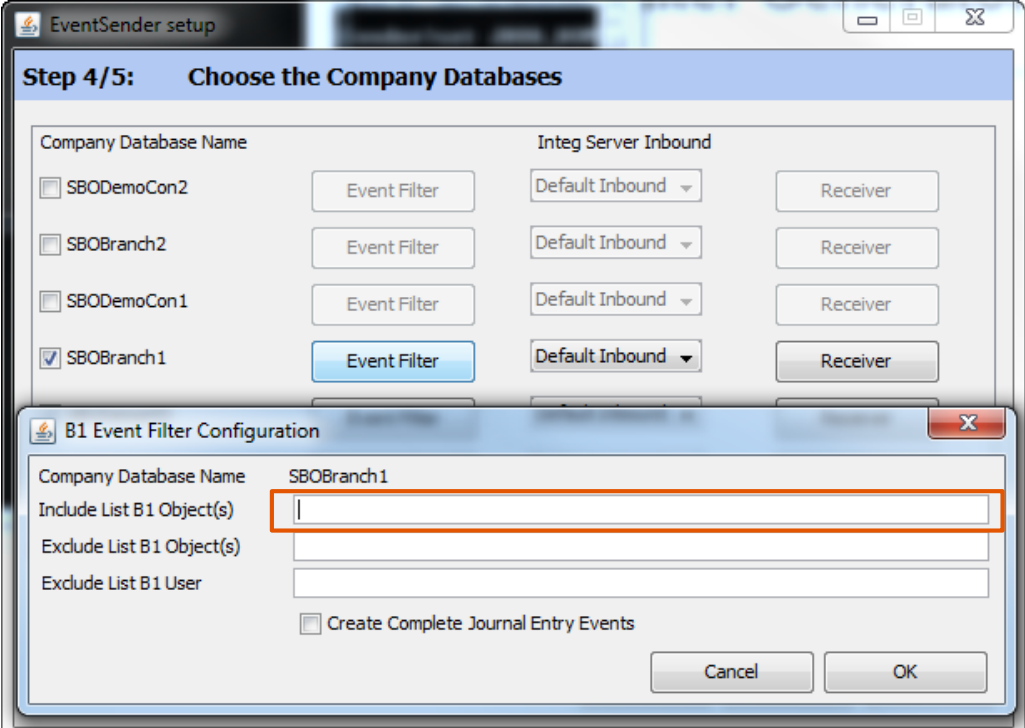
B1 Event Filter Generator

B1 Event Filter Generator

To check which events need to be filtered in event sender, run the Event Filter Generator.

Path: *Integration Framework → Tools → B1 Event Filter Generator*

SAP Business One Event Filter Generator

Generate	
Event Sender Filter	4,13,14,15,16,20,21,67,165,166,203,500,480000001,1210000008
Status	Filter Setting possible
Info	Copy Filter to the Event Sender Setup

Copy to

EventSender setup

Step 4/5: Choose the Company Databases

Company Database Name		Integ Server Inbound	
SBODemoCon2	Event Filter	Default Inbound	Receiver
SBOBranch2	Event Filter	Default Inbound	Receiver
SBODemoCon1	Event Filter	Default Inbound	Receiver
SBOBranch1	Event Filter	Default Inbound	Receiver

B1 Event Filter Configuration

Company Database Name	SBOBranch1
Include List B1 Object(s)	
Exclude List B1 Object(s)	
Exclude List B1 User	

☐ Create Complete Journal Entry Events

Cancel   OK

Note: restart event sender service after updating settings!

B1 Event Filter Generator

- For **intercompany package**, only below events need to be included (Chapter 6 of Intercompany Admin Guide):

In the *Include List B1 Object(s)* field, enter the following comma separated list of object identifier of the SAP Business One objects to minimize the load on the integration server.
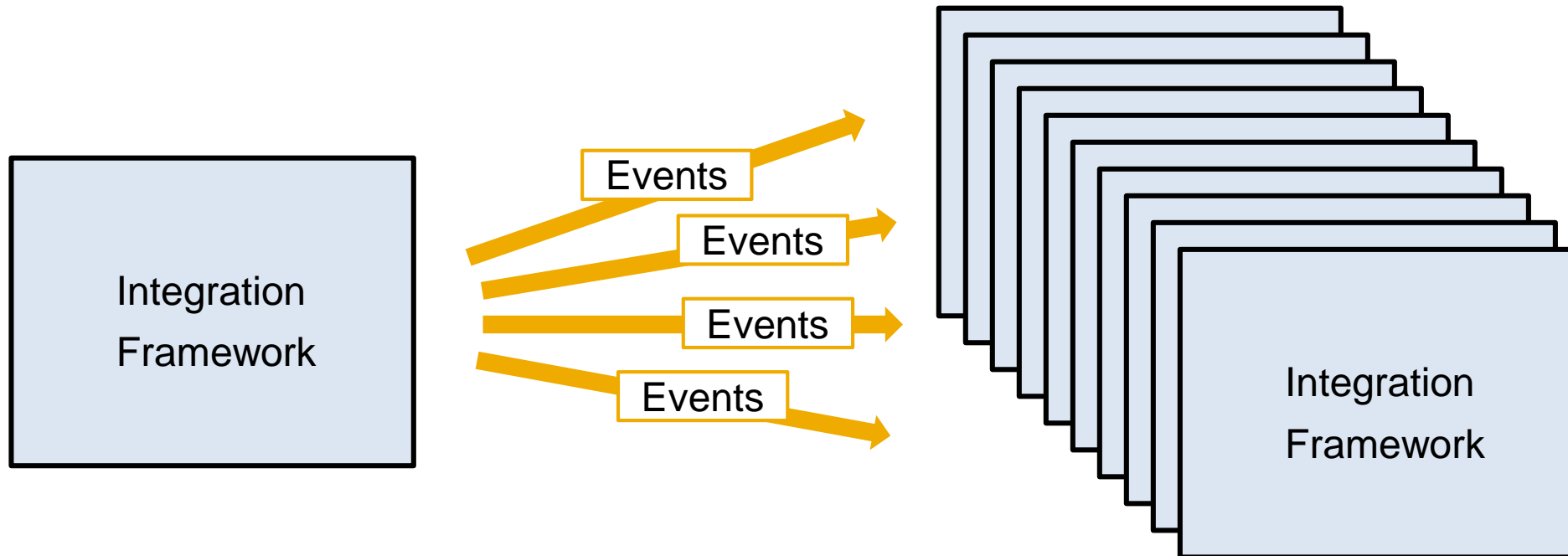
0,UDT,3,231,251,62,138,183,61,268,540000042,269,267,22,112,17,21,16,133,129,140000041,257,40,265,131,130,-3@CTX_SOURCETAX,255,53,186,196,65,223,147,28,30,44,36,150,254,6,-3@CTX_SYNC,239,15,20,540000066,540000065,540000067,540000068,165,163,166,164,278,10000199,10000197,-3@CTX_GLBDATADIS,201,1320000039,-3@CTX_ACCOUNTCLASS,56,50,51,274,140000007,159,256,52,125,10,8,49,43,37,46,13,18,19,14,2,190,176,170,66,4,63,1720000001,1320000032,205

- For **sap.B1System package**, event 500 has to be included in object list;

- For **dashboard package**, event 1210000008 has to be included in object list.

B1 Event Subscriber

B1 Event Subscriber

Using B1 Event Subscriber, you can dispatch events to different B1i servers.

B1 Event Subscriber – Setup

Setting (*B1i → Maintenance → Cfg B1 Event Subscriber*)

B1 Event Subscriber – Runtime

Runtime

Local B1i event monitor:

Message Status: success | Page: 1 (Total 1 pages)

| First Page | Previous Page | Next Page | Last Page |

Actions	Source Company	Object Id	Object Key(s)	Key Value(s)	Sent Data Time	Target Host	Target B1i Application
▶ ▶▶	SBODemoUS	4	ItemCode	testeventSub	2016/05/27 08:09:12	10.97.136.127	/B1iXcellerator/exec/ipo/ReceiveB1Even

Remote B1i event monitor:

Message Status: filtered | Page: 1 (Total 1 pages)

| First Page | Previous Page | Next Page | Last Page |

Source Company	Object Id	Object Key(s)	Key Value(s)	Sent Data Time
mo-5480d36ee.mo.sap.corp:SBODEMOUS	4	ItemCode	testeventSub	2016/05/27 08:09:15

Filtered due to no scenario is set up in the remote B1i server.

B1 Event Generator

B1 Event Generator - Setup

If you want to synchronize B1 data in a batch, you can use the event generator to manually create events.

Path: *Integration Framework → Tools → B1 Event Generator*

| SLD | MAINTENANCE | SCENARIOS | MONITORING | **TOOLS** | HELP |

Tools

- Control Center
- Troubleshooting
- Benchmarks
- B1 Event Generator
- B1 Event Filter Generator
- XML Editor

SAP Business One Event Generator

System ID	0010000106 ...
Event Generation ID	100 ...
Event Identifier	
Object Type ID	4 ...
Task Type	A ...
Table Key	ItemCode
Retrieval Block Size	100
Retrieval Limit	
SQL Statement	select ItemCode from OITM
Actions	📋 💾 Start Result Clear

B1 Event Generator - Runtime

Event Generator - Result

Display Result in XML

System ID	0010000104
Event Generation ID	100
Number of Events	69
Object Type ID	4
Table Key	ItemCode
Timestamp	2016/05/27 08:59:54

#	Key Value
1	A00001
2	A00002
3	A00003
4	A00004
5	A00005
6	A00006
7	aaa
8	B10000

SAP Business One Event Monitor

Log	On	Daily Deletion (HH:00)	00
Message Status	success		

79 messages found

Message Status: success | Page: 1 (Total 2 pages)

First Page | Previous Page | Next Page | Last Page

Actions	Source Company	Object Id	Object Key(s)	Key Value(s)	Sent Data Time	Target Host	Target B1i Application
	SBODemoUS	4	ItemCode	Z00002	2016/05/27 09:00:32	local	/vP.0010000104.in_BEAE/com.sap.b1i.\
	SBODemoUS	4	ItemCode	Z00001	2016/05/27 09:00:31	local	/vP.0010000104.in_BEAE/com.sap.b1i.\
	SBODemoUS	4	ItemCode	TR0001	2016/05/27 09:00:31	local	/vP.0010000104.in_BEAE/com.sap.b1i.\
	SBODemoUS	4	ItemCode	testuserfilter	2016/05/27 09:00:31	local	/vP.0010000104.in_BEAE/com.sap.b1i.\
	SBODemoUS	4	ItemCode	testItem001	2016/05/27 09:00:30	local	/vP.0010000104.in_BEAE/com.sap.b1i.\
	SBODemoUS	4	ItemCode	testeventSub	2016/05/27 09:00:30	local	/vP.0010000104.in_BEAE/com.sap.b1i.\
	SBODemoUS	4	ItemCode	testb1ifilter01	2016/05/27 09:00:29	local	/vP.0010000104.in_BEAE/com.sap.b1i.\
	SBODemoUS	4	ItemCode	testb1ifilter	2016/05/27 09:00:29	local	/vP.0010000104.in_BEAE/com.sap.b1i.\
	SBODemoUS	4	ItemCode	test01	2016/05/27 09:00:28	local	/vP.0010000104.in_BEAE/com.sap.b1i.\

Note that the events will be generated directly in B1i event monitor, records will not be generated in SEVT table and go through Event Sender.

Troubleshooting Tool

Troubleshooting Tool – B1 Event Sender

Path: *Integration Framework → Tools → Troubleshooting → Choose "B1 Event Sender" in Functional Group*

DEMO

Optimization

Optimization

✓ Increase batch number to improve event processing throughput

✓ Set include object list in event sender setup filter.

✓ Exclude B1 users in setup filter.

✓ Dispatch events to other B1i to balance server load.

✓ To replicate mass data, use event generator tool.

Thank you

Contact information:

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