



ETL Steps – Agile for SAP BW/4HANA®

- Solution Description

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ETL Steps - Solution Description

ETL Steps is a Framework which facilitates the agile development in SAP BW/4HANA®



Unite all the SAP BW Project Team members in a common interface



Gain Transparency of what was developed and transported in each BW System



Force the split of Requirements in small ETL Steps



Link the Code to Requirements (jump to Jira or MS Planner/Teams-Task)



Force the development of small and fast ABAP routines



Easy Impact analysis - Can I delete this Field or not?



Code and deploy now, use later:
Time dependency of the ETL-Steps



See the implemented logic at once for entire BW process chains



Force the split of Requirements in small ETL Steps

The interface consists of easy-to-use SAP Analytics Cloud Stories:

File

Edit

Tools

Display

{ }

Filter

Refresh

Bookmark

Undo

Redo

Detail

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ETL Steps Statistics

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ETL Steps Statistics by Application, Layer and BW Objects

App (All)

Layer (All)

Target (All)

Source (All)

Routine (All)

Process Chain (All)

TranID (All)

DTP (All)

ETL Step: /ETL/APDSUSA_0010

Open the Task

Open the Documentation

Open the ABAP Class

ETL Step ID	App	Layer	Status	Valid from	Valid to	Target	Source	Routine	Seq.No	ABAP class	Average Time
/ETL/APDSUSA_0010 Fill the Record Number Field with an autonumber	DATEV online	Entry	active	01.01.1000	31.12.9999	/ETL/APDSUSA	/ETL/IS_DSUSA_IN	Start	00010	/ETL/CL_MAP_DR_AUTONUMBER	0.0015147
/ETL/APDSUSA_0020 Extract the Client Name from the header rows	DATEV online	Entry	active	01.01.1000	31.12.9999	/ETL/APDSUSA	/ETL/IS_DSUSA_IN	Start	00020	/ETL/CL_MAP_DR_GET_FIELD_SELOP	0.0018051
/ETL/APDSUSA_0030 Extract the Tax Consultant Number from the header rows	DATEV online	Entry	active	01.01.1000	31.12.9999	/ETL/APDSUSA	/ETL/IS_DSUSA_IN	Start	00030	/ETL/CL_MAP_DR_GET_FIELD_SELOP	0.0016408
/ETL/APDSUSA_0040 Extract the Client Number from the header rows	DATEV online	Entry	active	01.01.1000	31.12.9999	/ETL/APDSUSA	/ETL/IS_DSUSA_IN	Start	00040	/ETL/CL_MAP_DR_GET_FIELD_SELOP	0.0016556
/ETL/APDSUSA_0050 Extract the Download Date and Time from the header rows>Date	DATEV online	Entry	active	01.01.1000	31.12.9999	/ETL/APDSUSA	/ETL/IS_DSUSA_IN	Start	00050	/ETL/CL_MAP_DR_GET_FIELD_SELOP	0.0016146
/ETL/APDSUSA_0060 Extract the Download Date and Time from the header rows>Time	DATEV online	Entry	active	01.01.1000	31.12.9999	/ETL/APDSUSA	/ETL/IS_DSUSA_IN	Start	00060	/ETL/CL_MAP_DR_GET_FIELD_SELOP	0.0016025
/ETL/APDSUSA_0070 Extract the Accounts included from the header rows	DATEV online	Entry	active	01.01.1000	31.12.9999	/ETL/APDSUSA	/ETL/IS_DSUSA_IN	Start	00070	/ETL/CL_MAP_DR_GET_FIELD_SELOP	0.0015845

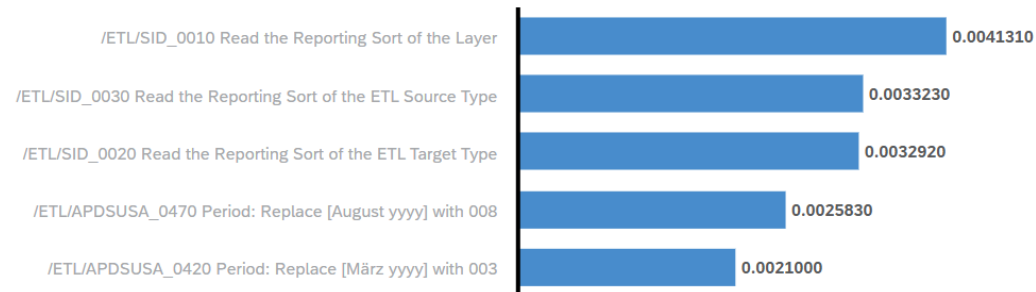




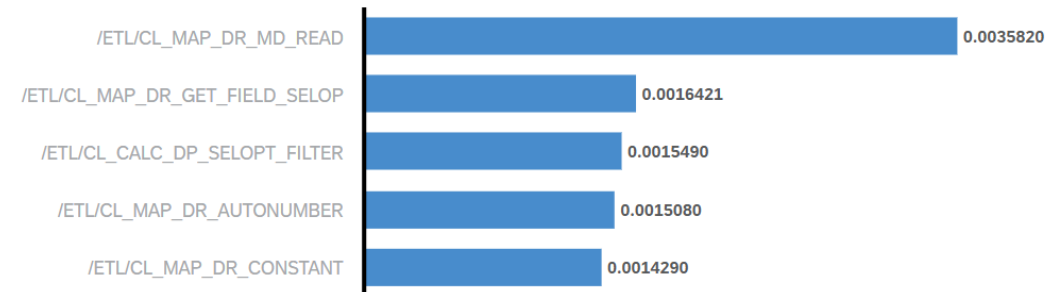
Force the development of small and fast ABAP routines

The runtime of the ETL Steps is recorded in real time so one can address any performance issues as soon as possible, both in production and during the development tests:

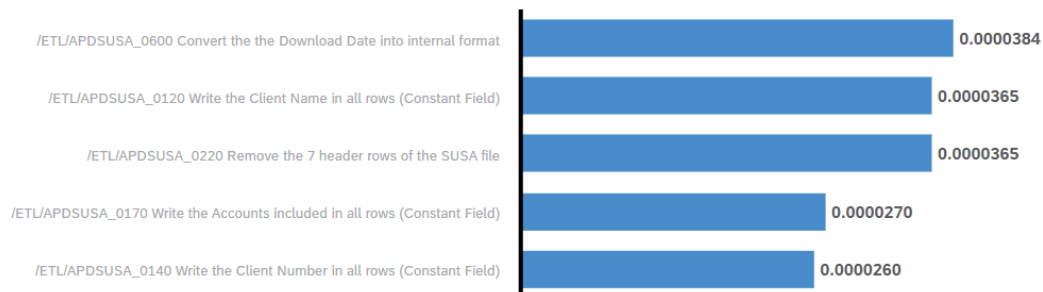
Top 5 worst buffering time by ETL Step



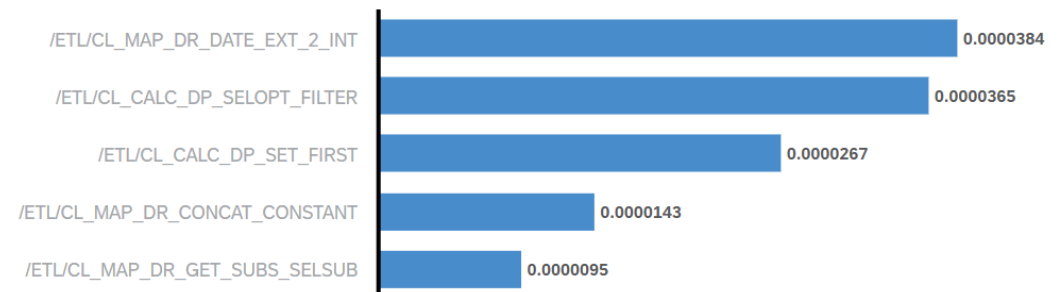
Top 5 worst average buffering time by ABAP Class



Top 5 worst runtime by ETL Step



Top 5 worst average runtime by ABAP Class





Code and deploy now, use later: Time dependency of the ETL-Steps

- Each ETL Step has a validity period.
- One can deactivate the ETL Steps causing problems in production.
- One can run an ETL process both with an old and a new version of an ETL Step and then compare the results.

ETL Step ID	App	Layer	Status	Valid from	Valid to	Target	Source
/ETL/APDSUSA_0010 Fill the Record Number Field with an autonumber	DATEV online	Entry	active	01.01.1000	31.12.9999	/ETL/APDSUSA	/ETL/IS_DSUSA_IN
/ETL/APDSUSA_0020 Extract the Client Name from the header rows	DATEV online	Entry	active	01.01.1000	31.12.9999	/ETL/APDSUSA	/ETL/IS_DSUSA_IN
/ETL/APDSUSA_0030 Extract the Tax Consultant Number from the header rows	DATEV online	Entry	active	01.01.1000	31.12.9999	/ETL/APDSUSA	/ETL/IS_DSUSA_IN
/ETL/APDSUSA_0040 Extract the Client Number from the header rows	DATEV online	Entry	active	01.01.1000	31.12.9999	/ETL/APDSUSA	/ETL/IS_DSUSA_IN



Link the Code to the Requirements

A list of ETL Steps is not sufficient to understand the logic of a BW application.

This is why we have defined a set of Tags one can use to specify which Requirement the ETL Steps address and with which Task where they implemented.

The interface gives the possibility to open the customized task and documentation in a new Tab.

One can now answer questions like: Which Business Rules are already implemented? Where is executed my business rule? Which business rules make the most of the runtime?

ETL Step:

Open the Task Open the Documentation Open the ABAP Class

ETL Step ID		Tags	Jira	Confluence	Planner	ABAP class
/ETL/APDSUSA_0010	Fill the Record Number Field with an autonumber	[JIRA CPG-3]	[WIKI x/tQAC]			/ETL/CL_MAP_DR_AUTONUMBER
/ETL/APDSUSA_0020	Extract the Client Name from the header rows	[PLWEB_PLAN 0jxESESwPESEag1YhDqYcpgAH_Tz]	[PLWEB_TASK FOT3tWg9...			/ETL/CL_MAP_DR_GET_FIELD_SELOP
/ETL/APDSUSA_0030	Extract the Tax Consultant Number from the he...	[TEAMS_PLAN 0jxESESwPESEag1YhDqYcpgAH_Tz]	[TEAMS_TASK FOT3tWg9...			/ETL/CL_MAP_DR_GET_FIELD_SELOP



Easy Impact analysis

All the Fields or BW Objects an ETL uses must be customized as parameters of the ETL Step.

So now you are able to answer typical impact analysis questions right away:

- ✓ "Which fields are used by a business rule?"
- ✓ "Which business rules use a certain field?"
- ✓ "Can I delete a field from the system?"

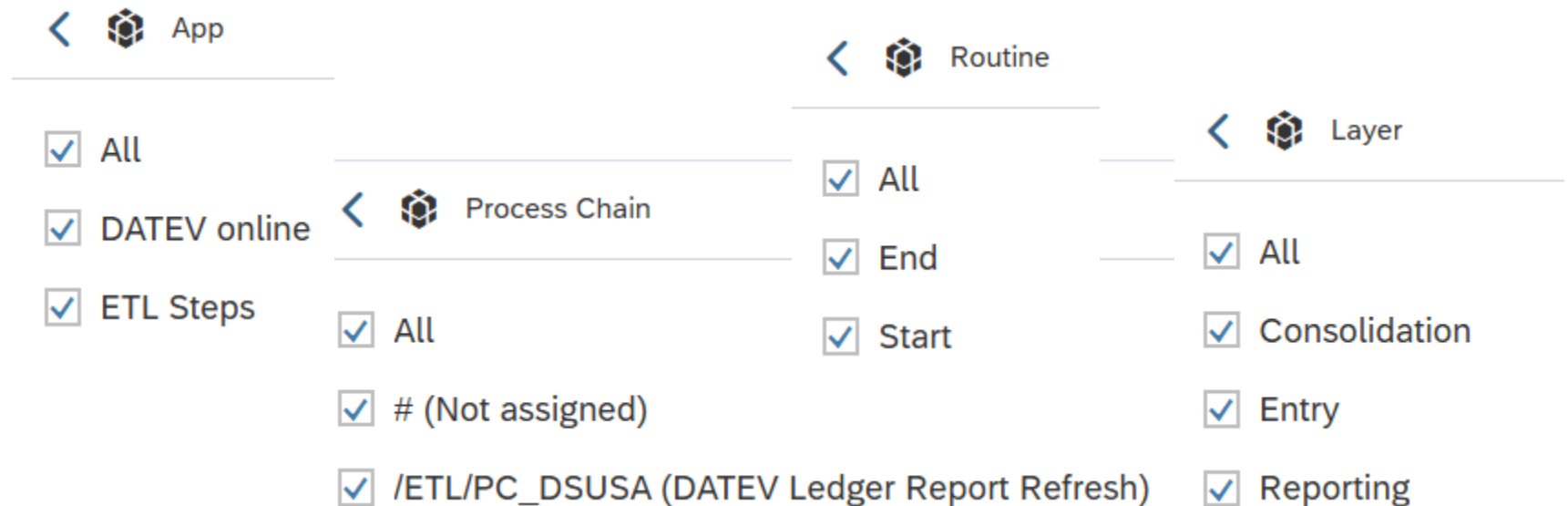
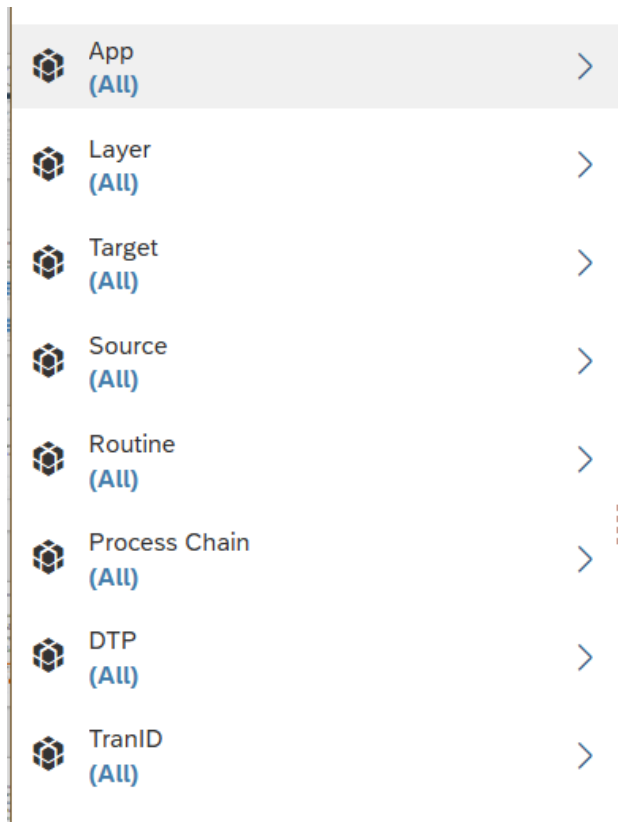
ETL Step ID		⬆️⬆️ ABAP class ⬆️⬆️	⚙️ Debugging ⬆️⬆️	Param 01	⬆️⬆️ Param 02 ⬆️⬆️	⬆️⬆️ Param 03 ⬆️⬆️	⬆️⬆️ Param 04 ⬆️⬆️	⬆️⬆️ Param 05 ⬆️⬆️	⬆️⬆️ Param 06 ⬆️⬆️
/ETL/APDSUSA_0500	Period: Replace [November yyyy] with 011	/ETL/CL_MAP_DR_GET_FIELD_SELOP	off	DPERIOD	011	DPERIOD	I	CP	November*
/ETL/APDSUSA_0510	Period: Replace [Dezember yyyy] with 012	/ETL/CL_MAP_DR_GET_FIELD_SELOP	off	DPERIOD	012	DPERIOD	I	CP	Dezember*
/ETL/APDSUSA_0520	Null balance key ALL for All accounts	/ETL/CL_MAP_DR_REPLACE	off	NULL_BALANCE	Alle Konten	AWO, ANB	FIRST	#	#
/ETL/APDSUSA_0530	Null balance key AWO for Accounts without null balance	/ETL/CL_MAP_DR_REPLACE	off	NULL_BALANCE	Konten ohne N...	AWO	FIRST	#	#
/ETL/APDSUSA_0540	Null balance key ANB for Accounts with null balance	/ETL/CL_MAP_DR_REPLACE	off	NULL_BALANCE	Konten mit Null...	ANB	FIRST	#	#
/ETL/APDSUSA_0550	Accounts included key LA for Ledger accounts	/ETL/CL_MAP_DR_REPLACE	off	ACCOUNTS_INCLUDED	Sachkonten	LA	FIRST	#	#
/ETL/APDSUSA_0560	Accounts included key AR for Accounts receivable	/ETL/CL_MAP_DR_REPLACE	off	ACCOUNTS_INCLUDED	Debitoren	AR	FIRST	#	#
/ETL/APDSUSA_0570	Accounts included key AP for Accounts payable	/ETL/CL_MAP_DR_REPLACE	off	ACCOUNTS_INCLUDED	Kreditoren	AP	FIRST	#	#
/ETL/APDSUSA_0580	Extract the Download Date from Date&Time	/ETL/CL_MAP_DR_GET_SUBS_SELSUB	off	DOWNLOAD_DATE	0	20	DOWNLOAD_DATE	0	10
/ETL/APDSUSA_0590	Extract the Download Time from Date&Time	/ETL/CL_MAP_DR_GET_SUBS_SELSUB	off	DOWNLOAD_TIME	0	20	DOWNLOAD_TIME	11	5
/ETL/APDSUSA_0600	Convert the the Download Date into internal format	/ETL/CL_MAP_DR_DATE_EXT_2_INT	off	DOWNLOAD_DATE	DOWNLOAD_D...	#	#	#	#
/ETL/APDSUSA_0610	Remove the : from the Time Field	/ETL/CL_MAP_DR_REPLACE	off	DOWNLOAD_TIME	:	#	ALL	#	#
/ETL/APDSUSA_0620	Add 00 Seconds to the Time for the internal Time format	/ETL/CL_MAP_DR_CONCAT_CONSTANT	off	DOWNLOAD_TIME	#	#	CONDENSE NO-G...	DOWNLOAD_TIME	00



Display the whole Logic at once for entire BW process chains

Combining the ETL Step customizing and the runtime statistics of the ETL Steps one can identify what logic is executed in the system when a BW process chain is started.

The following filters are available for further drill downs:



ETL Steps - Solution Benefits

- ✓ It makes the BW Application transparent to all team members.
- ✓ The BW developers do not necessarily need ABAP knowledge, and the ABAP developers do not necessarily need BW knowledge.
 - It simplifies the search for available and affordable human resources.
- ✓ It reduces the costs of the development.
- ✓ Speeds up the milestone achievement.



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