

SKF @ptitude Observer

Release summary



Software version: **13.5**

Release date: **2024 May**



Please read this document. Important information not covered in the @ptitude Observer User Manual is listed here.

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Requirements

Software and FW requirements in Observer 13.5

- Recommended IMx-1 GW firmware version – 4.0
- Recommended IMx-1 Sensor firmware version – 4.1
- Recommended IMx firmware version – 7.8
- Recommended Microlog dBX SW version – 1.1
- Monitor Service requires 64bit OS

Note: As announced in 2022, new releases of Observer will have the required minimum version of MS SQL Server 2014.

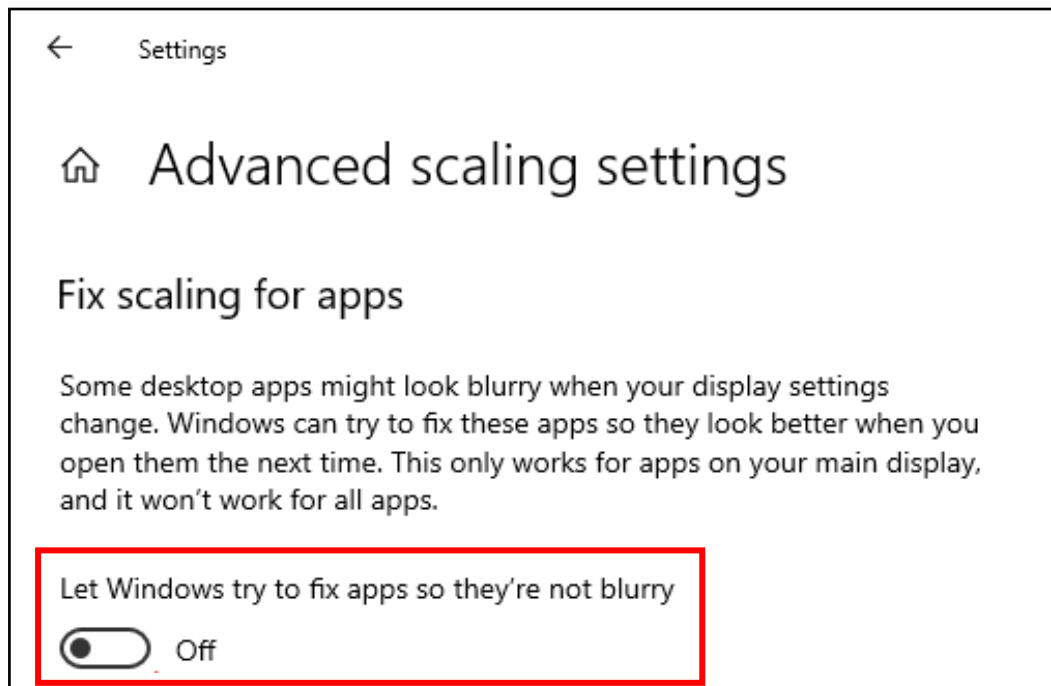
New icons

Icon	Description
	SKF @ptitude Observer
	Database administrator
	Monitor service manager
	OLDC

Windows scaling issue

There is an issue with Observer and Windows OS scaling that causes some users to experience visual glitches. We are looking for a solution for this.

In the meantime, turning off **Let Windows try to fix apps so they're not blurry** in **Advanced scaling settings** in Windows settings, can help to minimise the problem.



New features

IMx-1 Mesh network view

- Added functionality to allow users to set up a visual representation of the mesh network.
- Offers an overview of the network status for IMx-1 gateways and sensors. A valuable tool that can be used for maintenance and troubleshooting.
- Possibility to add a Background picture to represent the actual location of the sensors.

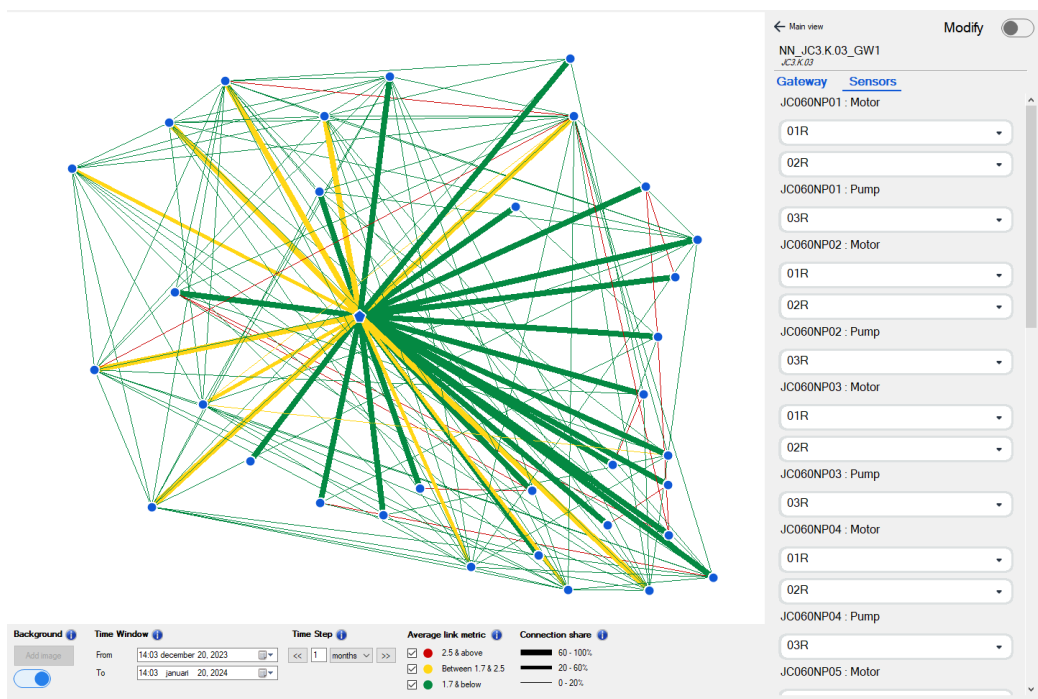


Figure 1 Mesh network view – Example

New type of system alarm

- You can now set up a system alarm that will be triggered if no data has been received within a specified time frame.
- This notification will alert the user to a possible malfunction with a Data Acquisition Device.

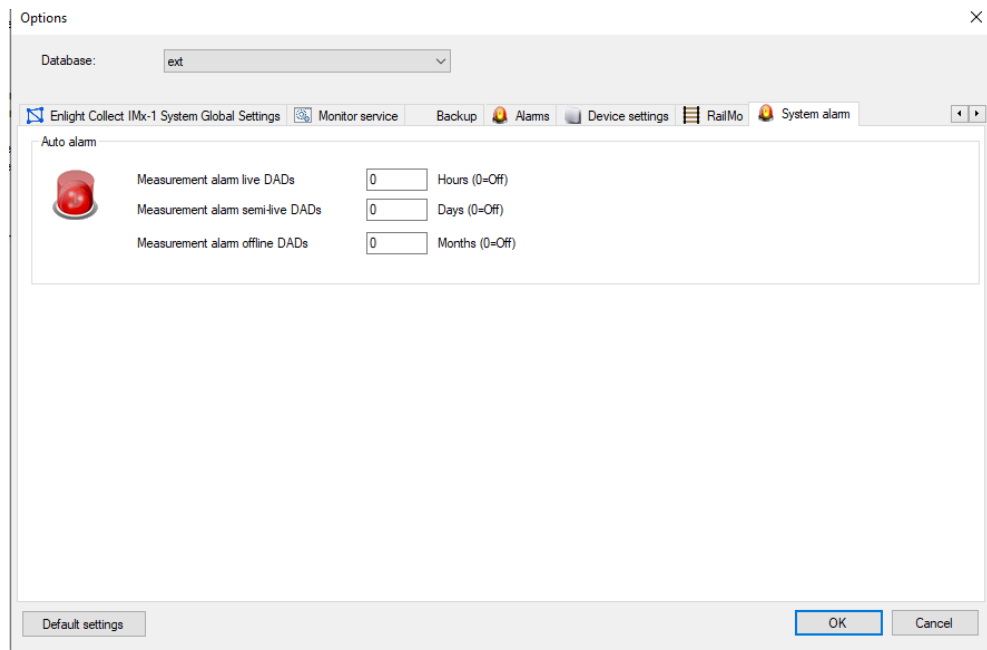


Figure 2 System alarm – Example

Enhanced quick find function

- The quick find function can now be used to search across multiple open databases.
- The Quick Find function can be opened by pressing **Ctrl + F**.

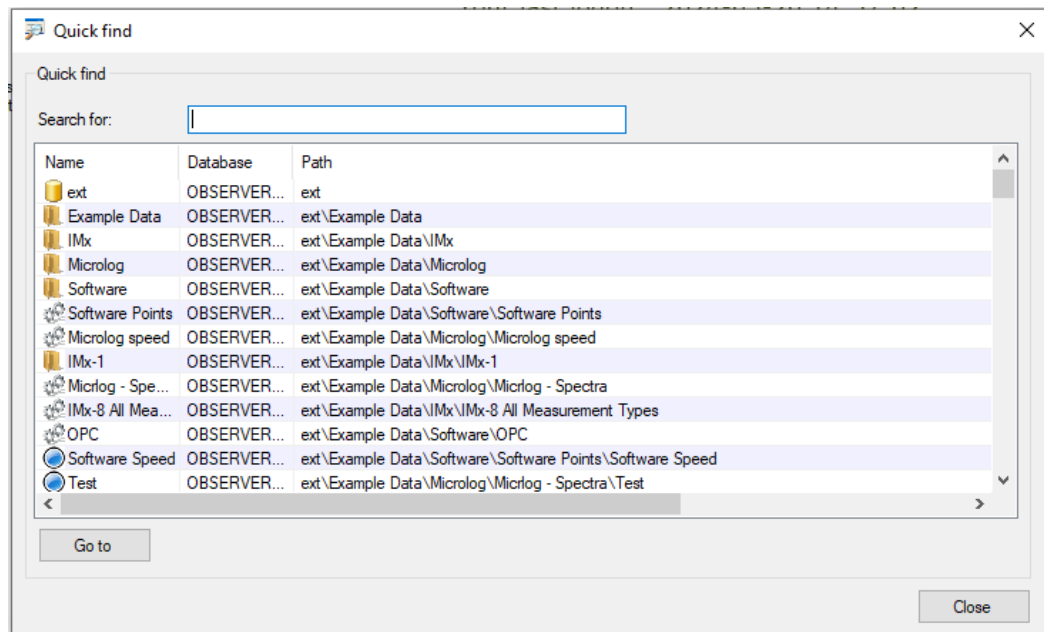


Figure 3 Quick find

Phoenix API

- Added an endpoint that will allow users using an external dashboard with hyperlinks to open a linked point directly in Observer.

See further explanation in the API documentation.

Bugs

Overview

- Fixed more than 40 bugs
- Analyse: 9
- Configuration: 11
- Data Bridge: 4
- Other: 12
- RailMo: 5

On the following pages, some of the fixed bugs are presented. For a full list of fixed bugs, see the change log.

Observer 13.5 bug fixes and insight MVP APIs

APIs

- API for Create/Update EventCases in Observer.
- API to Find event cases depending on EventID and returning the Event.
- Event Case – Add API for posting pictures to Observer.
- Event Case – Add API to delete pictures.
- Implement pagination for `/v1/eventcases`.

Observer bug fixes

- Unable to open Noise Web Client with security role: Rail Track Monitoring Web View.
- RailMo – Only the most recently saved line can be expanded, and it is the only one accepting data.
- An empty report is generated while emailing the event case report.

Event case API

API for Create and Update event cases in Observer

To enable third-party systems (currently Insight Rail) to create EventCases in @Observer.

Also, if there is an existing EventCase it updates it with the latest data received.

Endpoint: /v1/eventcase

Request	Response [JSON]
Event JSON	Node ID for which event is created
	EventCase ID of new event that is created.
	Report ID of new EventCase report
	Assessment ID of new EventCase report

Expected JSON

```

{
  "title": "Testing_Demo_50",
  "description": "InsightRailEvent50",
  "defectCategory": "Axlebox_50",
  "referenceID": "PK03247-83050",
  "caseNoPrefix": "123456870",
  "status": 0,
  "created": "2023-09-12T10:20:26.543",
  "modified": "2023-09-15T10:25:25.587",
  "reports": [
    {
      "id": 1,
      "createdBy": "f4a7c5e2-511d-450a-b838-258a91219d87",
      "approvedBy": "f4a7c5e2-511d-450a-b838-258a91219d87",
      "status": 2,
      "created": "2023-10-11T04:15:03.000",
      "modified": "2023-10-12T04:10:24.043",
      "description": "demoUpdate",
      "confirmation": {
        "isDefect": "NotSet",
        "date": "2023-11-25T10:00:00",
        "severity": 0,
        "defect": [ 1, 3 ]
      },
      "correction": {
        "fixed": "NotSet",
        "date": "2023-11-30T00:00:00",
        "action": "Action required",
        "comment": "Please fix"
      },
      "assesments": [
        {
          "id": 6,
          "classification": 2,
          "component": "AxleBox",
          "assessment": "Finding Problem",
          "recommendation": "Please check",
          "position": 1,
          "feedbackTopic": 0,
          "feedback": "Got to fix this",
          "chainageFrom": 0,
          "chainageTo": 0,
          "rail": "None"
        }
      ]
    }
  ]
}

```

/v1/EvenCase



EventCase created on Observer

Path	Title	Created	Modified	Case number	Defect category	Description	Status
Company\TRAN TestDemoNew\Wheel8	Testing Nonweight	4/25/2024 3:19:23 AM	4/25/2024 3:19:54 AM	02034	Adulbox_32		Open (Low level)
Company\9999239992-04-16 LH		4/12/2024 2:06:56 PM	4/12/2024 2:06:56 PM	02032			New
Company\9999239992-04-16 LH		4/12/2024 2:06:56 PM	4/12/2024 2:06:56 PM	02033			New
Company\999999-01-1 LH	Testing_Demo_41	12/20/2023 12:20:25 AM	12/20/2023 9:58:36 AM	12345678-02021	Adulbox_41	InsightPaEvent1	New
Company\1200-1200-02-6 LH	Testing_Demo_53	12/20/2023 8:29:29 AM	12/20/2023 8:29:51 AM	12345678-02023	Adulbox_53	InsightPaEvent3	New
Company\TRAN_Performance_new\TRAN_Performance_new-01-1 RH	Testing_Demo_31	12/24/2023 12:20:26 AM	1/16/2024 2:39:23 AM	12345678-02016	Adulbox_2458	InsightPaEvent45	Open (Low level)
Company\TRAN_Performance_new\TRAN_Performance_new-02-8 LH	Testing_Demo_31	12/24/2023 12:20:26 AM	12/20/2023 12:25:25 AM	12345678-02018	Adulbox_31	InsightPaEvent03	Open (Low level)
Company\TRAN_Performance_new\TRAN_Performance_new-02-12 LH	Testing_Demo_33	12/24/2023 12:20:26 AM	12/31/2023 5:48:07 AM	12345678-02020	Adulbox_32	InsightPaEvent03	Open (Low level)
Company\001200-01-1 RH		12/18/2023 10:40:59 AM	12/18/2023 10:40:59 AM	00006			New
Company\001200-01-1 RH		12/18/2023 10:37:45 AM	12/18/2023 10:41:50 AM	00005			New
Company\001200-01-1 LH		12/18/2023 10:20:27 AM	12/18/2023 10:37:31 AM	00004			New
Company\001200-01-1 LH	Error	12/18/2023 9:10:48 AM	12/18/2023 9:17:31 AM	00003			New
Company\001200-01-1 LH		12/18/2023 9:09:20 AM	12/18/2023 9:35:02 AM	00002			New
Company\915915-01-1 LH	Error	10/30/2023 2:28:44 PM	10/30/2023 2:28:44 PM	00001	Adulbox	Something not right	New
Company\1200-1200-02-6 LH	Testing_Demo_60	9/12/2023 10:20:26 AM	9/15/2023 10:25:25 AM	12345678-02017	Adulbox_60	InsightPaEvent60	New
Company\1200-1200-02-6 LH	Testing_Demo_58	9/12/2023 10:20:26 AM	9/15/2023 10:25:25 AM	12345678-02018	Adulbox_51	InsightPaEvent61	New
Company\1200-1200-02-6 LH	Testing_Demo_58	9/12/2023 10:20:26 AM	9/15/2023 10:25:25 AM	12345678-02019	Adulbox_50	InsightPaEvent60	New
Company\1200-1200-02-6 LH	Testing_Demo_58	9/12/2023 10:20:26 AM	9/15/2023 10:25:25 AM	12345678-02020	Adulbox_50	InsightPaEvent60	New
Company\1200-1200-02-6 LH	Testing_Demo_58	9/12/2023 10:20:26 AM	9/15/2023 10:25:25 AM	12345678-02021	Adulbox_50	InsightPaEvent60	New
Company\1200-1200-02-6 LH	Testing_Demo_58	9/12/2023 10:20:26 AM	9/15/2023 10:25:25 AM	12345678-02022	Adulbox_60	InsightPaEvent60	New
Company\1200-1200-02-6 LH	Testing_Demo_58	9/12/2023 10:20:26 AM	9/15/2023 10:25:25 AM	12345678-02023	Adulbox_60	InsightPaEvent60	New
Company\1200-1200-02-6 LH	Testing_Demo_58	9/12/2023 10:20:26 AM	9/15/2023 10:25:25 AM	12345678-02024	Adulbox_60	InsightPaEvent60	New
Company\1200-1200-02-6 LH	Testing_Demo_55	9/12/2023 10:20:26 AM	9/15/2023 10:25:25 AM	12345678-02026	Adulbox_51	InsightPaEvent61	New
Company\1200-1200-02-6 LH	Testing_Demo_60	9/12/2023 10:20:26 AM	9/15/2023 10:25:25 AM	12345678-02019	Adulbox_60	InsightPaEvent60	New

General settings

Machine: 1200-01-4 LH
 Date/Time: 10/31/2023 4:15:53 AM
 Status: Rejected
 Report number: 1 Modified: 10/31/2023 4:10:24 AM
 Description: DemoUpdate12
 Created by: admin.admin
 Approver: admin.admin

Confirmation: Not confirmed
 Connection: Not set
 Severity: 15 Defects in total and 1 Foot
 Action: Action required
 Comment: Please fix
 Date: 11/26/2023 10:00:00 AM

Component	Classification	Assessment	Feedback topic
Adulbox	2	Finding Problem	[None]

Assessment

Classification: 2
 Machine part: Adulbox
 Assessment: Finding Problem
 Recommendation: Please check
 Feedback topic: [None]
 Feedback: Goto fix this

API to Find event cases depending on EventID and returning the Event

To enable users to search and return EventCases with specific EventcaseID instead of sending the list of all EventCases.

Endpoint: `/v1/eventcases/{eventCaseId}`

EventCase Show/Hide List Operations Expand Operations

GET `/v1/eventcases/{eventCaseId}` Fetch event case related to the EventCaseID

Response Class (Status 200)
OK

Model | Example Value

```
{
  "title": "Suspect damage on NDE for impeller",
  "description": "Any descriptive message",
  "defectCategory": "",
  "id": 4,
  "caseNoPrefix": "",
  "status": 0,
  "created": "2019-09-17T09:15:57.943Z",
  "modified": "2019-09-18T09:12:53.031Z",
  ...
}
```

Response Content Type:

Parameters

Parameter	Value	Description	Parameter Type	Data Type
eventCaseId	<input type="text" value="(required)"/>	Id of the event case to be fetched.	path	integer

Response Messages

HTTP Status Code	Reason	Response Model	Headers
400	The request was invalid	Model Example Value	

```
{
  "message": "string",
  "messageDetail": "string"
}
```

Request	Response
EventCaseID	EventCase JSON

Request URL

http://localhost:22375/v1/eventcases/2031

Response Body

```
{
  "title": "Testing_Demo_50",
  "description": "InsightRailEvent50",
  "defectCategory": "Axlebox_50",
  "id": 2031,
  "caseNoPrefix": "123456870",
  "status": 0,
  "created": "2023-09-12T10:20:26.543",
  "modified": "2023-09-15T10:25:25.587",
  "reports": [
    {
      "id": 1043,
      "createdBy": "f4a7c5e2-511d-450a-b838-258a91219d87",
      "approvedBy": "f4a7c5e2-511d-450a-b838-258a91219d87",
      "status": 2,
      "created": "2023-10-11T04:15:03",
      "modified": "2023-10-12T04:10:24.043",
      "description": "demoUpdate",
      "confirmation": {
        "isDefect": "NotSet",

```

Response Code

200

If EventCaselId is not found in Observer, then the response comes as 204 – No Content.

Event Case – Add API for posting to Observer

To enable users to post pictures for a specific report of the EventCases.

POST /v1/eventcases/pictures
POST picture to the event case report

Response Class (Status 200)
OK

Model | Example Value

```
{
  "EventCaseID": "string",
  "ReportID": "string",
  "PictureID": "string",
  "Name": "string",
  "Message": "string"
}
```

Response Content Type:

Parameters

Parameter	Value	Description	Parameter Type	Data Type
picture	(required)	Picture object	body	Model Example Value
	<input type="text" value="Parameter content type: application/json; v=1.0"/>			<pre style="background-color: #fff9c4; padding: 5px;">{ "id": 14, "src": "/v1/eventcases/pictures/14", "name": "Picture of impeller damage", "content": "iVBORw0KGgoAAAANSUHEugAABpYAAAFCAAAAAC7CftFAAAAAXN "referenceId": "PK03247-83032" }</pre>

[Try it out!](#)

Request	Response [JSON]
Picture JSON	EventCase ID of EventCase for which the picture is posted
	Report ID of report for which the picture is posted
	Observer ID of the new posted picture
	Name of the new picture posted
	Message if any

Expected JSON

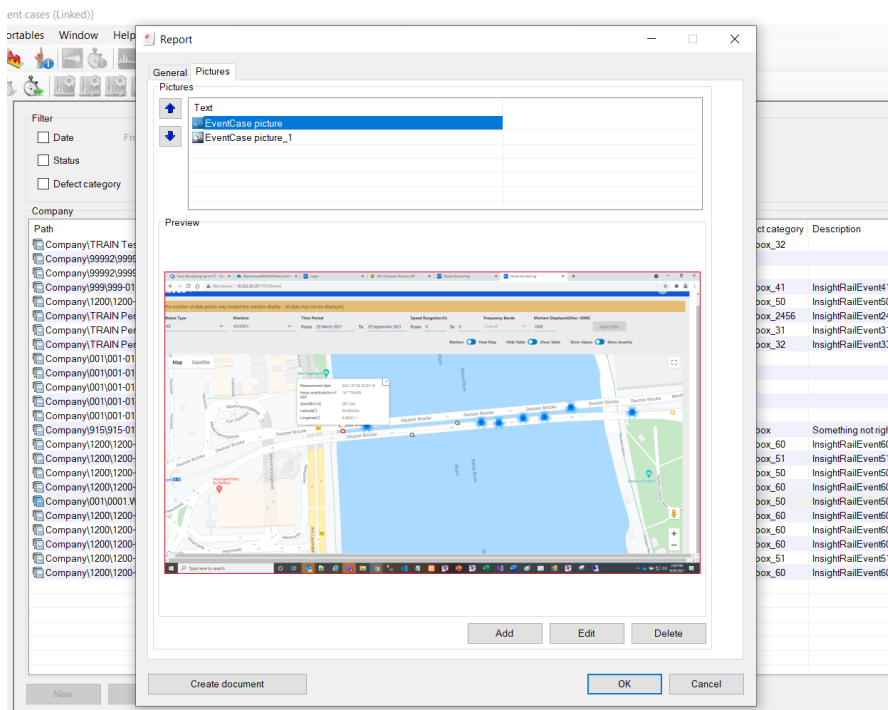
If Database ID of the picture is not known.

```
"referenceID" : "PK03247-83050",
"content" : picture in base 64 format,
"name" : "EventCase picture"
```

If Database ID of the picture is known, then the JSON could be as following:

```
"id" : 14,
"src" : "/v1/eventcases/pictures/14",
"referenceID" : "PK03247-83050",
"content" : picture in base 64 format,
"name" : "EventCase picture"
```

/v1/EvenCase



If the picture of the Report ID already exists, then it updates the picture. Otherwise, it adds this new picture to the report of the EventCase.

Event case – Add API to delete pictures

To enable users to delete pictures for a specific report of the EventCases.

Endpoint: /v1/eventcases/pictures/{pictureId}

DELETE
/v1/eventcases/pictures/{pictureId}
Delete a picture in Observer based on pictureId.

Response Class (Status 200)
OK

Model Example Value

```
{}
```

Response Content Type application/json; v=1.0

Parameters

Parameter	Value	Description	Parameter Type	Data Type
pictureId	(required)	ID of the picture to be deleted	path	integer

Try it out!

Request	Response [JSON]
Database ID of the picture	Observer ID of new picture that is deleted

If picture exists, then it returns the deleted Picture ID as response.

Request URL

```
http://localhost:22375/v1/eventcases/pictures/28
```

Response Body

```
28
```

Response Code

```
200
```

If picture does not exist, then it returns 404 as response with this message

Request URL

```
http://localhost:22375/v1/eventcases/pictures/40
```

Response Body

```
{
  "message": "Not found: http://localhost:22375/v1/eventcases/pictures/40",
  "messageDetail": "Picture with this ID is not found"
}
```

Response Code

```
404
```


Implement pagination for /v2/eventcase

As /v1/eventcases returns all the EventCases in the Observer. It takes too long if there are a lot of EventCases in the system. For the Insight Rail team, the API was either taking too long to return data or crashing. So, pagination is implemented to return only a specific number of EventCases, as mentioned in the **pagesize** parameter in the request.

EventCases Show/Hide | List Operations | Expand Operations

GET /v2/eventCases Eventcases

Response Class (Status 200)
OK

Model | Example Value

```

{
  "TotalCount": 0,
  "Page": 0,
  "PageSize": 0,
  "IsMore": true,
  "Data": [
    {
      "title": "Suspect damage on NDE for impeller",
      "description": "Any descriptive message",
      ...
    }
  ]
}

```

Response Content Type:

Parameters

Parameter	Value	Description	Parameter Type	Data Type
includeClosed	<input type="checkbox"/>		query	boolean
fromDateUTC	<input type="text"/>		query	date-time
toDateUTC	<input type="text"/>		query	date-time
pagesize	<input type="text" value="25"/>		query	integer
page	<input type="text" value="1"/>		query	integer
descending	<input type="checkbox"/>		query	boolean

Bug fixes

Unable to open Noise web client with security role: Rail Track Monitoring Web View

Problem statement

Users were unable to open the Noise monitoring application for the security role: Rail Track Monitoring Web View/ Edit



Figure 4 The error is presented as in the image above

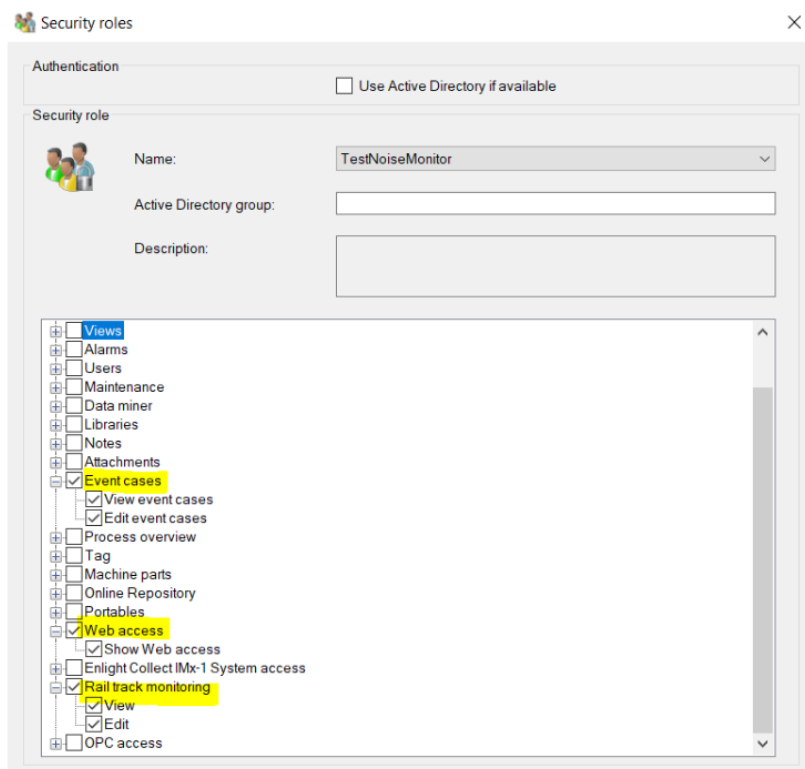
After investigation, we found that only users with Machine View/Edit had the authorization to /v1/settings API. This call returns the database time zone, time difference from UTC and the current version of the Observer database. As this call was failing, the users with just Rail Track Monitoring Web View/Edit role were not able to log into the application.

Solution

Made changes to the Authorization part of the API to allow Rail Track Monitoring Web View/Edit user role to allow this call.

```
[HttpGet]
[Authorize(Roles = "MachinePartView, RailTrackMonitoringView")]
[Route("v1/settings")]
[ResponseCodes(typeof(AllApiResponse))]
[ResponseType(typeof(Settings))]
public HttpResponseMessage GetSystemSettings()
{
    Log(this.Request.GetOwinContext().Request, this.GetType().Name + ":" + System.Reflection.MethodBase.GetCurrentMethod().Name);
    HttpResponseMessage response;
    Settings systemSetting = Settings.ToDto(OwinWebServiceMain.DbFactory);
    response = AsResponse(systemSetting, Request);
    return response;
}
```

Now with the **Rail Track Monitoring Web View/Edit** security role, users will be able to access the RailMo Web.



RailMo – Only the most recently saved line can be expanded, and it is the only one accepting data

Problem statement

You can only expand the most recently saved line. You can change which line can be expanded by taking properties on a line and clicking **OK**.

Also, possibly only the "active" accept new data or track section matching.

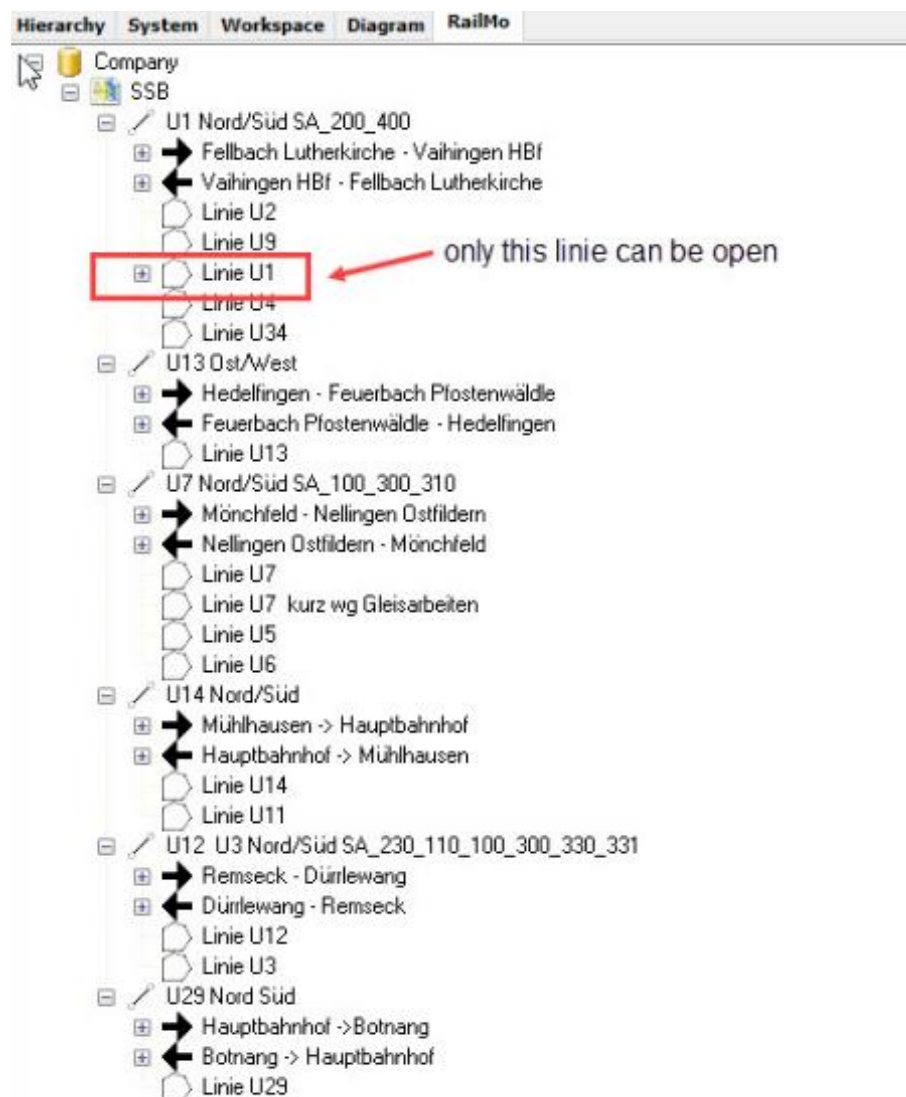


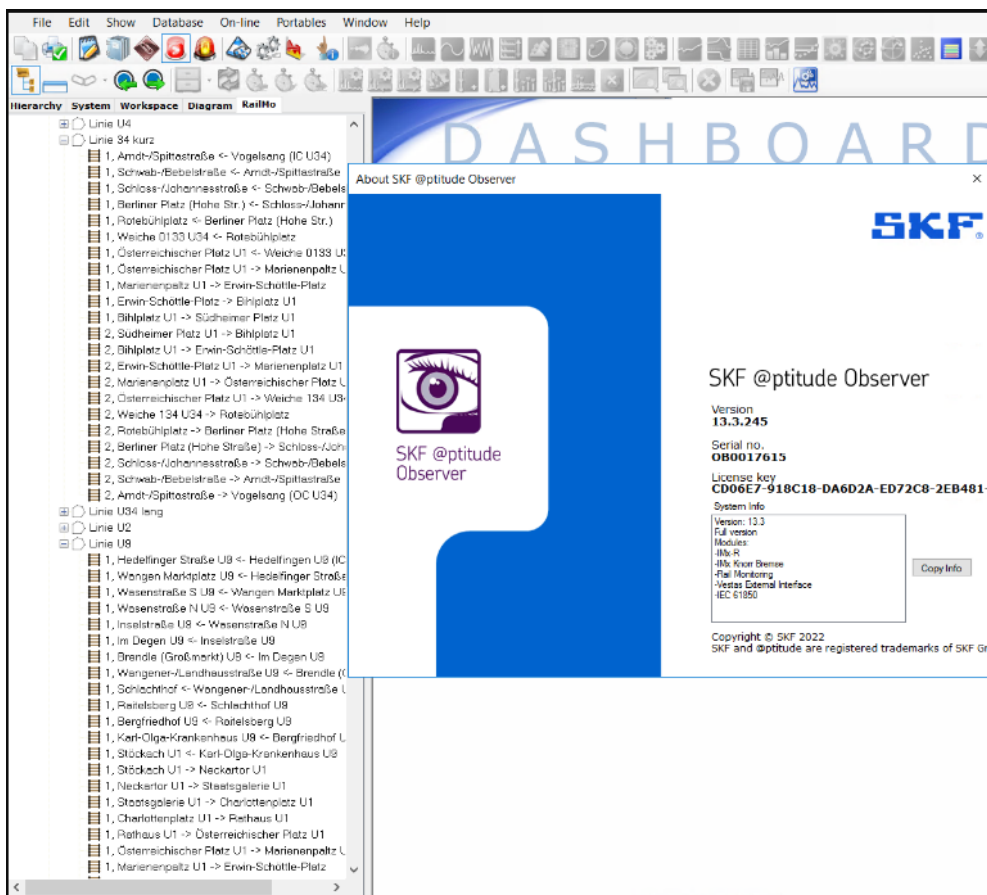
Figure 5 The error is presented as in the image above

After investigation, we found that there was a code chunk to delete all the old Routes without a check for any condition.

Solution

Made changes to check if that Route is edited by the user only then delete the old Route and add this new edited Route else, do not delete any existing Routes. It fixed the problem.

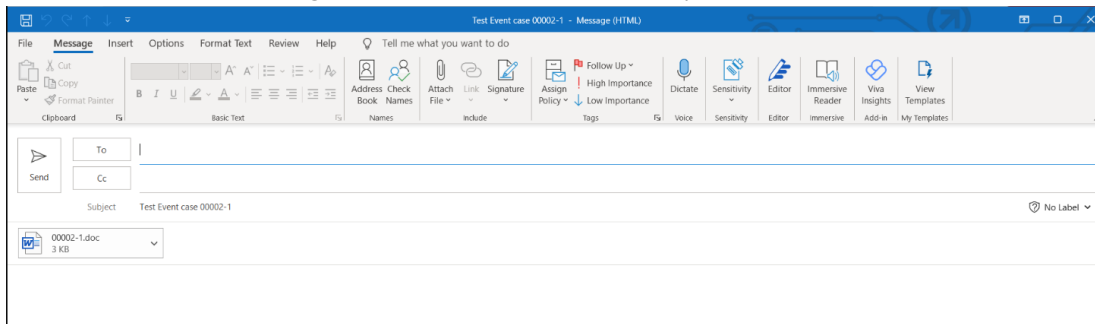
```
Dim railwaySectionRoute As CMRRailwaySectionRouteE
railwaySectionRoute = CMRRailwaySectionRouteB.DbGetByRouteID(oNode.DbFactory, m_RailRoute.IDNode)
If railwaySectionRoute.RailRouteID > 0 Then
    CMRRailwaySectionRouteB.DeleteOldrouteForUpdatedRoute(oNode.DbFactory, m_RailRoute.IDNode)
End If
```



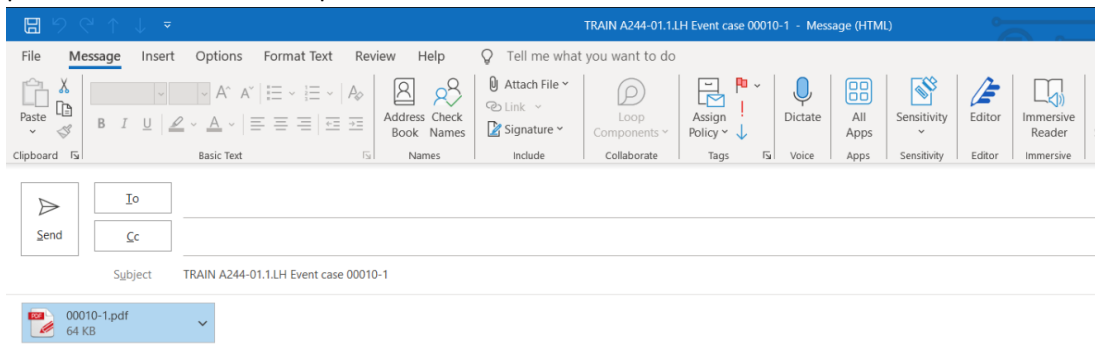
An empty report is generated while emailing the event case report

Problem statement

Upon sending the email of the event case report, a new mailbox opens with the event case report, but when we open the doc file, it shows empty where no data is captured in the DOC file. The new e-mail box is generated with the Event case report document.



But the document is empty without any information regarding the CaseEvent. After investigation, we found that `memoryStream.write()` was not working. We fixed that part and now it works as expected.



Event case report			
00010-1			
Site:	TRAIN A244		
Machine:	TRAIN A244-01.1.LH		
	Driving unit	Drivers unit	Transmission
Manufacture			
Type			
Component	Assessment	Classification	Recommendation
Rearling	Test assessment	4-7	Test Recommendation
Not selected		1-3	
The classification is specified as following:			
1-3 Normal abrasion or wear - no action required.			
4-7 Visible defect indicators - no change necessary Possible that other sanctions will be proposed later.			
8-9 Serious defects. An immediate replacement is necessary to prevent consequential damages.			
Location	Report Date	Signature	Approved
	5/2/2024	admin, admin	admin, admin

Figure 6 Event case report - Example