

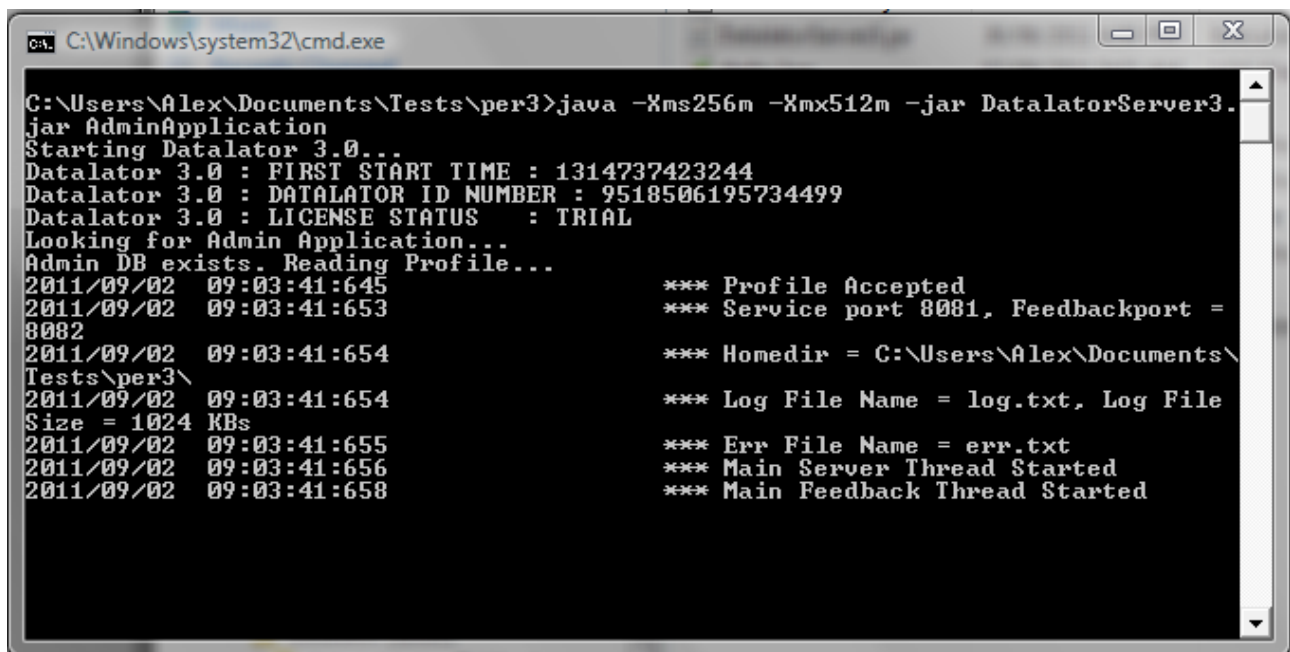
Datalator 3 Administrator Guide.

1. Powering it up...

After downloading and unzipping the installation package, content of the Datalator directory looks like this:

Name	Date modified	Type	Size
AdminApplication	30/08/2011 4:50 PM	File Folder	
lib	30/08/2011 4:50 PM	File Folder	
DatalatorClient3.jar	30/08/2011 2:47 PM	Executable Jar File	813 KB
DatalatorServer3.jar	30/08/2011 4:50 PM	Executable Jar File	82 KB
Download Time	30/08/2011 4:43 PM	File	1 KB
LICENSE.TXT	16/06/2011 11:26 ...	Text Document	8 KB
LinuxLaunch.sh	16/06/2011 12:06 ...	SH File	1 KB
Server ID	30/08/2011 4:43 PM	File	1 KB
WindowsLaunch.bat	16/06/2011 12:03 ...	Windows Batch File	1 KB

On a Windows machine use **WindowsLaunch.bat** to start the Server. On a Linux machine use **LinuxLaunch.sh** to do it.



```
C:\Windows\system32\cmd.exe
C:\Users\Alex\Documents\Tests\per3>java -Xms256m -Xmx512m -jar DatalatorServer3.jar AdminApplication
Starting Datalator 3.0...
Datalator 3.0 : FIRST START TIME : 1314737423244
Datalator 3.0 : DATALATOR ID NUMBER : 9518506195734499
Datalator 3.0 : LICENSE STATUS : TRIAL
Looking for Admin Application...
Admin DB exists. Reading Profile...
2011/09/02 09:03:41:645 *** Profile Accepted
2011/09/02 09:03:41:653 *** Service port 8081, Feedbackport = 8082
2011/09/02 09:03:41:654 *** Homedir = C:\Users\Alex\Documents\Tests\per3\
2011/09/02 09:03:41:654 *** Log File Name = log.txt, Log File Size = 1024 KBs
2011/09/02 09:03:41:655 *** Err File Name = err.txt
2011/09/02 09:03:41:656 *** Main Server Thread Started
2011/09/02 09:03:41:658 *** Main Feedback Thread Started
```

This set of messages means the server:

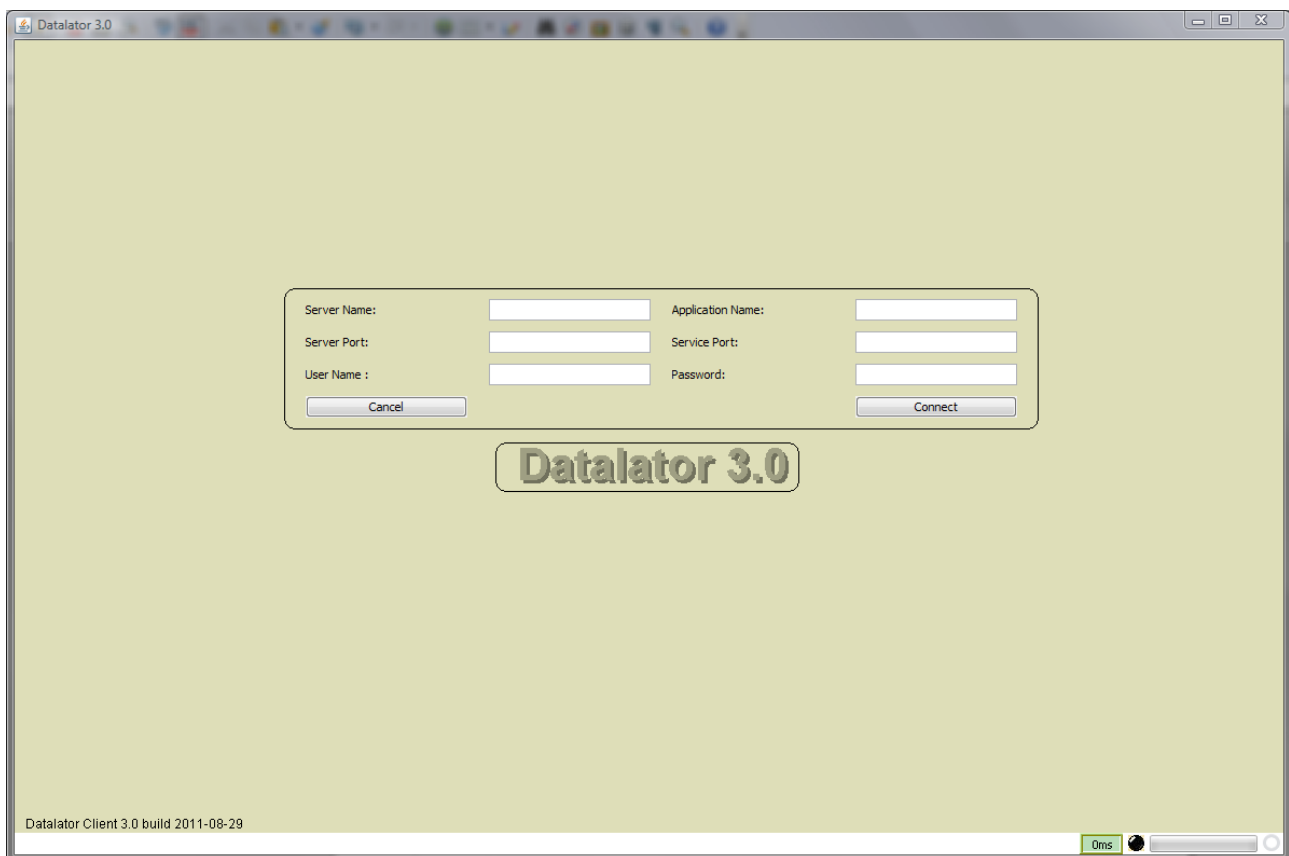
- Started embedded Derby(tm) database
- Used parameter "AdminApplication" as a name for Admin Database
- Have read active profile parameters from the Admin Database, used them to initiate itself and ready to accept clients' requests

By design AdminApplication contains running parameters (admin credentials, connection ports and log files names), tools to create and control other applications and tools to control access to those applications. Number of applications and users only limited by hardware. All applications will be contained in the Home Directory in separate folders bearing names of applications.

To control the server we have to start the Datalator client – from the file **DatalatorClient3.jar**. It starts with no parameters – double click it on a Windows machine or start it from a command line on Windows/Linux like this

```
Documents\Tests\per3>java -jar DatalatorClient3.jar
```

and the client starts like that:



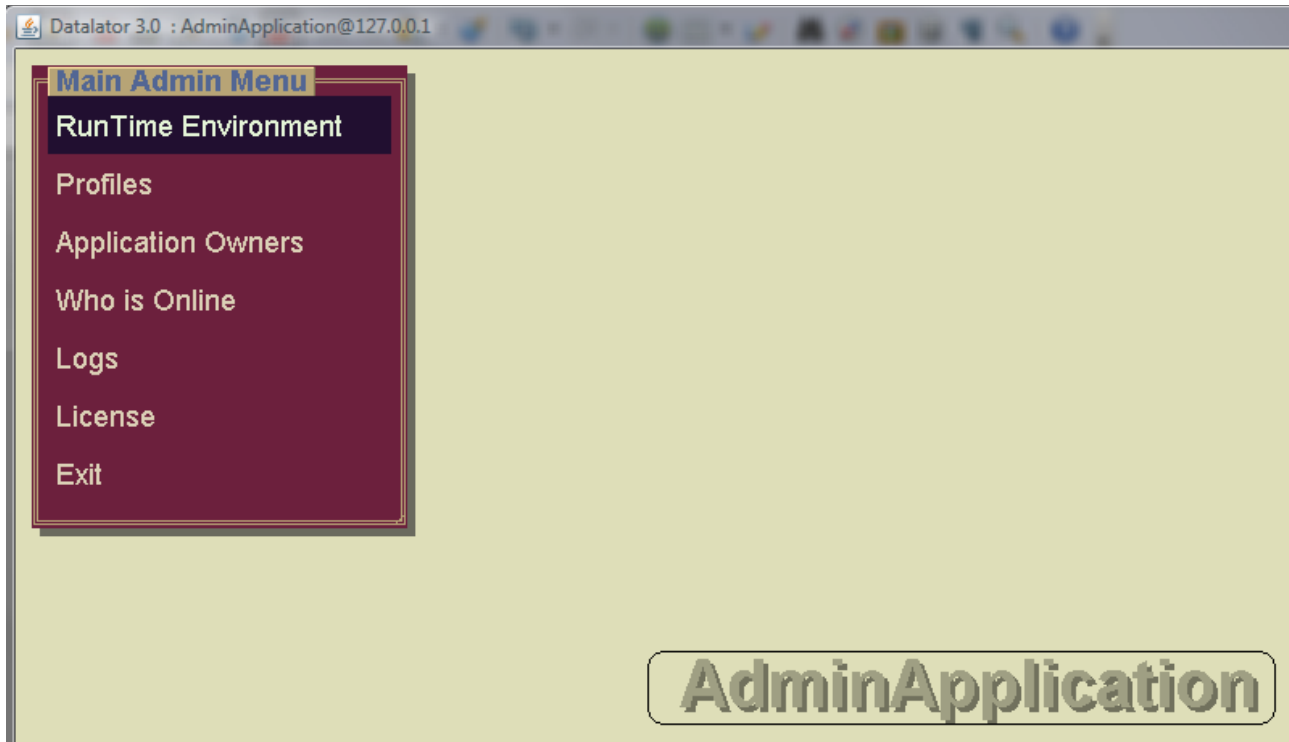
To connect to the server you have to type into the text fields:

Server Name:	127.0.0.1	Application Name:	AdminApplication
Server Port:	8081	Service Port:	8082
User Name :	admin	Password:	•••••
<button>Cancel</button>		<button>Connect</button>	

(default Administrator id and password are **admin** and **admin**) and click the **Connect** button.

Note: 127.0.0.1 is a network address for a local computer. To connect to a Datalator Server running on your LAN you might type in a computer name or IP address, like **KitchenComputer**. To connect to a Datalator Server running on the Internet, you have to type in a Web address, like **mysite.com**.
Note: A Firewall on the server computer must allow incoming connections on default ports 8081 and 8082. Those ports might be changed later.

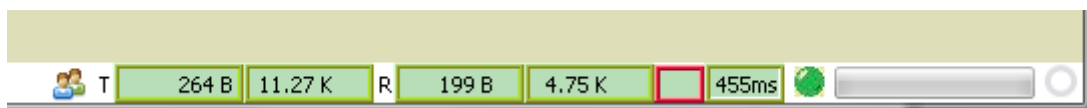
After you click on the **Connect** button, the client will communicate to the server and load an entry layer(window) of **Admin Application** (named **Main Admin Menu**) like that:



with a message in the message area of the status panel:



and connection statistics and controls:



which respectfully serves as:

- Button to check who's else online(left-click)
- T - Transmission stats (size of a last transmission and cumulative size of client requests)
- R – Reception stats(size of a last server response and cumulative size of server responses)
- Red Border Square – number of this client's pending requests (because of a slow connection or a server)
- Execution time of the last request
- Round Status Light : green is "connected", yellow – "connecting/checking the connection",

red – "error", blue – "application DB content was changed by another user – updating...",
black – "auto updating stopped"

- Progress bar to reflect progress when receiving big server response

"Who's online" icon and status light are clickable(stops/restarts updating).

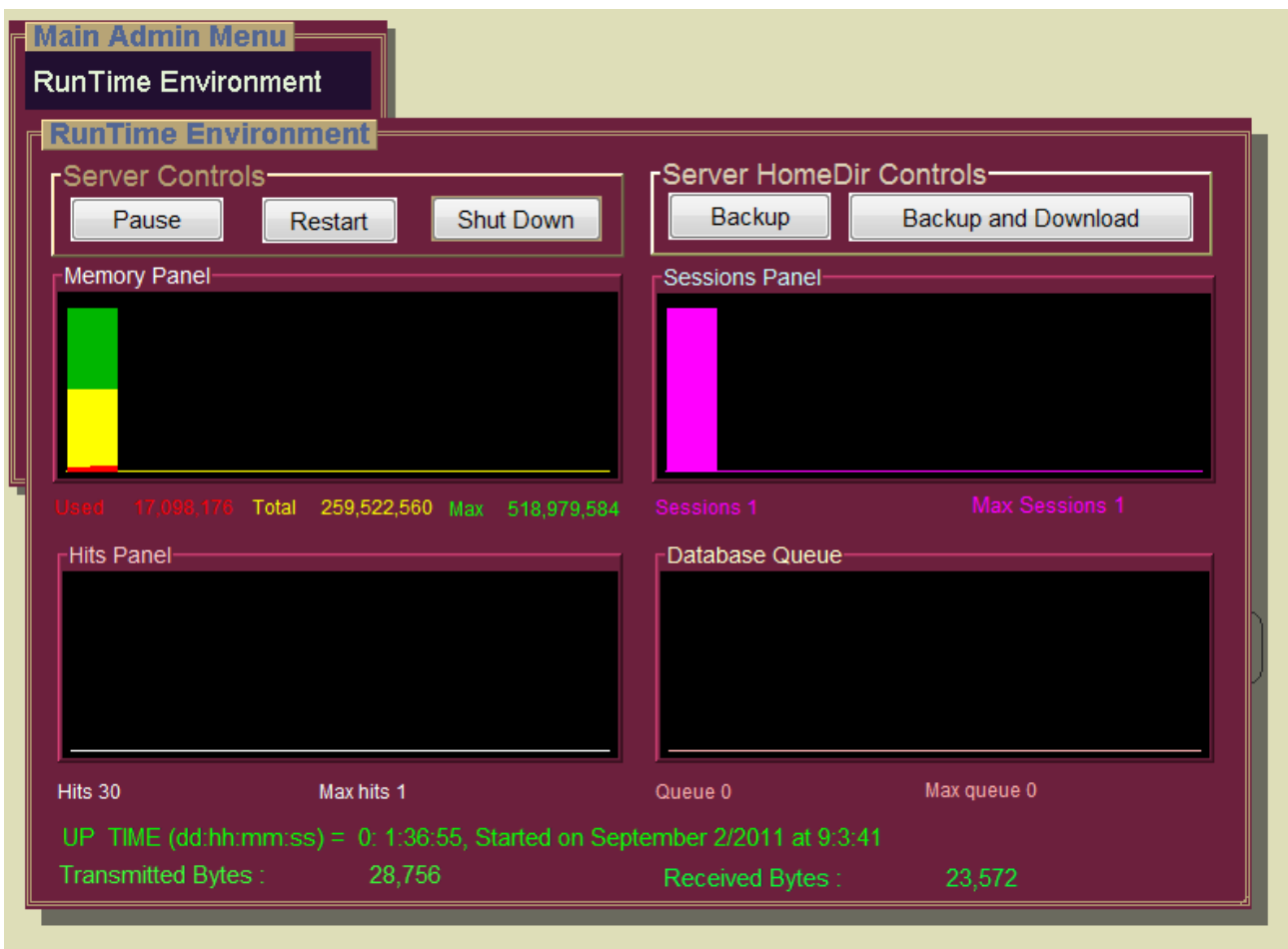
Connection stats are clickable too – you may want to see your client memory consumption chart:



This screenshot shows that the client consumed 4Mb of 259Mb of RAM available.

2. RunTime Environment.

To activate a line of the **Main Admin Menu**, double left-click it or use **Enter** button. Let's check the **RunTime Environment**:

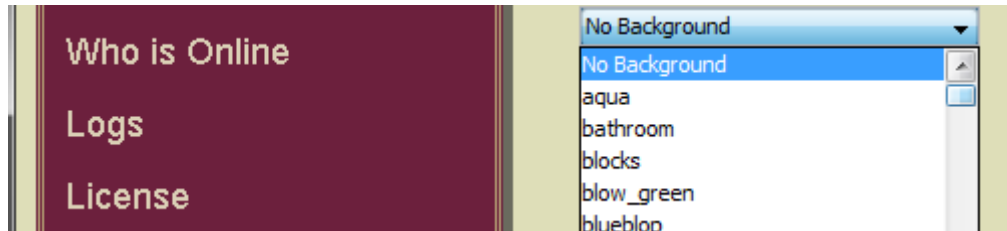


There are real-time gauges to check on your server health and activities plus a few obvious control buttons.

By using **Escape** button or right-clicking anywhere on the yellowish background you will close that **Layer** and return back to the **Main Admin Menu**.

Note: Enter/Escape operations are standard means to navigate between any application Layers.

Note: Yellowish background is also left-clickable – will produce a drop-down lists of backgrounds available:



3. Working With Profiles.

Let's enter **Profiles Layer** from the **Main Admin Menu**:

Main Admin Menu				
Profiles				
Profiles = 1 : 1				
Name	Admin Id	Status	Service Port	Feedback Port
profile	admin	Active	8081	8082

There is only one profile supplied; to input another one or to browse/edit the highlighted profile record in more details we use Input/Browse/Search/Edit form, which is activated by right-click on the highlighted active record or by **F5** button, like that:

Main Admin Menu				
Profiles				
Profiles = 1 : 1				
Name	Admin Id	Status	Service Port	Feedback Port
profile	admin	Active	8081	8082

Input Record
Name
Admin Id
Admin Password
Service Port Log File Name
Feedback Port Err File Name
Log Size(KBs)

F5 button or left-click on the form caption "Input Record" will cycle the form thru 5 states: **input** as we see it above; **browse**(cannot change the record); **search** by any field "starting as..."; **search** by any field "containing..." and **edit**(which locks the record).

Note: To close the form use the same enter/escape technique – right-click or Escape button.

Note: Each form contains one "activator" button which actually inserts a new record into the Database or changes a record when is in edit mode. Browse and search modes does not show that button.

Note: Search in the table conducted after you type every symbol automatically; if match found the record is shown and highlighted.

Browse Mode – you can see the fields but cannot change them:

Profiles = 1 : 1				
Name	Admin Id	Status	Service Port	Feedback Port
profile	admin	Active	8081	8082

Browse Record
Name: profile
Admin Id: admin
Admin Password: admin
Service Port: 8081
Feedback Port: 8082
Log File Name: log.txt
Err File Name: err.txt
1024

Search mode - looking for a record with a field "Admin Id" **containing** "ad":

Profiles = 1 : 1				
Name	Admin Id	Status	Service Port	Feedback Port
profile	admin	Active	8081	8082

Find Record Containing...
Name:
Admin Id: ad
Admin Password:
Service Port:
Feedback Port:
Log File Name:
Err File Name:

Search mode - looking for a record with a field "Admin Id" **starting with** "ad":

Profiles = 1 : 1				
Name	Admin Id	Status	Service Port	Feedback Port
profile	admin	Active	8081	8082

Find Record Starting...
Name:
Admin Id: ad
Admin Password:
Service Port:
Feedback Port:
Log File Name:
Err File Name:

Edit mode – the record is locked by you (anybody else will see the lock locked):

Name	Admin Id	Status	Service Port	Feedback Port
profile	admin	Active	8081	8082

Edit Record
Name: profile
Admin Id: admin
Admin Password: admin
Service Port: 8081
Feedback Port: 8082
Log File Name: log.txt
Err File Name: err.txt
Log Size(KBs): 1024

Edit mode – two clients working with **Profiles Layer** – two kinds of locks visible:

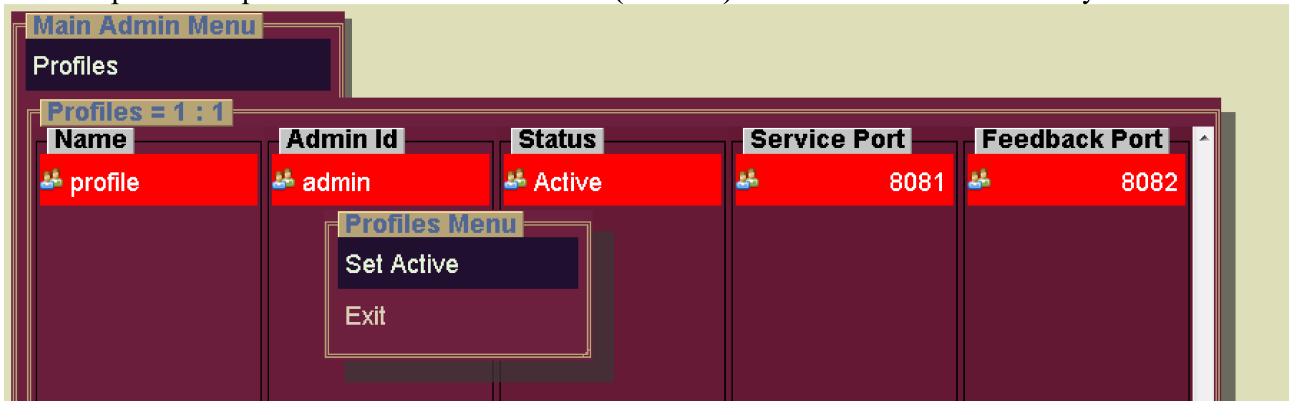
Name	Admin Id	Status	Service Port	Feedback Port
profile	admin	Active	8081	8082

If that second client at the front tries to open the locked record for editing, the form will skip the edit mode, will set the input mode and show the message:

Name	Admin Id	Status	Service Port	Feedback Port
profile	admin	Active	8081	8082

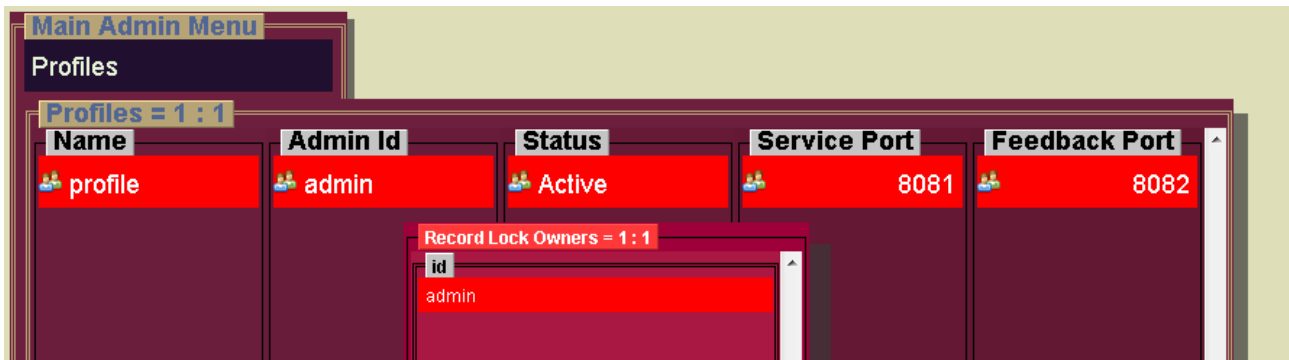
Input Record
Record locked for editing by admin
Admin Password:

To set a particular profile "active" use a **service(context) menu** which is activated by F2 button:

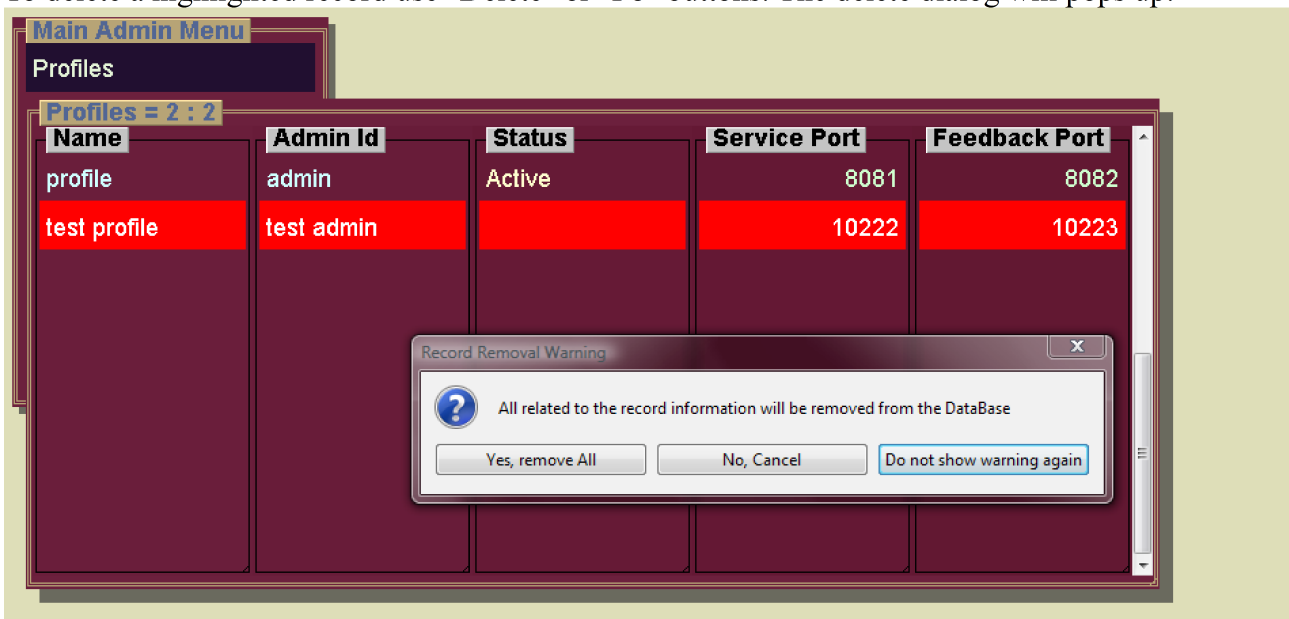


When using "Set Active" menu line you will be reminded to restart the server to make your active profile "effective" – server looks into active profile only when starting up.

Note: the record now is locked by another lock type – "people working below", which protects the record from deletion. By clicking on the lock icon another user will find out who is the lock owner:



To delete a highlighted record use "Delete" or "F8" buttons: The delete dialog will pops up:

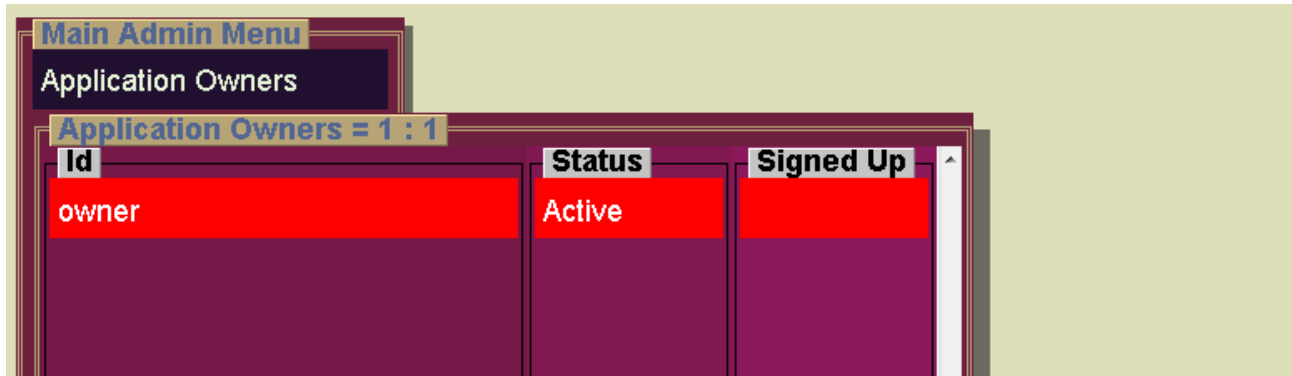


Note: a record deletion might involve a lot of changes in a complex Application, use the function wise.

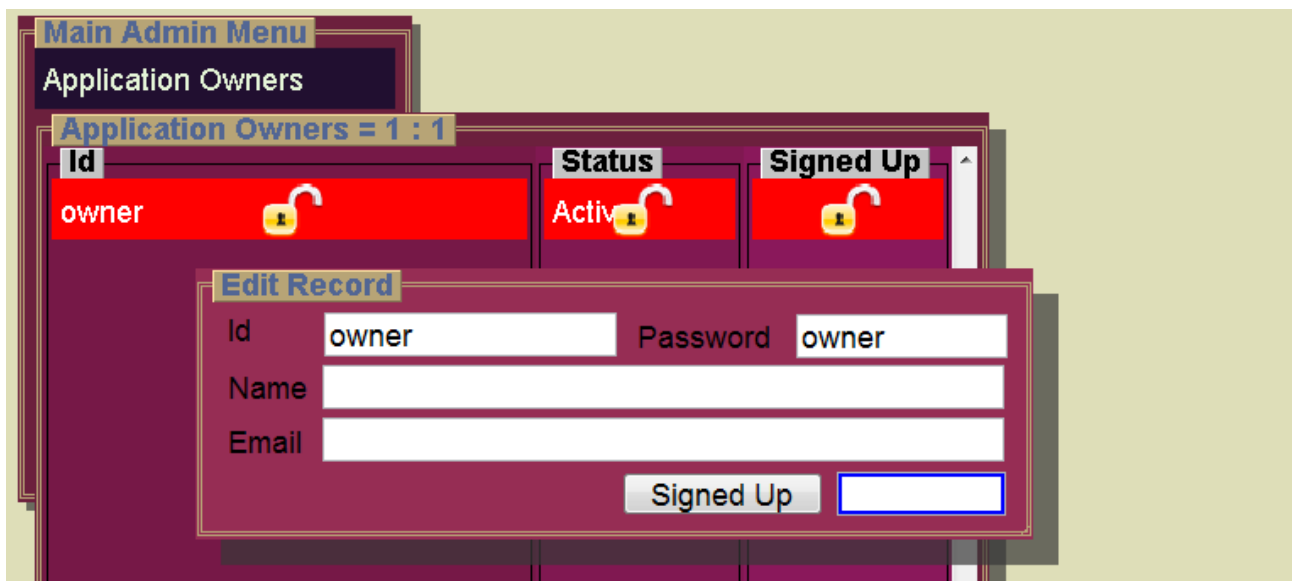
4. Applications and User Access Control.

The **Administrator** creates and controls unlimited number of **Application Owners**. The **Administrator** creates and controls unlimited number of **Applications** for those **Owners**. **Application Owners** control unlimited number of **User Groups** for each **Application**, with different access rights and entry points. **Application Owners** create and control unlimited number of **Users** in each **User Group**. **Administrator** and **Application Owners** have access to basic usage statistics for each **Application** and every **User**.

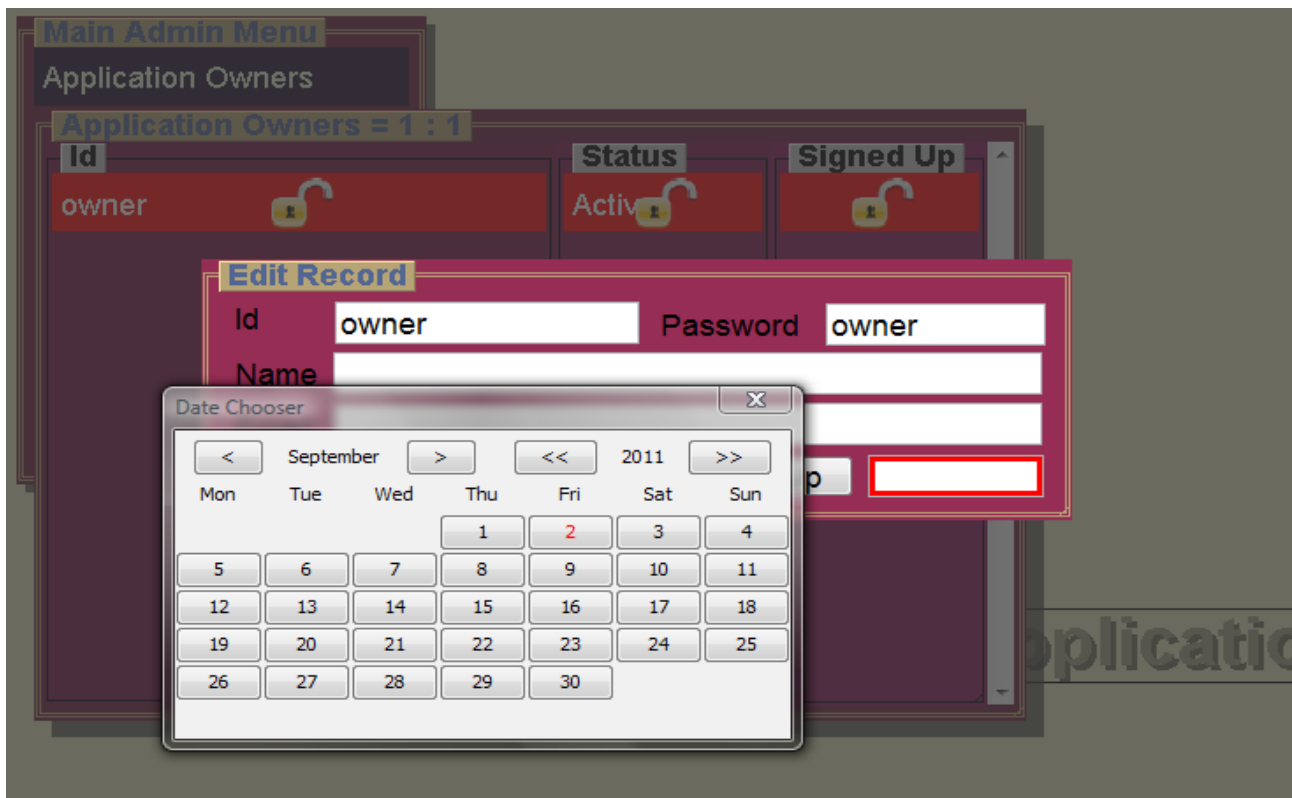
Lets enter "Application Owners" layer:



Lets edit some fields:

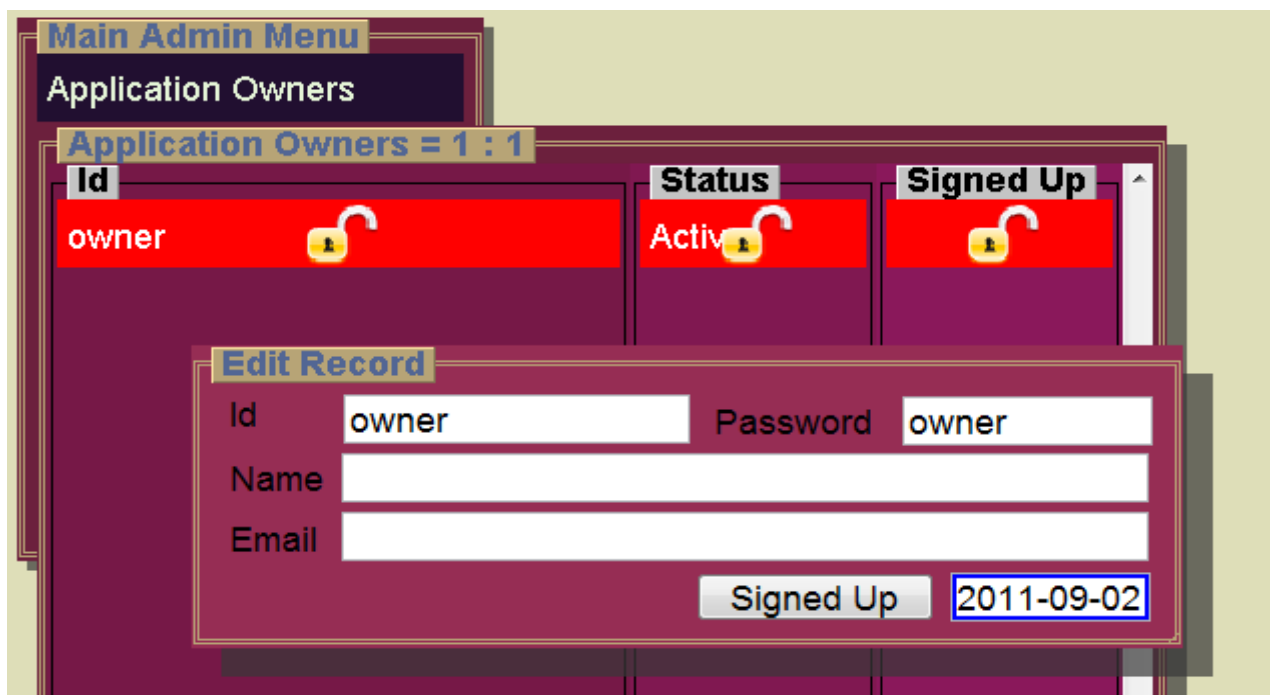


The blue border of the "Signed Up" field works like a hyperlink – click it or CTRL/Space it and "supporting" component pops up – in our case it is a Calendar Dialog:



Click on the particular day and it will set the value in the "supported" field. Client UI has darkened everything except receiving field and supporting layer. Think of those supports as of big drop down lists. Before visualizing themselves those supports clear the supported field. A Calendar and a Clock could be "escaped" by clicking on the "kill"-button – they are native Java Dialogs yet. Datalator native layers could be escaped by standard enter/escape technique.

Note: input form in the "browse" mode will not activate supporting "hyperlinks", only when in "input" or "edit" modes.



You can save that record now or change more fields. Click "activator" button to save or press Escape key to close the input form.

Note: when record is saved, the input form releases the lock and switches itself to "browse" mode.

Lets enter the "owner" record and get the next layer – "Applications", belonging to this owner.

The screenshot shows a web application interface. At the top, there's a 'Main Admin Menu' and a section for 'Application Owners'. Below this, a table titled 'Applications = 1 : 1' is displayed. The table has columns: Application name, Status, Logins, Hits, DB size, and Started On. The first row shows 'DatalatorApplication' with Status 'Active', Logins '1', Hits '16', DB size '0', and Started On empty. An 'Input Record' dialog is open in the foreground, allowing the user to add a new application. The dialog has fields for 'Application name' and 'Started On', and a 'Started On' button.

Application name	Status	Logins	Hits	DB size	Started On
DatalatorApplication	Active	1	16	0	

Here we observe an only application – "DatalatorApplication" which serves as an example – there is no such application in the installation package. We can see that the input form does not provide access to a few table fields – they are computed automatically. Lets create a new Application:

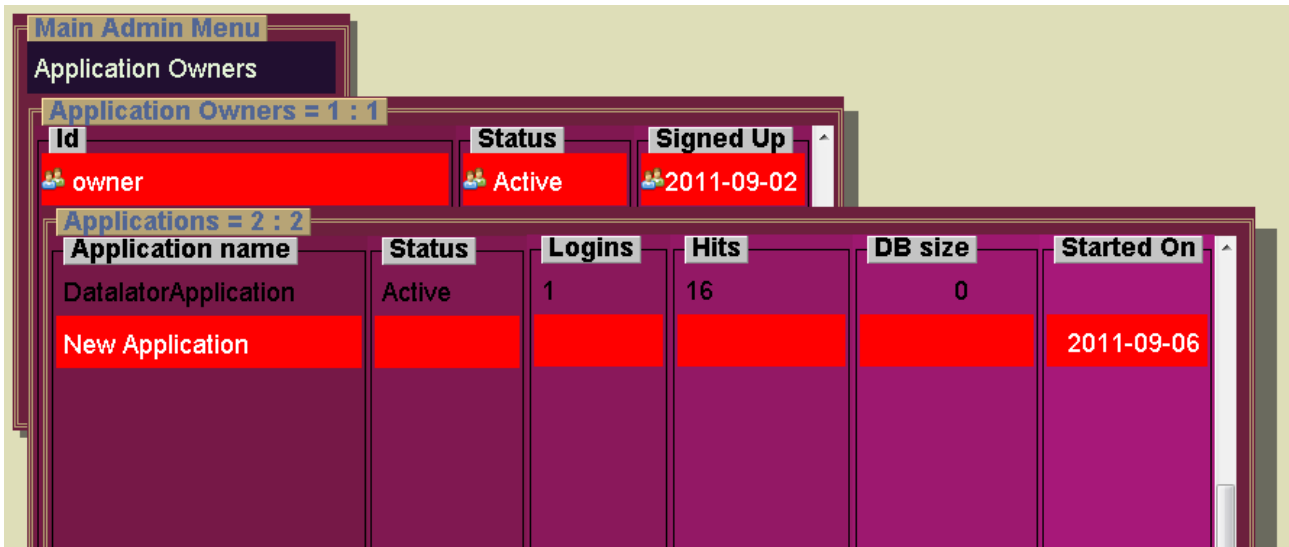
The screenshot shows the same web application interface as before. The 'Input Record' dialog is still open, but now the 'Application name' field contains 'New Application' and the 'Started On' field contains '2011-09-06'. The 'Started On' button is still visible.

Application name	Status	Logins	Hits	DB size	Started On
DatalatorApplication	Active	1	16	0	

Save the new record by clicking on the "Started On" button or pressing "Enter" button when cursor in the last input field – in our case that is "Started On" field.

Note: when filling in the form, "Enter" button will move cursor to the next field just like "Tab" button does, unless your cursor is in the last field; "Tab" will cycle your cursor further while "Enter" will insert a new record into the table.

Lets insert the new record:



Main Admin Menu

Application Owners

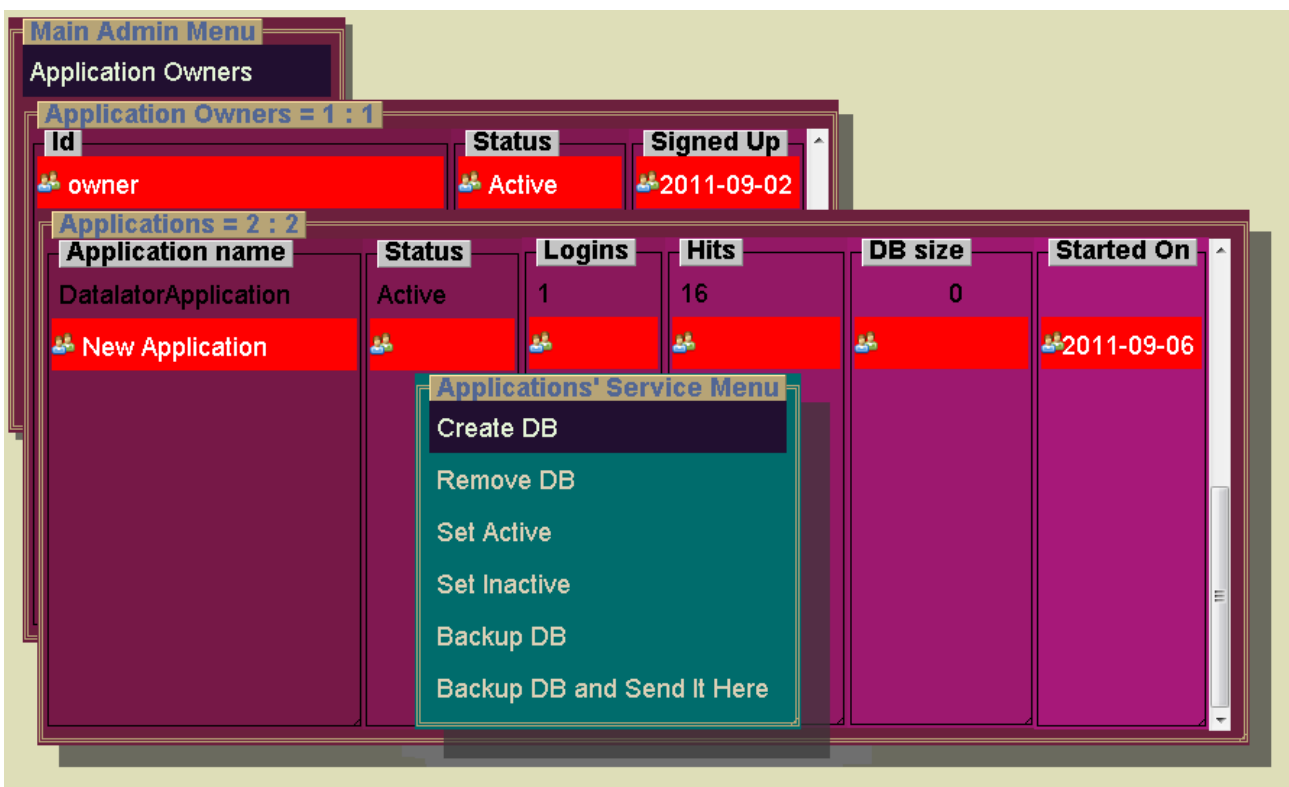
Application Owners = 1 : 1

Id	Status	Signed Up
owner	Active	2011-09-02

Applications = 2 : 2

Application name	Status	Logins	Hits	DB size	Started On
DatalatorApplication	Active	1	16	0	
New Application					2011-09-06

Here we go, the record is added. Now we must **enter** a "service" or "context" menu by pressing F2 button to actually create the "New Application":



Main Admin Menu

Application Owners

Application Owners = 1 : 1

Id	Status	Signed Up
owner	Active	2011-09-02

Applications = 2 : 2

Application name	Status	Logins	Hits	DB size	Started On
DatalatorApplication	Active	1	16	0	
New Application					2011-09-06

Applications' Service Menu

- Create DB
- Remove DB
- Set Active
- Set Inactive
- Backup DB
- Backup DB and Send It Here

Apply "Create DB" first, which will create a new folder in the Datalator home directory:

Name	Date modified	Type	Size	Tags
AdminApplication	06/09/2011 10:59 ...	File Folder		
lib	30/08/2011 4:50 PM	File Folder		
New Application	06/09/2011 12:08 ...	File Folder		
_old_err.txt	02/09/2011 1:09 PM	Text Document	1 KB	
_old_log.txt	02/09/2011 1:09 PM	Text Document	8 KB	
DatalatorClient3.jar	30/08/2011 2:47 PM	Executable Jar File	813 KB	
DatalatorServer3.jar	30/08/2011 4:50 PM	Executable Jar File	82 KB	

Now press the F2 button again and apply "Set Active" action to allow access to newly created Application (or Database):

Main Admin Menu

Application Owners

Application Owners = 1 : 1

Id	Status	Signed Up
owner	Active	2011-09-02

Applications = 2 : 2

Application name	Status	Logins	Hits	DB size	Started On
DatalatorApplication	Active	1	16	0	
New Application	Created	0	0	2,143,238	2011-09-06

Applications' Service Menu

- Create DB
- Remove DB
- Set Active**
- Set Inactive
- Backup DB
- Backup DB and Send It Here

And the "Applications" table will look like that:

Main Admin Menu

Application Owners

Application Owners = 1 : 1

Id	Status	Signed Up
owner	Active	2011-09-02

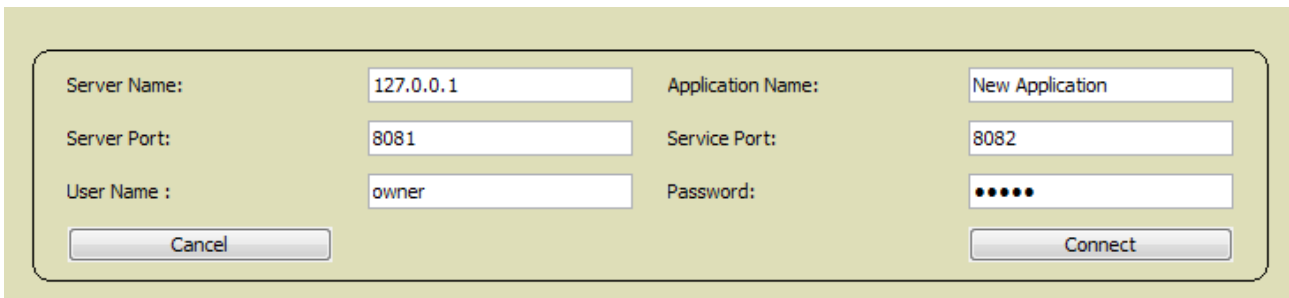
Applications = 2 : 2

Application name	Status	Logins	Hits	DB size	Started On
DatalatorApplication	Active	1	16	0	
New Application	Active	0	0	2,143,238	2011-09-06

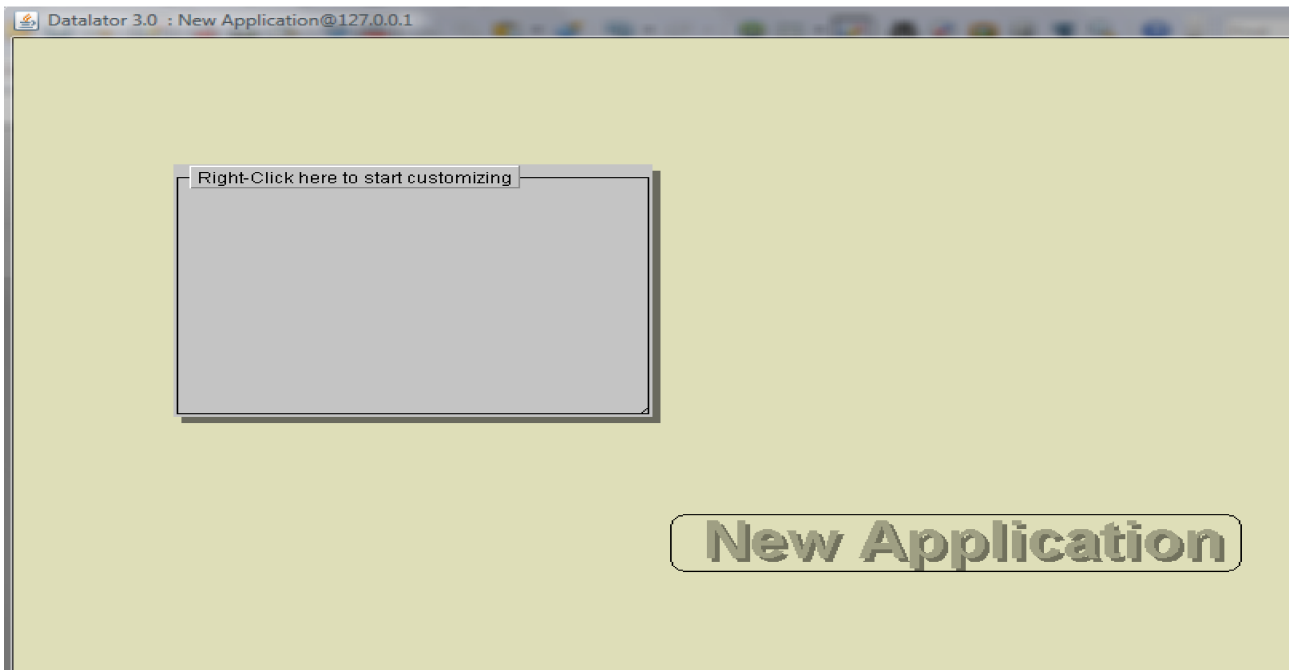
Every time you enter "Applications" layer you get the basic stats on every application: number of logins, hits(client actions like "enter" or "edit") and Database size on the server machine.

The other lines of shown above **service menu** is self explanatory: "Remove DB" line will erase the application folder, "inactive" application will not accept any logins, "Backup" will create a backup zip file in the home directory and "Backup and Send" line will download that backup archive to the client machine. The size of zipped archive should be less then 64Mbs to be downloaded thru AdminApplication; that usually translates into 500+MBs of the size shown in "DB size field". Bigger Databases should be downloaded by FTP means.

After creating and activating of a new application you **must** sign in to that application as an administrator with credentials "admin/admin" or as an owner with credentials "owner/owner" like that to create at least one entry point into the New Application:



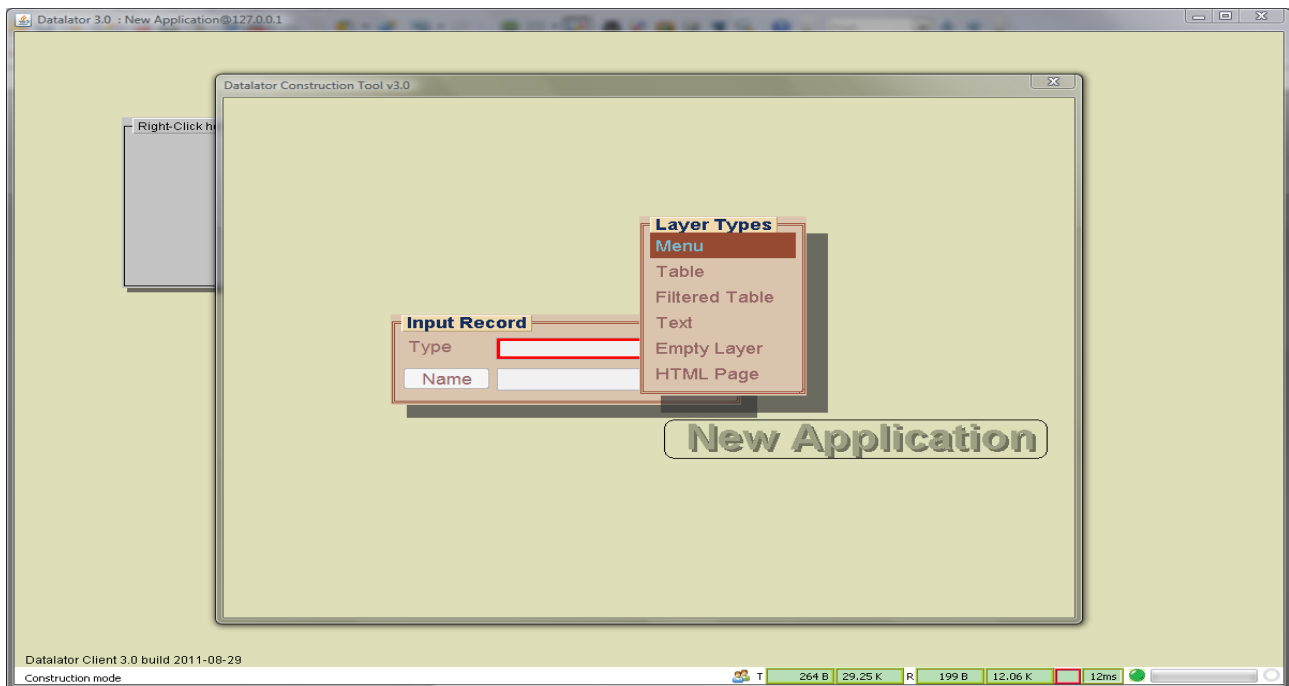
You have to create an entry point (a Layer as we call it) to allow it to be entered by users. Visual development is discussed in details in "Visual Development Guide", here we just briefly describe how to create a simple entry. Here is what you get when you connect to the "empty" application for the first time:



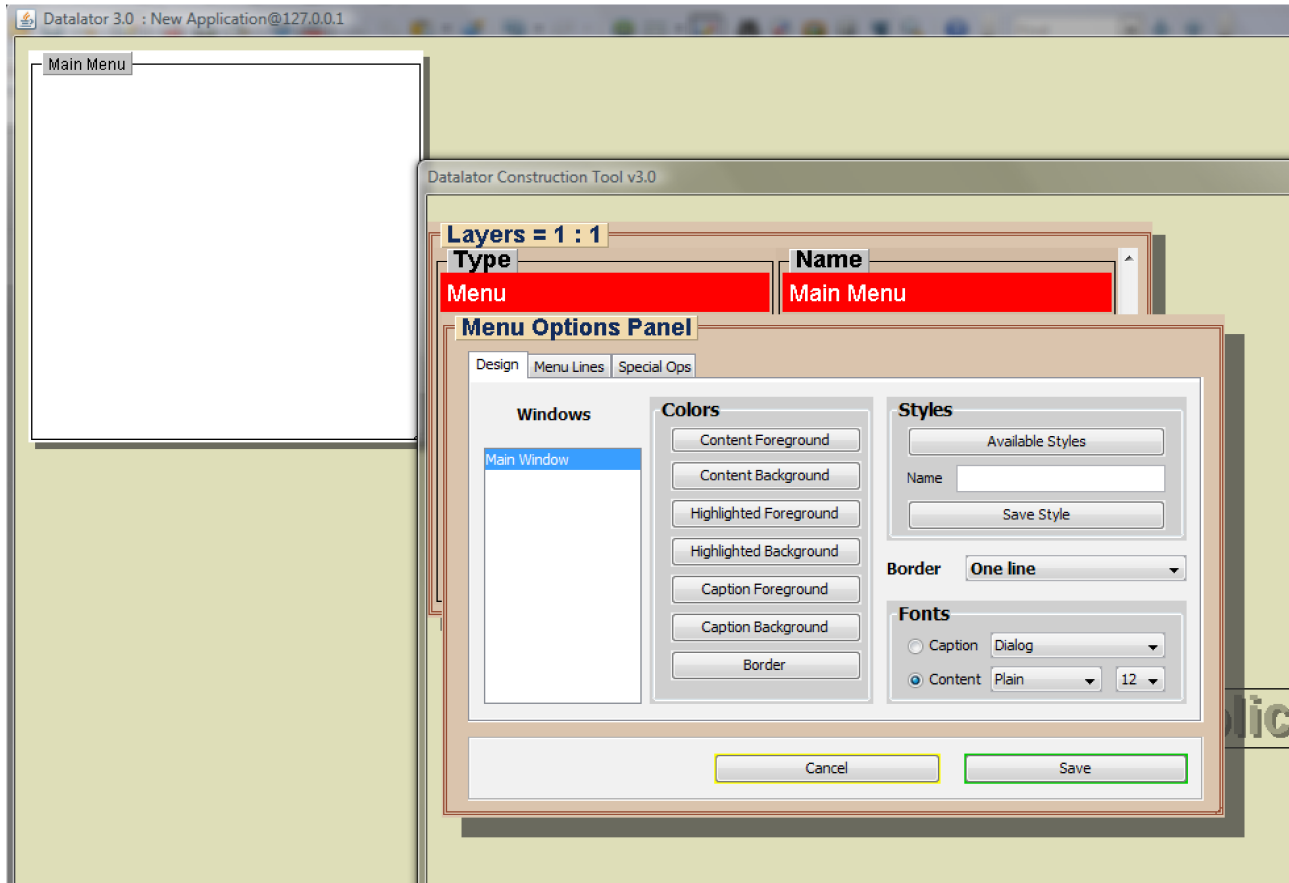
Follow the prompt and right-click on the caption of the "dummy" layer. This will invoke a visual "construction" tool (see screenshot below). To create a layer you have to choose a type and give it a name. In our case we use "Menu" layer type and "Main Menu" as a name. To stop construction - press "Escape" key, to proceed – populate the fields and click on "Name" button.

Note: an entry layer for an application is always a "Menu" layer.

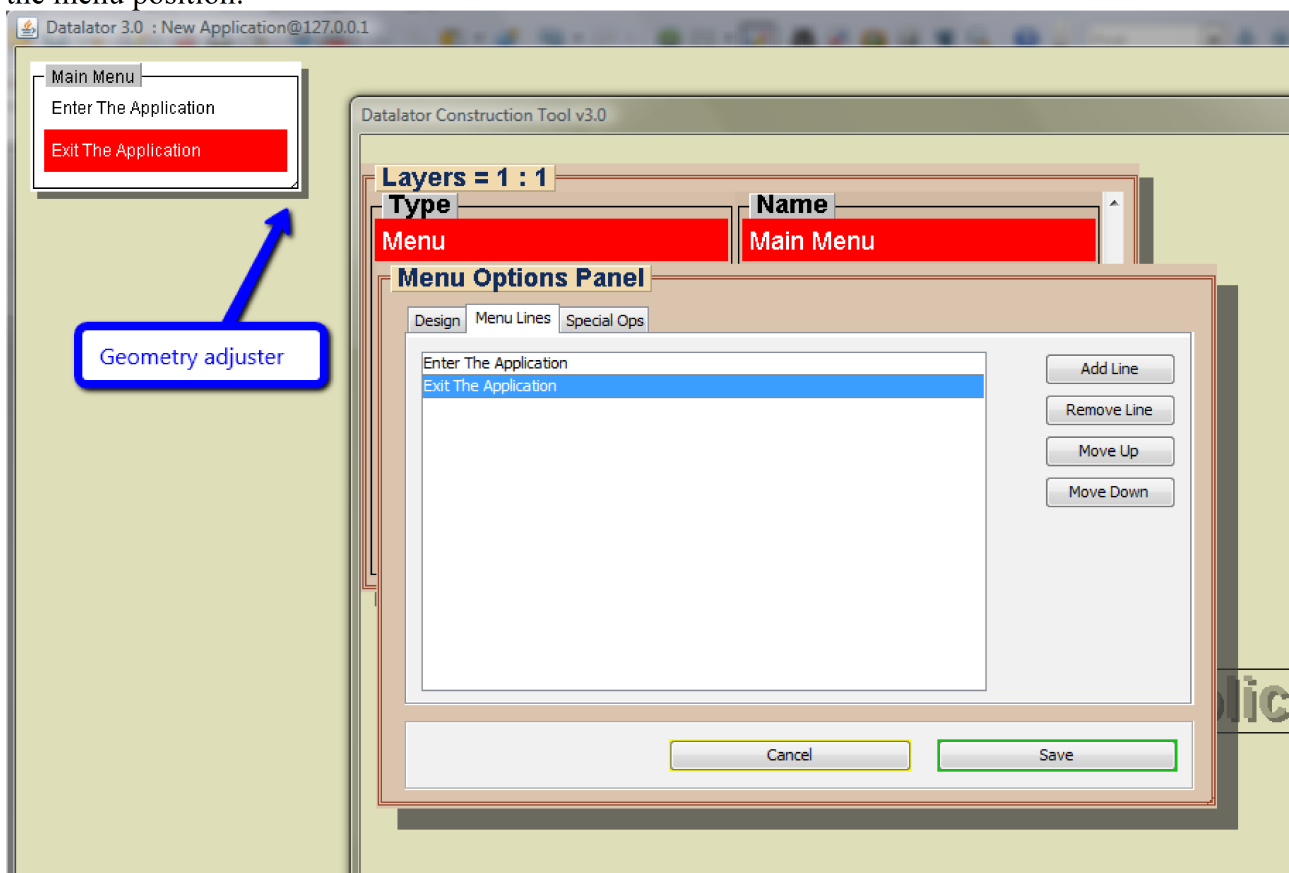
Note: to disconnect from an application just click the "kill"-button in the right top corner of the client application frame. The client will "escape" all activated layers, passing navigation details to the server, will request the server to close it's session and will shut itself down.



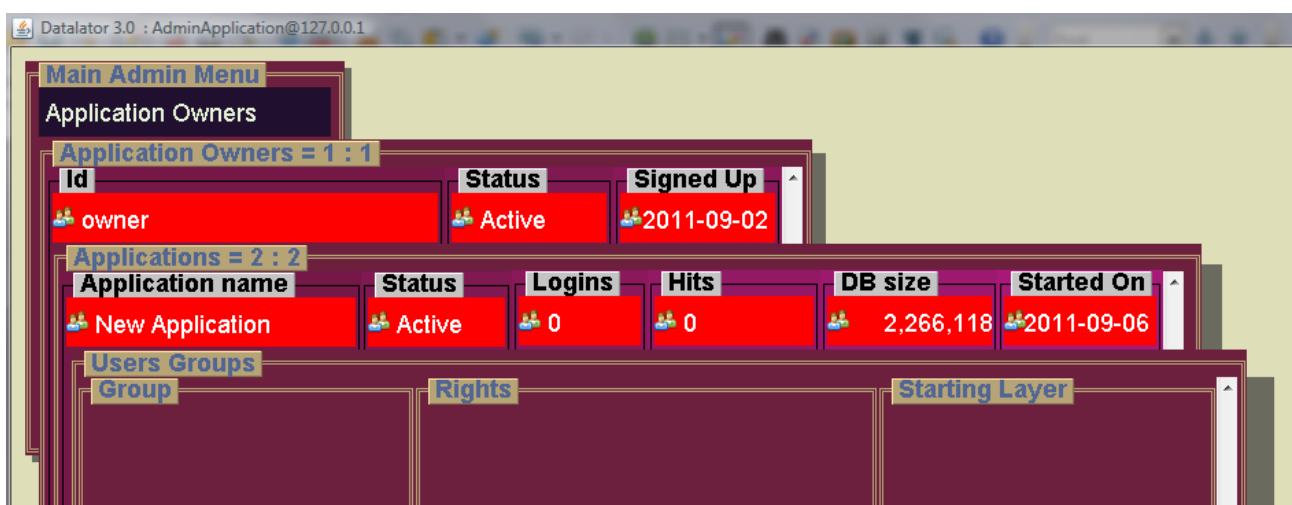
After defining "Type" and "Name" fields and clicking the "Name" button the menu will be created and the tool will show the menu customization controls:



By using the "Menu Lines" tab we can define a couple of menu lines. By dragging the menu "geometry adjuster" we can set the menu dimensions, by dragging the menu caption we can define the menu position:



The simplest entry layer is designed. To save and deploy it click "Save" button on the construction tool. Now we can return back to administration review. Click the "kill"-button of the "New Application" frame and sign in as admin/admin into "AdminApplication" again. Navigate thru "Main Admin Menu" and "Application Owners" to "Applications" layer and into the "New Application" record:



Note: an administrator or an owner logins/hits does not count against usage stats, only activity of defined users collected.

Here we activated the "Users Groups" layer and it is empty. Lets open an input form (F5) and define a few groups, like this:

That is how "Developers" are created:

Application Owners = 1 : 1

Id	Status	Signed Up
owner	Active	2011-09-02

Applications = 2 : 2

Application name	Status	Logins	Hits	DB size	Started On
New Application	Active	0	0	2,266,118	2011-09-06

Users Groups

Input Record

Group: Developers

Rights: Read, Create, Update, Delete, Design

Starting Layer: Main Menu

Users' Rights

- Read
- Read, Create
- Read, Create, Update
- Read, Create, Update, Delete
- Read, Create, Update, Delete, Design

Note: Users Groups(roles) could be named to suit your taste and the application logic, they could be assigned different rights and different entry layers. The group name could be read programmatically to provide advanced access control.

Applications = 2 : 2					
Application name	Status	Logins	Hits	DB size	Started On
New Application	Active	0	0	2,266,118	2011-09-06

Users Groups = 4 : 4		
Group	Rights	Starting Layer
Developers	Read, Create, Update, Delete, Design	Main Menu
Guests	Read	Guest Menu
Accountants	Read, Create, Update	Accountants Menu
The Bosses	Read, Create, Update, Delete	Bosses Menu

All groups have different entry layers and different access rights. So far only "Main Menu" exists , so only users from "Developers" group could connect to the "New Application". Lets enter the "Developers" record and define three developers:

The screenshot shows a user management interface. At the top, there are three tabs: "Users Groups = 1 : 4", "Rights", and "Starting Layer". The "Users Groups" tab is active, showing a list of users under the "Developers" group. The table has columns for Id, Name, Status, Logins, Hits, and Started on. Two users are listed: dev1 (Joe) and dev2 (John). Below the table, there is an "Input Record" form with fields for Id, Name, Password, Email, and Started on. The form is currently empty, with the "Started on" field set to 2011-09-06.

Id	Name	Status	Logins	Hits	Started on
dev1	Joe				2011-09-06
dev2	John				2011-09-06

Input Record

Id: Name:
 Password: Email:
 Started on:

They are: Joe with credentials "dev1/dev1", John with "dev2/dev2" and Jim with "dev3/dev3". The server will collect statistics on the number of logins and hits for each of them. We just have to use a "context" menu for the "Users" layer to set their status "Active", like that:

The screenshot shows the same user management interface, but now with three users listed: dev1 (Joe), dev2 (John), and dev3 (Jim). The status for all three users is "Active". A context menu is open over the "dev3" user, showing options "Set Active" and "Set Inactive".

Id	Name	Status	Logins	Hits	Started on
dev1	Joe	Active			2011-09-06
dev2	John	Active			2011-09-06
dev3	Jim	Active			09-06

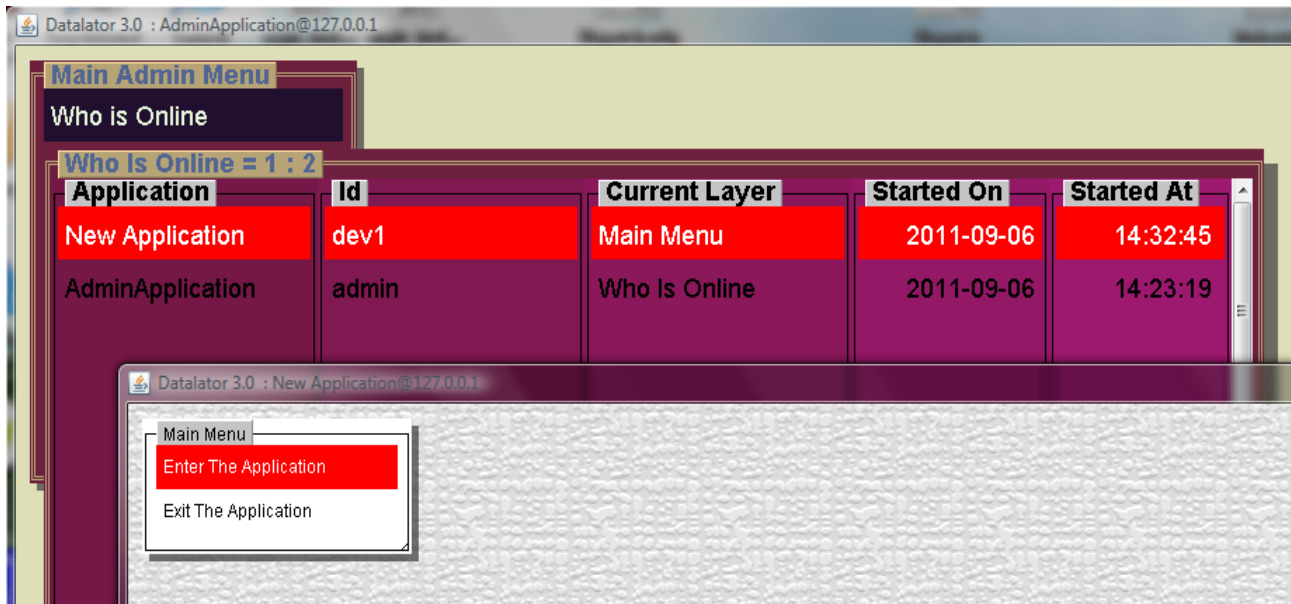
Users' Service Menu

- Set Active
- Set Inactive

Note: If we delete "Developers" from the "Users Groups", all 3 our developers will be deleted along. If we delete "New Application" from "Applications", all Users Groups and all Users will be erased. The deletion of "owner" from "App Owners" will remove all applications of that Owner, all applications' User Groups and all their Users.

5. Checking Who Is Online.

If we enter in "Who is Online" line of "Main Admin Menu", we would see all the active sessions with a few details and a "context" menu(F2) with the only action available – "Close The Session". This layer content is updated in real time, reflecting users navigation inside applications:



Here we can see two users connected to the same Datalator server at 127.0.0.1. On the front plan we can see our freshly created Developer "dev1/dev1" connected to "New Application" and currently has "Main Menu" activated.

In AdminApplication the layer "Who is Online" activated, which shows that "admin" is right there and "dev1" is staring at his "Main Menu" layer.

Note: "Who Is Online" prime purpose is to provide means to "close" the session of a particular user if needed. That layer reflects info on "active" sessions only and does not save info on past activity, but might be extended to serve as a complete Software As A Service (SaaS) platform.

6. Working With Logs.

There are 2 generations (present and previous) of 2 types of logs(activity log and errors log) supported by the Datalator server. Those logs could be accessed thru "Logs" line of the "Main Admin Menu".That line activates"Logs" layer which provides access to shown types of logs.



Lets activate "Present Log's Content" line:



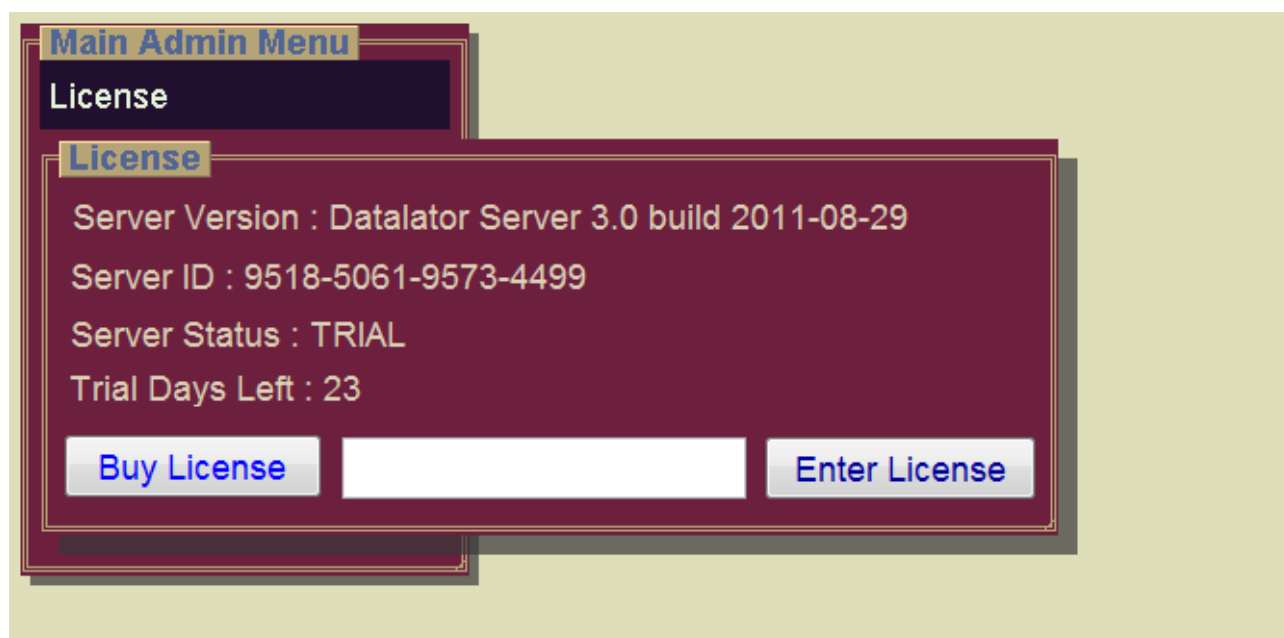
As we can see Datalator 3.x keeps logs of major users activity on the level of users commands. Server startup and shutdown are marked by stars "****", users sign ins and sign outs are marked with dashes "---" and users requests or commands are prefixed with the ids of the user ("admin" in our case). Any problems occurred during requests fulfillment will be marked with stars "****". When server is restarted the "present" log becomes a "previous" one and "present" starts from the scratch. The same "logs regeneration" happens when the size of the "present" log reaches the limit, set up in the active profile. Activity logs and errors logs are kept as plain text files in the Datalator server home directory with the names defined in the active profile.

Note: Log files could be downloaded from the server or their content could be copied to OS clipboard from the "Logs ... Content" text layers.

Note: Format and behavior of errors logs are the same as activity logs, except they contain only startup/shutdown and errors (if any) related information.

6. License Control.

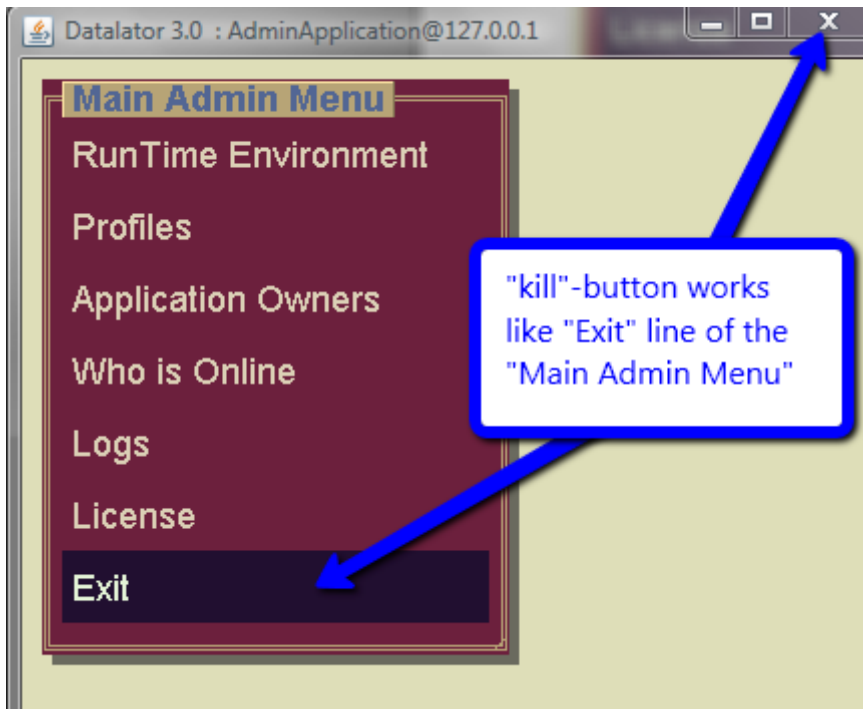
To check the server version, build date and license status you should enter the "License" line of the "Main Admin Menu":



That layer is self explanatory. After trial period is over the server will not restart, till you use your Server ID to buy a license. On a Windows machine "Buy License" button will attempt to start Internet Explorer and load the page at "<http://www.fancydata.com/buy.html>". If you run another OS and/or browser, you can always navigate there manually. We use a PayPal secure engine as of now to accept the payments and after transaction is complete, we email you your license number promptly. Enter it in the provided text field, click "Enter License" button and change the status of your Datalator server to "Activated".

7. Stopping Administrator Application.

To stop working with the AdminApplication you either use the "kill"-button of the application frame or "enter" the "Exit" line of the "Main Admin Menu". That stops the client.



To stop the server use "Shut Down" button from the "RunTime Environment" layer.