

NVS Greenex Monitoring.

Setup guide.

Part 2

Configuring SAP ABAP Reports

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Introduction.

This instruction is a continuation of the Setup Guide. Part 1.

As an example, we consider setting up a dump report in SAP ABAP transaction ST22. For other types of checks, you need to change the type of background task, otherwise the differences are insignificant. The example illustrates typical steps for configuring other SAP ABAP reports of the "trigger" type, i.e. tracking one numeric parameter and sending an email when it is exceeded, as well as a letter about parameter normalization.

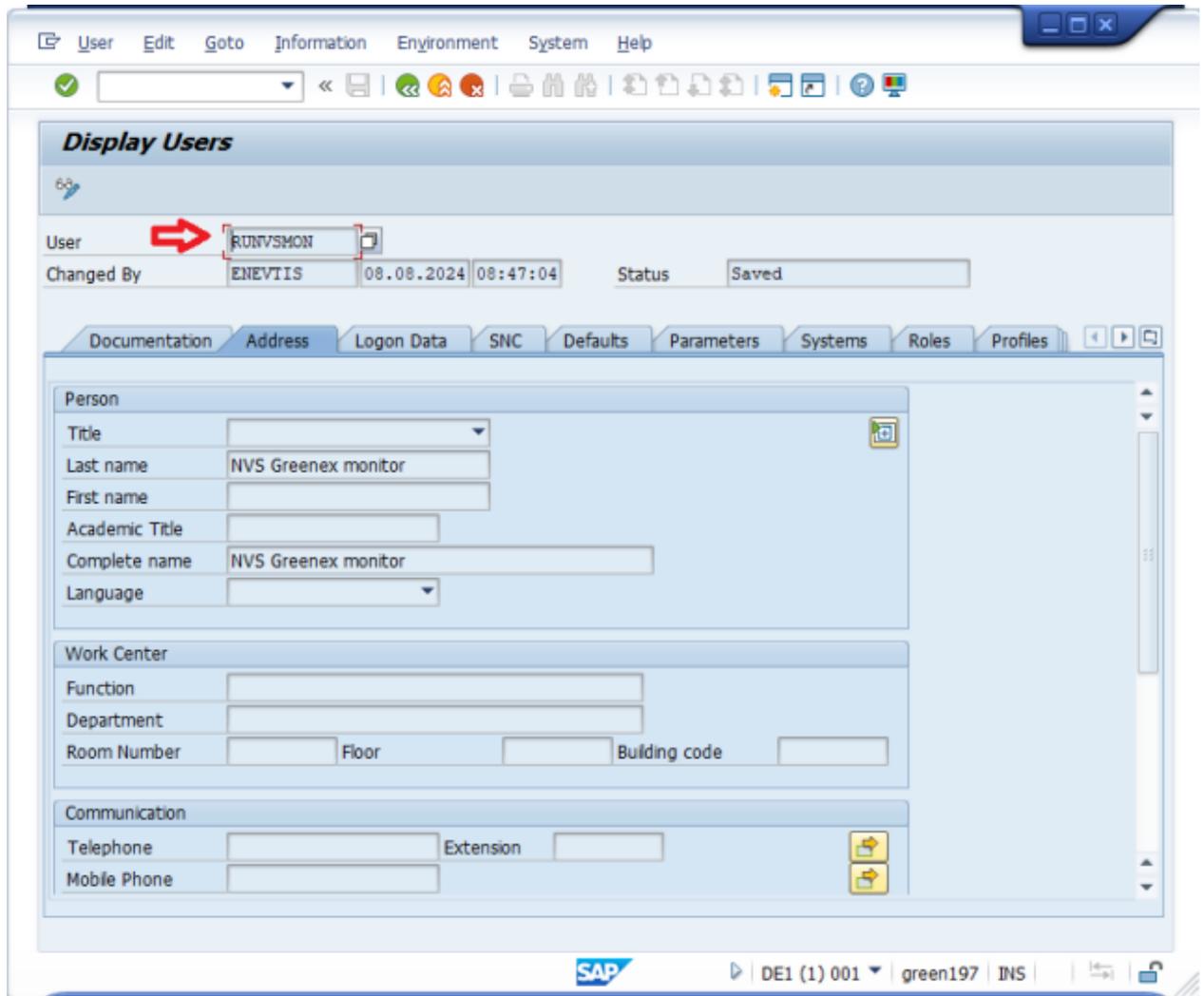
For a better understanding, it is also recommended to read the first part of the document

Example. Configuring the SAP ABAP dump ST22 report.

Creating a user in the SAP system.

Create a user with which the monitor will poll the SAP system in

transactions SU01



Set its type as Communication Data for greater security.

Attention. For test purposes, the user has been assigned the SAP_ALL profile. In practice

, it is recommended to limit his rights to a separate role, which you can create

yourself by enabling authorization tracing. The topic of authority in SAP is beyond the

scope of this document

The screenshot shows the SAP 'Display Users' (SU01) transaction. The user 'RUNVSMOH' is selected, and the 'User Type' is set to 'Communications Data'. The 'Changed By' field shows 'ENEVTIS' on '08.08.2024' at '08:47:04'. The status is 'Saved'. The 'Logon Data' tab is active, showing fields for 'Alas', 'User Type', 'Security Policy', 'Password', 'Password Status', 'Initial Password (Set by Administrator)', 'User Group for Authorization Check', 'User group', 'Validity Period', 'Valid from', 'Valid through', 'Other Data', 'Account no.', and 'Cost center'. A red arrow points to the 'User Type' dropdown menu.

Menu: User Edit Goto Information Environment System Help

Display Users

User: RUNVSMOH

Changed By: ENEVTIS | 08.08.2024 | 08:47:04 | Status: Saved

Documentation | Address | **Logon Data** | SNC | Defaults | Parameters | Systems | Roles | Profiles

Alas: []

User Type: **Communications Data**

Security Policy: []

Password: []

Password Status: [] Initial Password (Set by Administrator) [i]

User Group for Authorization Check

User group: []

Validity Period

Valid from: []

Valid through: []

Other Data

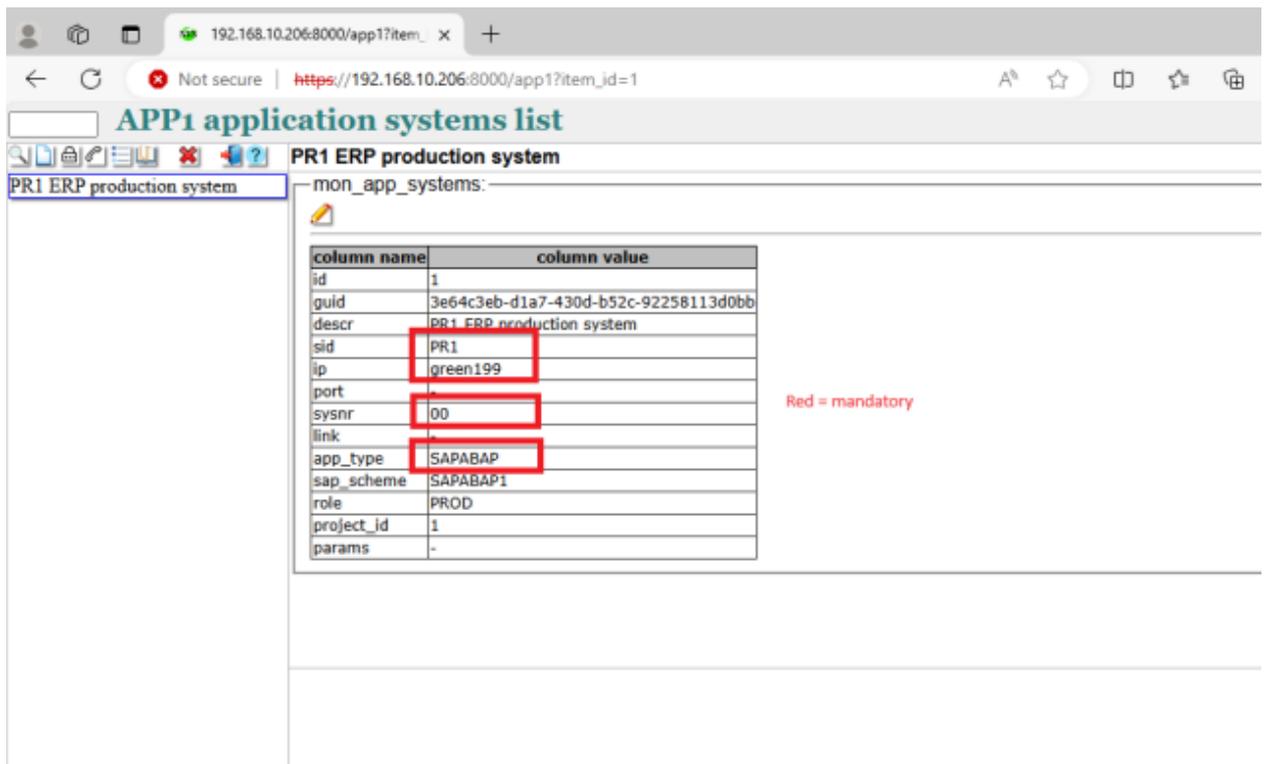
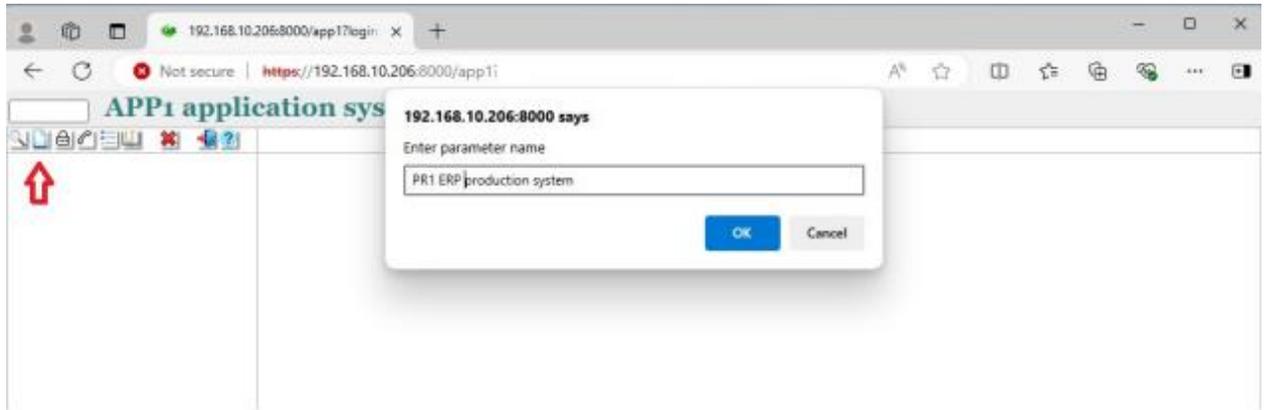
Account no.: []

Cost center: []

SAP | DE1 (1) 001 | green197 | INS | [] []

Registration of the SAP ABAP system in the NVS Greenex monitor.

Create a system record in the APP1 transaction. The procedure is similar to registering the SAP HANA database from the first part of the document. To edit the parameters, use the context menu



Enter the username and password for the connection that you created earlier. Do not forget to specify the client for the SAP system

APP1 application systems list

PR1 ERP production system

mon_app_systems:

column name	column value
id	1
guid	3e64c3eb-d1a7-430d-b52c-92258113d0bb
descr	PR1 ERP production system
sid	PR1
ip	green199
port	-
sysnr	00
link	-
app_type	SAPABAP

Set connection parameters:

User: RUNVSMON

Password: *****

Password (again): *****

Add info(optionally): clnt=001

Save

Check the connection. If successful, you will see a green flag and the SAP system parameters:

However, remember that the test does not check whether all the permissions are sufficient. In case of incorrect operation, use the authorization trace in SAP

APP1 application systems list

PR1 ERP production system

column name	column value
id	1
guid	3e64c3eb-d1a7-430d-b52c-92258113d0bb
descr	PR1 ERP production system
sid	PR1
ip	green199
port	-
sysnr	00
link	-
app_type	SAPABAP
sap_scheme	SAPABAP1
role	PROD
project_id	1
params	-

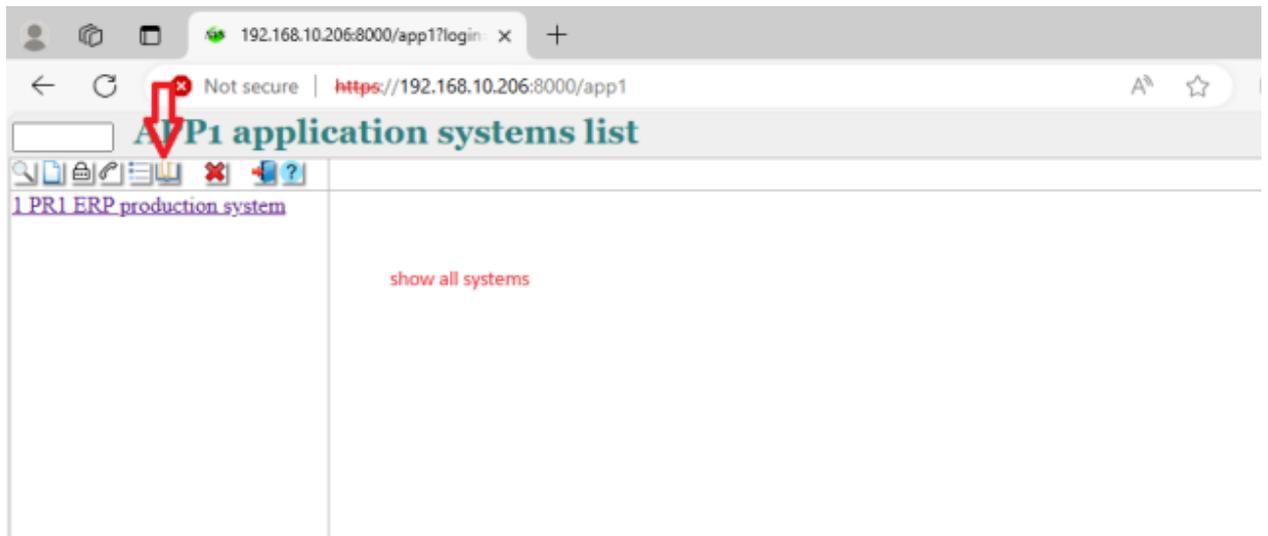
It seems test is ok

```
RFCPROTO=011
RFCCHARTYP=4103
RFCINTTYP=LIT
RFCFLOTYP=IE3
RFCDEST=green199_PR1_00
RFCHOST=green199
RFCSYSID=PR1
RFCDATABS=PR1
RFCDBHOST=green199
RFCDBSYS=HDB
RFCSAPRL=740
RFCMACH=390
RFCOPSYS=Linux
RFCTZONE=10800
RFCDAYST=
RFCIPADDR=192.168.20.199
RFCKERNRL=745
RFCHOST2=green199
RFCSI_RESV=
RFCIPV6ADDR=192.168.20.199
```

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Hint:

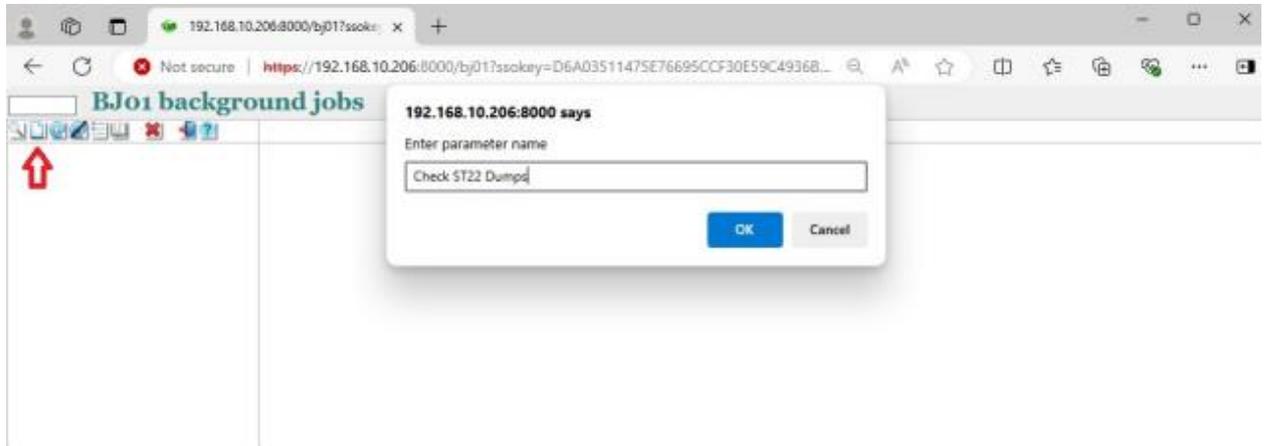
If you re-enter the transaction, you can see the systems that have already been entered using the open book icon



Planning a background task

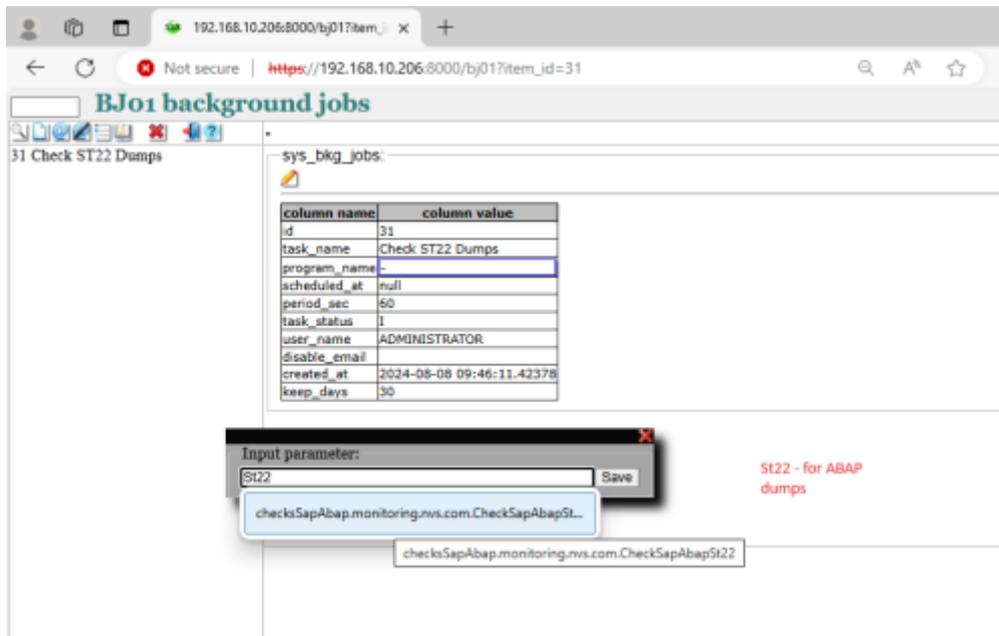
In the BJ01 transaction, create a new background task that will poll the systems (in our case, the only one) and count the number of dumps in the last 15 minutes.

If the threshold of 30 dumps is exceeded, the monitor must send an email

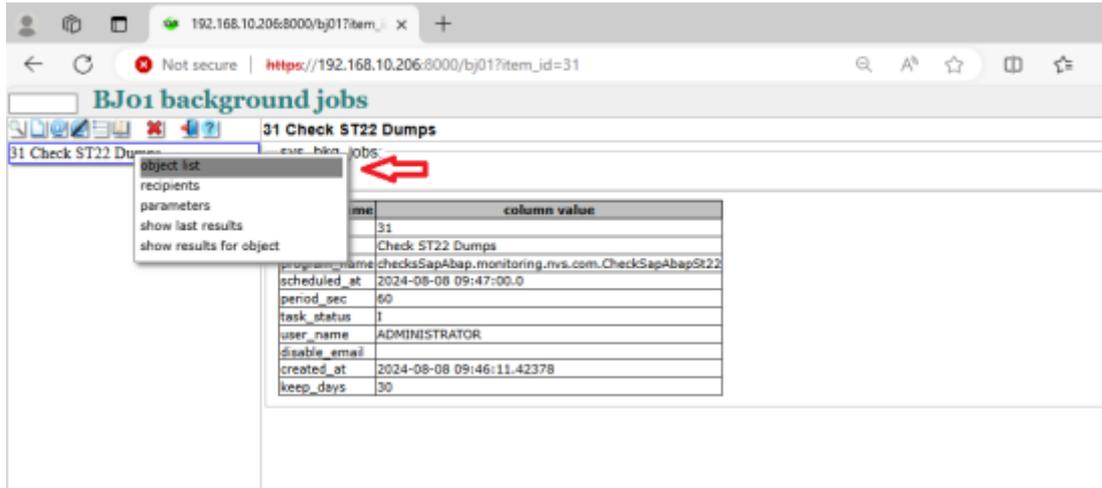


In the program name field, specify the type of report :

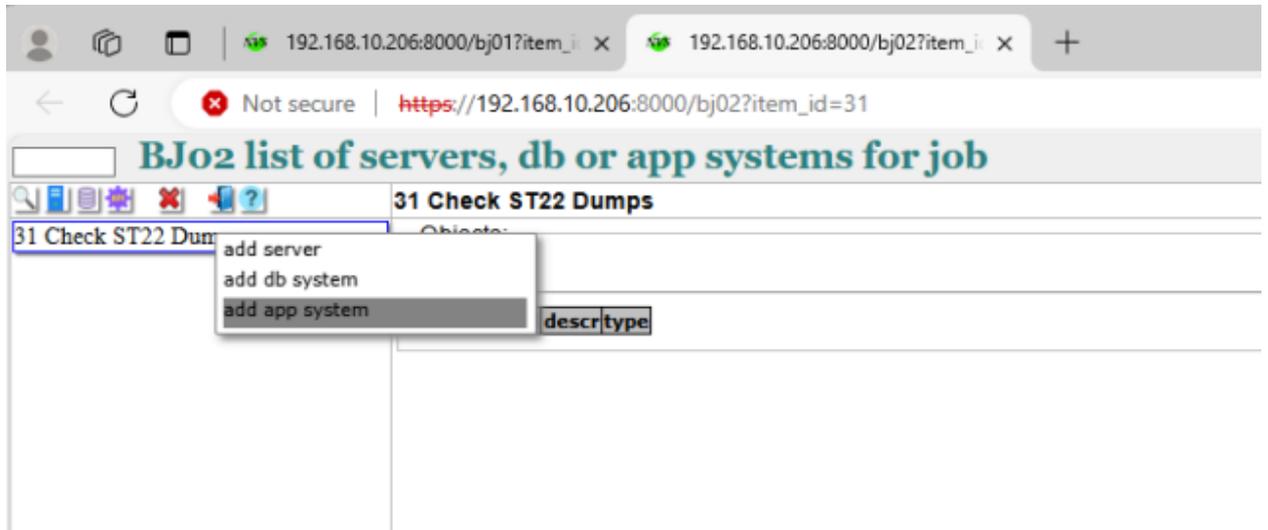
`checksSapAbap.monitoring.nvs.com.CheckSapAbapSt22`



Specify which systems the task will check. In the example, we have one system



You will be transferred to the BJ02 transaction. Add a system by name



BJo2 list of servers, db or app systems for job

31 Check ST22 Dumps

Objects:

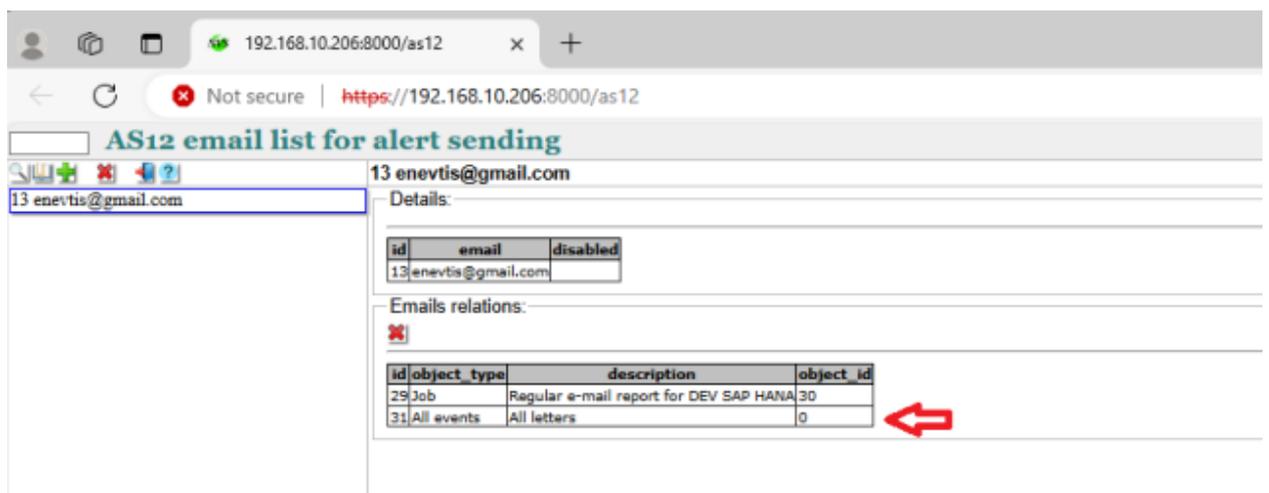
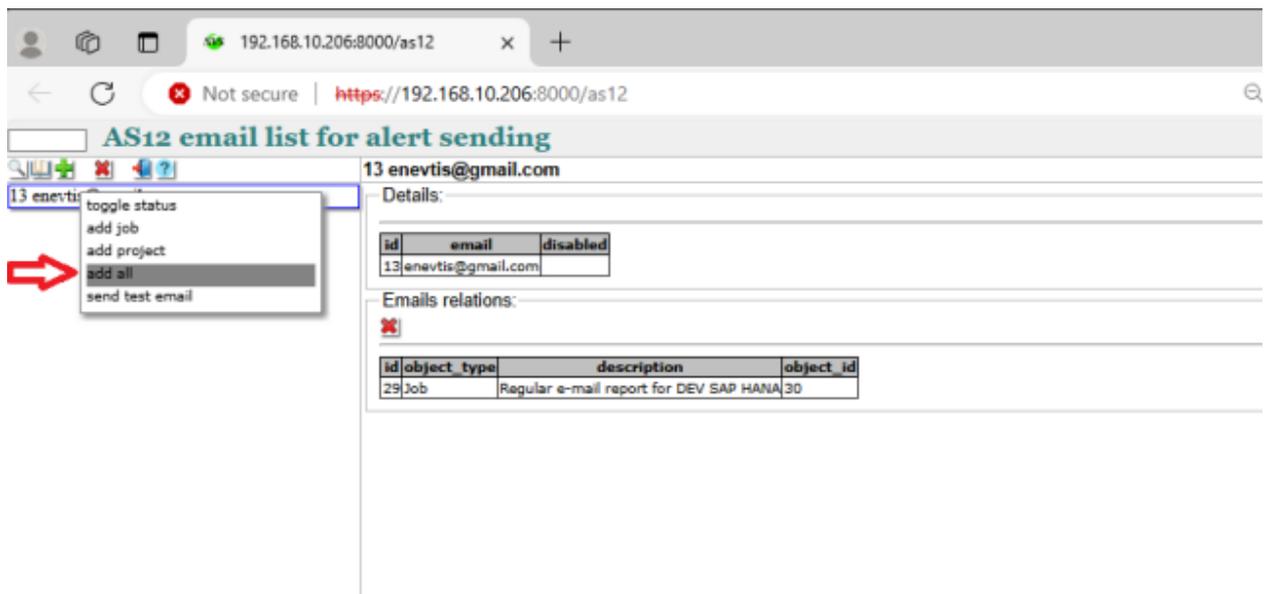
✖

id	object_id	descr	type
2	1	PR1 ERP production system	A

Editing the mailing list recipients.

In AS12, if necessary, add e-mail addresses and use the context menu to select add all.

Unlike regular statistical reports, trigger reports are intended for administrators who receive notifications globally across all systems. You can limit this property by maintaining hardware projects, but this is beyond the scope of this instruction



Activate the task in BJ01 if you haven't already done so

BJ01 background jobs

31 Check ST22 Dumps

column name	column value
id	31
task_name	Check ST22 Dumps
program_name	checksSapAbap.monitoring.nvs.com.CheckSapAbapST22
scheduled_at	2024-08-08 09:47:00.0
period_sec	60
task_status	1
user_name	ADMINISTRATOR
disable_email	
created_at	2024-08-08 09:46:11.42378
keep_days	30

Input parameter:
A Active (ready to schedule) Save

BJ01 background jobs

31 Check ST22 Dumps

Last 30 check results:

id	object_id	object_type	result_value	result_msg	is_alert	checked_at	past_min
8	1	A	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-08-08 10:05:59.0	less than 1 minute
7	1	A	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-08-08 10:04:59.0	1 minute
6	1	A	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-08-08 10:03:59.0	2 minutes
5	1	A	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-08-08 10:02:59.0	3 minutes

Checking the correct operation of the monitor.

This operation is optional, but it is recommended to verify the operation of the monitor in order to reduce the risk of missing an SAP malfunction. In the NVS Greenex distribution

Additional test programs are provided to simulate various malfunctions.

We can use the report to generate massive division by 0 dumps. This

will not cause damage to the system being checked, but it will help to make sure

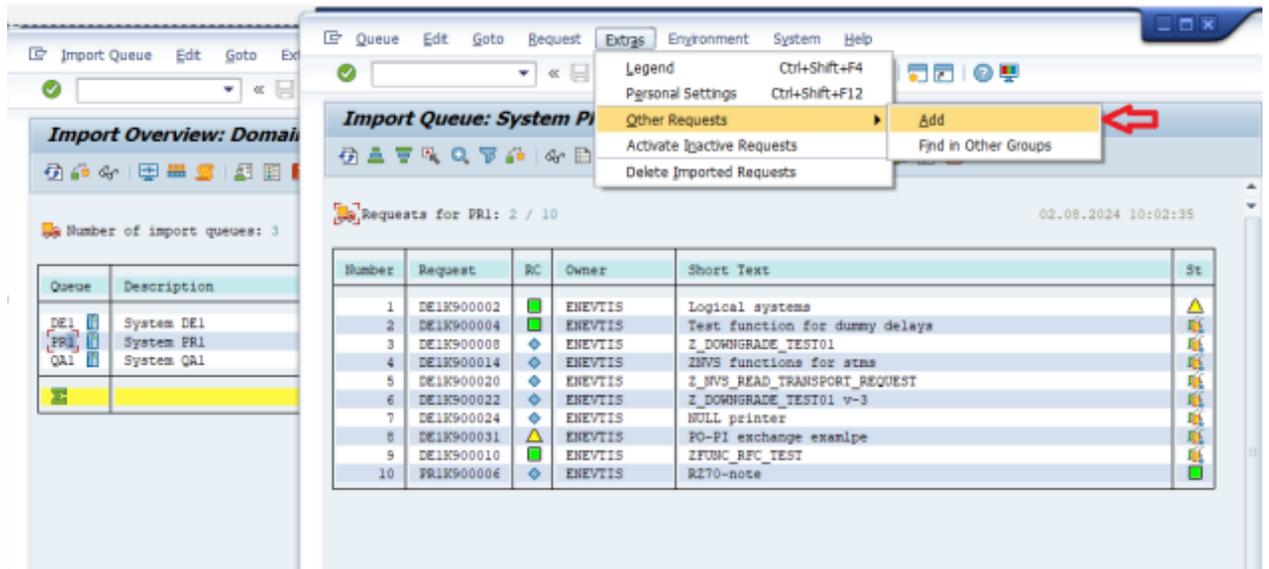
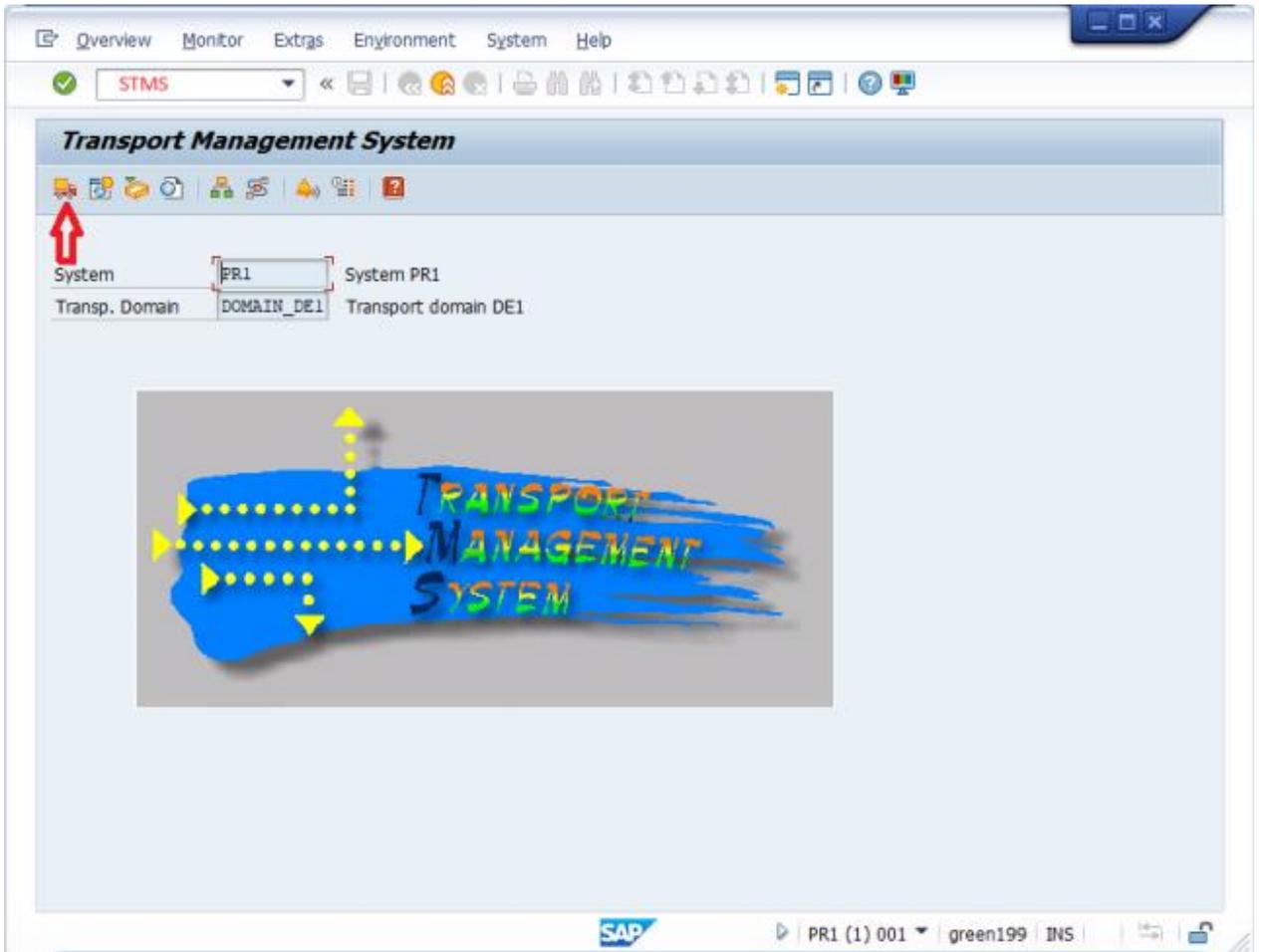
that the monitoring is working properly.

Import reports via the standard SAP transport mechanism by unpacking

transport requests from the archive /usr/nvs/DEV_D00/utills/SAP_test_reports.zip

The image shows two terminal windows. The left window, titled '192.168.20.199 - PuTTY', displays a file listing of the /usr/nvs/DEV_D00/utills directory. The listing includes files like 'jcdi.3.0.202', 'jvm -> /usr/nvs/DEV_D00/jcdi.3.0.202', 'lib', 'log', 'logger.prop', 'pid.txt', 'readme.txt', 'startlastDevade.sh', 'servercrt.key', 'servercert.jks', 'start_profile.properties', 'sap', and 'utils'. Below the listing, the user runs 'cd utils/' and 'ls -l', showing a list of files including 'SAP_SM_create_incident.zip', 'SAP_test_reports.zip', 'tcode_example.zip', and 'tcdi_tcode_example.zip'. Red arrows point to these files. The user then runs 'unzip SAP_test_reports.zip', showing the extraction of 'K923094.DEL' files. A second red arrow points to the 'unzip' command. The right window, titled '192.168.20.199 - PuTTY', shows an SSH connection to 'green199'. The user runs 'show prladm:sapsys /usr/sap/trans/cfiles/*.*DEL' and 'show prladm:sapsys /usr/sap/trans/data/*.*DEL'. Red arrows point to the file paths in these commands.

Import requests to STMS



Next are the standard steps for the SAP Basis administrator:

The screenshot displays the SAP 'Import Queue: System PR1' interface. At the top, there is a menu bar with options: Queue, Edit, Goto, Request, Extrgs, Environment, System, and Help. Below the menu is a toolbar with various icons. The main content area shows 'Requests for PR1: 2' with a timestamp of '08.08.2024 10:38:34'. A filter is applied to 'Request DE1K923094', showing two entries: DE1K923094 and DE1K923096. Below this is a table with the following data:

Number	Request	RC	Owner	Project	Short Text	St
11	DE1K923094	◆	ENEVTIS	DE1_P00005		🚚
12	DE1K923096	◆	ENEVTIS	DE1_P00005		🚚

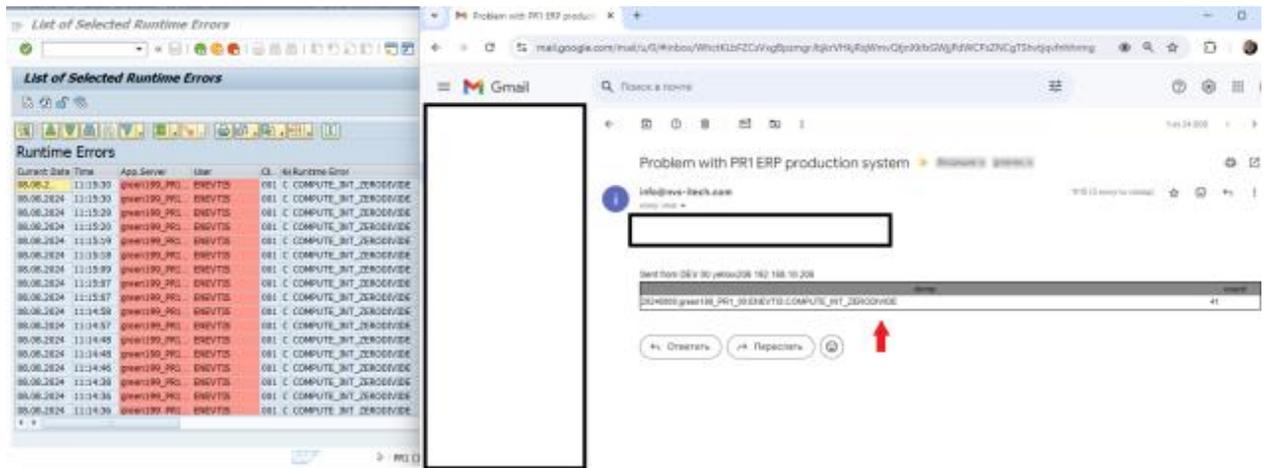
At the bottom of the window, a status bar shows 'Import into system PR1 started', the SAP logo, and system information: 'PR1 (1) 001 | green199 | INS'.

Finally, run the Z_NEMONITOR02 report in transaction SE38 as shown in the figure.

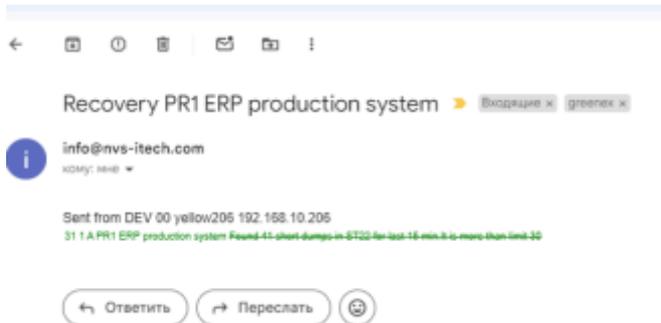
You can check the built-in help available at the link /help or by typing in the window at the top left. Set the number of dumps to be greater than the default threshold of 30

The image shows two screenshots related to SAP monitoring. The top screenshot is a browser window displaying the SAP HELP Documentation for 'SAP ABAP ST22'. The page title is 'checksSapHana.monitoring.nvs.com.CheckSapAbapSt22'. The main content describes the monitoring process, mentioning the table SNAP and system parameters like maxSt22RecordsLimitSapAbap = 30. A red arrow points to the text 'Monitor reads records from table SNAP :'. Below this, it states 'The system parameter maxSt22RecordsLimitSapAbap = 30 and pastMinutesSm22SapAbap = 15 by default.' Another red arrow points to the text 'Go to se38 and start Z_NEMONITOR02 with T_NUMS > maxSt22RecordsLimitSapAbap and second report Z_NEMONITOR04 which will divide by 0.' A third red arrow points to the text 'Next, go to SM22 and make sure that there are many short dumps. Monitor has to send an alert.' The bottom screenshot shows the SAP SE38 transaction interface. The title is 'Mass start test for update monitor'. The T_NUMS field is highlighted in yellow and has a red arrow pointing to it, with the value '50' entered. The T_PAUSE field has the value '10' and the REPNAME field has the value 'Z_NEMONITOR04'. The SAP logo and system information are visible at the bottom of the screenshot.

If all the settings are made correctly, after a while you will receive an email with an alert and a brief description of the dumps.



If the dumps have stopped, you will receive an email about the normalization of the situation.



The result of the problem detection can be seen in the job log in BJ01

The image shows two overlapping windows. The top window is the SAP 'ABAP Runtime Errors - All Clients' interface. It displays a search filter for 'ST22' and a 'Today' button. A red arrow points to the number '50' next to 'Runtime Errors'. The bottom window is a web browser displaying 'BJ01 background jobs'. It shows a table of '31 Check ST22 Dumps' with columns for 'id', 'subject_id', 'object_type', 'result_value', 'result_msg', 'is_start', 'checked_at', and 'post_min'. A red arrow points to the 'is_start' column header. The table contains 31 rows of data, all with a 'result_value' of 0.0 and a 'result_msg' indicating 'Found 0 short dumps in ST22 for last 15 min. It is more than limit 2000'.

id	subject_id	object_type	result_value	result_msg	is_start	checked_at	post_min
200	A	50.0	0.0	Found 0 short dumps in ST22 for last 15 min. It is more than limit 2000		2024-06-08 10:50:59.0	less than 1 minute
199	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:16:59.0	34 minutes
198	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:15:59.0	35 minutes
171	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:14:59.0	36 minutes
169	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:13:59.0	37 minutes
170	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:12:59.0	38 minutes
143	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:11:59.0	39 minutes
142	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:10:59.0	40 minutes
141	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:09:59.0	41 minutes
140	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:08:59.0	42 minutes
139	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:07:59.0	43 minutes
9	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:06:59.0	44 minutes
8	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:05:59.0	45 minutes
7	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:04:59.0	46 minutes
6	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:03:59.0	47 minutes
5	A	0.0	0.0	Found 0 short dumps in ST22 for last 15 min.		2024-06-08 10:02:59.0	48 minutes

Conclusion

This document provides a simple scenario for configuring amx monitoring in an SAP ABAP system, which provides an idea of the next steps needed to configure this type of report.

Thanks for choosing NVS Greenex