

Diffuser/MDR Release Notes

8.1 — Last update: 2016/05/11

Basis Technologies

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Introduction

These Release Notes provide an overview of the new functionality rolled out in recent versions of Diffuser (previously called Mass Data Runtime).

- Diffuser 8.10 (*released August 2015*)
- Diffuser 8.00 (*released March 2015*)
- Mass Data Runtime 7.20 (*released March 2013*)
- Mass Data Runtime 7.10 (*released September 2011*)
- Mass Data Runtime 7.00 (*released January 2010*)

SAP Certification

Diffuser/MDR is a SAP certified product:

- Certified for integration with SAP ABAP 7.0 (SAP report no. 28272361)

All Diffuser SAP components exist within Basis Technologies' own namespace /BTR

Diffuser 8.10

Enhancements (8.10)

Capacity Groups

Capacity Groups extend the ability of users to control the distribution of system resources to Diffuser programs. It supports the construction of groups of background processors from a number of Application Servers into what Basis Technologies terms a Capacity Group. It allows for each Application server to supply a percentage of background processors to a Capacity Group and the ability to ring fence a number of background jobs to be kept free from being utilized by Diffuser. Capacity Groups also allow the setup of “Activity Periods” where at a configured day of the week and time the configuration can change the number background jobs available to the capacity group.

Different programs can be given a low, medium or high priority where each is set up with percentages of the overall capacity group. Take as an example a Capacity Group of 100 background processors where low priority programs are configured with 10%, medium 20% and high 70%. If programs are running at all priority levels the low priority programs can only use 10 background jobs so just 10 of the total, while the high priority programs have 70 processors available

The configuration of the capacity group can be changed at runtime and this will be reflected in the Diffuser programs running once the changes are saved.

More details are available in the [Capacity Groups](#) section of the Administrators Guide.

Bug Fix (8.10)

Transformation Programs

In transformation programs that have used the statement “mdr_instance_result_get” in the Initialization of the transformation program will get the error “An Diffuser transformation program cannot be run directly” this formerly worked with version 7.20, this bug is now fixed and the statement “mdr_instance_result_get” no longer throws an error.

Diffuser 8.00

Re-naming

Mass Data Runtime is now known as Diffuser, which is a part of our Node5 Architecture which is at the core of all of Basis Technologies software solutions.

For a program to be accelerated by the Node5 Diffuser, it can either be developed as a custom Z Accelerator or provided as a prepackaged program supplied by Basis Technologies (as a GT, GTi or BDi App). The key features to accelerate a program are the Node5 Diffuser and Node5 MiniCube.

Enhancements (8.00)

The following Enhancements were made to the framework for the upgrade to Diffuser 8.0

- [MiniCubes](#)
- [Debugging Intervals](#)
- [Reprocess Error](#)
- [Security Enhancements](#)

MiniCubes

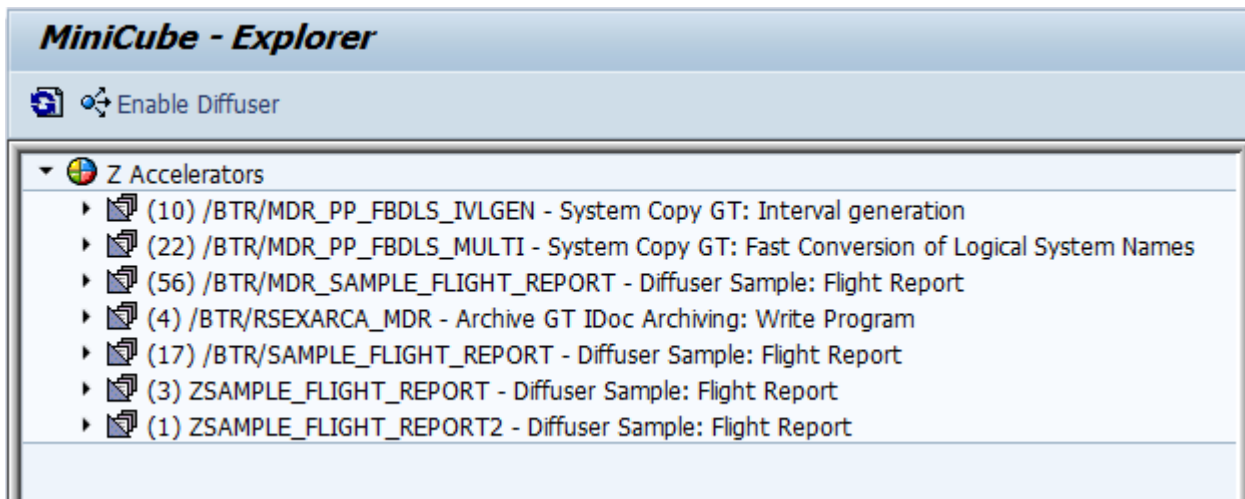
With previous versions of MDR the Run History transaction /BTR/MDRH was used to access historical runs as well as viewing the live running of programs, this transaction still runs and exists as it did previously, however, there is now an enhanced transaction /BTR/MINICUBE. It works in much the same way as the Run History, but with an enhanced look and feel and the following key differences.

- [Debugging Intervals](#)
- [Reprocessing Errors](#)
- [Increase jobs with a simple number and view numbers of available background jobs](#)

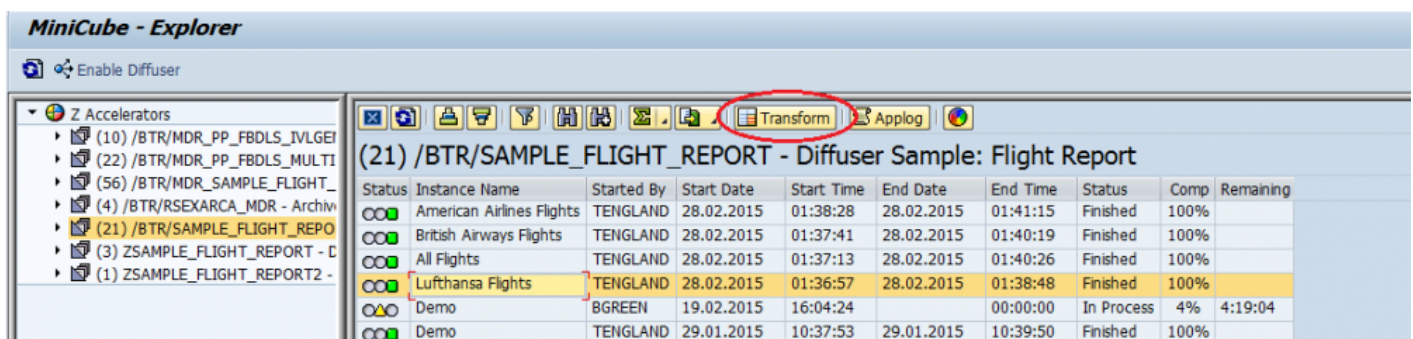
The entry screen to transaction /BTR/MINICUBE is very similar to /BTR/MDRH it allows to search by user, time period, status and program.

Select Options			
Instance ID	<input type="text"/>	to	<input type="text"/>
Started By	<input type="text" value="USER1"/>	to	<input type="text"/>
Start Date	<input type="text" value="28.02.2015"/>	to	<input type="text"/>
Start Time	<input type="text" value="00:00:00"/>	to	<input type="text" value="00:00:00"/>
End Date	<input type="text"/>	to	<input type="text"/>
End Time	<input type="text" value="00:00:00"/>	to	<input type="text" value="00:00:00"/>
Instance Status	<input type="text"/>	to	<input type="text"/>
Diffuser Program	<input type="text"/>	to	<input type="text"/>

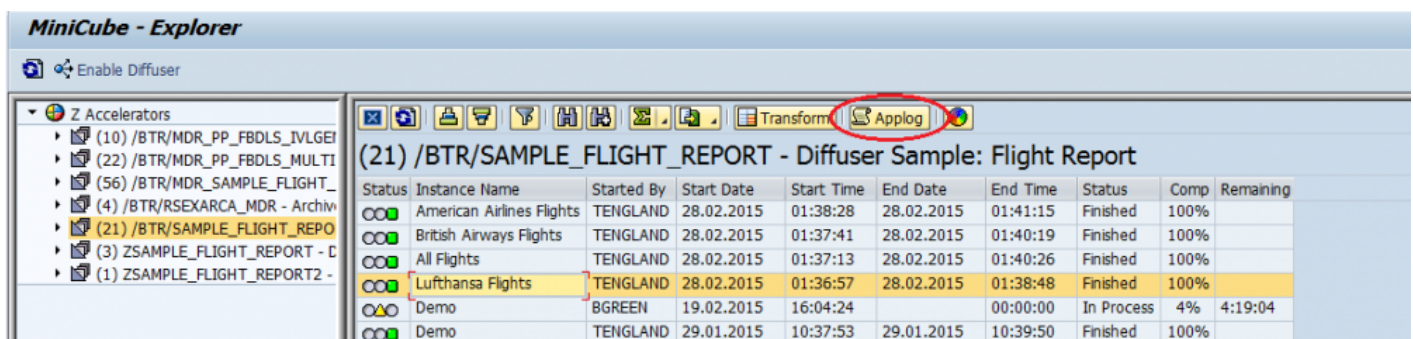
MiniCube will show a list of the Diffuser defined program(s) with instances relevant to the search criteria, expand the Z Accelerators Node to reveal the results.



By drilling down on the program name the user will access the programs instance runs. Select an instance and double click or click “Transform” to display the results of the run.



In the same manner you can check the application log for error messages.



Once on the screen above the user will be able to see and administer historical data as well as instances in progress using the functionality mentioned in [Administering Diffuser Programs](#).

APIs

A suite of APIs have been introduced to allow the retrieval of information and the administration of a Diffuser instance

The Jobname and Jobcount have to be provided as parameters and used to perform the following actions on a Diffuser Instance:

- Pause Instance
- Restart Instance
- Change number of processors running against an instance

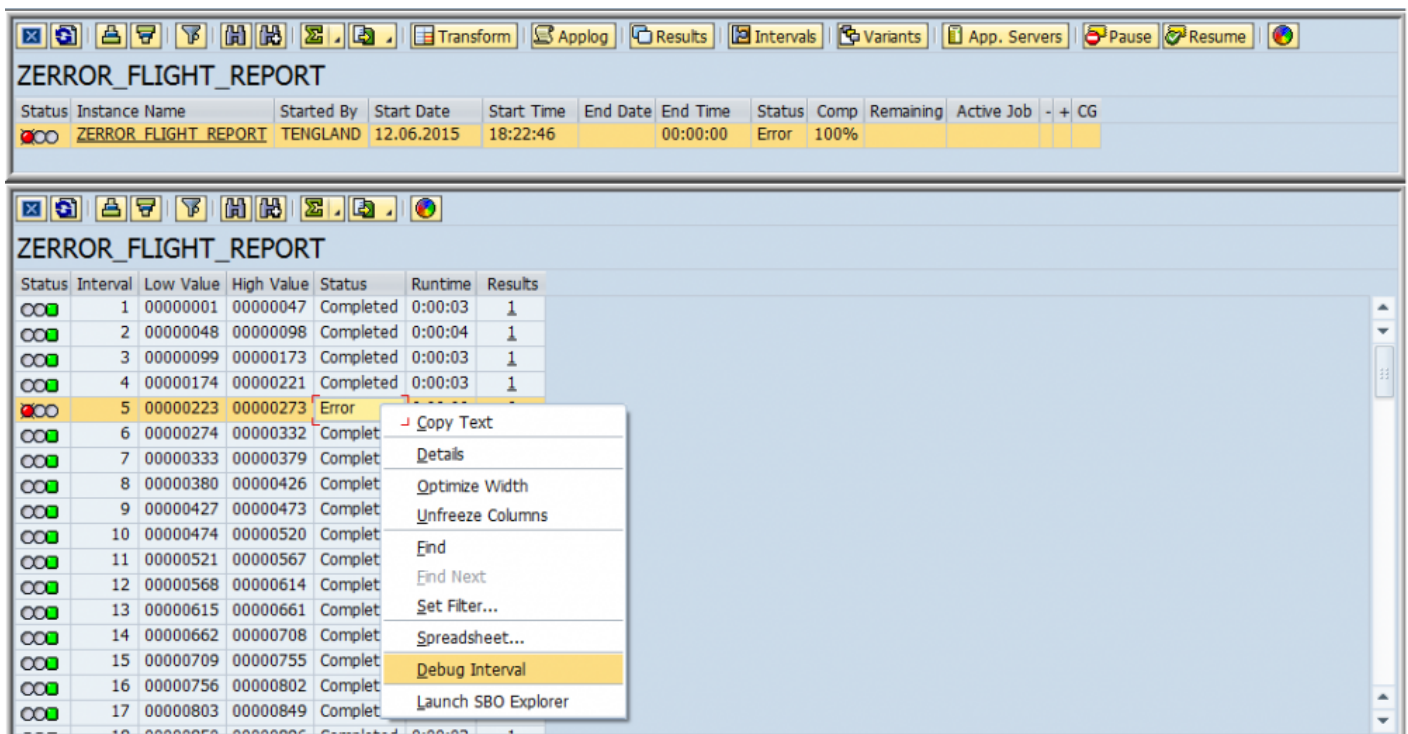
The following information on a Diffuser instance can be retrieved:

- Status
- Estimated time remaining
- Percentage complete
- Number of intervals completed
- Number of intervals remaining
- Number of active background processes operating

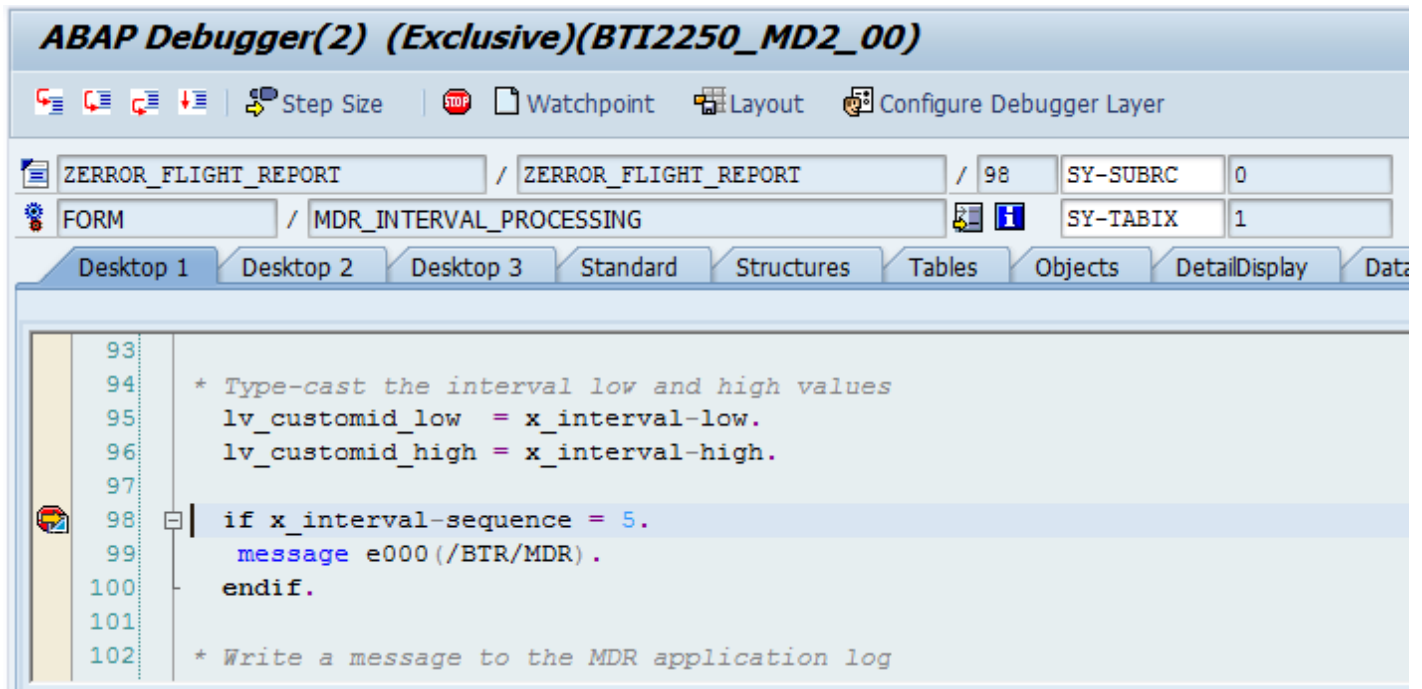
Debugging Intervals

Diffuser 8.0 also offers the ability to debug an individual interval through the MiniCube transaction /N/BTR/ MINICUBE, on finding an interval in error there is now the option of debugging the interval to try and work out what went wrong.

Firstly ensure you have positioned your break point in the code, then select the interval and right-click for the option to “Debug an Interval”



The debugger will then open at your break point.



Reprocess Error

Diffuser 8.0 also offers the ability to reprocess intervals in error through the MiniCube transaction /N/BTR/ MINICUBE, on finding an interval in error as below there is an option to reprocess where you have been able to fix the cause of the error, such as updating some master data.



Bear in mind the impact that running the interval out of sequence or at a later date may have on your report or processing of data.

ZERROR_FLIGHT_REPORT											
Status	Instance Name	Started By	Start Date	Start Time	End Date	End Time	Status	Comp	Remaining	Active Job	- + CG
	ZERROR_FLIGHT_REPORT	TENGLAND	12.06.2015	17:33:02		00:00:00	Error	100%			

ZERROR_FLIGHT_REPORT						
Status	Interval	Low Value	High Value	Status	Runtime	Results
	1	00000001	00000047	Completed	0:00:09	1
	2	00000048	00000098	Completed	0:00:10	1
	3	00000099	00000173	Completed	0:00:13	1
	4	00000174	00000221	Completed	0:00:04	1
	5	00000223	00000273	Error	0:00:00	0
	6	00000274	00000332	Completed	0:00:06	1
	7	00000333	00000379	Completed	0:00:04	1
	8	00000380	00000426	Completed	0:00:04	1
	9	00000427	00000473	Completed	0:00:04	1
	10	00000474	00000520	Completed	0:00:03	1
	11	00000521	00000567	Completed	0:00:03	1
	12	00000568	00000614	Completed	0:00:03	1
	13	00000615	00000661	Completed	0:00:04	1
	14	00000662	00000708	Completed	0:00:03	1
	15	00000709	00000755	Completed	0:00:04	1
	16	00000756	00000802	Completed	0:00:03	1
	17	00000803	00000849	Completed	0:00:03	1

To reprocess the error select the instance in the status of error and right-click for the “Reprocess Error” option as below.

The screenshot shows the ZERROR_FLIGHT_REPORT interface. At the top, there is a toolbar with icons for Transform, Applg, Results, Intervals, Variants, App. Servers, Pause, and Resume. Below the toolbar, a summary bar displays the instance name 'ZERROR_FLIGHT_REPORT', started by 'TENGLAND', start date '12.06.2015', start time '17:33:02', end date '00:00:00', end time '00:00:00', status 'Error', completion '100%', and remaining 'Active Job'. A context menu is open over the error row (row 5), showing options: Copy Text, Details, Optimize Width, Unfreeze Columns, End, End Next, Set Filter..., Spreadsheet..., Delete Run, Force Error, Reprocess Error (highlighted), Rename, and Launch SBO Explorer.

Status	Interval	Low Value	High Value	Status	Runtime	Results
Completed	1	00000001	00000047	Completed	0:00:09	1
Completed	2	00000048	00000098	Completed	0:00:10	1
Completed	3	00000099	00000173	Completed	0:00:13	1
Completed	4	00000174	00000221	Completed	0:00:04	1
Error	5	00000223	00000273	Error	0:00:00	0
Completed	6	00000274	00000332	Completed	0:00:06	1
Completed	7	00000333	00000379	Completed	0:00:04	1
Completed	8	00000380	00000426	Completed	0:00:04	1
Completed	9	00000427	00000473	Completed	0:00:04	1
Completed	10	00000474	00000520	Completed	0:00:03	1
Completed	11	00000521	00000567	Completed	0:00:03	1
Completed	12	00000568	00000614	Completed	0:00:03	1
Completed	13	00000615	00000661	Completed	0:00:04	1
Completed	14	00000662	00000708	Completed	0:00:03	1
Completed	15	00000709	00000755	Completed	0:00:04	1

The same as resuming a Diffuser instance the popup for the number of processors you want to utilize appears.

The screenshot shows the ZERROR_FLIGHT_REPORT interface with a dialog box titled 'Available BGDs: 3' open. The dialog box has a text field labeled 'Active Jobs' with the value '1' entered. There are checkmark and X buttons at the bottom right of the dialog box.

Status	Interval	Low Value	High Value	Status	Runtime	Results
Completed	1	00000001	00000047	Completed	0:00:09	1
Completed	2	00000048	00000098	Completed	0:00:10	1
Completed	3	00000099	00000173	Completed	0:00:13	1
Completed	4	00000174	00000221	Completed	0:00:04	1
Error	5	00000223	00000273	Error	0:00:00	0
Completed	6	00000274	00000332	Completed	0:00:06	1
Completed	7	00000333	00000379	Completed	0:00:04	1
Completed	8	00000380	00000426	Completed	0:00:04	1
Completed	9	00000427	00000473	Completed	0:00:04	1
Completed	10	00000474	00000520	Completed	0:00:03	1
Completed	11	00000521	00000567	Completed	0:00:03	1
Completed	12	00000568	00000614	Completed	0:00:03	1
Completed	13	00000615	00000661	Completed	0:00:04	1
Completed	14	00000662	00000708	Completed	0:00:03	1
Completed	15	00000709	00000755	Completed	0:00:04	1

In this example the error is successfully reprocessed.

ZERROR_FLIGHT_REPORT

Status	Instance Name	Started By	Start Date	Start Time	End Da...	End Time	Status	Comp	Remaining	Active Job	-	+	CG
	ZERROR_FLIGHT_REPORT	TENGLAND	12.06.2015	17:33:02	12.06.20	17:56:50	Finishe	100%					

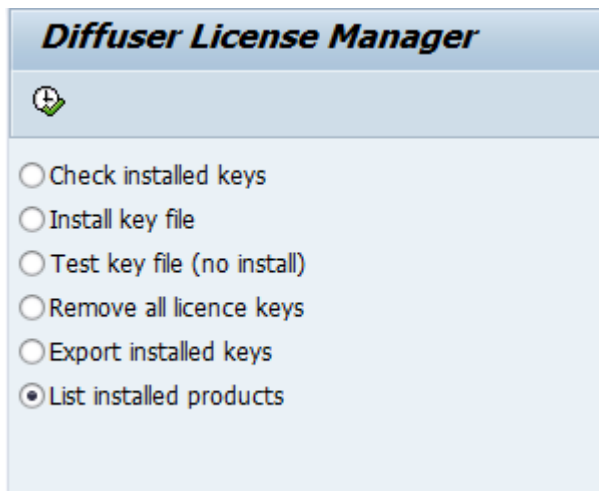
ZERROR_FLIGHT_REPORT

Status	Inter...	Low Value	High	Status	Runtime	Results
	1	00000001	00000047	Completed	0:00:09	1
	2	00000048	00000098	Completed	0:00:10	1
	3	00000099	00000173	Completed	0:00:13	1
	4	00000174	00000221	Completed	0:00:04	1
	5	00000223	00000273	Completed	0:00:03	1
	6	00000274	00000332	Completed	0:00:06	1
	7	00000333	00000379	Completed	0:00:04	1
	8	00000380	00000426	Completed	0:00:04	1
	9	00000427	00000473	Completed	0:00:04	1
	10	00000474	00000520	Completed	0:00:03	1
	11	00000521	00000567	Completed	0:00:03	1
	12	00000568	00000614	Completed	0:00:03	1
	13	00000615	00000661	Completed	0:00:04	1
	14	00000662	00000708	Completed	0:00:03	1

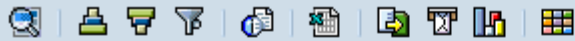
License Keys

A new method of installing License Keys enables you to easily check the installed products that can be accelerated by Diffuser.

To check the products you have installed in your system, select the “List installed products” option as below and execute.



A list of installed products on your system is shown.

Diffuser License Manager

		ObjectTypeName
0001	0001 Graviti - Fast Month End Depreciation	/BTR/CL_MDR_LICENCE_KEY_PP_DEP
0002	0002 Consenti - Compliance Control Engine	/BTR/CL_MDR_LICENCE_KEY_PP_CGT
0003	0003 ExPo - Fast PO Status Tracker	/BTR/CL_MDR_LICENCE_KEY_PP_EXP
0004	0004 PoGo - Fast PO Closure	/BTR/CL_MDR_LICENCE_KEY_PP_POC
0006	0006 Setelite - Fast Month End Settlement	/BTR/CL_MDR_LICENCE_KEY_PP_SET
0007	0007 Articlus - Fast Retail Assortment Publisher	/BTR/CL_MDR_LICENCE_KEY_PP_ART
0008	0008 Production Order Settlement	/BTR/CL_MDR_LICENCE_KEY_PP_STP
0009	0009 SnapOps - Scramble	/BTR/CL_MDR_LICENCE_KEY_PP_DSF
0010	0010 BDEX	/BTI/CL_MDR_LICENCE_KEY_PP_BDX
0011	0011 Javelin - Joint Venture Accounting	/BTR/CL_MDR_LICENCE_KEY_PP_JVA
0012	0012 Batch Accelerator	/BTR/CL_MDR_LICENCE_KEY_BATCH
0013	0013 DevOps - Archiving of IDOCs	/BTR/CL_MDR_LICENCE_KEY_PP_ARI
0014	0014 Fast Material Document List	/BTR/CL_MDR_LIC_KEY_MAT_LIST
0015	0015 DevOps - Archiving of Sales Orders	/BTR/CL_MDR_LIC_KEY_PP_VBAK
0016	0016 DevOps - Archiving of FI Docs	/BTR/CL_MDR_LIC_KEY_PP_FIDOC
0017	0017 DevOps - Emma Case	/BTR/CL_MDR_LIC_KEY_PP_EMMACAS
0018	0018 DevOps - Archiving of Billing Doc	/BTR/CL_MDR_LIC_KEY_PP_VBRK
0019	0019 DevOps - Archive Delete	/BTR/CL_MDR_LIC_KEY_PP_ARCHDEL
0020	0020 DevOps - Archiving of EMMA Job	/BTR/CL_MDR_LIC_KEY_PP_EMMAJOB
DRCC	Remote Client Copy GT	/BTR/CL_MDR_LICENCE_KEY_FRCC
GT	Description	/BTR/CL_MDR_LICENCE_KEY_GT0003
GTSC	System copy GT	/BTR/CL_MDR_LICENCE_KEY_GT_SC
MDR2	Diffuser	
RBOP	REBOP - Rescheduling\Backorder Processing	/BTR/CL_MDR_LICENCE_KEY_PP_BOP
TE01	TE01 Advanced dependency check	/BTI/CL_MDR_LICENCE_KEY_TE_ADC

Bug Fix (8.00)

Interval Status

Occasionally Interval Status could be reset to available by selecting and displaying the results, this is now fixed.

Syntax Error for SAP Release 7.40

The interval object for contracts had a problem with the higher syntax standards for ABAP in the release 7.40 this has now been corrected.

Mass Data Runtime 7.20

Enhancements (7.20)

Security Enhancements

MDR now includes options to control users making changes to the technical settings of MDR runs and being able to add authority checks, coded to your own requirements via exits.

The “Defaults for Technical Settings” screen through the /BTR/MDR transaction now offers two options for functionality restrictions, “Lock Technical Settings” and “Lock Expert Mode”. These work at a program level and once set they will apply for every user.

Lock Technical Settings

This options allows to lock all input fields for Technical Settings. This is useful if when a program can repeatedly run with the same default values and users should not change those values. When this option is set, the Expert Mode in the Run History will be locked as well.

This restriction applies at program level and not at user level. That is, once set the Technical Settings will be locked for all users. Restrictions at user level can be implemented with the MDR enhancement spots (see MDR Enhancement Spots document).

Lock Expert Mode

This option is similar to “Lock Technical Settings”. The only difference is that on the Technical settings screen only the input fields under “Distribution” are locked. This allows the user to change settings like label name while protecting the more critical job distribution section from potential misuse. This option applies at program level as well. Restrictions at user level can be implemented with see the MDR Developers Guide Authority Checks

MDR also provides enhancement spots to allow developers to apply customer specific authority checks. This can be used to restrict technical as well as administrative settings at user and at program level. To implement authorizations into MDR the following steps allow you to control which users can control the technical parts of MDR, either in the technical settings popup or the expert mode in the MDR Run History, using normal SAP authorization objects.

Implementation

Technical Settings

Expert Mode

Individual Actions

For more information refer to the section [Authority Checks](#) in the MDR Developers Guide.

Bug Fix (7.20)

Child Job

In the rare event that no free background work processes were available and a MDR master job was set to “wait for completion” then there was a possibility that the job would not complete correctly, this has been fixed by ensuring the status of all jobs is considered from the Job Status Overview Table (TBTCO).

Mass Data Runtime 7.10

Enhancements (7.10)

Distribution

To enable greater control over the distribution of processors, options were added to the technical settings to allow the usage of server groups or manual distributions, rather than simply a number of background jobs.

- Distribution according to server grouping – This allows the distribution of jobs over one server group to control the number of processors available to this MDR instance
- Manual Distribution – The server grouping above can also be distributed manually

Distribution

☐ Number of batch jobs across all servers

☐ Distribution according to server group

☒ Manual Distribution

10

BTI3035_DM1_00

☐ Run online as a single process (debugging mode)

Launch Transformation Program

When running programs online some users have no wish to see the run history program so simply want to view the results the option on technical settings as below now enables this to occur.

Other settings	
<input type="checkbox"/> Wait for run to complete	<input type="checkbox"/> Launch Transformation Program after completed run

In addition the MDR statement `mdr-begin-select_screen_trans` allows the transformation program to be run separately from the run history and doing so will produce the options below the main part of the selection screen allowing the user to check their latest runs or select runs. See the developers guide [Transformation](#) section for more details.

MDR Transformation run options	
<input checked="" type="radio"/> Latest run	
<input type="radio"/> Latest run for user	<input type="text" value="BASISTECH"/>
<input type="radio"/> Selected run	<input type="text"/>

View App Servers

A button was added in the Run History screens to view the application servers click the App Server button as below.

MDR: Run History

Transform Application Log Results Intervals Variants **App. Servers**

Diffuser Program	Report title	Run Count
/BTR/SAMPLE_FLIGHT_REPORT	Diffuser Sample: Flight Report	26

Instance Name	Started By	Start Date	Start Time	End Date	End Time	Instance Status	Comp	Remaining	Active Job	-	+
Qantas Airways Flights	TENGLAND	19.12.2014	15:56:53	19.12.2014	15:58:36	Finished	100%				
American Airlines Flights	TENGLAND	19.12.2014	15:38:18	19.12.2014	15:40:22	Finished	100%				
All Flights	TENGLAND	19.12.2014	15:37:45	19.12.2014	15:39:26	Finished	100%				
BA Flights	TENGLAND	19.12.2014	15:36:11	19.12.2014	15:36:15	Finished	100%				
Run Name	TENGLAND	13.12.2014	01:11:16	13.12.2014	01:12:21	Finished	100%				

This then displays the available App Servers

SAP Servers

Release Notes

Server Name	Host Name	Message Types	Status
bt101_D01_01	bt101	Dialog Batch Update Upd2 Spool Enqueue ICM	Active

Mass Data Runtime 7.00

Deployed into BTR Namespace

At this point Mass Data Runtime was brought into the /BTR/ namespace and baselined as a product.