

Kyubit Business Intelligence Installation and Administration

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1. Installation and configuration

1.1. Kyubit Business Intelligence installation Prerequisites

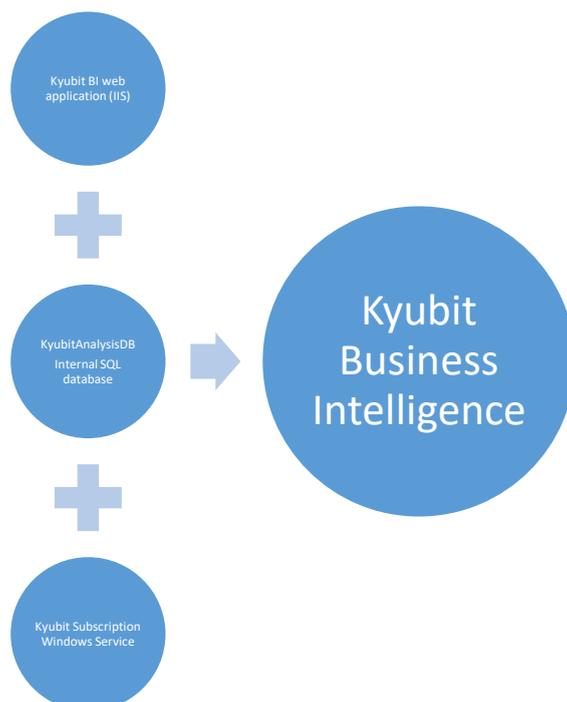
Kyubit Business Intelligence is a standalone web application designed for **Self-Service BI** analysis/reporting, Microsoft **OLAP analysis/reporting**, **Dashboards**, **KPI** and **Scorecards** management, providing a complete Business Intelligence environment. It relies on the **Microsoft software infrastructure** and technologies which make prerequisites to install and work with Kyubit Business Intelligence software.

Server-side prerequisites:

- **Windows** 7, Windows 8, Windows 10, Windows Server 2008 or newer version
- **.NET Framework** 4.7.2 SP1
- **IIS** 7 or newer version
- **ASP.NET** 4.5
- **MS SQL Server** 2008 or newer version - Any Edition. (for Kyubit Business Intelligence internal database)
- MS Charts (available in Kyubit Business Intelligence installation)

Client-side prerequisites to use full features of Kyubit Business Intelligence is one of the following browsers:

- Internet Explorer 9 or newer
- Chrome
- Edge
- Safari
- Firefox



1.2. Kyubit Subscription service installation

Kyubit Subscription service is a Windows service application with features to **send subscription emails** at the scheduled time with attached analysis and dashboards created with Kyubit Business Intelligence software, but also to run **scheduled Jobs** of recreating **Analytic Models** with most recent data from defined data sources. The Subscription service is installed together with Kyubit Business Intelligence application during the setup. To configure 'Kyubit Subscription Service', use installed **Kyubit Subscriptions Panel** application.

Kyubit Subscription service server prerequisites:

- Windows 7, Windows 8, Windows 10, Windows Server 2008 or newer version
- .NET Framework 4.7.2

1.3. Planning deployment

Kyubit Business Intelligence is a **web application** that is installed on the machine with a web server (**IIS**). SQL Server instance for Kyubit Business Intelligence internal database and SQL Server Analysis Services instance could be installed on a single server or distributed to multiple servers. For example, Kyubit Business Intelligence could be installed on **Server A**, its database could be located on **Server B** and use OLAP data while analyzing from SSAS (SQL Server Analysis Services) on **Server C**.

Single Server Deployment

Server A
<ul style="list-style-type: none"> • IIS (Kyubit Business Intelligence) installation
<ul style="list-style-type: none"> • SQL Server instance for Kyubit BI Internal database
<ul style="list-style-type: none"> • SQL Server Analysis Services (SSAS) instance (For Analysis)

Distributed Environment Deployment

Server A
<ul style="list-style-type: none"> • IIS (Kyubit Business Intelligence) installation

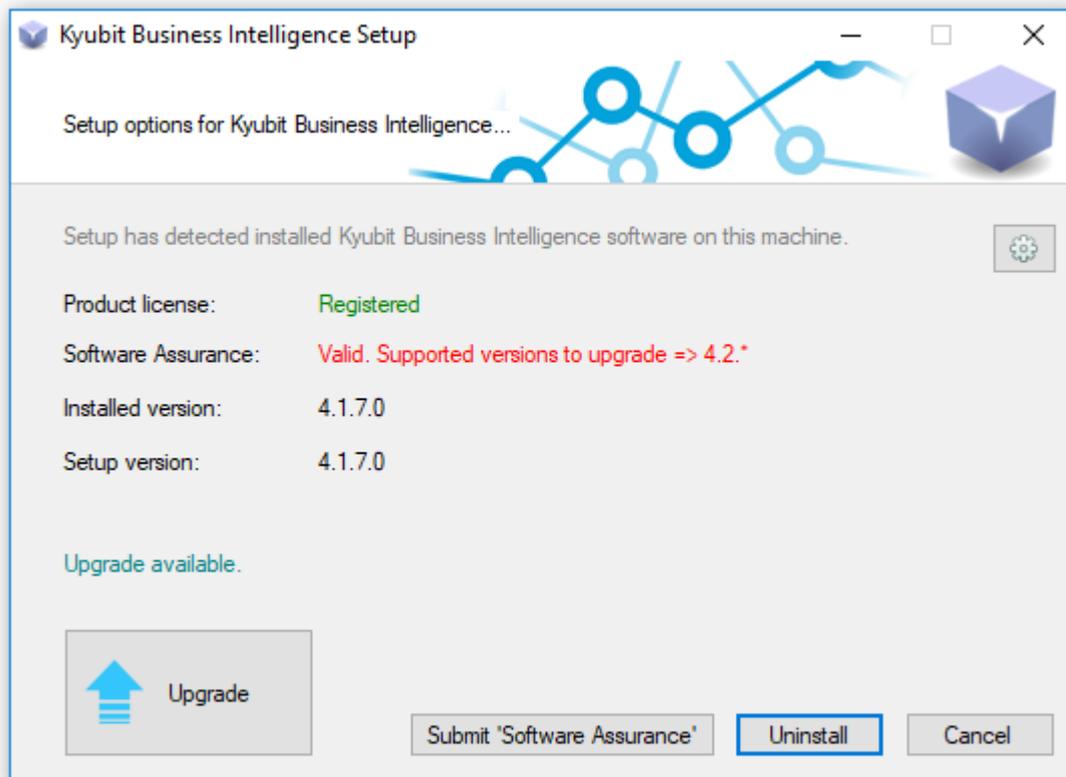
Server A
<ul style="list-style-type: none"> • SQL Server instance for Kyubit BI Internal database

Server A
<ul style="list-style-type: none"> • SQL Server Analysis Services (SSAS) instance (For Analysis)

Kyubit Business Intelligence communicates with its internal SQL server database using a Windows/AD account defined within the setup procedure. After Kyubit Business Intelligence setup, connection to SSAS (SQL Server Analysis Services) is **impersonated** with the current user credentials using Kyubit Business Intelligence web application.

1.3.1. User credentials for Active Directory search

During the setup procedure, the user provides valid credentials for a user that would be used for all search towards **Active Directory** when searching for Users and Groups. Credentials of a Windows account under that is used for Active Directory searches could be changed afterward by starting the setup.exe and selecting “Change Active Directory User Credentials” on the upper right wheel button.



By default, Kyubit Business Intelligence works with **Active Directory** users or groups. Also, Kyubit Business Intelligence could be configured to work with **local machine** users and groups to assign permissions to Kyubit BI objects. If Kyubit application will not be part of an Active Directory, it is also possible to use local machine users and groups to set permissions for Kyubit application objects (Analyses, Dashboards, etc.)

To use local machine users and groups set following key in web.config file to your machine name:

```
<add key="ADMachineSearchContext" value="YOURMACHINENAME" />
```

1.4. Authentication options

Some important remarks on the Kyubit IIS web application authentication methods and a topology of Kyubit Business Intelligence and SSAS (SQL Server Analysis Services) environment. It concerns how user credentials are passed from the browser to IIS web application (Kyubit BI) and then forwarded to the SQL or OLAP database to retrieve the data for analysis and visualizations.

1.4.1. Windows Integrated Authentication (Default)

Windows credentials of the **current user** who opened the browser are **automatically used to identify a user** in Kyubit application and the same Windows account is used while accessing data sources. If the Kyubit application and data sources are not on the same server, valid Kerberos authentication has to be configured. This authentication mode is already active after Kyubit BI setup.

- ✓ Easy usage with no login form
- ✓ Good security
- No logout button
- Cannot be used with external users

How to configure

1. Open your IIS -> Sites -> KyubitAnalysis -> Authentication. Enable 'Windows Authentication' and 'ASP.NET Impersonation', while disable other authentication options.
2. Open your web.config file (C:\Program Files\Kyubit\BusinessIntelligence) and set **LoginForm** setting to "0".

```
<add key="LoginForm" value="0" />
```

1.4.2. Windows Login Form Authentication

A user is prompted to enter his Windows credentials into the login form, with an option to be remembered by the application (not having to supply credentials each time). It is recommended to use this authentication mode together with the HTTPS protocol.

- ✓ At any-time log-out and log-in with appropriate credentials.
- ✓ Convenient for external user access.
- ✓ Kerberos not required.
- External users still require a Windows account.

How to configure

1. Open your IIS -> Sites -> KyubitAnalysis -> Authentication. Enable 'Anonymous Authentication', while disable other authentication options. Right-click on 'Anonymous Authentication' -> Edit -> Set 'Application Pool Identity'
2. Open your web.config file (C:\Program Files\Kyubit\BusinessIntelligence) and set "LoginForm" setting to "1".

```
<add key="LoginForm" value="1" />
```

1.4.3. Kyubit Users Authentication

With this authentication scenario, **Users and Groups are created inside the Kyubit application** by the Kyubit administrator. The Kyubit application user is prompted to enter his Kyubit credentials into the login form, with an option to be remembered by the application (not having to supply credentials each time). It is an ideal authentication option, if preferred to avoid Windows account creation for end-users for any reason. If BI content is served over the internet to outside users that are not part of the domain, this is a recommended approach. Also recommended to be used with the HTTPS protocol.

Because certain data sources require a Windows account to connect to the data (SSAS, for example), each user created in Kyubit could have optionally associated Windows account to be used while accessing the data sources. If a Windows account is not associated with Kyubit user, Windows account of the Kyubit Application Pool in IIS will be used to access data sources when Windows authentication is expected by the data sources.

- ✓ An ideal approach for **access by external users** avoiding a Windows account creation for each external user.
- ✓ Easy to manage users and groups by Kyubit administrator.
- ✓ Optionally associate a Windows account to apply OLAP role-based security.

How to configure

1. First, while you are still working with Windows authentication, create initial Kyubit user and assign him the administrative role. Administration -> Users -> Create User. Click on the user -> Set Admin Rights.
2. Open your IIS -> Sites -> KyubitAnalysis -> Authentication. Enable 'Anonymous Authentication', while disable other authentication options. Right click on 'Anonymous Authentication' -> Edit -> Set 'Application Pool Identity'
3. Open your web.config file (C:\Program Files\Kyubit\BusinessIntelligence) and set "LoginForm" setting to "2".

```
<add key="LoginForm" value="2" />
```

4. Login with created Kyubit user.

1.4.3.1 Kyubit Users Password Policy

Define the password policy for users created in the Kyubit application. Password policy includes a definition of password minimum length, expiration period, mandatory usage of upper-lower characters, numeric or special characters. While creating a new user, an admin can set a password change on the first user login.

Define Password Policy details in the application web.config file (default path C:\Program Files\Kyubit\BusinessIntelligence).

Example of password policy in the web.config file:

```
<!-- PASSWORD POLICY -->
<!-- The password minimum length -->
<add key="PassMinLength" value="5" />

<!-- The password must include upper and lower case characters -->
<add key="PassIncludeUpperLower" value="1" />

<!-- The password must include a numeric character -->
<add key="PassIncludeNumeric" value="1" />

<!-- The password must include a special character -->
<add key="PassIncludeSpecialCharacter" value="1" />

<!-- The password expires after a number days -->
<add key="PassExpireDays" value="2" />
```

1.5. Troubleshooting after installation

Some environment settings and configuration could lead to certain problems with Kyubit Business Intelligence application usage.

1.5.1. Opening Kyubit Business Intelligence return '500.19 Error'

Resolution: **ASP.NET** is not installed as a part of IIS features.

(Windows 7) Go to Control Panel -> Programs -> Turn Windows Features -> Internet Information Services -> World Wide Web Services -> Application Development Features -> (Select) ASP.NET

(Windows Server 2008 R2) Go to Control Panel -> Programs -> Turn Windows Features -> Expand Roles -> (Right click) Add Role Services -> (Select ASP.NET)

1.5.2. Opening Kyubit Business Intelligence return '401.2 Unauthorized Error'

Resolution: **Windows Authentication** is not enabled as a part of IIS features.

(Windows 7) Go to Control Panel -> Programs -> Turn Windows Features -> Internet Information Services -> World Wide Web Services -> Security -> (Select) Windows Authentication

(Windows Server 2008 R2) Go to Control Panel -> Programs -> Turn Windows Features -> Expand Roles -> (Right click) Add Role Services -> (Select Windows Authentication)

1.5.3. Recommended IIS Settings

Check bellow **IIS features**/configuration in your environment in order to ensure that IIS serves all necessary content to Kyubit Business Intelligence application.

To check IIS settings on Window Server 2008, go to Administrative tools -> Server Manager -> Roles -> (Right click on) web server (IIS) -> Add Role Service and then check items in the list with our recommended settings.

1. Application Development Features

- .NET extensibility
- ASP.NET
- ISAPI Extensions
- ISAPI Filters

2. Common HTTP Features

- Default document
- Directory browsing
- HTTP Errors
- Static content

3. Security

- ASP.NET Impersonation
- Basic authentication
- Windows authentication

1.6. Configure user interface in other language

To implement a user interface on your language, please follow these steps:

- 1) Go to your installation folder (C:\Program Files\Kyubit\BusinessIntelligence) and locate the "Multilingual" folder
- 2) Within "Multilingual" folder locate a folder with your language (for example "Spanish") and copy its contents (files and folder) to the "CurrentLanguage" folder
- 3) Reset your IIS, or recycle "KyubitAnalysisPool" and your language should be ready to use.

Note:

- If you find some translation issues, let us know we will provide a fix.
- Error messages are not translated for convenience to faster locate eventual problems

1.7. Setup additional Kyubit application instance

At any time, you can create **additional** Kyubit application **instance** to serve content using a **different** user interface language (multilingual options) or to use different authentication settings using the same product license. For example, you can have two instances, one serves the content using English user interface and another serving Spanish language, always working with the same data. Or you can have one instance working with "Windows Integrated authentication" and another using "Login form" or "Kyubit Users and Groups" authentication.

To set up an additional instance:

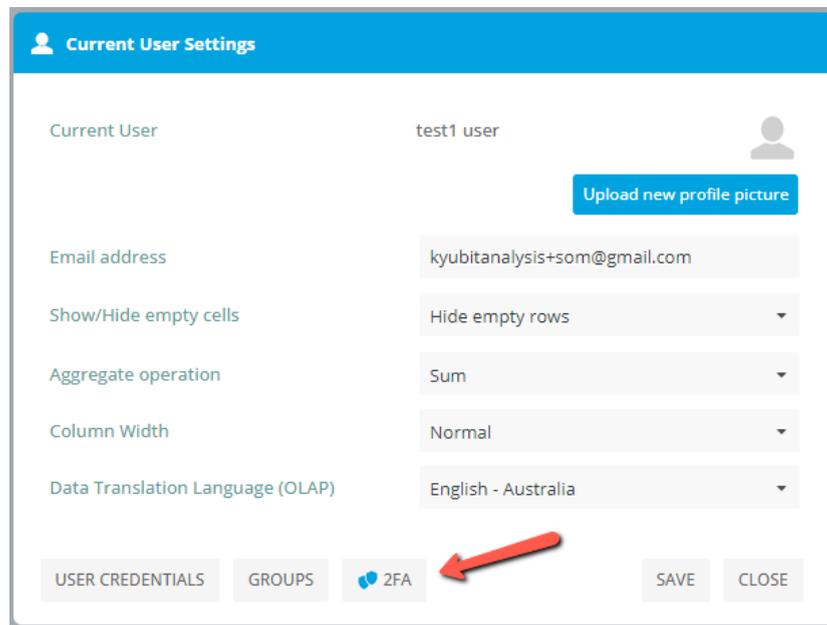
- Duplicate existing folder "C:\Program Files\Kyubit\BusinessIntelligence", so you have for example "C:\Program Files\Kyubit\BusinessIntelligenceLogin"
- In IIS Manager create a new site with a physical path to "C:\Program Files\Kyubit\BusinessIntelligenceLogin" and uses the same application pool "KyubitAnalysisPool"
- Set port to any available, for example, 83
- Set appropriate authentication for the new site (Section 1.4)

Open <http://localhost:83/home> to see if it works normally.

Now, we have two application instances that are looking at the same data. One is working with "LoginForm", while another with "Windows Authentication". The same approach would be for a multilingual purpose.

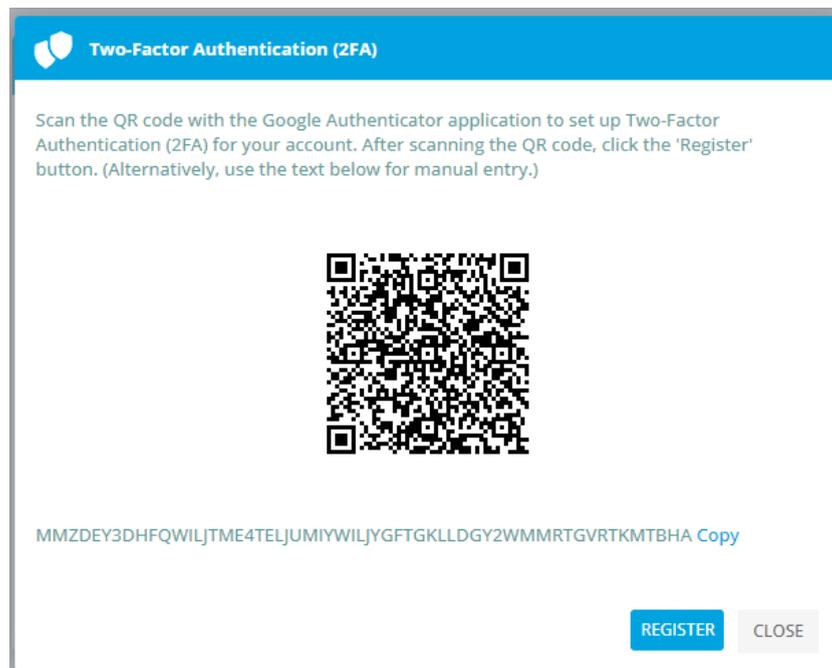
1.8. Two-Factor Authentication

Kyubit support **Two-Factor Authentication** with the **Google Authenticator** application. Every Kyubit user can decide to enable 2FA for his account. To enable Two-Factor Authentication, open the **User Settings** form, click on the **2FA** button...



The screenshot shows the 'Current User Settings' interface. At the top, it displays 'Current User' as 'test1 user' with a profile picture icon and an 'Upload new profile picture' button. Below this, several settings are listed: 'Email address' (kyubitanalysis+som@gmail.com), 'Show/Hide empty cells' (Hide empty rows), 'Aggregate operation' (Sum), 'Column Width' (Normal), and 'Data Translation Language (OLAP)' (English - Australia). At the bottom, there are four tabs: 'USER CREDENTIALS', 'GROUPS', '2FA', and 'SAVE'. A red arrow points to the '2FA' tab.

... select 'Setup', and scan provided QR code with the **Google Authenticator** application that is previously installed on the mobile phone.



The screenshot shows the 'Two-Factor Authentication (2FA)' setup screen. It features a blue header with the title 'Two-Factor Authentication (2FA)'. Below the header, there is a paragraph of instructions: 'Scan the QR code with the Google Authenticator application to set up Two-Factor Authentication (2FA) for your account. After scanning the QR code, click the 'Register' button. (Alternatively, use the text below for manual entry.)'. In the center, there is a large QR code. Below the QR code, there is a long alphanumeric string: 'MMZDEY3DHFQWILJTME4TELJUMIYWILJYGFTGKLLDGY2WMMRTGVRTKMTBHA Copy'. At the bottom right, there are two buttons: 'REGISTER' and 'CLOSE'.

After the QR code is scanned with the **Google Authenticator** application, click on the 'Register' button and provide the PIN from **Google Authenticator**. If the PIN is correct this will enable Two-Factor Authentication for this account.

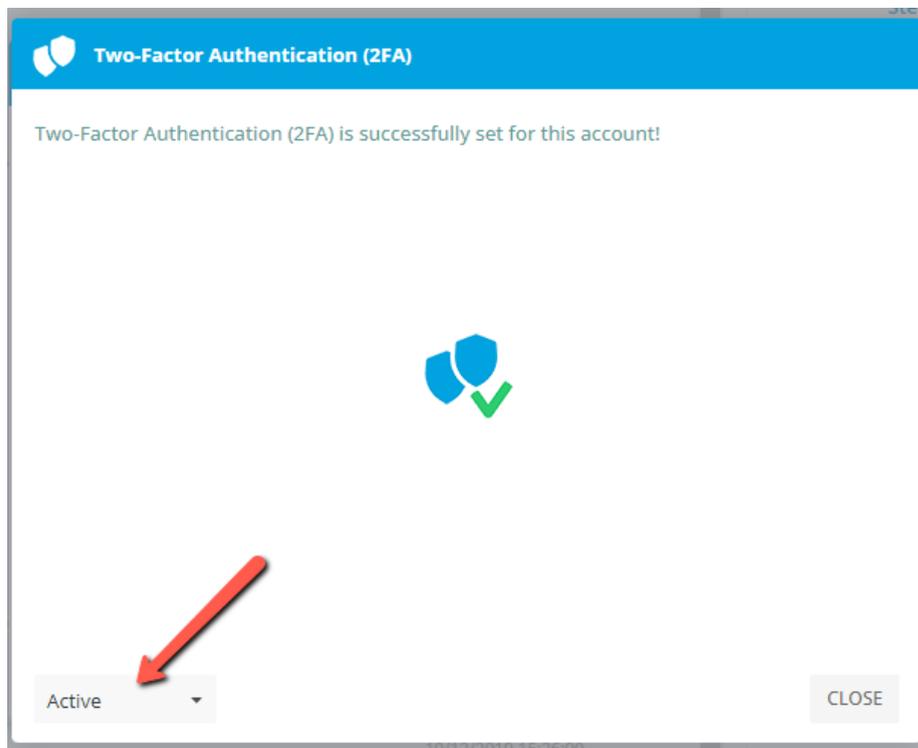
After the **Two-Factor Authentication** is enabled, when starting a new browser session to work with Kyubit, the application will additionally ask to provide the PIN to enter the application.

Two-Factor Authentication (2FA)

Provide the PIN number from the Google Authenticator application.

3	9	7	5		
---	---	---	---	--	--

... A user can always disable or enable 2FA on his account as he prefers by selecting the 'Disable' or 'Activate' option from the drop-down list on the same form after 2FA is enabled.



To enable mandatory 2FA authentication for all users, set the "Mandatory2FA" to "1" in the web.config file.

2. Roles, Structure & Administration

Before starting to analyze the data, it is good to be familiar with some basic concepts that help users to organize and manage related Kyubit Business Intelligence data.

2.1. 'Administrator' Role

Users who belong to an Administrator role have **maximum privileges** in Kyubit Business Intelligence application. Administrators can see and manage any object in Kyubit Business Intelligence. By default, **a user who installs** Kyubit Business Intelligence is automatically becoming a member of the Administrator role. Only members of the Administrator role have the right to do the following actions:

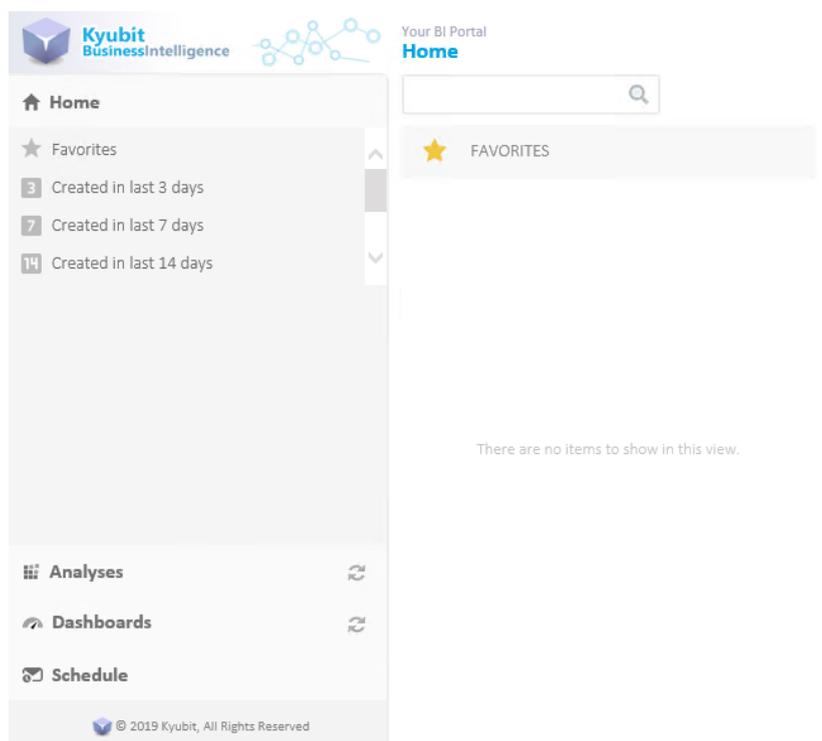
- Activate/deactivate users
- Create new users and groups (if Kyubit Users Authentication is used)
- Assign/remove Administrator privileges to any user
- Manage licensing/Import license
- Assign Kyubit User or Group a Windows account that will be used while connecting to the data source (if Kyubit Users Authentication is used)
- Create and manage tenants (If Multitenant mode is used)

2.2. 'Creator' Role

A user who belongs to the 'Creator' role can see all application sections except 'Administration' but within each application section, a 'Creator' user needs explicit permission on the object to be visible for him (or to edit the object). A user who belongs to the 'Creator' role can create new required objects (Data Source, Analysis, Dashboards, etc.) and share them with other users.

2.3. 'Visitor' Role

A user who belongs to the 'Visitor' role can only see 'Analyses', 'Dashboards' and 'Schedule' application sections. Furthermore, a 'Visitor' cannot create new objects (Analyses, Dashboards, etc.) but only can see objects where they have permissions added by the 'Creator' or 'Administrator' role. (Sample of the Visitor view picture below)



2.1.1. Activate/deactivate users

Every user who connects to Kyubit Business Intelligence is automatically becoming Kyubit BI user (with no rights on created Kyubit BI content, for which he needs explicit permission). The administrator does not have to add any user explicitly. Additionally, administrator has privileges to activate/deactivate any user in Administration > Users & Admins section. The deactivated user will receive a message that his/her account is deactivated first time he/she tries to connect to Kyubit Business Intelligence.

2.1.2. Add/remove a user to Administrator role

To add any user to Administrator role, go to Administration > Users & Admins section, mark user checkbox and click **Set Admin Rights** or **Remove Admin Rights** to remove a user from Administrator role.

2.2. Kyubit Business Intelligence objects and User/Group permissions

To any of the Kyubit Business Intelligence object types User/Groups permission could be assigned, so other users could see and utilize its functionality. Any object is visible only to his creator when created (and to administrators). To be visible to other users, appropriate permissions need to be set for the object.

Kyubit Business Intelligence objects are:

Data Source – a reference to **SQL Database**, **OLAP database**, Kyubit **Analytic Model** or **ODBC** data source.

Folder – a grouping of many analyses with common permissions set and/or common business subject.

Analysis – created OLAP and 'Analytic Model' analysis/reports, including OLAP decomposition analysis.

Dashboards - dashboard charts and KPIs, based on created analyses and queries.

Queries – SQL and MDX queries that could be used as dashboard visualizations or KPIs.

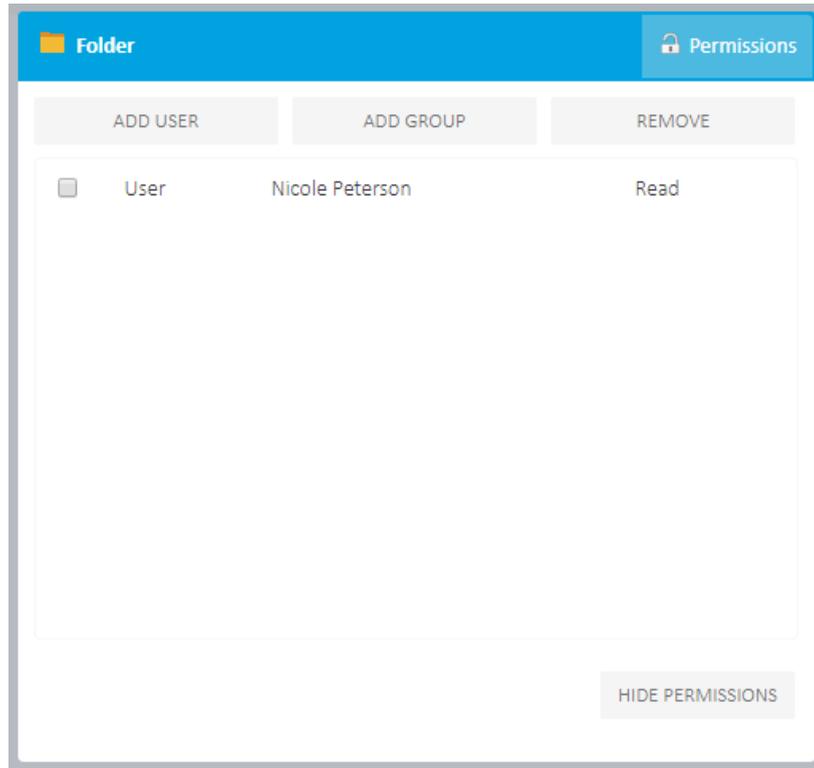
KPIs and Scorecards – create success and fail rules to be displayed based on your SQL, OLAP and CSV data.

User Named sets – named sets defined in Kyubit Business Intelligence

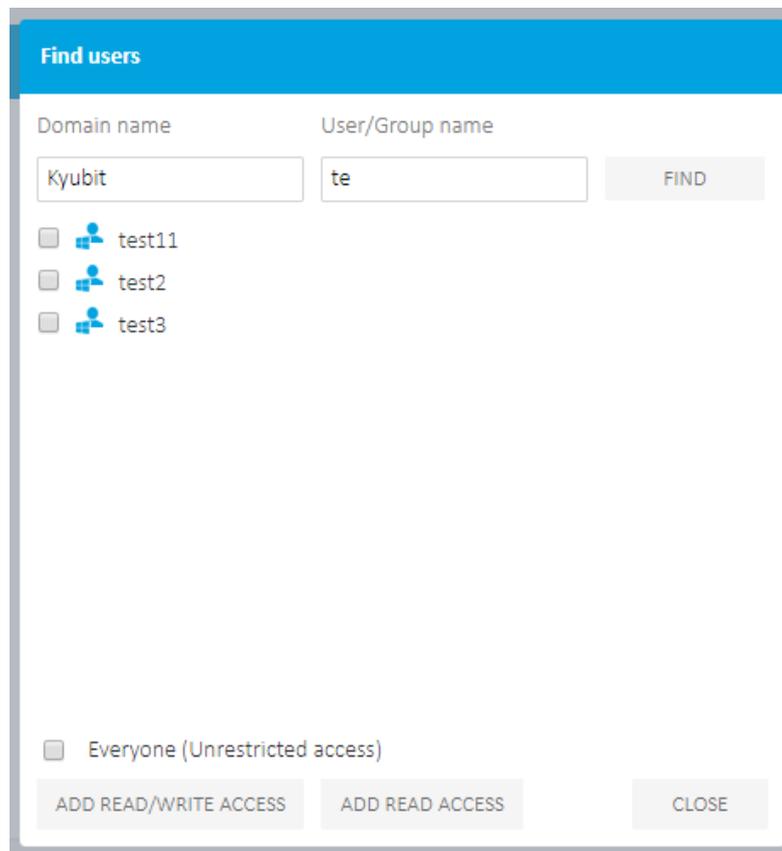
User Drill-through columns – columns to return in drill-through action

User Calculated Measures – calculated measures defined in Kyubit Business Intelligence

To assign User/Groups permissions to any of these objects, open certain object (requires **Read/Write** permission) and select **Permissions** in the up-right corner. Existing permissions will be displayed in the list. Find users and groups from Active Directory / Local Machine / Kyubit 'Users & Groups' and add them to the list. Mark users and groups and select **Remove** to remove them from object permissions.



To set that absolutely all users can see or edit given object, select Add users and mark “Everyone (Unrestricted access)” and give “Read” or “Read/Write” permission.



2.3 Home Page Configuration

Left section of the home page displays favorite or last created objects (reports and dashboards), while the right section is configurable to show one of the following:

- Tutorials and Help links
- “My Recent Content Activity” and “Most Popular by All Users” views
- Charts based on custom created analysis or query
- None

Tutorials and Help links

YOUR BI PORTAL Home

FAVORITES

- Analytic Model decomposition
- Comparing sales details
- Country - Education Overview of Customer Education on each country with sales.
- Edge Analysis
- KPIs, Gauges and Scorecards
- MDX query and OLAP filters
- SQL and OLAP data and slicers on the Dashboard
- SQL Based Dashboard Examples

Step-by-step Analysis Features Tutorial
To get an idea of how to start and use Kyubit analytic features, follow these steps that describe common analysis features usage and will help you quickly discover analytic possibilities.

Step-by-step Dashboard Features Tutorial
Learn about most important dashboard features within this step-by-step dashboard introduction, with instructions on how to use many of available dashboard possibilities within the Kyubit BI.

Features Sheet
Read details on Kyubit BI Features Sheet that is elaborated on a single page as quick reminder and possibilities discovery insight.

User Manual Documents
Details on installation, configuration and usage of Kyubit Business Intelligence software. User manual documents cover all aspects of installation, configuration and usage of Kyubit BI software.

“My Recent Content Activity” and “Most Popular by All Users” views

YOUR BI PORTAL Home

FAVORITES

- Analytic Model decomposition
- Comparing sales details
- Country - Education Overview of Customer Education on each country with sales.
- Edge Analysis
- KPIs, Gauges and Scorecards
- MDX query and OLAP filters
- SQL and OLAP data and slicers on the Dashboard
- SQL Based Dashboard Examples

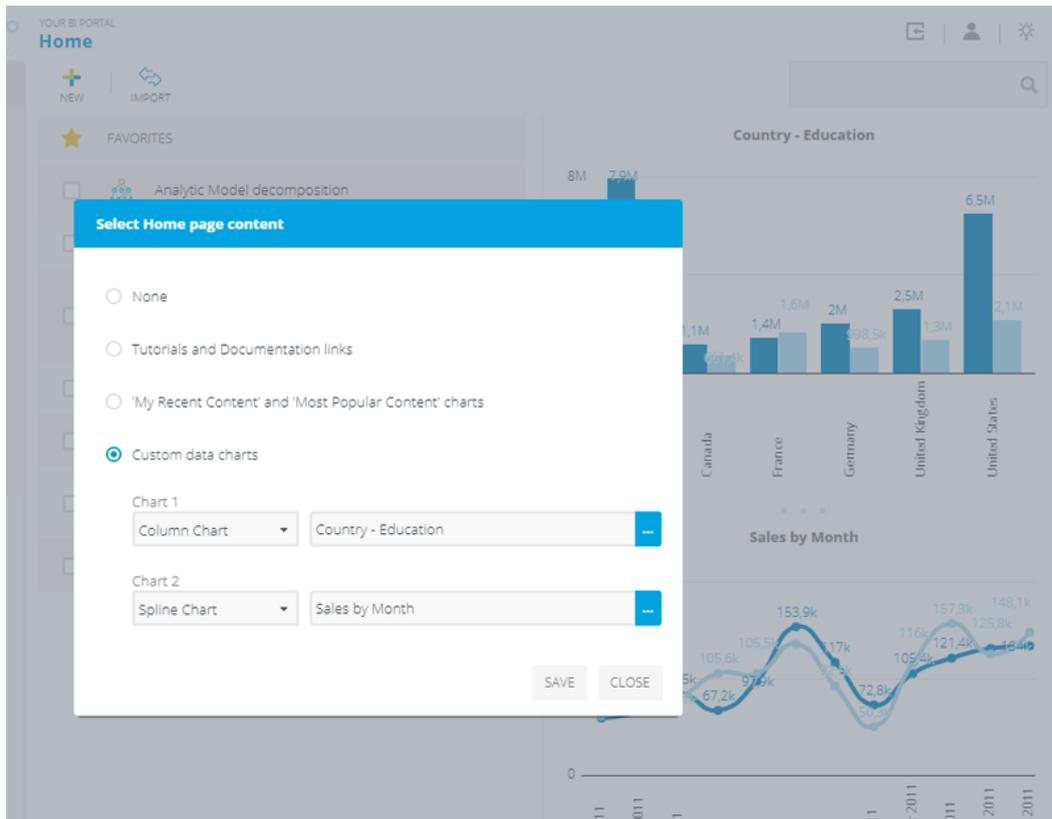
My Recent Content Activity

Item	Percentage
(D) test squ	5.9%
(D) Regional Sales and Demographic Data	5.9%
(D) Kyubit by Month	5.9%
(D) Compare analysis and delta chart	6.9%
(D) Sales Details	6.9%
(A) Country - Education	9.9%
(A) Analytic Model decomposition	10.9%
(D) Comparing sales details	36.6%

Most Popular by all Users

Item	Count
(A) Country - Educ...	12
(A) Geo Rgt: Prod ...	8
(D) Comparing sal ...	8
(D) Sales Details	8
(D) test squ	7
(A) Edge Analysis	6
(D) Kyubit by Mon ...	6
(D) Kyubit Sales: W ...	6
(D) New Dashboard ...	6
(D) Regional Sales ...	6

5 new item(s) added within the last 3 days.

Charts based on custom created analysis or query**Configure home page in the web.config file**

Administrator has an option to configure display of home page right section in the web.config file and on this way ensure what users will see on the home page.

Example...

```
<add key="HomePageConfig" value="3,A,2053,Column_Chart,First chart
title,Q,11090,Pie_Chart,Second chart title" />
```

This attribute in the web.config file expects several values separated by comma (,).

1st value = (1) Tutorial and Help links, (2) My Recent Content and Most popular by all users, (3) custom query/analysis charts

If the first value is (3) custom query/analysis charts, then:

2nd value = A or Q (Analysis or Query) for the first chart

3rd value = Analysis ID or Query ID for the first chart

4th value = Chart type for the first chart. One of the following values (Column_Chart, Column_Stack, Line_Chart, Spline_Chart, Bar_Chart, Bar_Stack, HeatMap, Area_Chart, Area_Stack, Pie_Chart, Doughnut_Chart, Bubble_Chart, Card, Scorecard)

5th value = Second chart title

6th value = A or Q (Analysis or Query) for the second chart

7th value = Analysis ID or Query ID for the second chart

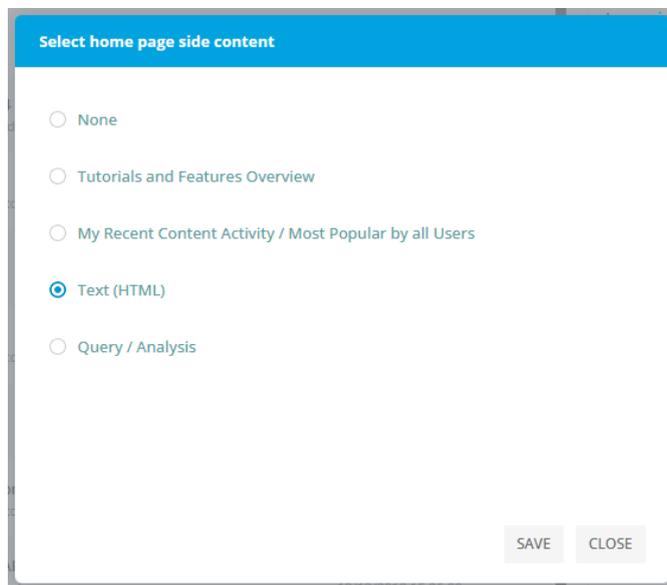
8th value = Chart type for the second chart

9th value = Second chart title

2.4. Home Info Panel

Right content of the home page could be configured to display custom Text/HTML that is managed by Admin users. Home Info Panel can contain multiple tabs, each containing its own HTML/Text. While editing the text embedded HTML editor is available to format the text, and add images, links, tables, or 'Dynamic Values' (values from existing queries and analyses).

On the home content menu select Text (HTML)...



Add various text, images, links or other HTML content that would be helpful for other users.



Created On ▾ ▲

13/12/2021 08:26:00	
09/12/2021 13:10:00	
25/06/2021 14:54:00	
01/04/2021 16:04:00	
10/12/2020 09:56:00	
25/05/2020 09:17:00	
15/01/2020 13:37:00	
08/01/2020 14:06:00	

Head 1 Head 2 Title 2

Usefull links:

- [Document A](#)
- [Document B](#)

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis mattis lorem orci, a finibus erat vestibulum et. Ut sed enim ut est luctus feugiat quis non libero. Sed pellentesque, nulla quis vehicula blandit, orci augue viverra augue, eget pulvinar justo risus ac est. Nullam posuere nibh ac nulla hendrerit, at eleifend magna facilisis. Aliquam sollicitudin mi nibh, sit amet dapibus quam aliquam quis. Praesent imperdiet lorem nec aliquam sollicitudin. Pellentesque augue mi, vulputate eget elementum quis, consequat sit amet mauris. In sagittis tempor venenatis.

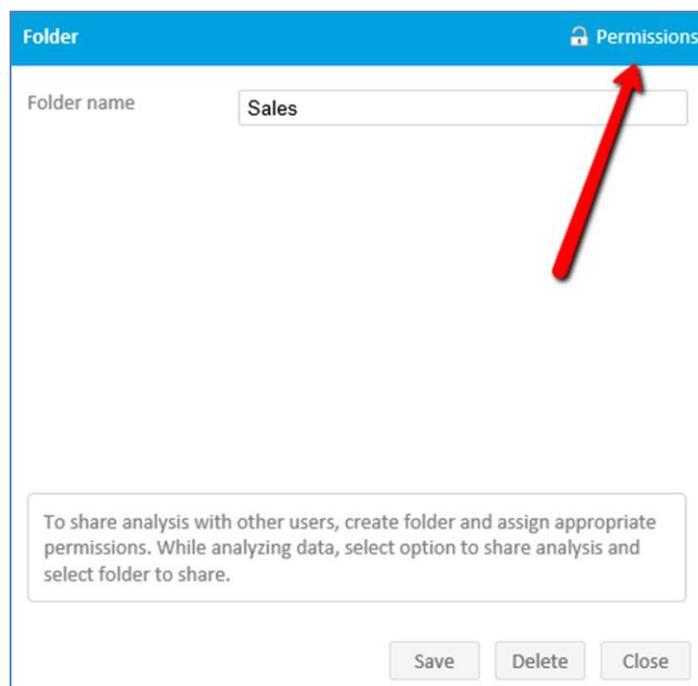
2.5. Folders

To give other people permissions to see or edit created analysis or dashboard, created item has to be **shared** using previously created folder. Folder is object that groups all analyses and dashboards with same User/Group permissions. Folders could be used to share analysis with common subject or belong to certain business unit or process. Administrator or user with read/write permission on a folder could manage permissions for other user or groups.

To see actual data from OLAP/SQL data source, user needs permission on SSAS database/cube level, but to see that certain analysis exists in Kyubit Business Intelligence application, user needs permission also in Kyubit Business Intelligence folder with given analysis or dashboard.

To create new folder and define folder permissions, follow these steps:

- On Main menu select **Create Folder** link on the right side of screen.
- Set folder name and click **Save**
- To define permissions on folder, select “permissions” and choose required Active Directory users and groups, and finally select which access level should be given **Read Access** or **Read/Write Access** (See chapter 2.2. for details).



Folder name: Sales

To share analysis with other users, create folder and assign appropriate permissions. While analyzing data, select option to share analysis and select folder to share.

Save Delete Close

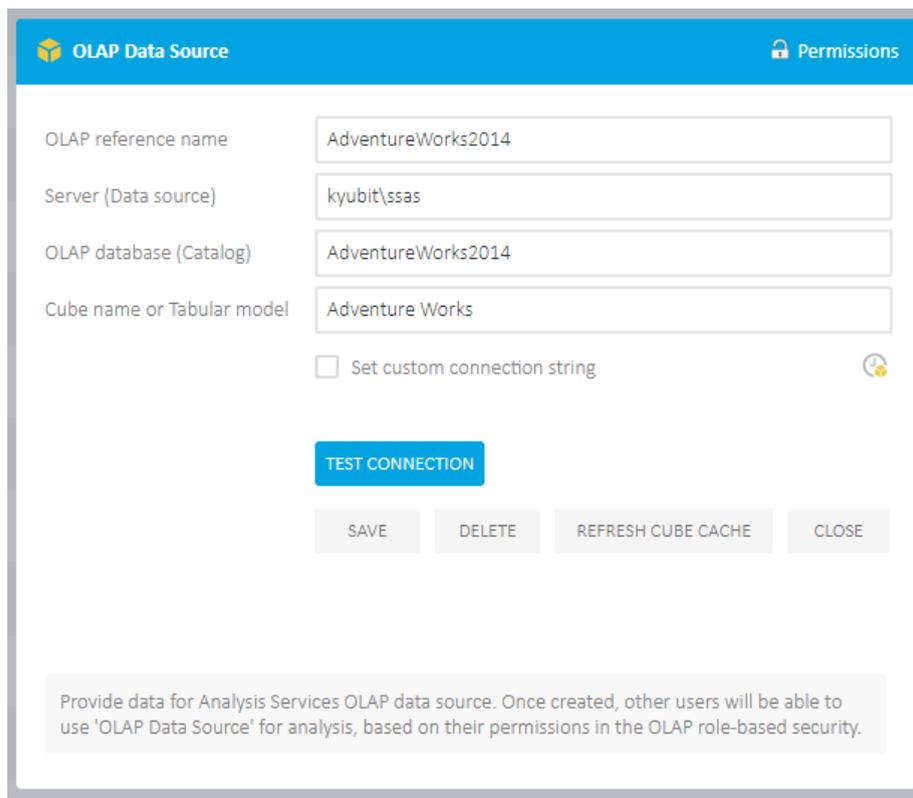
2.6. My Workspace

By default, all users have “My Workspace” folder. When saving analysis or dashboard, item is automatically saved in users “My Workspace” folder, which is visible only to belonging user. “My Workspace” folder cannot be deleted or renamed. To move certain analysis to other folder, analysis has to be moved to that particular folder. Once shared to folder, analysis is available to the group of users which have access permissions to view the content of the folder.

2.7. Data sources

To start analyzing data for a certain OLAP/SQL/ODBC database, its connection details have to be **referenced** in the Kyubit Business Intelligence application using **Data Sources** application section. Once it is referenced it can be **reused** in different analysis and reports, and used by any users of Kyubit Business Intelligence who has permissions for the same data source. The data source just represents a central catalog of all available data sources to use in the Kyubit BI application. To define OLAP/SQL/ODBC database as a new Data Source, data source connection has to be configured and tested.

OLAP data source sample ...



The screenshot shows the 'OLAP Data Source' configuration window. The window has a blue header with the title 'OLAP Data Source' and a 'Permissions' link. Below the header, there are four input fields: 'OLAP reference name' (AdventureWorks2014), 'Server (Data source)' (kyubit\ssas), 'OLAP database (Catalog)' (AdventureWorks2014), and 'Cube name or Tabular model' (Adventure Works). There is a checkbox for 'Set custom connection string' which is currently unchecked. Below the fields is a blue 'TEST CONNECTION' button, followed by four grey buttons: 'SAVE', 'DELETE', 'REFRESH CUBE CACHE', and 'CLOSE'. At the bottom, there is a light grey box with the following text: 'Provide data for Analysis Services OLAP data source. Once created, other users will be able to use 'OLAP Data Source' for analysis, based on their permissions in the OLAP role-based security.'

The OLAP/SQL data source could be defined by server/database elements or could be defined as a **custom connection string**, so advanced users could add some additional parameters that would allow setting connection specific requirements. To assign the permissions for other users on that same Data Source, select "Permissions" link and manage user/group permissions.

2.8. Licensing

Kyubit Business Intelligence is licensed per server. To obtain a license, it is necessary to provide “System Name” in the license purchase process.

After the evaluation period ends, Kyubit Business Intelligence will not be available to perform any further analysis/visualizations. To activate Kyubit Business Intelligence and all of its functionalities in production usage mode, it has to be registered with a valid license key file.

After the license has been purchased, the license file (*.lic) will be provided and should be uploaded in the Administration>Licensing section.

Licensing

Kyubit BI licensing information

Kyubit BI version: 4.2.1.0 (Enterprise Edition)

This software is licensed to:

Owner:	Kyubit
Company:	Kyubit
Address:	
Software Assurance:	Valid Software Assurance. Supported upgrade version 4.1.*

System Name:

License file:

Software Assurance file:

To purchase Kyubit Business Intelligence license, please visit www.kyubit.com

3. Subscriptions

The subscription features allow users to **schedule subscriptions** for created dashboards, analysis reports, and SQL/MDX queries but also to run **scheduled Jobs** to process Analytic Models with the new data. Subscribed objects will be received via email messages on a scheduled time interval.

All users are able to subscribe to an Analysis, Query or a Dashboard if they have at least read permission for the object. Administrators could see and manage all subscriptions in the Kyubit Business Intelligence application.

“Kyubit Subscription Service” and “Subscription Panel” application is installed within “Kyubit Business Intelligence” setup procedure.

3.1. Subscription service configuration

After service is installed, it takes several details to be configured before the service can be started.

3.1.1. Service Logon User

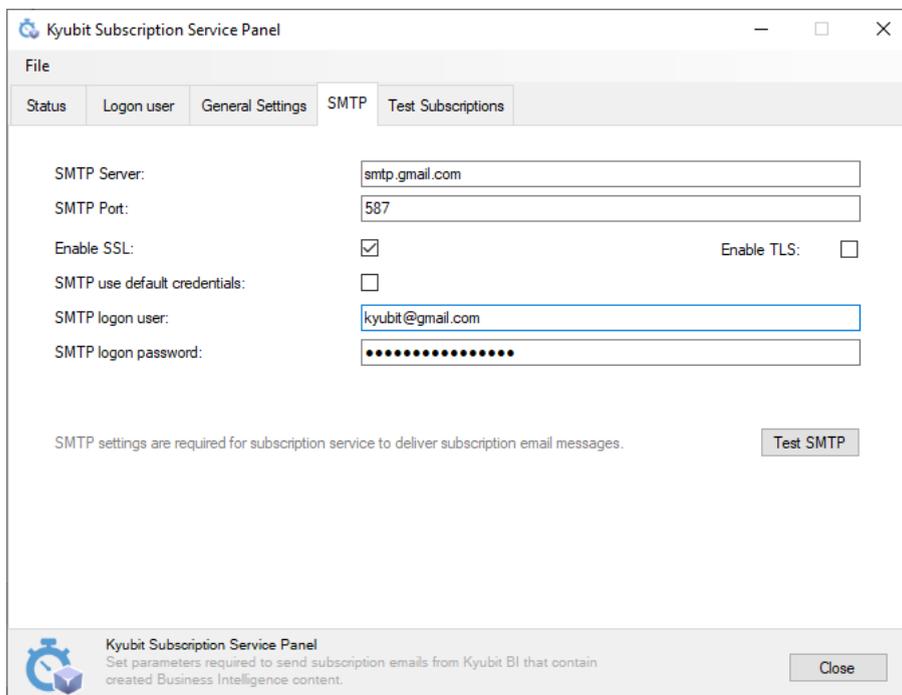
Service **Logon User** for the ‘Kyubit Subscription Service’ should always be set to ‘LocalSystem’ account.

3.1.2. General settings

Defines Kyubit Business Intelligence **URL** and **SMTP** settings in local intranet to be used to send subscription emails.

The URL for the subscription service target to your Kyubit **ServiceEndPoint** instance visible in the IIS manager. This is Kyubit application instance that serves content for the Subscription service.

The URL to be included in the email message target to your Kyubit default (User Access) instance.

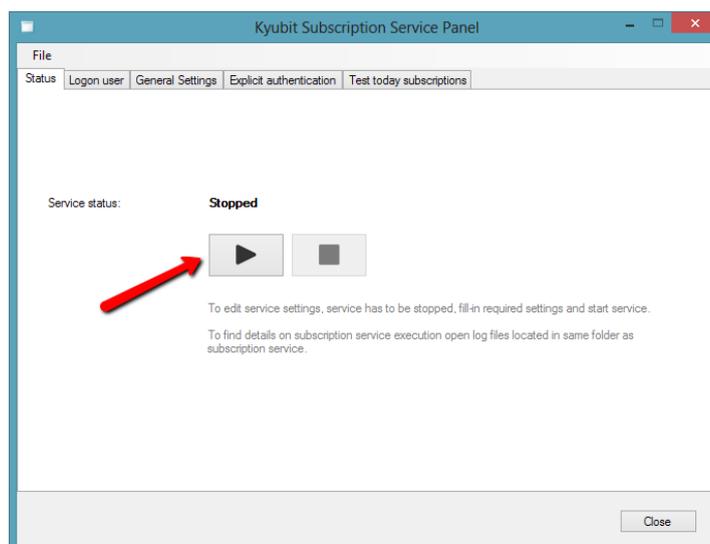


3.2. Chrome browser and PDF subscriptions

Kyubit Subscription service is using web browser features to create Dashboard PDF file (when scheduled subscription includes dashboard PDF attachment). This is done by using IE browser by default. However, on some environments IE is no longer available. In such situation, to continue with Dashboard PDF subscriptions, it is required to enable “Use Chrome for Dashboards PDF creation” (of course, Chrome browser has to be installed on the server machine).

3.3. Start Subscription service

When all details are configured, click on the start button to run Subscription service.



The subscription service status could be also managed from the **Windows Service Console**.

3.4. Testing subscriptions

After some subscription have been created in the Kyubit Business Intelligence application, to avoid waiting on the scheduled subscription time in order to **test email subscriptions**, open tab “Test Subscription” in “Subscription Panel” application and set the date and time for which you wish to test subscription emails.

For example, if you test for time 09:15, and there is some subscription scheduled for 09:15, subscription emails should be successfully sent.

 Kyubit Subscription Service Panel

File

Status	Logon user	General Settings	Test Subscriptions
--------	------------	------------------	--------------------

Date:

Time:

Enter date and time and click 'Test subscriptions' to run scheduled jobs and send scheduled subscriptions.

3.5. Monitoring Subscriptions log of activity

In the Subscription Service folder, **log files** will be created to track Subscription Service detailed activities and messages for troubleshooting purposes. For each day one subscription log file will be created.

Local Disk (C:) > Program Files > Kyubit > SubscriptionService > Log				
<input type="checkbox"/>	Name	Date modified	Type	Size
	2-19-2019.log	19.2.2019. 10:30	Text Document	11 KB
	2-18-2019.log	18.2.2019. 15:55	Text Document	25 KB
	2-15-2019.log	15.2.2019. 14:15	Text Document	31 KB
	2-14-2019.log	14.2.2019. 15:30	Text Document	22 KB
	1-31-2019.log	31.1.2019. 9:26	Text Document	7 KB
	1-30-2019.log	30.1.2019. 14:05	Text Document	19 KB
	1-28-2019.log	28.1.2019. 16:55	Text Document	30 KB
	1-25-2019.log	25.1.2019. 16:15	Text Document	37 KB
	1-24-2019.log	24.1.2019. 16:05	Text Document	25 KB
	1-23-2019.log	23.1.2019. 16:05	Text Document	24 KB
	1-22-2019.log	22.1.2019. 16:25	Text Document	27 KB
	1-21-2019.log	21.1.2019. 17:10	Text Document	31 KB
	1-18-2019.log	18.1.2019. 16:30	Text Document	38 KB
	1-17-2019.log	17.1.2019. 16:40	Text Document	27 KB
	1-16-2019.log	16.1.2019. 16:25	Text Document	21 KB
	1-15-2019.log	15.1.2019. 16:45	Text Document	28 KB
	1-14-2019.log	14.1.2019. 15:40	Text Document	25 KB
	1-11-2019.log	11.1.2019. 16:05	Text Document	32 KB

Log files show exact times and what actions are performed in order to deliver subscribed emails.

3.6. TLS Support

To enable TLS support while send subscription emails, open C:\Program Files\Kyubit\SubscriptionService\Kyubit.SubscriptionService.exe.config file and edit attribute "TLSSupport" to "1".

3.7. Email Templates

Managing templates for subscription emails. The application now supports creating and managing email templates, which can be selected for each scheduled subscription. The email template can contain any HTML/text which is also edited using a new embedded HTML editor. Quickly creating a template by editing fonts, colors, images, links, tables, or 'Dynamic Values' (values from existing queries and analyses).

Email Templates



NEW

Template Name

Template External Users

Template for customers

Template Sales & Production

Email template could be created as a simple text, or it could be styled with some HTML features using the HTML editor (button on the lower right). While in the HTML editor view it is possible to add styles, colors, links, images and bullets. However, some HTML content could not be nicely displayed in the final email message when open by the user, so HTML options should be used carefully.

There are some content placeholders that will be replaced with actual values during the process of sending the email. Those are

{firstName} first name of the Contact added to subscription recipients.

{lastName} last name of the Contact added to subscription recipients.

{subscriptionTitle} will be replaced with the name of the Subscription.

{content} When embedding analysis or query results into email message, it will be added to the end of the email message by default. However, if the template includes {content} placeholder, it will be inserted on this position.

Email Template

Name
Template Sales & Production

Subject
{subscriptionTitle}

Content
Dear {firstName},

Please find attached data about recent sales activities.
Most sales is done in {{A21564}} with the sales value of {{A21564#}}.

{content}

Sincerely,

The Kyubit application



Placeholders > {subscriptionTitle}, {firstName}, {lastName}, {content} 

DELETE SAVE CLOSE

Images could be added to the template only as URL to the actual image. The image will not be added as embedded file to the email, but only as HTML element with a valid URL. (The image has to be available on the URL on the web)

Email template supports adding dynamic values from existing Analyses or Queries. While in the HTML editor, click on the insert dynamic value button in the lower right corner and choose existing Analyses or Queries. The first cell of the results as member name or member value will be added. For example {{A21564}} refers to first cell member (name), while {{A21564#}} refers to first cell value.

3.8. Subscription mode to save content as files on the server

In the subscription form, there is an option to set if you prefer a particular subscription report to be saved as files (Excel, PDF) on the server.

In the `C:\Program Files\Kyubit\SubscriptionService\Kyubit.SubscriptionService.exe.config` you control where these files will be saved. For example... `<add key="ReportFilePath" value="C:\Temp" />` You can also save it on a network folder as `<add key="ReportFilePath" value="\\kyubitfiles\reports" />`. If this attribute remains empty (`<add key="ReportFilePath" value="" />`) the files will be saved on the `C:\Program Files\Kyubit\SubscriptionService\Log` path. Files will be saved on the targeted path in the subfolder with the date as the name of the folder. So, if you have a subscription running every day for some report, it will not overwrite the previous file but everything will be organized in folders for every day. In case you have a subscription running multiple times within a single day, the report files will be overwritten in the folder for that day.

4. Kyubit BI Configuration settings (web.config)

It is possible to customize Kyubit Business Intelligence web application behavior related to various aspects of application usage. In order to change configurable details, open the **web.config** file located in Kyubit Business Intelligence installation path (Typically, C:\Program Files\Kyubit\BusinessIntelligence) and change one of the configuration settings which exists in the following form:

```
<add key="[ConfigurationSetting]" value="[Value]"/>
```

4.1 General Application Configuration Settings

MaxAxisMembers	Maximum allowed members (Items) on each axis in the OLAP analysis grid. (Default value, 20000)
MaxReturnedCells	Maximum allowed number of cells returned by the OLAP analysis. (Default value, 50000)
MaxRowsDrillthrough	Maximum allowed number of rows returned by the OLAP drill-through. (Default value, 250000)
MaxMembersSearch	Maximum allowed number of members while searching for members. (Default value, 10000)
FolderAnalysisSorting	Default sorting in Kyubit Business Intelligence folders could be applied to 4 columns (AnalysisID, Title, DataSourceName and CreatedBy). Any combination of four columns is allowed, separated with the comma character. Descending sort order is defined with the keyword "Desc" after the column name. For example... "ORDER BY DataSourceName Desc, CreatedBy, Title"
ADMachineSearchContext	To configure Kyubit Business Intelligence to work with local machine users and groups, instead of the Active Directory, set your local machine name in the setting.
LoginForm	Configuring authentication modes. Please read section 1.4 of Administration manual for more details.
HideDashboardPDFFilters	To configure Kyubit BI not to display filters while exporting the Dashboard to the PDF file, set value to "1".
OnlyAdminCubes	To allow that only administrator can manage data sources, set value to "1".
OnlyAdminSubscriptions	To allow that only administrator can manage subscriptions, set value to "1".

OnlyAdminSharedItems	To allow that only administrator can manage OLAP Shared Items section, set value to "1".
OnlyAdminKPI	To allow that only administrator can manage KPI section, set value to "1".
OnlyAdminQueries	To allow that only administrator can manage Queries section, set value to "1".
OnlyAdminCreateFolder	To allow that only administrator can create new folders, set value to "1".
OnlyAdminCreateAnalysis	To allow that only administrator can create a new analysis, set value to "1".
OnlyAdminCreateDashboard	To allow that only administrator can create a new dashboard, set value to "1".
CSVDelimiter	Set delimiter character which will be applied when exporting analysis to the CSV file. (Default value is ",")
DefaultAnalysisAggregation	Default aggregate function in an OLAP analysis, applied only if the user did not select his preference in the 'User Settings' form. Possible values : None=0, Sum=1, Min=2, Max=3, Count=4, Avg=5, [All]=6. (Default value is "1")
VerboseLogging	To set more detailed logging of application errors, related to the export of dashboard to the PDF file.
DisableComments	To disable dashboard 'Commenting' features completely, set the value to „1“.
DisableAudit	To avoid application tracking of user actions in the application, set value to „1“.
DisableDashboards	To disable dashboard features completely, set value to „1“.
DisableUserSettings	To disable user settings form, set value to „1“.
OLAPFilterSelectionMethod	Default OLAP filter member selection method/Tab (0 = Browse, 1 = Search).

DefaultDataTranslationLanguage	If the user did not select his default data translation language, this value will be used. This setting is applicable if the OLAP cube is built with different data translation language options. (For example. None=0, French=1036, Russian=1049, etc.)
AutoWindowsUserActivation	Automatic Windows User activation. The first time the user connects to the application will be automatically added to application users. (Default value is „1“). If this setting is set to „0“, each new users needs to me manually added to application in the Administration -> Users & Admin form. Note, that even if the user will automatically become the application user, he will not get authorization to any created application object. Authorization to a certain application object (Analysis, Dashboard, etc.) needs to be manually assigned by the user with Read/Write permissions on the certain object.
Multitenant	Set Kyubit application to work in the Multitenant mode. Requires „LoginForm“ setting to be „2“ (Multitenant mode works only with 'Kyubit Users and Groups Authentication'). For more details about 'Multitenant' mode, read the 'Multitenant' section of the Administration user manual.
NonImpersonatedSubscriptions	By default, all subscriptions (to send analysis or dashboard on email) are executed in the context of the user who created the subscription. Setting this value to “1” will disregard credentials of the subscription creators and subscriptions will be sent in the context of the Windows account running the Kyubit Subscription service.
MinimizedTablePDFExport	While exporting the dashboard to 'Simple PDF', set this value to “1” to minimize 'Table charts' on the dashboard. Displaying only 10 rows and 2 columns at most.
TopMargin, RightMargin, BottomMargin, LeftMargin	Sets margins defaults when exporting dashboard to the PDF file. Default values are TopMargin=20, RightMargin=30, BottomMargin=20 and LeftMargin=40.
PDFFontSize	Sets the 'Font Size' default value when exporting the dashboard to the PDF file.
ReopeningConnections	While analyzing in Grid/Chart view, OLAP connection is kept alive for the performance reasons. To reset connection after each MDX query, set this value to „1“.

PartialOLAPStructure	Indicates if OLAP structure (measures, dimensions, etc.) will be retrieved at once or partially as user expand cube items. To retrieve the OLAP cube structure partially, as individual measures/dimensions are selected, set this value to „1“ (default). Otherwise, all structure will be retrieved at one, which could be slow for larger cubes („0“). Could have significant performance gains when using OLAP cubes with many measures and dimensions.
HideDashboardBreadcrumb	If set to „1“, dashboard breadcrumbs will be hidden.
ActivityLogRetentionDays	If set to number higher than 0, it will represent a number of days after which activity log entries will be deleted.
HomePageConfig	<p>Configure home page in the web.config file Administrator has an option to configure display of home page right section in the web.config file and on this way ensure what users will see on the home page.</p> <p>Example...</p> <pre><add key="HomePageConfig" value="3,A,2053,Column_Chart,First chart title,Q,11090,Pie_Chart,Second chart title" /></pre> <p>This attribute in the web.config file expects several values separated by comma (,).</p> <p>1st value = (1) Tutorial and Help links, (2) My Recent Content and Most popular by all users, (3) custom query/analysis charts.</p> <p>If the first value is (3) custom query/analysis charts, then: 2nd value = A or Q (Analysis or Query) for the first chart. 3rd value = Analysis ID or Query ID for the first chart. 4th value = Chart type for the first chart. One of the following values (Column_Chart, Column_Stack, Line_Chart, Spline_Chart, Bar_Chart, Bar_Stack, HeatMap, Area_Chart, Area_Stack, Pie_Chart, Doughnut_Chart, Bubble_Chart, Card, Scorecard). 5th value = Second chart title. 6th value = A or Q (Analysis or Query) for the second chart. 7th value = Analysis ID or Query ID for the second chart. 8th value = Chart type for the second chart. 9th value = Second chart title.</p>
WhereClauseDefaultChoice	This attribute sets the application to use OLAP filtering with the default "WHERE" instead of the "SUBCUBE" filtering option.
HideDashboardFilterButton	This attribute hides the dashboard filter button while not working in the dashboard design view. If the dashboard is saved with the filter panel closed, using this option, the end-user will not be able to see the dashboard filters applied (if for any reason, this is a convenient behavior for the current environment).

HideDashboardFilterButton	This attribute hides the dashboard filter button while not working in the dashboard design view. If the dashboard is saved with the filter panel closed, using this option, the end-user will not be able to see the dashboard filters applied (if for any reason, this is a convenient behavior for the current environment).
CloneToMyFolder	Move cloned analysis and dashboards to my Analysis/Dashboards folder after cloning. (Instead of clone items to the same folder of the original item)
MobileDeviceAutoRedirect	Auto redirects requests from mobile devices to mobile friendly URL.
VisitorCanChangeInitialFilters	Controls if a 'Visitor' role can change initial filters on analyses and dashboards.
HideTutorials	When this value is set to 1, the application does not offer tutorial content to the users.
KPILastChangePercentDecimals	Configure Dashboard KPI change percent number of decimal digits.
LogoBox	Controls display of the Logo box on the reports and dashboards (set to '0' to hide). Logo box is visible only with Company and Enterprise Edition license.
DataProprietaryStatement	The Data proprietary statement is configurable and visible at the bottom of all content exported from the Kyubit application (Excel, PDF, CSV files)
OLAPGetMembersMethod	Configure OLAP dimension members search method (Filter Dialog). Default is the MDX approach, but for some environments, OLD DB SCHEMA_ROWSET has performance advantages. Set "OLAPGetMembersMethod" in the web.config file to "0" for MDX queries (default) or "1" for OLE DB SCHEMA_ROWSET.
NULLValueDisplay	Use this setting to control what will be displayed in the whole application (analyses and dashboards) for NULL values.

ExplicitTimeZone	By default, the time zone is related to the server Windows regional settings. In some situations, the server is not in the required time zone and now you can configure the time zone explicitly by setting the " ExplicitTimeZone " attribute in the web.config file. For example, 'Central Europe Standard Time', 'Middle East Standard Time', 'W. Australia Standard Time', etc. Full list at https://learn.microsoft.com/en-us/windows-hardware/manufacture/desktop/default-time-zones?view=windows-11 .
AnalyticModelsDisabled	Disable the usage of Analytic Models in the application.
OnlyAdminCustomDrillthrough	Set this value to „1“ to allow only Admin role to see and use „Custom Drillthrough“ feature.

4.2 Security Configuration settings

Configure application behavior and options related to Security-related topics.

ExtraAdministrator	Administrators are managed in application sections 'Administration', but here is an additional option to configure additional administrator by his login name, without entering the application.
ActiveDirectorySearchUserName	Managed from setup.exe. Start setup.exe and in the upper right corner select 'wheel' button to configure a new value.
ActiveDirectorySearchUserPassword	Managed from setup.exe. Start setup.exe and in the upper right corner select 'wheel' button to configure a new value.
EncryptDataSource	When creating a data source in the Kyubit application, all data source connectivity details are encrypted for the security reasons using the following configuration. To disable encryptions set the value to „0“. (Default value is "1")
PassMinLength	Kyubit users password minimum length.
PassIncludeUpperLower	The password must include upper and lower case characters (Kyubit users).
PassIncludeNumeric	The password must include a numeric character (Kyubit users).
PassIncludeSpecialCharacter	The password must include a special character (Kyubit users).
PassExpireDays	The password expires after a number days (Kyubit users).
SecurityAlertEmailAddresses	Notifications about events of security importance will be sent to these email addresses.
AdditionalXSSAttackPrevention	Additional XSS attack prevention. Prevents users from entering characters ()\ {}" in the application. The application is safe from XSS attacks, however following some strong security practices these characters should also be prevented for stronger security.

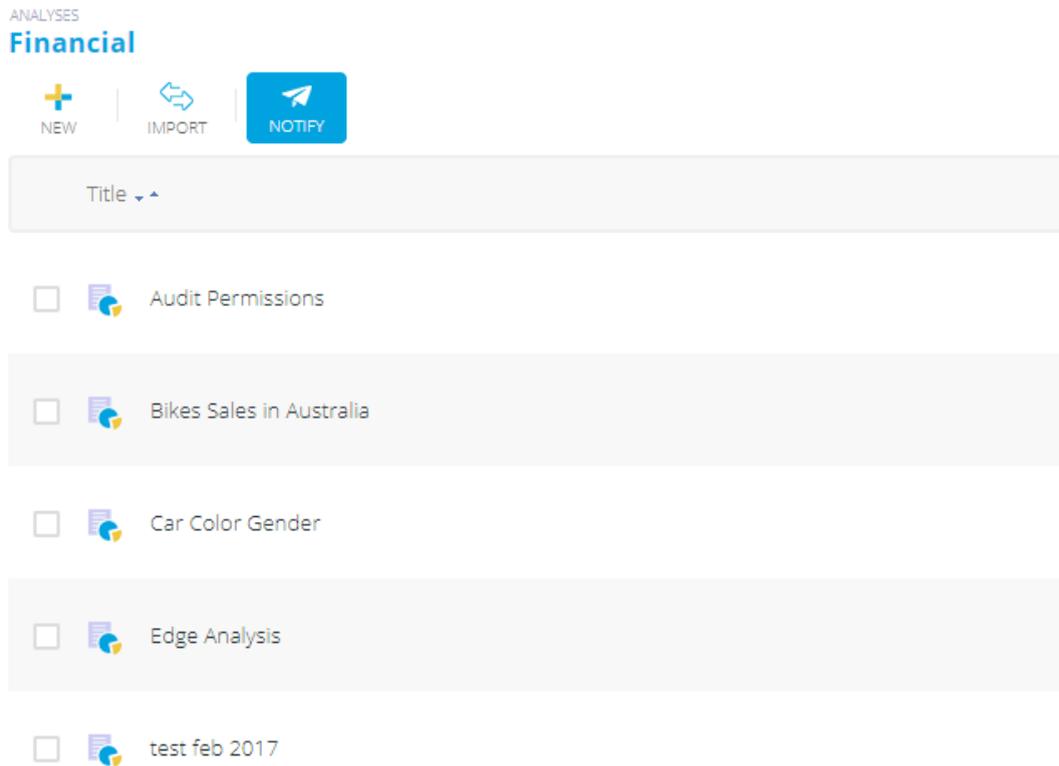
RequestRateLimit	<p>Rate limiting to reduce the number of requests a user (IP Address) can send to the application within the 60-second time frame. Prevents unnecessary application load and DDoS attacks.</p> <p>If the rate limit is reached, the application cannot be used for 30 minutes from the same IP address (or the app recycled). This event can be seen in the Application Log with an IP address.</p> <p>To enable, set the limit to a certain number greater than 0. A 200 rate limit is recommended. Please note that the application is using multiple requests to render a single page.</p>
Mandatory2FA	<p>Mandatory Two-Factor Authentication (2FA). To enable, set this value to 1. When enabled, users will be prompted to configure 2FA and will not be able to work with the application unless they configure their accounts to use 2FA.</p>

5. Notifications

Each user has an option to enable notifications on a certain folder within Kyubit Business Intelligence application. Once notification is set, the user will receive an email message whenever...

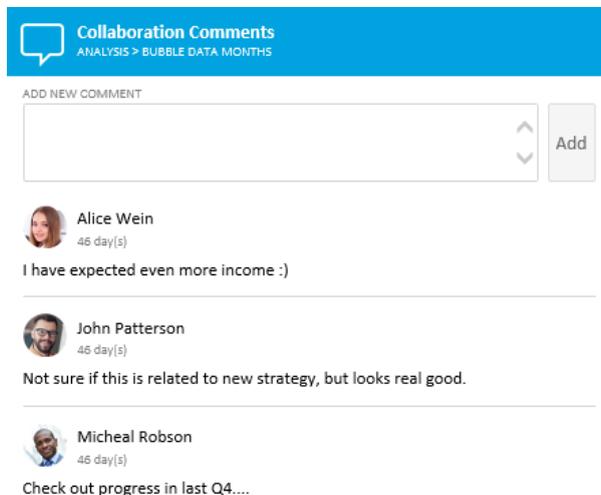
- 1) New **analysis** or **dashboard** is **added** to the same folder, or
- 2) Someone adds **collaboration comment** (see next section for ‘Collaboration comments’) on an analysis or dashboard within the same folder.

The user can set notifications if he has defined his email address in the ‘User settings’ from within Kyubit BI. Also, “Kyubit Subscription Service” has to be started for notifications to work.

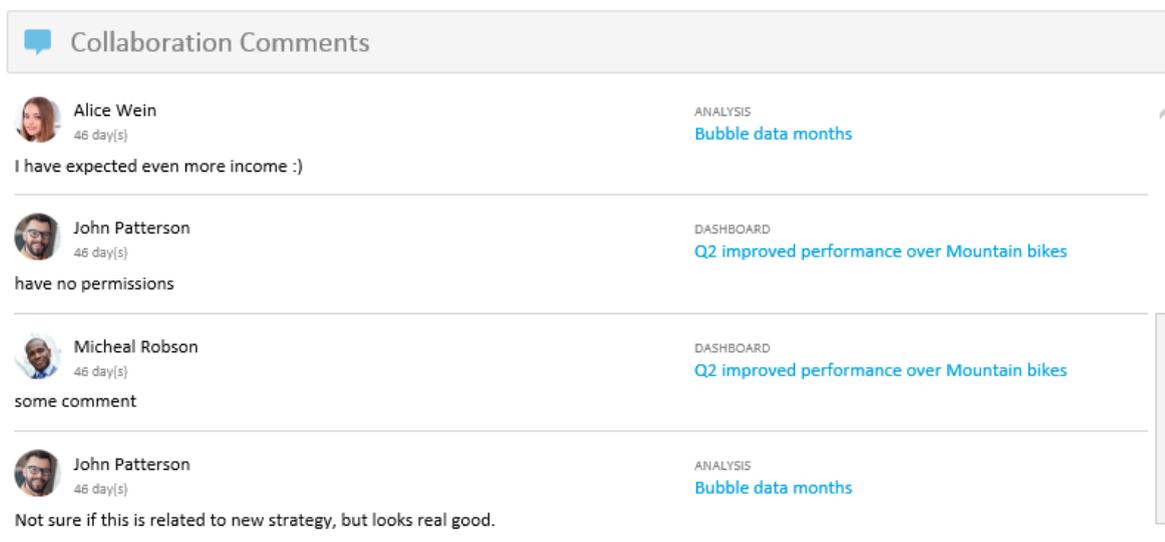


6. Collaboration comments

Kyubit BI users can add their comments and **discuss BI content** within the application. Comments can be added to an analysis, dashboard or application level. If user has enabled 'Notification' on a parent folder, he will **receive the email message** with related content and a new comment.



All cumulative comments are visible on the application "Home" page.



User can add his picture in the 'User settings' to visually be presented in collaboration comments.

'Collaboration comments' could be disabled at the application level by adding the value "1" to web.config configuration.

```
<add key="DisableComments" value="1" />
```

7. Activity Log

All actions taken by any user are written to the “Activity Log” that could be viewed by the administrator role for an inspection. Use the **Activity Log search** to find related actions within some date period or object type scope.

Activities history on the portal

Activity Log

Activity: Object Type:

User: Object ID:

Date Period: -

Activity	Object ID	Object Name	Object Type	User	Time
Analysis - Opened	2075	Bubble data months	Analysis	Micheal Robson	3.2.2016. 10:16:00
Dashboard - Opened	6	Q2 improved performance over Mountain bikes	Dashboard	Micheal Robson	3.2.2016. 10:15:00
User - Login	2	Micheal Robson	User	Micheal Robson	3.2.2016. 9:50:00
User - Login	3	Alice Wein	User	Alice Wein	3.2.2016. 9:48:00
Dashboard - Opened	5	Geo Analysis, Sales and Trends	Dashboard	Micheal Robson	2.2.2016. 17:04:00
Dashboard - Opened	3	Sales Overview	Dashboard	Micheal Robson	2.2.2016. 17:02:00
Dashboard - Opened	70	Combo	Dashboard	Micheal Robson	2.2.2016. 16:50:00
Dashboard - Opened	69	audit 03022	Dashboard	Micheal Robson	2.2.2016. 16:50:00
Dashboard - Opened	67	audit 02020	Dashboard	Micheal Robson	2.2.2016. 16:50:00
Dashboard - Opened	74	Single	Dashboard	Micheal Robson	2.2.2016. 16:46:00
Dashboard - Changed	68	audit 29029	Dashboard	Micheal Robson	2.2.2016. 16:34:00
Dashboard - Opened	68	audit 29029	Dashboard	Micheal Robson	2.2.2016. 16:32:00
Dashboard - Opened	69	audit 03022	Dashboard	Micheal Robson	2.2.2016. 16:32:00
Dashboard - Opened	67	audit 02020	Dashboard	Micheal Robson	2.2.2016. 16:27:00
User - Login	2	Micheal Robson	User	Micheal Robson	2.2.2016. 16:27:00
Dashboard - Opened	76	New Dashboard	Dashboard	Alice Wein	2.2.2016. 16:13:00
Dashboard - Created	76	New Dashboard	Dashboard	Alice Wein	2.2.2016. 16:13:00
Dashboard - Opened	75	Sales	Dashboard	Alice Wein	2.2.2016. 15:57:00
Dashboard - Added to folder	3	Sales Overview	Dashboard	Micheal Robson	2.2.2016. 15:55:00
Dashboard - Added to folder	57	Recent changes visualized	Dashboard	Micheal Robson	2.2.2016. 15:55:00
Dashboard - Added to folder	66	Q3 Results	Dashboard	Micheal Robson	2.2.2016. 15:55:00
Dashboard - Added to folder	18	Test PDF (2)	Dashboard	Micheal Robson	2.2.2016. 15:54:00
Dashboard - Added to folder	17	Slicers (2)	Dashboard	Micheal Robson	2.2.2016. 15:54:00
Dashboard - Added to folder	25	Lists	Dashboard	Micheal Robson	2.2.2016. 15:54:00

Activities history on the portal 1000

The ‘Activity Log’ could be disabled at the application level by adding value “1” to the web.config configuration.

```
<add key="DisableAudit" value="1" />
```

8. White-Labeling

Follow the below instructions to set your own logo and text to be used with the Kyubit BI application (with Enterprise Edition license).

All changes in this procedure will remain after the application upgrade to the new version.

Edit values in web.config (C:\Program Files\Kyubit\BusinessIntelligence) and images in folder C:\Program Files\Kyubit\BusinessIntelligence\WhiteLabel as follows...

Set this value to 1 to activate White-Label features.

```
<add key="WhiteLabelActive" value="1"/>
```

SPLASH MESSAGE

Splash message when opening application first time in a day.

Replace 'Splash.png' image with your own located in 'WhiteLabel' folder, respecting image dimensions 441px * 254px.

Replace below splash text with your own (approximately same length).

```
<add key="splashText1" value="Business Intelligence portal for OLAP Analysis,"/>
```

```
<add key="splashText2" value="Data visualization, Dashboards and KPI management."/>
```

APPLICATION HEADER

Replace 'CompanyLogoBox.png' image with your own located in 'WhiteLabel' folder, respecting image dimensions 32px * 32px.

APPLICATION ICON

Replace the application icon (visible on the browser top) 'Kyubit.ico' with the different icon. Supported sizes 16x16, 32x32, 64x64.

LOGIN FORM LOGO

Replace 'LoginLogo.png' image with your own located in 'WhiteLabel' folder, respecting image dimensions 441px * 254px.

MOBILE LOGIN FORM LOGO

Replace 'LoginLogoMobile.png' image with your own located in 'WhiteLabel' folder, respecting image dimensions 538px * 104px.

MOBILE LOGIN FORM LOGO

Replace 'MobileLogo.png' image with your own located in 'WhiteLabel' folder, respecting image dimensions 400px * 80px.

9. Multitenant Mode

Kyubit BI can be configured to work in the Multitenant mode, where each tenant content (typically company/organization/person) is completely separated from other tenants.

Default Single tenant mode is designed to be used within a single company/organization and users are divided between administrators and regular users. Administrators can access all the application created content, while regular users need to get content authorization by assigning permissions to the particular content.

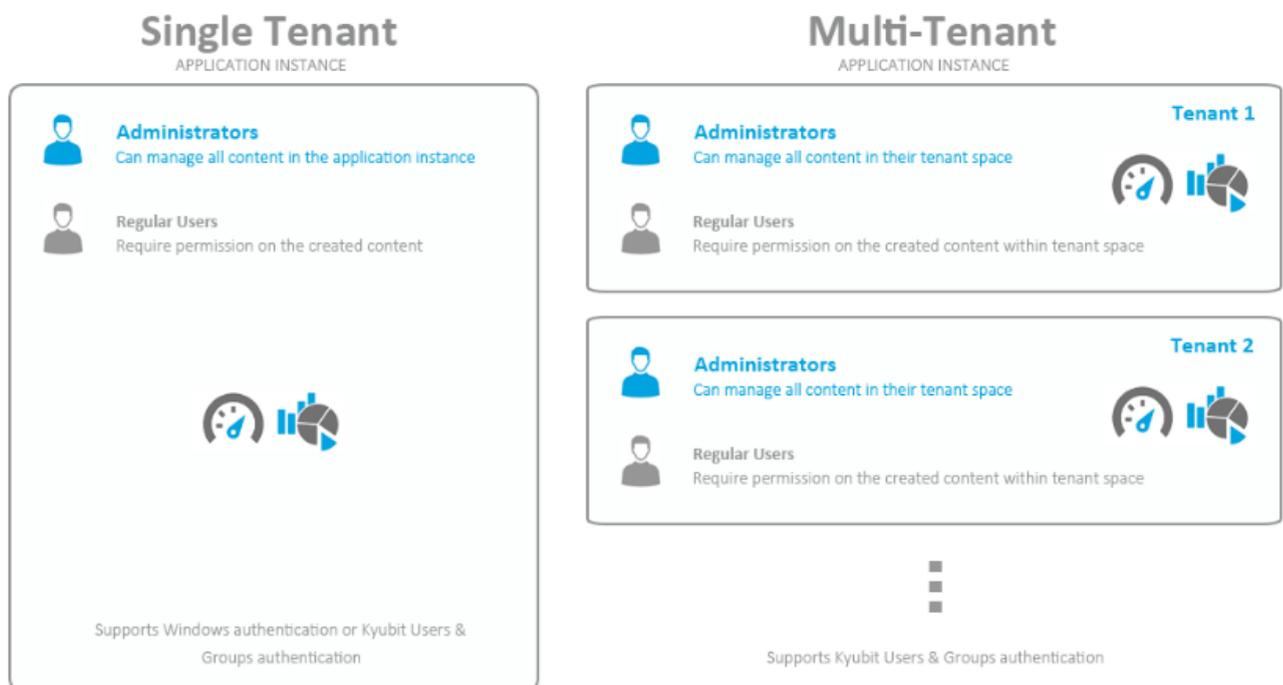
When using a Multitenant mode, each company/organization has its own Administrators and regular users and administrator from one tenant cannot see or interact with any content from other company/organization (tenant).

In other words, Multitenant mode ensures total isolation of the content between companies/organizations (tenant) using the same Kyubit BI application instance.

While running in the multitenant mode, Kyubit BI is still one instance of the application and using one internal database, which structure is designed to provide the multitenant functionality.

The multitenant mode is available only with the **Kyubit Users and Groups Authentication**, while Windows authentication is not supported. However, each Kyubit user or whole tenant could have assigned Windows account that will be used when connecting to data sources (OLAP/SQL) that expect Windows authentication.

To use multi-tenant in the production, 'Multitenant Edition' license is required.



9.1 Configuring Multitenant Mode

Only administrator of root tenant (default tenant) is considered as a master administrator and has privileges to manage application tenants.

How to configure

- 1) First, configure Kyubit Users Authentication required for the multitenant mode. After this step you will have a Kyubit user who is the master administrator with privileges to manage tenants.
- 2) Open your web.config file (C:\Program Files\Kyubit\BusinessIntelligence) and set "Multitenant" setting to "1".
- 3) `<add key="Multitenant" value="1" />`
- 4) After login with the master administrator within the "Administration" section, there will be options to manage tenants.
- 5) Create a new tenant
- 6) Create new users (Administration -> Users & Admins -> Create User) and set each tenant appropriate administrators. From that moment created users (now tenant administrators) can login to Kyubit BI and manage their own tenant users, groups or any tenant data.
- 7) Each tenant can have associated Windows account to be used while accessing data sources expecting Windows Authentication (SSAS, for example). Optionally, each user could have associated his own Windows account for the same purpose.

The screenshot shows a web-based configuration interface for a tenant. The title bar is blue with a white home icon and the text "Tenant". The main content area is white and contains the following elements:

- Name:** A text input field containing "Tenant Alpha".
- Description:** An empty text input field.
- Inactive:** A checkbox that is currently unchecked.
- Optional. Associated Windows account used to access data sources.:** A section header with a plus icon to its left.
- Tenant Admins:** A section header with a plus icon to its left. Below it is a checkbox and a user icon for "John Petterson".
- Buttons:** At the bottom of the window, there are five buttons: "Set Admin Rights", "Remove Admin Rights", "Save", "Delete", and "Close".

9.2 Cross-Multitenant content

Create a single analysis or dashboard that will be visible in all tenants, but each tenant is using its own data source to display the results. In situations when multiple tenants have the same report or dashboard, but using different OLAP cube or SQL database to display appropriate results for the tenant, use 'Cross-multitenant' feature and simplify content management. Without this feature, for 100 tenants, it would be required to create 100 analysis/reports to prepare the results, instead of a single analysis/dashboard with this feature.

Steps to prepare analysis/dashboard as a cross-multitenant content:

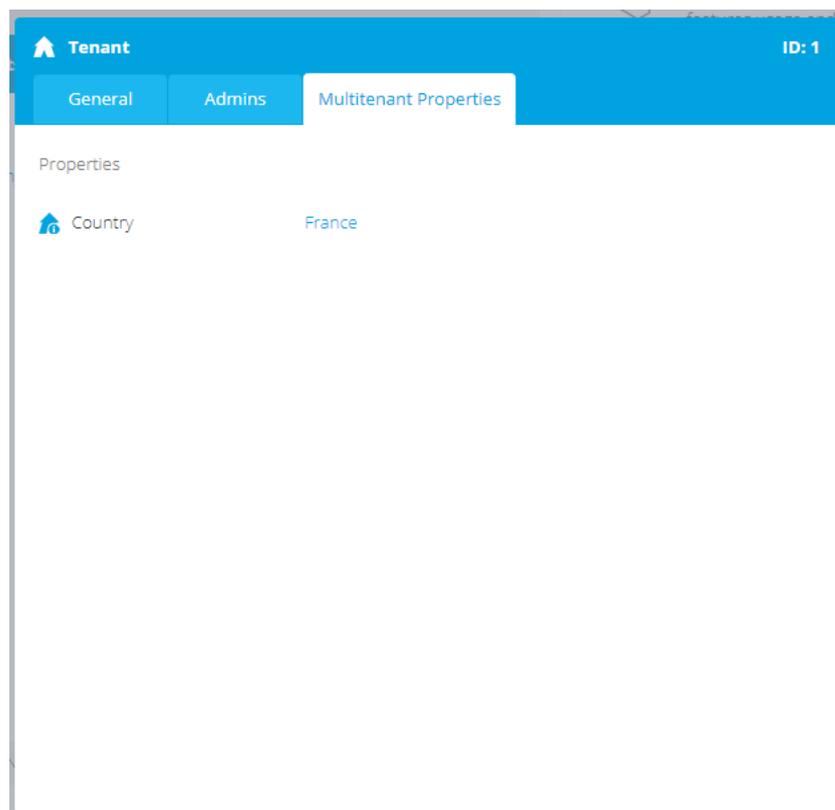
- Login as master admin (default tenant)
- Create analysis/dashboard you wish to use in all the tenants
- Go to Administration > Tenants and create a new 'Cross-Multitenant Template'
- Go to the data source analysis/dashboard is using and mark with the same 'Cross-Multitenant Template'
- Create a new folder for cross-multitenant purpose and with the same 'Cross-Multitenant Template'
- Move your analysis/dashboard to the created folder (Immediately after this action, folder content is visible to all the tenants)
- Admin of Tenant X has to mark certain tenant data source with the same 'Cross-Multitenant Template' to finally tell the application to use this data source when opening the analysis/dashboard that is stored in a cross-multitenant folder.

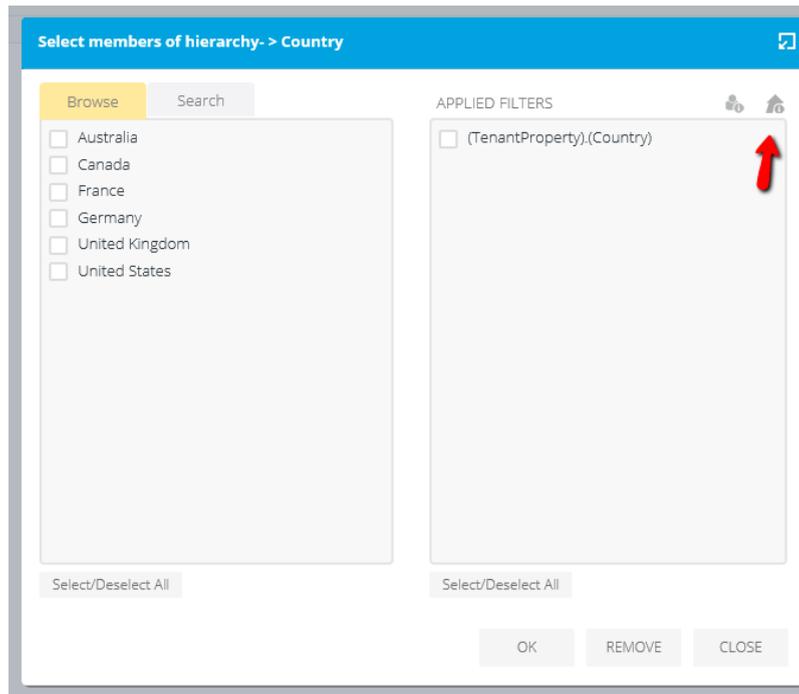
After these steps, opening the same analysis/dashboard is using tenant specific data source.

9.3 Multitenant Properties

This feature relies on Cross-Multitenant templates. If a certain analysis/dashboard is shared among tenants using Cross-Multitenant template, but instead of using different data sources to display the data analysis/dashboard is using the same data source in all the tenants. Using multitenant properties, it is possible to filter appropriate analysis/dashboard data for specific tenants.

Admin has to create a new multitenant property and assign the value for this property for each tenant. When analysis/dashboard is created, add a new filter and set one of the existing multitenant properties.





9.4 Multitenant White-Labeling

Multitenant White-Labeling enables you to apply each tenant users their own logo while using the application on all places in the application where by default Kyubit logo and branding is used.

All changes in this procedure will remain after the application upgrade to the new version.

Edit values in web.config (C:\Program Files\Kyubit\BusinessIntelligence) and images in folder C:\Program Files\Kyubit\BusinessIntelligence\WhiteLabel as follows...

Set this value to 1 to activate White-Label features.

```
<add key="WhiteLabelActive" value="1"/>
```

Also, set this value to 1 to activate White-Label features per Tenant.

```
<add key="WhiteLabelPerTenant" value="1"/>
```

White-label images for the master tenant are stored in C:\Program Files\Kyubit\BusinessIntelligence\WhiteLabel, while White-label images for any other additional tenant are stored in C:\Program Files\Kyubit\BusinessIntelligence\WhiteLabel\{TenantID} folder. To check the ID of the created tenant, open the tenant form in the application.

Prepare images for White-label usage following the White-label section.

Tenant ID: 2

Name: Tenant 2

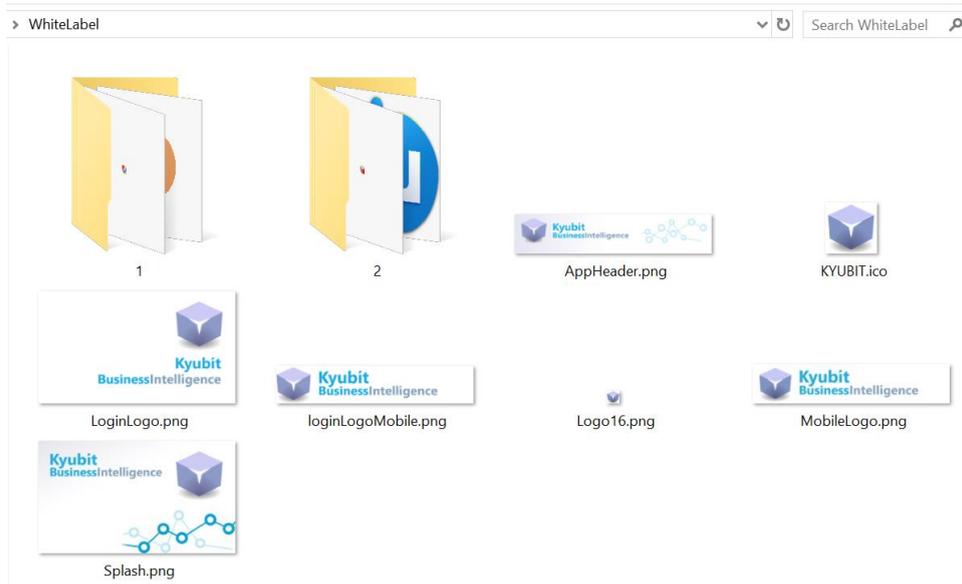
Description:

Inactive:

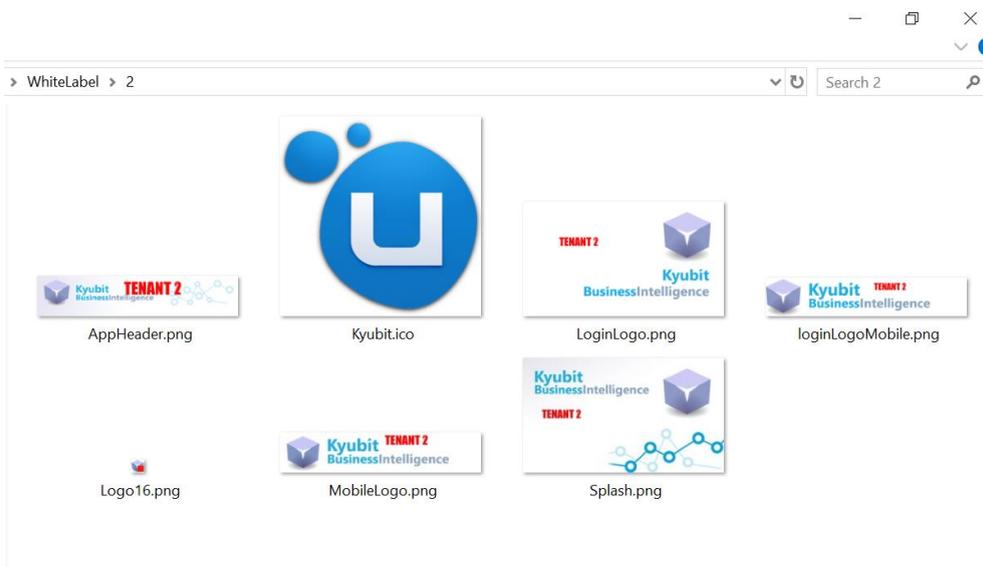
Optional. Associated Windows account used to access data sources.

Tenant Admins

Test User 2



Tenant 2 sample ...



10. Geolocations Management

Geolocations are used to display data on dashboard charts related to a particular place on earth. To manage all geo locations in the Kyubit application, go to the Administration -> Geo Locations section. Kyubit Administrator has rights to add, change or delete geolocations in the system. After Kyubit BI setup, automatically 7300 largest cities are loaded to Geo locations, while an administrator can manage all entries at any time. In the Geo Location section administrator can search all geolocations by the location name or country/group field, quickly visualize all geo location from the same country/group, delete existing or add new geolocation entries that will be immediately ready for usage in geolocation visualizations and analysis.



- 1) Listing all geolocations in the system related to France, for example. List of all geolocations is displayed as the list with names and geographical positions.

Kyubit Business Intelligence

- Home
- Analyses
- Dashboards
- Data Sources
- Queries
- KPI & Scorecards
- OLAP Shared Items
- Schedule
- Administration
 - Users and Admins
 - Activity Log
 - Tags
 - Geo Locations
 - Licensing
 - Plan Your Environment

List of latitude and longitude of geo locations

Geo Locations

Name:

Country/Group:

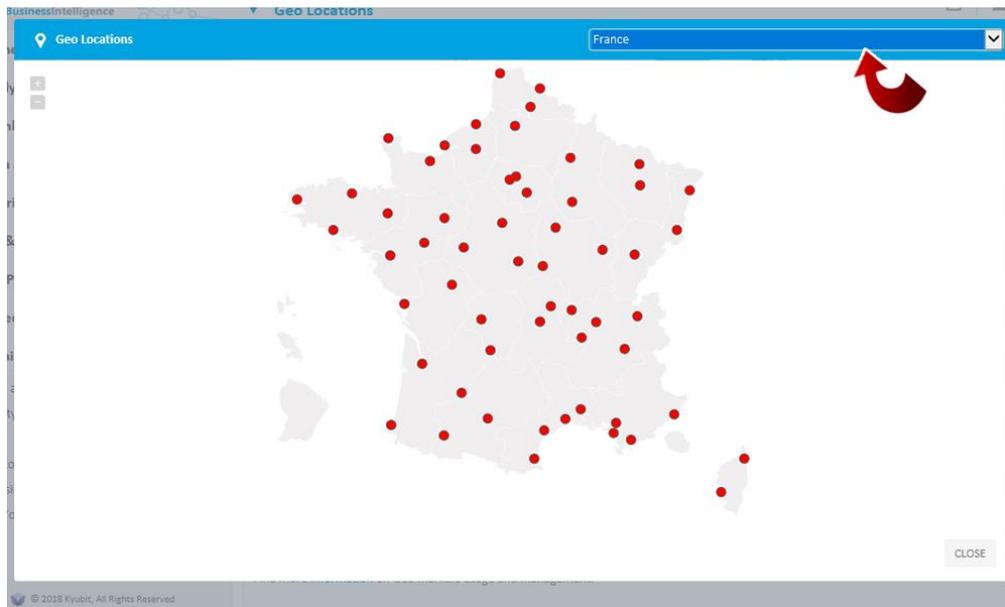
SEARCH

NEW

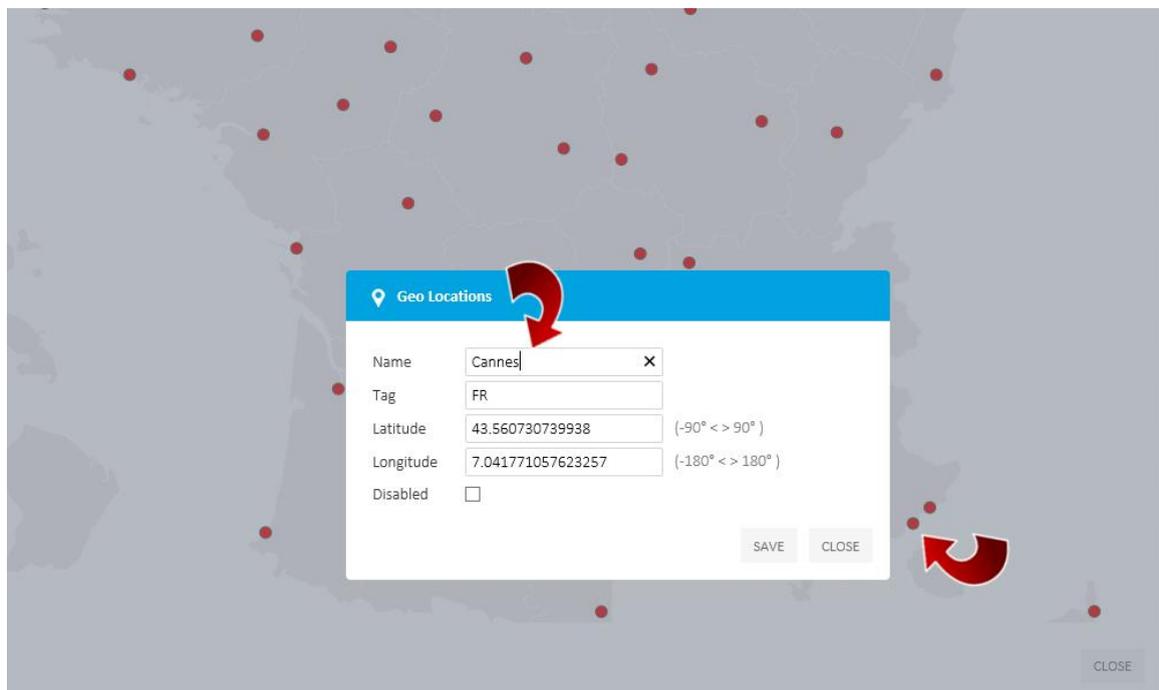
ENA

<input type="checkbox"/>	Name	Country/Group	Latitude	Longitude
<input type="checkbox"/>	Agen	FR	44.20041445	0.633335733
<input type="checkbox"/>	Aix-en-Provence	FR	43.51999086	5.44992634
<input type="checkbox"/>	Ajaccio	FR	41.92706484	8.728293822
<input type="checkbox"/>	Amiens	FR	49.90037661	2.300004027
<input type="checkbox"/>	Angers	FR	47.48000755	-0.530029949
<input type="checkbox"/>	Annecy	FR	45.89997479	6.116670287
<input type="checkbox"/>	Arras	FR	50.28332481	2.783333698
<input type="checkbox"/>	Auxerre	FR	47.80042727	3.566593382
<input type="checkbox"/>	Bastia	FR	42.70316734	9.450006875
<input type="checkbox"/>	Besancon	FR	47.22999697	6.03000891
<input type="checkbox"/>	Beziers	FR	43.35049217	3.209974323
<input type="checkbox"/>	Biarritz	FR	43.47327537	-1.561594891
<input type="checkbox"/>	Bordeaux	FR	44.85001304	-0.595013063
<input type="checkbox"/>	Bourges	FR	47.08372683	2.399997923
<input type="checkbox"/>	Brest	FR	48.39044793	-4.49500757

- 2) Click on the 'Globe' icon to visualize listed geo locations on the geo map. At any time, change geo map country/region for a more appropriate view of geolocations.



- 3) To add new geolocation, click the map on the position of new geo location and new geolocation dialog will be displayed to add name and save geolocation.



10.1. Adding multiple Geo Locations

If there are many geo locations with a known name and geographical location you wish to add more quickly, it is possible to directly add new rows in Kyubit internal database 'KyubitAnalysisDB', table 'GeoLocations', which is straightforward to comprehend and maintain.

11. Embedded BI with Kyubit

Embedded BI features are designed to integrate Analytics, Interactive Charts, Dashboards and KPIs within your Solution (HTML page). For more details on Embedded BI, please visit <https://www.kyubit.com/Embedded-BI>

12.1 HTML/Javascript Embedded BI

Activate Embedded BI by including Kyubit Javascript/CSS files to your web site/application to integrate OLAP/SQL embedded analytics and data visualizations. Embedded BI Kyubit visualizations enable users of your solution to analyze OLAP/SQL/CSV data directly on your site, using Kyubit embedded analytic features like Drill-Down, Drill-through, 'Large View', Export to Excel, customize appearance, Caching and other.

Example

```
<script type='text/javascript'>
$(document).ready(function ()
{
    $kyu.initVisualization('testDiv', {
        name: 'My Visualization',
        analysisId: 2053,
        chartType: 'Column_Chart',
        colorPallete: 0,
        allowLargeView: true,
        refreshTime: 5
    })
}
</script>
```

12.2 IFRAME HTML Embedded BI

Embedded BI approach to include whole OLAP/SQL Analysis Report or Dashboard to your site, use IFRAME HTML embedded analytics options. Created Analysis or Dashboard within Kyubit application is included to your site with a single line of HTML and ready for your site user data discovery and usage with custom visual preferences to best fit to your existing user interface experience.

Example

```
<iframe id="dashFrame"
src="http://localhost:85/Forms/Dashboard.aspx
?DashboardID=3027
&@country=Canada;Australia
&align=right&font=helvetica
&fontColor=red&tileFontSize=11px
&hideDesignButton=1&hideCloseButton=1
&hideOpenPDFbutton=1&hideSubscribeButton=1"
width="1600px"
height="1000px"
frameborder="0"
scrolling="no">
</iframe>
```

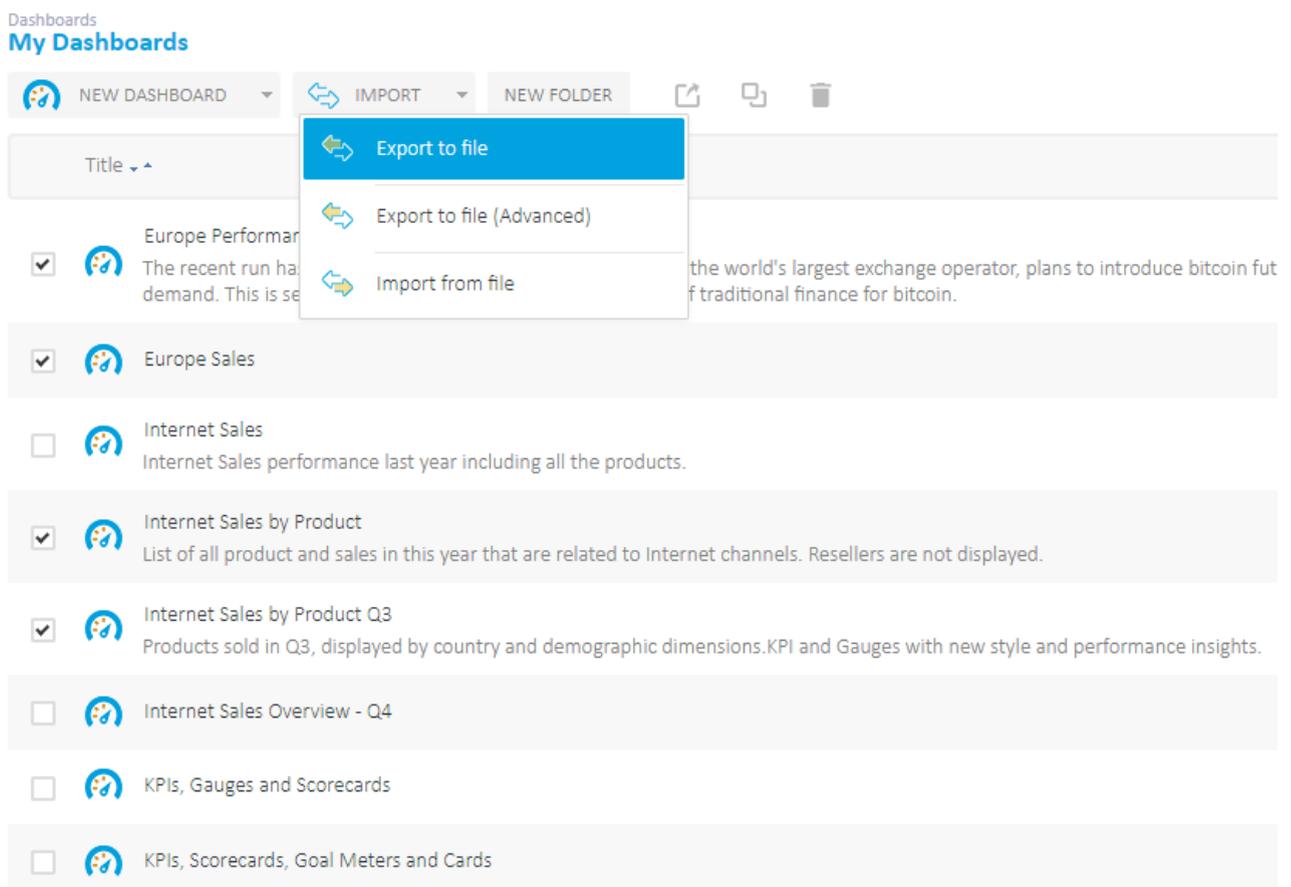
13. Import/Export Features

With Import/Export features it is easy to **migrate particular Kyubit BI objects** (Data source, Analyses, Dashboards, Queries, KPIs, Scorecards) from one Kyubit application instance to another. It is an ideal tool when having multiple instances for testing, development and production purposes. The Kyubit **administrator has a privilege** to export the required objects and import to the other Kyubit application instance. Exported objects are **serialized to the XML file** that contains all information about the exported object. The same XML file is used on the other instance to import the objects.

Each Kyubit objects is assigned a unique identifier **UNQ** which ensures that single object from one instance is always correctly migrated to the same object on another instance (if exists), allowing us to migrate the same object multiple time regardless of its name and definition.

13.1 Simple Export of the Kyubit objects

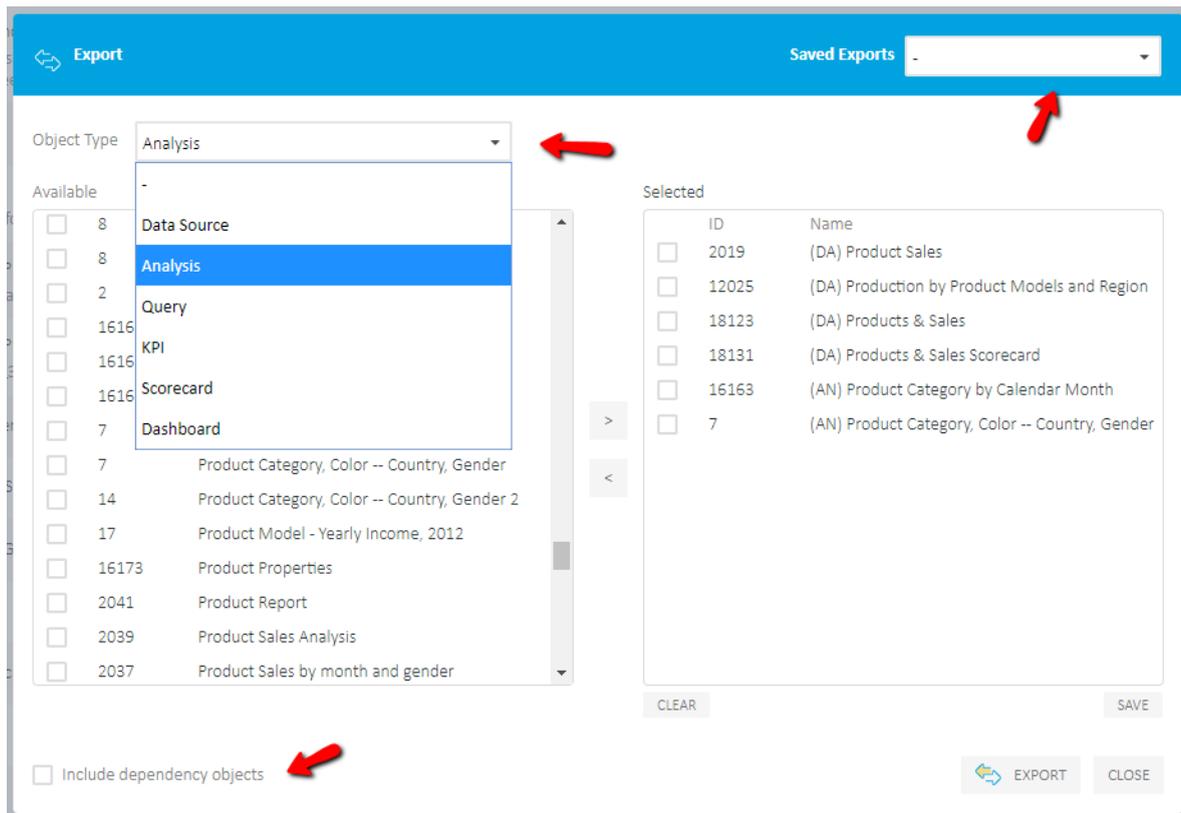
The fastest way to export the objects is to select required objects selecting its checkboxes and from the top menu select **Export to file** option. Immediately, an XML file with the definition will be downloaded which could be used for import on another Kyubit instance. When running a simple export only definitions of the selected items will be exported to the XML file (its parent objects will not be exported, for which we would need to use Advanced Export). Simple export is available on a single folder, while to export objects from different folders and different object types, Advanced Export features needs to be used.



13.2 Advanced Export of the Kyubit objects

More options to define which objects and how to export are available with the Advanced Export feature. The user creates a list of objects of **different object types** (analyses, dashboards, etc.) to be exported. Created list of objects could be saved (**Saved Exports**) and used later to export same objects again (upper right corner drop-down list).

Most interesting option included in the advanced export feature is to **Include dependency objects**. Using this option an application will not only export selected objects but will also include their parent objects in the dependency chain of objects all the way up to the data source object. For example, selecting a single dashboard to export with Include dependency object option would result with the export of all analyses, KPIs, queries that are included within this dashboard elements, but also their parent (dependency) objects to the data source as a root object.

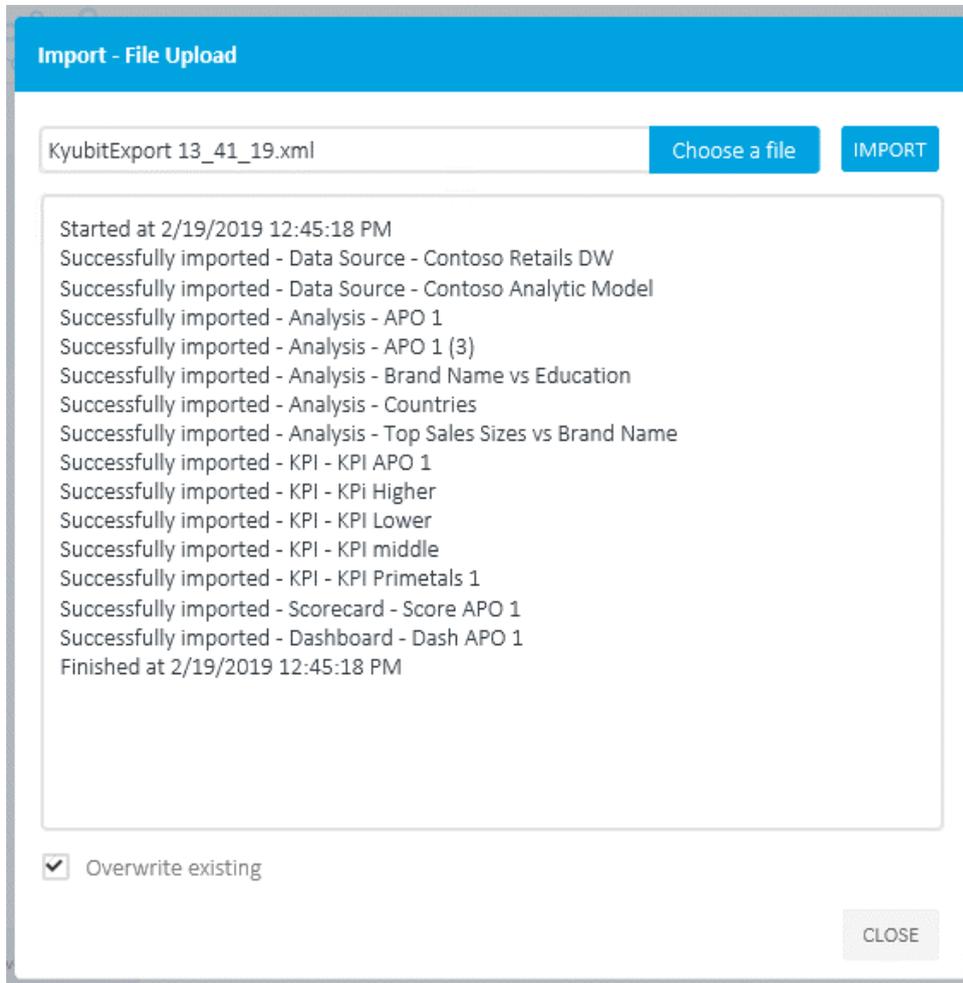


Sample XML file generated by the export features.

```
<?xml version="1.0"?>
- <KyubitExport>
  + <ExportObject ObjectType="40">
  + <ExportObject ObjectType="50">
  + <ExportObject ObjectType="30">
  + <ExportObject ObjectType="70">
  + <ExportObject ObjectType="30">
  - <ExportObject ObjectType="30">
    <AnalysisType> </AnalysisType>
    <Title>Country - Gender</Title>
    <Description> </Description>
    <AnalysisDefinition>PEFuYWx5c2lzRGVmaW5pdGlvbj48TWVhc3VyZXM+PE1lYXN1cmUgTWVhc3VyZVRpdG...
    <Definition> </Definition>
    <OverallFilters> </OverallFilters>
    <LevelDefinitions> </LevelDefinitions>
    <GridChartCombination>1</GridChartCombination>
    <UNQ>8e4a9e9d-c3bf-44db-934d-54d20b2de123</UNQ>
    <Dependency ObjectType="50" UNQ="a0f9576e-bf3b-4c16-95c9-04d3d23f1d32"/>
  </ExportObject>
```

13.3. Import of the Kyubit objects

Once export XML file is created it could be imported in any other Kyubit application instance. When Import dialog form is opened, we need to provide the **location of the XML file** and choose do we want to **overwrite objects** that already exist on this instance or to skip update those objects. Import feature creates an immediately visible log of the events that could be observed what exactly has been imported or if any issues have occurred and why.



14. User Management API

Kyubit application includes a Web service API to manage Kyubit users programmatically. Previously a new Kyubit user could have been created only within the Kyubit application user interface (manually). For an environment that integrates its own features with Kyubit BI content, this is a convenient way to add new users in the background on some event in the environment.

New web service is available on <http://localhost:81/WCF/APIUsers.svc> and includes methods to login to Kyubit and then use received token for subsequent calls to create new user or edit existing user.

This is a sample class and usage you can refer to...

```
public partial class frmAPI : Form
{
    Guid token;
    int userID;
    public frmAPI()
    {
        InitializeComponent();
    }

    //First, add web service reference to http://localhost:81/WCF/APIUsers.svc (change URL root based on your
    environment)
    private void login_Click(object sender, EventArgs e)
    {
        //Call Login method to get Token (Guid) that will be used in all other subsequent API calls
        APIUsers.APIUsersClient apiClient = new APIUsers.APIUsersClient();
        token = apiClient.Login("forms1", "pass@word1");
    }

    private void addNewUser_Click(object sender, EventArgs e)
    {
        //Creates new user. User type "ADMIN", "CREATOR" or "VISITOR"
        APIUsers.APIUsersClient apiClient = new APIUsers.APIUsersClient();
        userID = apiClient.AddKyubitUser(token, "apiUser2", "API User 2", "somepass", "CREATOR", true);
    }

    private void editUser_Click(object sender, EventArgs e)
    {
        // Update existing user. Password is optionally provided. If password is not provided, password value
        remains the same.
        APIUsers.APIUsersClient apiClient = new APIUsers.APIUsersClient();
        userID = apiClient.EditKyubitUser(token, userID, "apiUser2", "API Kyubit User 2", null, "VISITOR", true);
    }

    //If API calls are not successful (results not as expected), check your http://localhost:85/forms/diagnostics.aspx
    for more details.
}
```