

Standard Operating Procedure for fetching Errors from DP+ platform using Kibana and Grafana Applications

Version Control

Document Name	Version	Date
SOP for for fetching Errors from DP+ platform using Kibana and Grafana applications	V1.0	01-07-2022

Prepared by	Technical Support Services	01-07-2022
Approved by	Saji Krishnan	<i>Saji Krishnan</i>

Revision History

Issue	Date	Reason for change
V1.0	01-07-2022	First Release

Introduction

This document outlines the standard procedure for fetching errors from DP+ platform using Kibana and Grafana applications

Procedure

1. Open the MNO platform instance in which errors need to be checked.
2. Go to “Profile Inventory” section. Example snippet below-

The screenshot shows the WORKZ Profile Inventory page. The left sidebar contains navigation links: DASHBOARD, NEW ORDER, PROFILE INVENTORY (selected), DEVICES, PROFILE TYPES, SCHEDULED REPORTS, STATISTICS, and HELP. The main content area displays a table with the following columns: State, Profile Type, Device Type, EID, ICCID, IMEI, and Last Operation Date. The table lists various profiles, including those in a RELEASED state and one in an ERROR state. At the bottom of the table, there are buttons for 'Create Report' and 'Audit by ICCID'. A pagination bar at the bottom right shows '1-100 of 30122'.

3. Filter “State” and select “ERROR”. Example snippet below-

This screenshot shows the same WORKZ Profile Inventory page, but with the 'State' filter dropdown set to 'ERROR'. The table now only displays profiles that are in an ERROR state. The left sidebar and navigation elements remain the same. The pagination bar at the bottom right now shows '1-5 of 5'.

4. Select the ICCID which needs to be investigated and go in its Audit Trail. Example snippet below-

Operation Date	Operation Type	Status	EID
2022-06-17 23:30:52	ES2+.HandleDownloadProgressInfo/BppDownload	Executed-Success	89043051202200005221000577258564
2022-06-17 23:30:52	ES2+.HandleDownloadProgressInfo/BppInstallation	Executed-Success	89043051202200005221000577258564
2022-06-17 23:17:42	ES2+.HandleDownloadProgressInfo/NotificationLocalDelete	Executed-Success	89044047012349040295026944967579
2022-06-17 23:17:42	ES2+.HandleDownloadProgressInfo/BppInstallation	Executed-Success	89044047012349040295026944967579
2022-06-17 23:17:41	ES2+.HandleDownloadProgressInfo/BppDownload	Executed-Success	89044047012349040295026944967579
2022-06-08 18:56:40	ES9+.HandleNotification/ProfileInstalled	Failed (1.2 - 4.2 - LOAD_PROFILE_ELEMENTS failed: INSTALL_FAILED_DUE_TO_PE_PROCESSING_ERROR)	89043051202200005221000577258564
2022-06-08 18:56:25	ES9+.GetBoundProfilePackage	Executed-Success	89043051202200005221000577258564
2022-06-08 18:56:24	ES9+.AuthenticateClient	Executed-Success	89043051202200005221000577258564
2022-06-06 13:09:27	PRP.ReuseProfile/Released/SAME_MID	Executed-Success	89044047012349040295026944967579
2022-06-06 13:09:27	ES9+.HandleNotification/ProfileDeleted	Executed-Success	89044047012349040295026944967579

5. Check the reason of error in Audit trail.

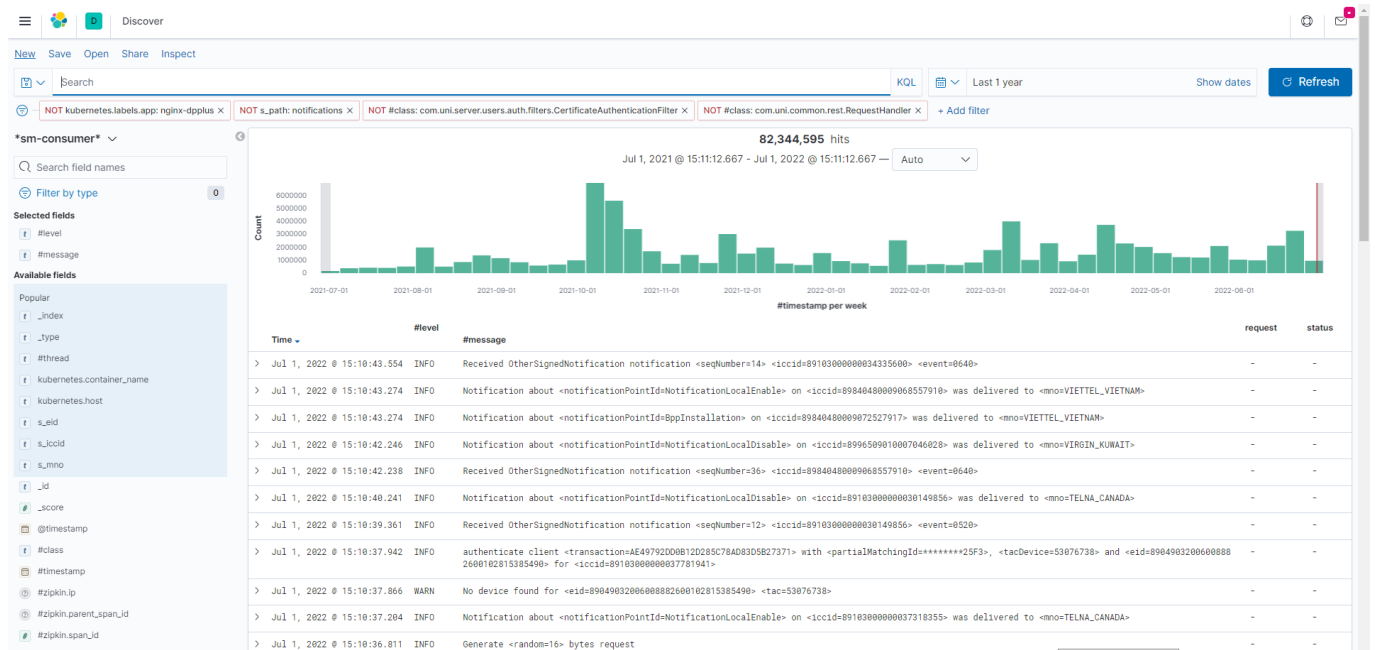
6. Some types of error and next resolution steps on same:

- Failed (1.2 - 4.2 - LOAD_PROFILE_ELEMENTS failed: INSTALL_FAILED_DUE_TO_PE_PROCESSING_ERROR)
Next step – check Profile Installation result in Kibana logs to understand the profile element block which is causing the error.
- Failed (1.2 - 4.2 - LOAD_PROFILE_ELEMENTS failed: INSTALL_FAILED_DUE_TO_DATA_MISMATCH)
Next step – check the data provisioned in platform and data in electrical profile.
Ex: GID values in platform metadata and in profile should match.
ICCID value in profile header ICCID and EF_ICCID should match.
MCC-MNC value in platform metadata should match with MCC-MNC in EF_IMSI in profile.
- Failed (8.8.5 - 6.4 - The maximum number of retries for the Profile download order has been exceeded.)
Next step – check with customer and if they want the profile to be reusable again, put it in RELEASED state.
- Failed (1.2 - 4.2 - CONFIGURE_ISDP failed: INSTALL_FAILED_DUE_TO_INTERRUPTATION)
Next step – check Profile Installation result in Kibana logs to understand the profile element block which is causing the error.

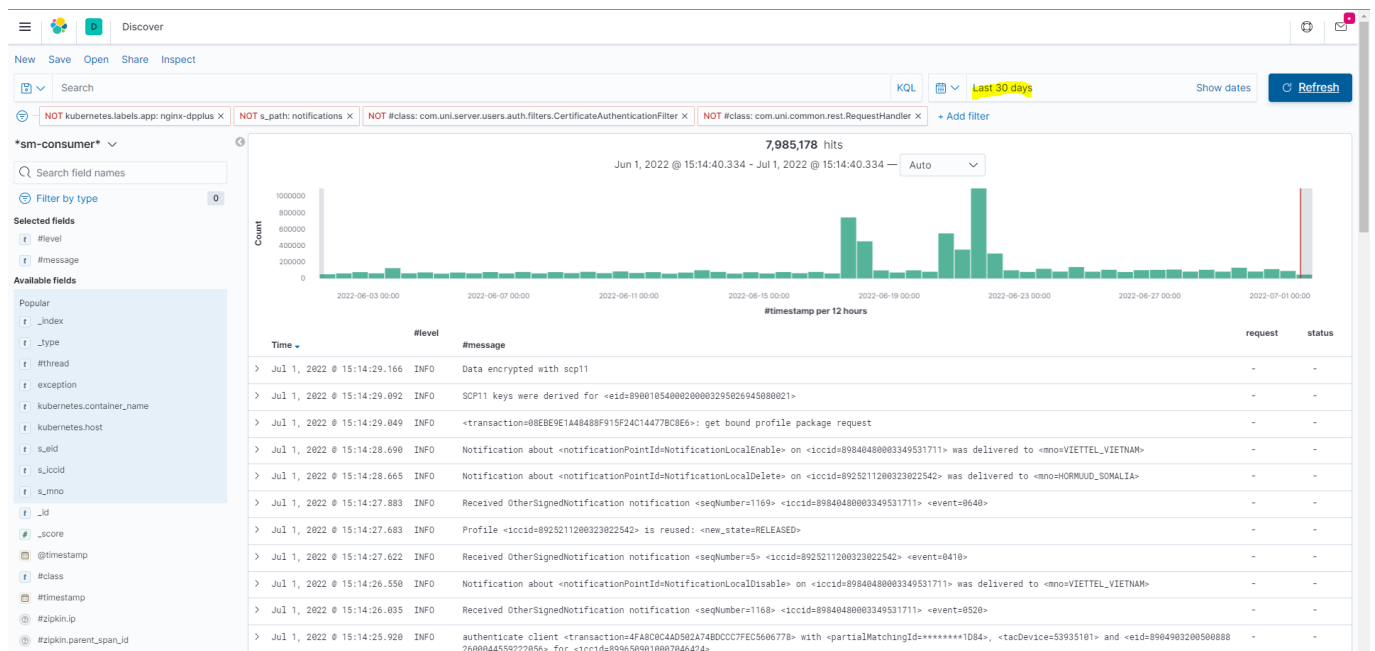
7. For errors to be further investigated in Kibana, open Kibana platform. Credentials below:

- Kibana Dubai - <http://10.6.3.113:5601>
- Kibana France - <http://10.228.5.10:5601>
- Kibana US - <http://10.147.5.10:5601>

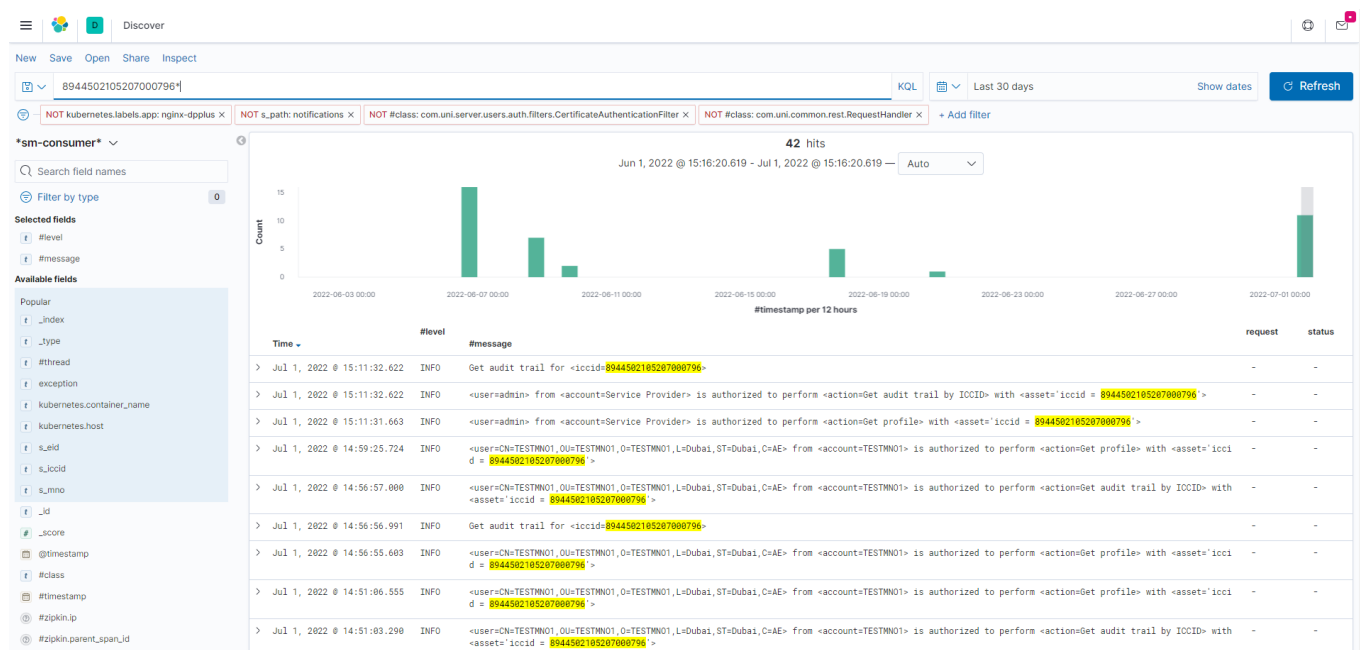
8. Kibana landing page –



9. Change the duration (of logs) as per requirement. Example snippet below:



10. Enter the ICCID ending with ‘*’ which needs to be investigated in Search tab. Ex: to investigate ICCID “8944502105207000796” enter 8944502105207000796*. Snippet below:



11. Navigate to timestamp at which error has occurred. Timestamp can be taken from audit trail.

The screenshot shows the WORKZ Audit Trail interface for ICCID 8944502105207000796. The table lists various operations with their dates, types, statuses, and EIDs.

Operation Date	Operation Type	Status	EID
2022-06-17 23:30:52	ES2+.HandleDownloadProgressInfo/BppDownload	Executed-Success	89043051202200005221000577258564
2022-06-17 23:30:52	ES2+.HandleDownloadProgressInfo/BppInstallation	Executed-Success	89043051202200005221000577258564
2022-06-17 23:17:42	ES2+.HandleDownloadProgressInfo/NotificationLocalDelete	Executed-Success	89044047012349040295026944967579
2022-06-17 23:17:42	ES2+.HandleDownloadProgressInfo/BppInstallation	Executed-Success	89044047012349040295026944967579
2022-06-17 23:17:41	ES2+.HandleDownloadProgressInfo/BppDownload	Executed-Success	89044047012349040295026944967579
2022-06-08 18:36:40	ES9+.HandleNotification/ProfileInstalled	Failed (1.2 - 4.2 - LOAD_PROFILE_ELEMENTS failed: INSTALL_FAILED_DUE_TO_PE_PROCESSING_ERROR)	89043051202200005221000577258564
2022-06-08 18:56:25	ES9+.GetBoundProfilePackage	Executed-Success	89043051202200005221000577258564
2022-06-08 18:56:24	ES9+.AuthenticateClient	Executed-Success	89043051202200005221000577258564
2022-06-06 13:09:27	PRP.ReuseProfile/Released/SAME_MID	Executed-Success	89044047012349040295026944967579
2022-06-06 13:09:27	ES9+.HandleNotification/ProfileDeleted	Executed-Success	89044047012349040295026944967579

	Discover					
#zipkin.user_id	>	Jun 17, 2022 @ 23:30:52.676	INFO	Notification about <notificationPointId=BppDownload> on <iccid= 8944502105207000796 > was delivered to <mno=TESTMN01>	-	-
b_ccPresent	>	Jun 17, 2022 @ 23:30:52.601	INFO	Notification about <notificationPointId=BppInstallation> on <iccid= 8944502105207000796 > was delivered to <mno=TESTMN01>	-	-
b_release	>	Jun 17, 2022 @ 23:17:42.929	INFO	Notification about <notificationPointId=NotificationLocalDelete> on <iccid= 8944502105207000796 > was delivered to <mno=TESTMN01>	-	-
f_docker_container_id	>	Jun 17, 2022 @ 23:17:42.736	INFO	Notification about <notificationPointId=BppInstallation> on <iccid= 8944502105207000796 > was delivered to <mno=TESTMN01>	-	-
f_kubernetes.container_image	>	Jun 17, 2022 @ 23:17:41.560	INFO	Notification about <notificationPointId=BppDownload> on <iccid= 8944502105207000796 > was delivered to <mno=TESTMN01>	-	-
f_kubernetes.container_image_id	>	Jun 9, 2022 @ 15:25:53.228	INFO	<user=Cn=TESTMN01, Ou=TESTMN01, O=TESTMN01, L=Dubai, ST=Dubai, C=AE> from <account=TESTMN01> is authorized to perform <action=Get audit trail by ICCID> with <assets> iccid = 8944502105207000796 >	-	-
f_kubernetes.labels.app	>	Jun 9, 2022 @ 15:25:53.219	INFO	Get audit trail for <iccid= 8944502105207000796 >	-	-
f_kubernetes.labels.type	>	Jun 8, 2022 @ 18:50:40.145	WARN	<transaction=BD4928D3EAD46CF4D08186C7F85F691>: Profile installation for <iccid= 8944502105207000796 > failed. <Reason=INSTALL_FAILED_DUE_TO_PE_PROCESSING_ERROR>	-	-
f_kubernetes.labels.version	>	Jun 8, 2022 @ 18:50:40.135	INFO	<transaction=BD4928D3EAD46CF4D08186C7F85F691>: receive ProfileInstallationResult notification	-	-
f_kubernetes.master.uri	>	Jun 8, 2022 @ 18:56:24.954	INFO	Profile <iccid= 8944502105207000796 >, is bound to <eid=89043051202200005221000057258564>	-	-
f_kubernetes.namespace_id	>	Jun 8, 2022 @ 18:56:24.512	INFO	authenticate client <transaction=BD4928D3EAD46CF4D08186C7F85F691> with <partialMatchingId=*****TZUL>, <tdDevice=00000000> and <eid=89043051202200005221000057258564> for <iccid= 8944502105207000796 >	-	-
f_kubernetes.namespaces.labels.kube...	>	Jun 8, 2022 @ 18:56:11.444	INFO	<user=Cn=TESTMN01, Ou=TESTMN01, O=TESTMN01, L=Dubai, ST=Dubai, C=AE> from <account=TESTMN01> is authorized to perform <action=Get profile> with <assets> iccid d = 8944502105207000796 >	-	-
f_kubernetes.namespaces.labels.name	>	Jun 8, 2022 @ 18:56:09.558	INFO	<user=Cn=TESTMN01, Ou=TESTMN01, O=TESTMN01, L=Dubai, ST=Dubai, C=AE> from <account=TESTMN01> is authorized to perform <action=Get audit trail by ICCID> with <assets> iccid = 8944502105207000796 >	-	-
f_kubernetes.namespace_name	>	Jun 8, 2022 @ 18:56:09.550	INFO	Get audit trail for <iccid= 8944502105207000796 >	-	-
f_kubernetes.pod_id	>	Jun 6, 2022 @ 13:09:27.403	INFO	Profile <iccid= 8944502105207000796 > is reused: <new_state=RELEASED>	-	-
f_kubernetes.pod_ip	>	Jun 6, 2022 @ 13:09:27.340	INFO	Received OtherSignedNotification <seqNumber=1> <iccid= 8944502105207000796 > <event=0410>	-	-
f_kubernetes.pod_name	>	Jun 6, 2022 @ 13:05:38.155	INFO	<transaction=78111F81CB2ABE734AF1E6AC94D198B1>: successful profile installation result for <iccid= 8944502105207000796 >	-	-
n_ccSeqNumber	>	Jun 6, 2022 @ 13:05:38.146	INFO	<transaction=78111F81CB2ABE734AF1E6AC94D198B1>: receive ProfileInstallationResult notification	-	-
n_expire	>	Jun 6, 2022 @ 13:05:11.830	INFO	Profile <iccid= 8944502105207000796 >, is bound to <eid=89044047812349048295026446967579>	-	-
n_prevSeqNumber	>	Jun 6, 2022 @ 13:04:44.615	INFO	authenticate client <transaction=78111F81CB2ABE734AF1E6AC94D198B1> with <partialMatchingId=*****TZUL>, <tdDevice=00000000> and <eid=89044047812349048295026446967579> for <iccid= 8944502105207000796 >	-	-
n_random	>					
n_seqNumber	>					
n_try	>					
o_profileInstallationResult.euiccSign...	>					
o_profileInstallationResult.profileInst...	>					
o_profileInstallationResult.profileInst...	>					
o_profileInstallationResult.profileInst...	>					

12. Find “ProfileInstallationResult notification” and expand the same.

[illegible]

13. Fetch “profileInstallationResultData.errorResult.simaResponse” and “profileInstallationResultData.finalResult”.

```

{
  "kubernetes.master_url": "https://10.96.0.1:443/api",
  "kubernetes.namespace_id": "c69f965c-35b2-4ca6-8b7d-d83761feb2be",
  "kubernetes.namespace_labels.kubernetes_io_metadata_name": "sm-consumer",
  "kubernetes.namespace_labels.name": "sm-consumer",
  "kubernetes.namespace_name": "sm-consumer",
  "kubernetes.pod_id": "462aab21-4454-44a3-9656-9cb6b650c961",
  "kubernetes.pod_name": "dpplus-deployment-1.8.3-6fb9f98978-sbthc",
  "o_profileInstallationResult.euiccSignPIR": "C81024F36C3A8C46FC26F28B9545B8379F12A3C79BAFEFC36D5854DA919BCE428E0C2919A72F105D46F",
  "o_profileInstallationResult.profileInstallationResultData.errorResult.bppCommandId": "EF6D8750369B547B4DFC70D8EE723A36425084B6869",
  "o_profileInstallationResult.profileInstallationResultData.errorResult.errorReason": "LOAD_PROFILE_ELEMENTS",
  "o_profileInstallationResult.profileInstallationResultData.errorResult.simaResponse": "INSTALL_FAILED_DUE_TO_PE_PROCESSING_ERROR",
  "o_profileInstallationResult.profileInstallationResultData.finalResult": "300FA00B30098001038101048301478100",
  "o_profileInstallationResult.profileInstallationResultData.notificationMetadata.iccid": "A218A11990010581010C0211300FA00B30098001038101048301478100",
  "o_profileInstallationResult.profileInstallationResultData.notificationMetadata.notificationAddress": "8944502105207000796",
  "o_profileInstallationResult.profileInstallationResultData.notificationMetadata.profileManagementOperation": "consumer.rsp.global",
  "o_profileInstallationResult.profileInstallationResultData.notificationMetadata.seqNumber": "0700",
  "o_profileInstallationResult.profileInstallationResultData.smdpId": "1.3.6.1.4.1.52775.1.1.1.1.21",
  "o_profileInstallationResult.profileInstallationResultData.transactionId": "8DA92803EAD446CF4D0B186C7F85F691",
  "s_transaction": "8DA92803EAD446CF4D0B186C7F85F691",
  "stream": "stdout",
  "tag": "jsonlog.kubernetes.var.log.containers.dpplus-deployment-1.8.3-6fb9f98978-sbthc_sm-consumer_dpplus-d775a945b947d8a3c5f3f5fb9cblac5e4e6d535ff9dbf40b5a391696b4fbf.log"
}

```

> Jun 8, 2022 @ 18:56:24.954 INFO Profile <iccid=8944502105207000796> is bound to <eid=89043051202200005221000577258564>

> Jun 8, 2022 @ 18:56:24.512 INFO authenticate client <transaction=8DA92803EAD446CF4D0B186C7F85F691> with <partialMatchingId=*****T2UL>, <tacDevice=00000000> and <eid=89043051202200005221000577258564> for <iccid=8944502105207000796>

14. Parse “profileInstallationResultData.errorResult.simaResponse” and identify the reason of error and profile element block causing the same.

Ex: profileInstallationResultData.errorResult.simaResponse = 300FA00B30098001038101048301478100

A2 1B
A1 19
80 01 05
81 01 0C — ‘0x0C’ is Error Reason
82 11
30 0F
A0 0B
30 09
80 01 03 - '0x03' is SIMalliance error status
81 01 04 - '0x04' is pe element that is causing issue
83 01 47
81 00

Error reason snippet from SGP.22 –


```

ErrorReason ::= INTEGER {
    incorrectInputValues(1),
    invalidSignature(2),
    invalidTransactionId(3),
    unsupportedCrtValues(4),
    unsupportedRemoteOperationType(5),
    unsupportedProfileClass(6),
    scp03tStructureError(7),
    scp03tSecurityError(8),
    installFailedDueToIccidAlreadyExistsOnEuicc(9),
    installFailedDueToInsufficientMemoryForProfile(10),
    installFailedDueToInterrupttion(11),
    installFailedDueToPEProcessingError(12),
    installFailedDueToDataMismatch(13),
    testProfileInstallFailedDueToInvalidNaaKey(14),
    pprNotAllowed(15),
    installFailedDueToUnknownError(127)
}

```

SIMAlliance error status in PESTatus snippet from SGP.22

SIMAlliance error status in PESTatus	ErrorReason in ErrorResult
pe-not-supported(1)	installFailedDueToPEProcessingError(12)
memory-failure(2)	installFailedDueToPEProcessingError(12)
bad-values(3)	installFailedDueToPEProcessingError(12)
not-enough-memory(4)	installFailedDueToInsufficientMemoryForProfile(10)
invalid-request-format(5)	installFailedDueToPEProcessingError(12)
invalid-parameter(6)	installFailedDueToPEProcessingError(12)
runtime-not-supported(7)	installFailedDueToPEProcessingError(12)
lib-not-supported(8)	installFailedDueToPEProcessingError(12)
template-not-supported(9)	installFailedDueToPEProcessingError(12)
feature-not-supported(10)	installFailedDueToPEProcessingError(12)
unsupported-profile-version(31)	installFailedDueToPEProcessingError(12)
Other SIMAlliance status codes except (0)	installFailedDueToPEProcessingError(12)

Meaning of SIMAlliance error status snippet from TCA eUICC technical specification:

The `status` can take the following values:

- `ok`: used at the end of the Profile download and installation in order to indicate that the Profile has been successfully processed by the eUICC. This status shall not be sent for all the PEs but only at the end of the Profile installation. When using this status code, the eUICC shall not indicate any identification of a PE.
- `PE-not-supported`: indicates that a specific PE identified by its identification number is not supported by the eUICC. If this PE was indicated as "mandated" in the PE header, this status is an error status and the processing of the Profile was aborted. Otherwise this is just a warning and the installation of the Profile continues.
- `memory-failure`: indicates a failure during the installation of the Profile due to internal memory issue.
- `bad-values`: indicates that a least one value in the PE identified by its identification number is out of acceptable value range.
- `not-enough-memory`: indicates that the eUICC does not have enough free memory to install the Profile. This status is an error status and the processing of the Profile was aborted.
- `invalid-request-format`: indicates that the order of the PEs is invalid or a structure in a PE is unknown or badly formatted. It is not required that the eUICC is able to detect and reject all the incorrect order of the PEs or all invalid formats.
- `invalid-parameter`: indicates that a parameter in a PE description is not supported.
- `runtime-not-supported`: indicates that the runtime environment required by the application present in a PE-Application is not supported by the eUICC.
- `lib-not-supported`: indicates that a library required by the application present in a PE-Application is not available in the eUICC.
- `template-not-supported`: indicates that the template indicated by the OBJECT IDENTIFIER in the Generic File System Template PE is not available in the eUICC.
- `feature-not-supported`: indicates that a feature included in the PE is not supported by the eUICC.
- `unsupported-profile-version`: indicates that the major version indicated in the Profile header is not supported by this eUICC. This status is an error status and the processing of the Profile was aborted.

15. Understand the error reason and block number causing the same. Check that specific profile element block in ASN.1 definition and investigate the cause and resolution of issue.

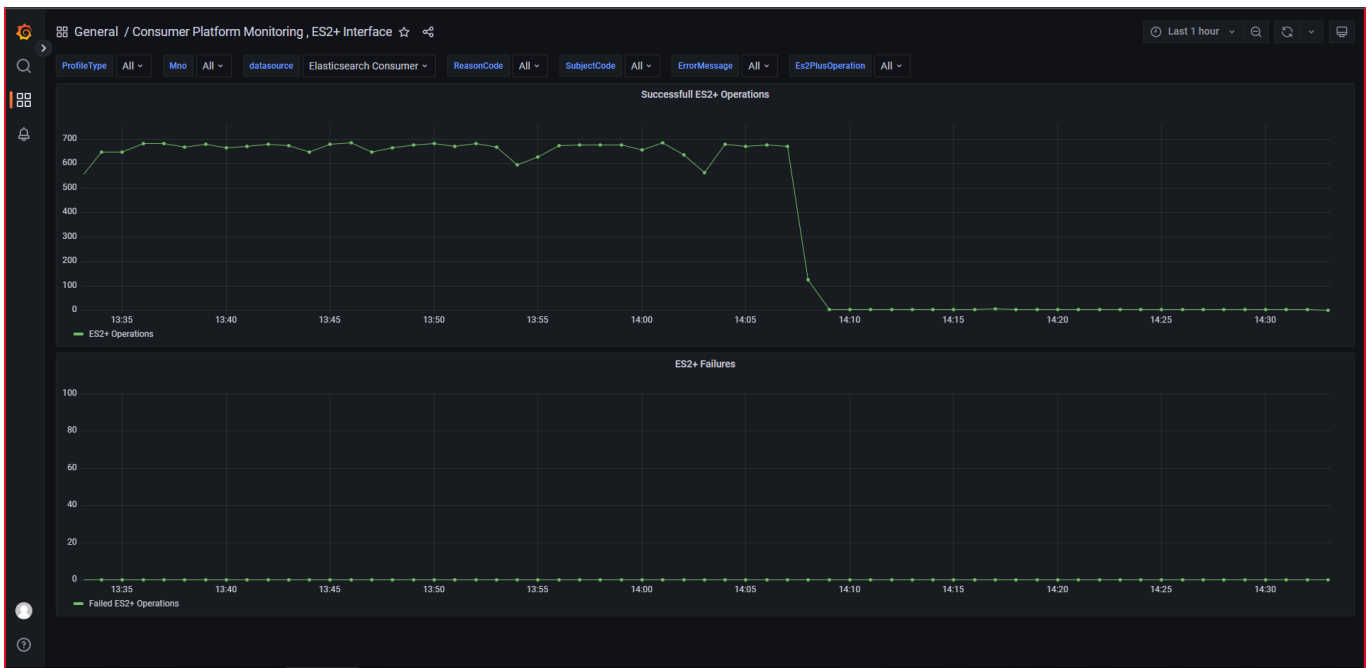
16. The errors can also be filtered using Grafana platform.

Dubai - <http://10.6.3.115:3000>

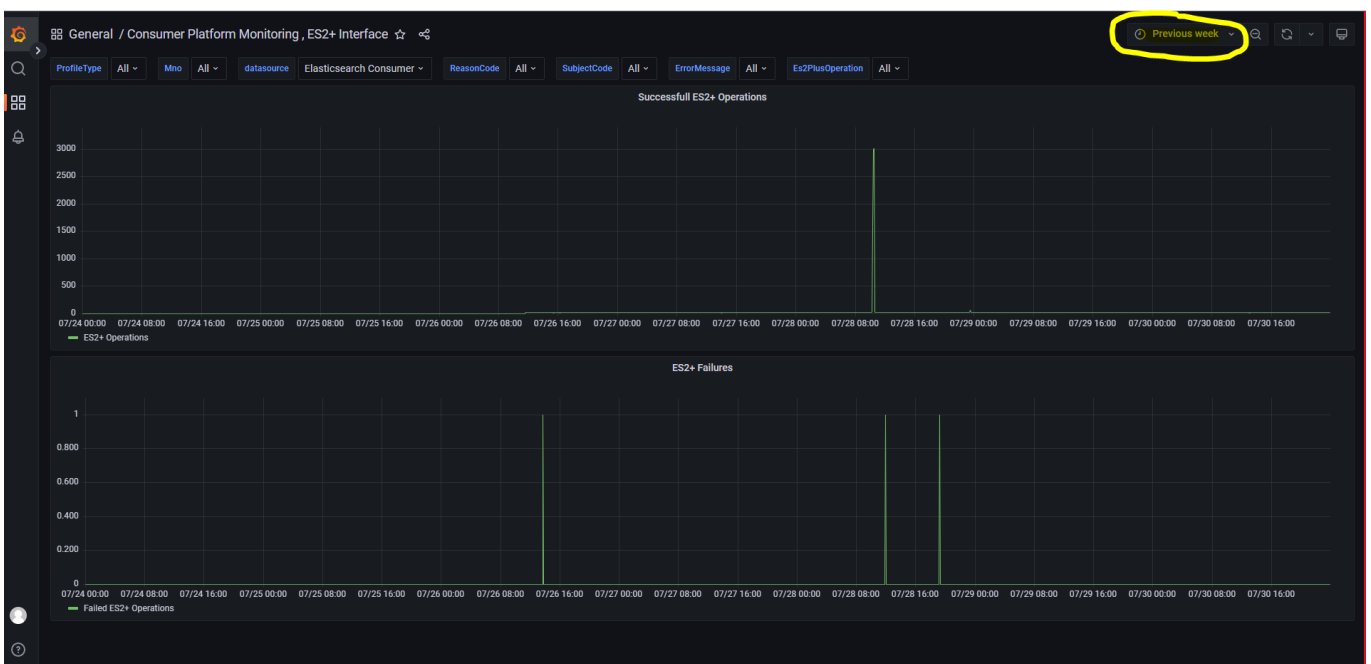
17. Select "Dashboards" and enter the appropriate dashboard for fetching the errors. The 2 options available are:

- a. Consumer Platform Monitoring, ES2+ Interface
- b. Consumer Platform Monitoring, ES9+ Interface

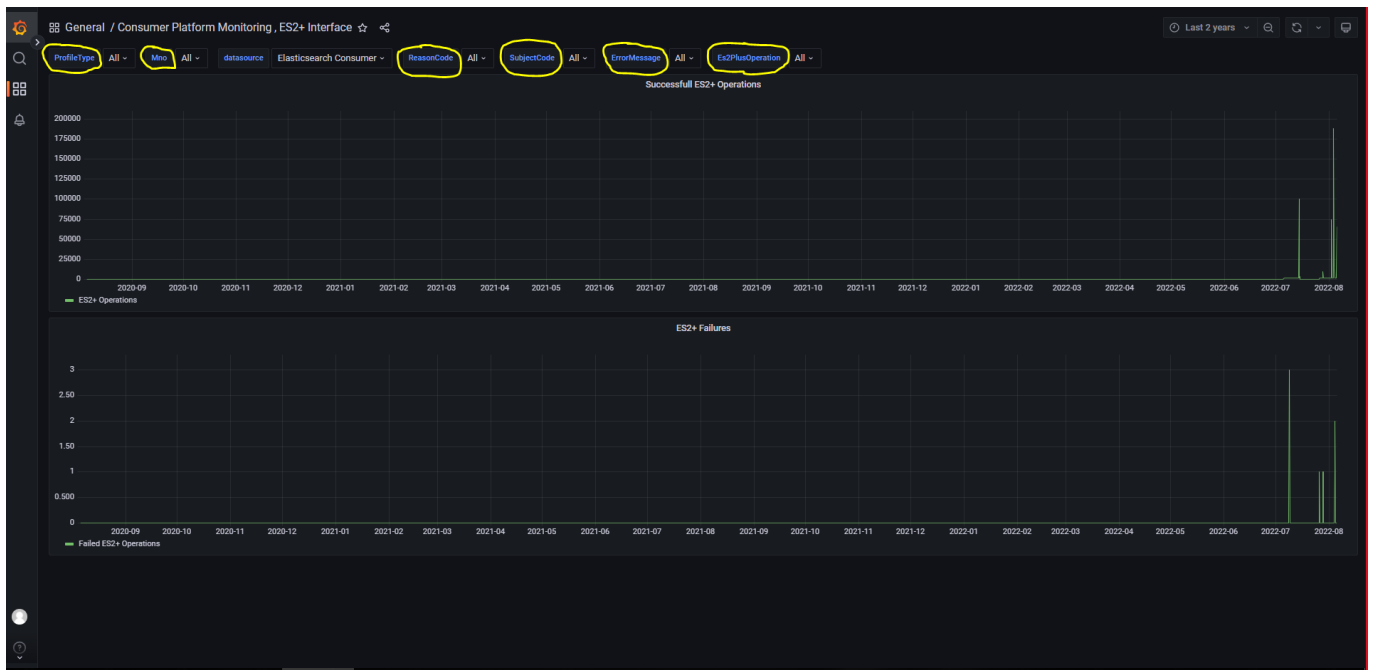
18. Snippet of ES2+ is shown below.



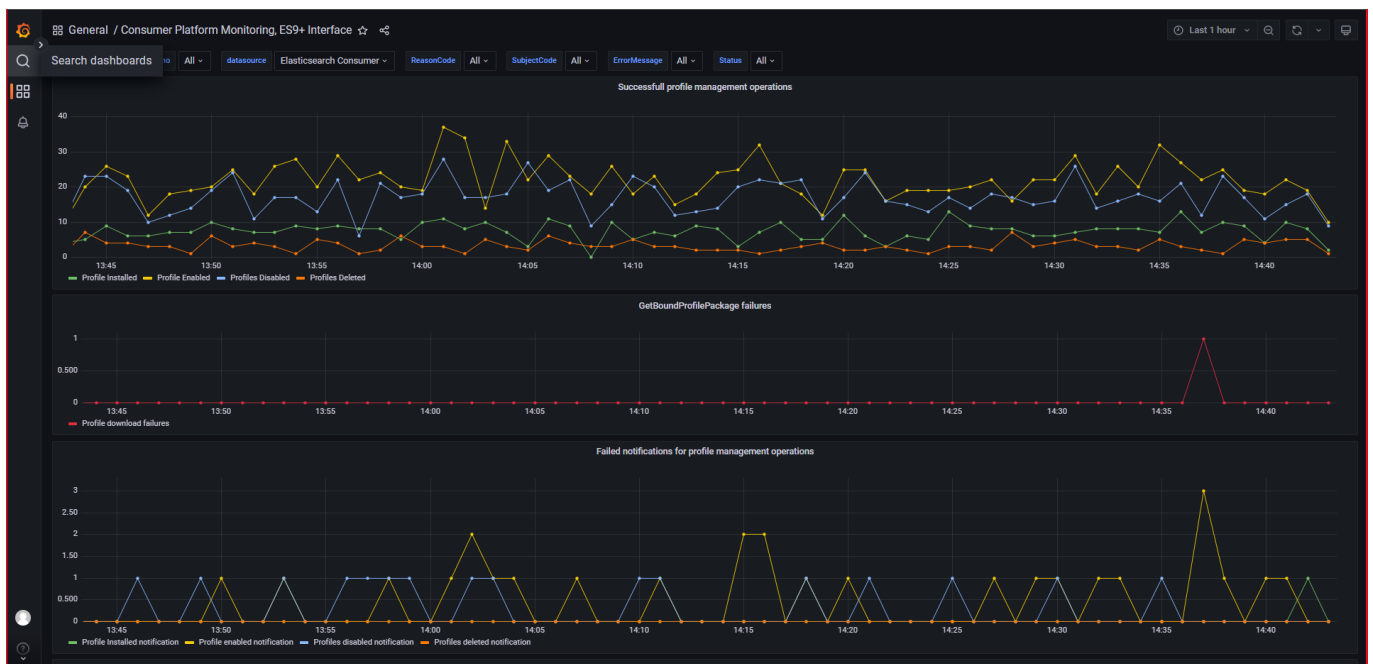
19. The time frame can be selected using filtering option. See snippet below.



20. The error can be filtered from various filtering options present in the GUI. See snippet below.



21. Snippet of ES9+ is shown below.



22. The errors can be filtered based on various options available.

TITLE	SOP_for_fetching_Errors_from_DP+_platform_using_Kibana_and_G...
FILE NAME	SOP_for_fetching_...cations_v1.0.docx
DOCUMENT ID	e093d2e902c1dc32875347465f87887bc3292f7c
AUDIT TRAIL DATE FORMAT	DD / MM / YYYY
STATUS	● Signed

Document history



SENT

05 / 09 / 2022

10:01:33 UTC+4

Sent for signature to Saji Krishnan
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IP: 94.200.229.6



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05 / 09 / 2022

11:00:06 UTC+4

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The document has been completed.