List view UI Search Text has circle over the label → Firefox

4 Test suite

This section contains all the tests that need to be executed to verify the functionalities contained in the RAS application.

The tests are grouped around the following domains:

- Access to the application
- Administration
- Assets
- Filters
- Dashboards
- Data Analysis Engine
- Reports
- Events
- Scheduled tasks
- Web notifications
- User security

Ideally, each test should contain the following elements:

- Pre-conditions for the test
    - e.g. a dashboard must already be shared with another user
- Execution steps
    - e.g. 'click on the 'submit' button'
- Expected result
    - e.g. the preview data should only contain values between 5 and 10

4.1 Access to the application

ID	Preconditions	Steps	Expected result
2	User is not logged in	login with wrong username	should fail
3	User is not logged in	login with wrong password	should fail
4	User is not logged in	login with username that is not a valid e-mail address	should fail
5	User is not logged in	login with correct username and correct pwd	should work logged in user is printed at top
6	User is logged in	logoff, and try to use RAS after pressing browser <back> button	using RAS should not be possible (selecting an item in the menu on the left)
7	User is logged in	change password, provide invalid old password but valid (and equal) new and new confirmed passwords	error "incorrect password" should be shown
8	User is logged in	change password, use valid old password and use "testtest" as	error about minimum password

		'new password' and as 'confirm new password'	requirements should be shown
9	User is logged in	change password, provide valid old password but differing new & confirm passwords	error about differing new & confirm passwords should be shown
10	User is logged in	change password, login with old pwd	login with old should fail
11	User is logged in	change password, login with new pwd	login with new should work
12	User is logged in	click 'hello <username>' in home screen	profile page should be shown

4.2 <u>Administration</u>

4.2.1 Manage users

- create user (+ test login using newly created user)
- impersonate (+ test permissions)

Testing of permissions and web notifications happens in section 4.

Ask a developer to delete the newly created user (w/ permissions)

4.2.2 Manage companies

- screen should show all companies
- create new company

Ask a developer to delete the newly created company.

4.2.3 Manage assets

- create new asset
- set associated companies
- change ftp password (and test FTP) (*)
- change asset image

(*) Note: on GHENT it is not be possible to test FTP.

4.2.4 Manage asset type

- create new asset type
    - o base asset type is required (cannot be null/none)
- asset types cannot be deleted from UI

Ask a developer to delete the newly created asset type.

4.2.5 Manage Data Chunks

- only x records are loaded initially, but by scrolling down additional records are added to the table
- Records are sorted: most recent at the top
- Logfiles can be downloaded by clicking the download icon in the last column
- Logfiles can be viewed online by clicking the ID in the first column

4.3 <u>Assets screen</u>

4.3.1 List of assets

- The screen should show the list of all the assets that are available for the company (that the user belongs to), and only these assets.
- The screen should not show any asset that is not linked to the company the user belongs to.
- Images should be shown for every asset that has an avatar in the list.
- Clicking a card (box in UI showing details of single asset), should bring up the asset detail screen back werkt niet over tabs

4.3.2 Single asset detail

Test when logged in with a user with administrator privileges:

- The screen should show the following tabs: general information, device properties, custom properties, log, control center, filters, dashboards, reports, log files

Test when logged in with a user without administrator privileges:

- The screen should show the following tabs: (all of the previously mentioned tabs other than Logfiles, which should not be visible).

4.4 <u>Filters</u>

4.4.1 List of filters

- The screen should show the list of all the filters that are available for the user. This includes: filters that are created by the user and filters that are shared with the user
- Filters that are created by the user:
  - o have edit, export and delete button
  - o have a share icon showing the number of shares
  - o have a clickable title that takes the user to the edit filter screen
- Filters that are not created by the user (i.e. shared with the user):
  - o have export and unlink button
  - o have no share icon
  - o do not have a clickable title

4.4.2 Create a new filter

- Wizard…
  - o Each tab: check all UI-controls/elements (!)
  - o Tab 1: check correct list of assets is shown
  - o Tab 2: check correct properties are listed
  - o Tab 3: check 'data filters'
  - o Tab 4: check 'timestamp filters'
  - o Tab 5: check preview

interface time absolute range ?!

4.4.3 Edit an existing filter

- Clicking 'edit' should bring user to the same wizard as for the create
- Functionality is the same as create

4.4.4 Delete a created filter

- Cannot delete filter that is in use by dashboard
- If the user tries to delete a filter that is shared by the user with other users, a warning message should be displayed after the user clicks 'delete'
- If the user has deleted a filter that is shared by the user with other users, then this filter should not be in the list of filters anymore for those other users.
- Can delete a filter without warning that is not shared or in use by any dashboard

4.4.5 Export filter data

- User can export the filter data to CSV after clicking 'export'. → geen data? geen file!
- After clicking 'export', a message is shown.
- Data export should not take longer than 5 minutes → werkt niet?!
- When export is complete:
    - email should be sent to user
    - web notification should be shown
    - both messages contain a link to the same csv export file
- exported file is correct

4.4.6 Filter sharing

- Share filter
- Unlink filter
- Accept share invitation
- Try to accept share invitation twice
- Refuse share invitation

4.5 <u>Dashboards</u>

4.5.1 List of dashboards

- The screen should show the list of all the dashboards that are available for the user. This includes: dashboards that are created by the user and dashboards that are shared with the user.
- Dashboards that are created by the user:
    - have view, edit, duplicate and delete button
    - have a share icon showing the number of shares
    - have a transfer of ownership icon
    - have a clickable title that takes the user to the dashboard detail screen
- Dashboards that are not created by the user (i.e. shared with the user):
    - have view and unlink button
    - have no share icon
    - have no transfer of ownership icon

4.5.2 Create a new dashboard

- Drop-down list of filters should contain filters that are created by the users and filters that are shared with the user
- The <edit> button next to the drop-down list of filters should only be enabled for filters that are created by the user, not for those that are shared with the user

- After the dashboard is created, the card in the dashboard list should include an image preview of the dashboard.

4.5.3 Edit an existing dashboard
- Clicking <edit> should bring user to the same UI as for the create

4.5.4 Duplicate an existing dashboard
- Clicking <duplicate> should bring user to the same screen as for editing a dashboard.

4.5.5 Delete an existing dashboard
- Click <Delete>. → werkt niet (caching?)
- If the user tries to delete a dashboard that is shared by the user with other users, a warning message should be displayed after the user clicks 'delete'
- If the user has deleted a dashboard that is shared by the user with other users, then this dashboard should not be in the list of dashboards anymore for those other users.

4.5.6 DevExpress dashboards
- Create a dashboard
    - [Move this to dedicated location?]
    - Create a simple dashboard using a limited dataset.
    - Create a complex dashboard using a large dataset.
    - <TODO>
- Edit dashboard
    - Possible to edit and save dashboard

4.6 Reports
todo

→ authenticatie
→ TODO testboek

4.7 Event
Todo

4.8 Scheduled tasks
4.8.1 Create a new scheduled task
- Tab 1
    - Select 'based on a fixed schedule'.
    - Set schedule to trigger every minute
- Tab 2
    - Select any dashboard.
- Tab 3
    - Check box 'send an e-mail'
    - Check box 'send a website notification'
- After 1 minute of waiting, the website notification and e-mail should be received. → slow

4.8.2 Instantly run a schedule task
- On an existing scheduled task, click 'run now'.
    - The website notification and e-mail should be received.

Preprocessor tasks?

Logo Mails !

Mail Templates feature?

4.8.3 Edit a schedule task

- Click <edit> for an existing scheduled task.
- User should be taken to the same UI as for the creation of a scheduled task.

4.8.4 Delete run a schedule task

- Click <delete> for an existing scheduled task.
- User is asked to confirm deletion.
- After confirmation, the task should be deleted.

4.9 <u>Web notifications</u>

4.9.1 Send notification to user

- Pre:
  - need 2 separate accounts, user1 and user2
  - log users in using different browser sessions (e.g. user1 uses Firefox, user2 uses Chrome)
- send notification
  - use user1
  - go to administrator/manage users
  - Find <user2>
  - Click <sends web notification>
  - Enter any data
- Read notification
  - Use user2
  - Top of screen: bell icon should indicate that a notification is available
  - Notification message should contain the data that was entered by user1

4.10 <u>User security</u>

Check permission:

Login with a user that does not have permission to ...

Finish this?

TODO

4.11 <u>Web browser support</u>

Testing web browser support can be done in many ways. The following is a basic set of tests.

	Google Chrome	Firefox	Microsoft Internet Explorer	Microsoft Edge
Enter URL, access application				
Edit a filter				
View a dashboard				[illegible]!!
View an asset's details screen				

20 secs

add all to the test (edit dash, etc)

Note: The list of supported browsers (and their versions) is not specified in this test document: this list should be specified elsewhere. In absence of such a list, the tests in this paragraph assume that the latest major version of each browser is used.

4.12 Transfer of Ownership

4.12.1 Filter

- Create a new filter, the contents of which do not matter.
- Click the  icon in the top right of the newly created filter card.
- Confirm the hierarchy diagram shows the name of the filter.
- Confirm a warning indicating the seriousness of what you're about to do is shown.
- Enter your email adress as the recipient and click the button.
- Log out of RAS, and click the link you received IN the email.
- Log in when prompted
- Confirm the system asks you if you want to accept.
- Choose to accept the filter.
- Ensure the filter is present in your list of filters, as an owned filter (ie transfer of ownership and share icons visible).
- Check the contents (assets, properties, ...) are the same as originally configured
- Log back into the account you originally logged in with, and ensure the filter is no longer present in this account.

Repeat this entire procedure, only refusing instead of accepting the transfer. Ensure the filter remains visible for the original user, and is not visible for the new user.

Notifications : in bell icon should be chronological
: List View should be a table

4.12.2 Dashboard

Repeat the procedure mentioned in 4.12.1, but instead of only creating a new filter, create a new filter and a new dashboard based on that filter. Furthermore, create a second dashboard based on the same filter. Then transfer the dashboard instead of the filter. Verify the diagram when transferring shows both the dashboard and the underlying filter.

Once the transfer is complete, verify that the recipient has received both the filter and the dashboard. Also verify that the original owner's second dashboard, the one which was based on the filter that was transferred as part of the dashboard transfer, still functions correctly. Check that the filter which was transferred is now shared with the original owner.

Make delete Template
DAD Enable locale?!
Unsubscribe → Nothing selected = 500

4.13 Data Analysis Engine

We will test the proper function of the Data Analysis Engine by manually uploading multiple files, creating DADs and checking they have the results that were expected.

These test input files can be found on the same confluence page where this document could be found.

4.13.1 Preparation

Create a new assettype and a new asset you will use in the tests. Remember the asset id that was assigned to this asset. Also note down the GUID assigned to this asset.

4.13.2 First data

Place file 1.log in the unprocessed directory for the newly created asset. Verify the file disappears from the directory after a few seconds, and verify that a new datachunk is created with the expected contents (see content of file for expected contents).

4.13.3 Create DAD

Create a new DAD with the following text:

```
with asset(63) as w                 add
define every(w.TEMPERATURE) as temp
when 1 then writevalue(w.DAE_TEMP_KELVIN, temp+273, timestamp)
```

Substitute the asset id with the asset id of the asset you created. Save and enable the DAD. Wait a few seconds and verify that

- A new property DAE_TEMP_KELVIN was created
- It contains a single datapoint 290.11

4.13.4 Modify DAD

Now modify the text so 273.15 instead of 273 is added to the temperature.

Check that there is still only a single value for the data series DAE_TEMP_KELVIN for the asset, but that the value has changed to 290.26. Also verify that the associated timestamp is the 14th of October 2018, at 08:29:30.

4.13.5 Upload new data

Put the file 2.log in the unprocessed directory for the asset. Wait a few seconds. Verify that the file disappears. Wait another few seconds.

Check that there are now two datapoints associated with DAE_TEMP_KELVIN for the asset, the first as above, and a second on the 16th of October 2018, at 03:57:06 with the value 282.78.

4.13.6 Web Notifications

Create a new webnotification template and add the clause to send a webnotification upon receipt of new data. Like so:

Filter → open filter → go back → go forward.

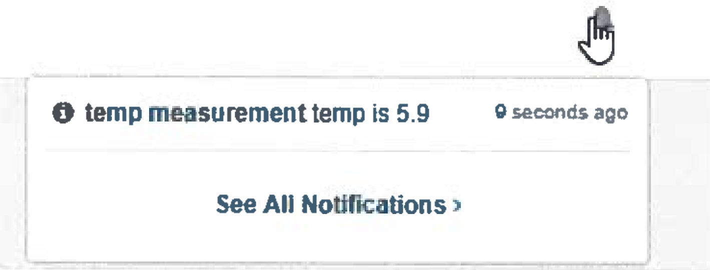
```
when 1 then writevalue(w.DAE_TEMP_KELVIN, temp+273.15, timestamp),
webnotification("NotificationTemplate1")
```

Enter the following data into the notification template:

Save the DAD. This may generate a few webnotifications.

4.13.7 *More data*

Upload file 3.log into the unprocessed directory for the asset. Check that the following notification is generated:



4.13.8 *Delete a DAD*

- click on the 'delete' button on the Data Analysis screen
- answer 'yes, delete this definition' when prompted
- DAD should be removed

4.13.9 *Help pages*

- edit a DAD
- click on help-hyperlink (upper right)
- help information should be available

4.14 Most recently used items (MRU items)

4.14.1 *Dashboard*

Open a dashboard & wait for it to load completely. Then open the Home page by clicking the Home link in the menu bar on the left and confirm that this dashboard is the first item listed.

4.14.2 *Filter*

Edit a filter by changing its name. Open the Home page in the menu bar. Confirm that the Filter, visible by its new name, is the first item listed. Also confirm that the second item is the dashboard you opened in 4.14.1.

4.14.3 Scheduled Task

Pick a scheduled task that already exists, and Run it. Open the home page and confirm the scheduled task you just executed is the first listed, followed by a filter and with a dashboard in third place.

4.14.4 Report

View an existing report. Open the home page and confirm the report you just viewed is listed at the first position. Confirm it is followed by a scheduled task, a filter and a dashboard.

4.14.5 Text Max Number of Items

Open/edit at least 9 different dashboards/filters/scheduled tasks & reports. Ensure that no more than 9 items are visible on the home screen.

5 Test results

If during functional testing tests from this suite above are found to be failing, the failure should be registered in a ticketing system using a reference to the failed test and the tested RAS application:

- Reference to failed test
  - Test ID (e.g. 4.1.5)
  - Test document version ID (e.g. 0.6)
- Reference to the tested RAS application
  - Build reference (commit tag?)

Functional testing should produce a test report that contains:

- Time-stamp of when the test was performed (begin, end)
- Details of person(s) who performed the test
- RAS information that can identify the specific version of RAS (e.g. build number)
- Reference to log files that may be available.
- Reference to screenshots that may be available.
- A short summary table describing the test results, for example:
  - Number of test(s) successful: 125
  - Number of test(s) failed: 14
  - Number of test(s) not performed: 3
- An overview of the number of bugs (tickets) that have been created, for example:
  - Number of CRITICAL bugs logged: 2
  - Number of MAJOR bugs logged: 4
  - Number of MINOR bugs logged: 5
  - Number of OTHER tickets logged: 11
- ...