



CREATIVITY THROUGH EFFICIENCY

An automated predictive datamining tool

*TIMi Deployment & Configuration*_{v1.09}

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1. Introduction

This is a technical document. Please review the content of this section with the proper IT technician.

This document covers the different configurations steps required to deploy TIMi on a new machine.

You can install TIMi practically on any windows-based machine: i.e. The minimum system Requirements for TIMi installation on a server or workstation are:

OS: Windows 2000, XP, Vista, Win7, Windows8, Win10

Strongly advised: No virtual machine: By default, TIMi won't run in a VMWare virtual Machine or equivalent software. If you need to run TIMi in a VMWare virtual Machine, you should request either:

- ...a "special" Serial Number that authorizes a Virtual Machine.
- ...a Network License (the Network License is free when you buy a TIMi license). This is the preferred solution.

RAM: Minimum 2GB per simultaneous user. Large data-transformations require more RAM.

Video Card: To use StarDust, you need a 3D-hardware-accelerated-graphical card that supports OpenGL2.0 (any computer produced after 2007 will do the trick). The specific OpenGL drivers from you video card manufacturer must be installed (do not use "generic" OpenGL drivers installed with Windows).

If you want to buy a new server dedicated to running TIMi, please refer to the document "[TIMi_infrastructure.pdf](#)" for more information about the ***optimal*** hardware infrastructure to deploy TIMi.

There are two ways to deploy TIMi: You can either choose a server-installation or a desktop-installation. The installation of TIMi on any machine (server or desktop) is performed using the same user-friendly classic setup software (typically, everything is installed in less than 5 minutes).

There also exists a "portable" version of TIMi. The "portable" version offers the same features as the "normal" version, except that there is no installer software (the installer is replaced with a simple ZIP archive that you decompress). It is not required to have any administrator rights to install the "portable" version of TIMi.

You don't need any administrative rights to be able to use 99% of the functionalities offered by TIMi.

On a desktop, the TIMi Suite installation (the "portable" version or the "normal" version) usually takes less than 5 minutes.

2. TIMi installation

Before starting the installation, you should download all the required installation files.

	32 Bit	64 Bit
TIMi Maximal Install (portable)	These 3 files: unzip.exe unzip_TIMi32_Portable_in_C_SOFT.bat TIMiPortableFull_win32.zip	These 3 files: unzip.exe unzip_TIMi64_Portable_in_C_SOFT.bat TIMiPortableFull_x64.zip
TIMi Maximum Install (setup.exe)	http://download.timi.eu/TIMi64_Full/TIMiSetup_Full.exe	
TIMi Minimum Install (portable)	coming soon	coming soon
TIMi Minimum Install (setup.exe)	coming soon	
ODBC driver: Oracle	http://download.timi.eu/ODBC/ODBC_drivers_Oracle/	
ODBC driver: MySQL	http://download.timi.eu/ODBC/ODBC_drivers_MySQL/	
ODBC driver: Teradata	http://download.timi.eu/ODBC/ODBC_drivers_Teradata/	
ODBC driver: Ms-Access	http://download.timi.eu/ODBC/ODBC_drivers_Access/	
ODBC driver: Ms-SQLServer	http://download.timi.eu/ODBC/ODBC_drivers_SQLServer/	
ODBC driver: SQLite	http://download.timi.eu/ODBC/ODBC_drivers_SQLite/	
ODBC driver: DB2	http://download.timi.eu/ODBC/ODBC_drivers_IBM_DB2/	
ODBC driver: Sybase	http://download.timi.eu/ODBC/ODBC_drivers_Sybase/	
*R engine + extra R libraries (see section 3.4 below for more information)	http://download.timi.eu/R/R_with_libraries.zip	
*Stardust VR extension (see section 4.3. below for more information)	n/a	http://download.timi.eu/StardustVR.zip
Jenkins (see section 4.4 below for more information)	http://download.timi.eu/ThirdParty/jenkins-2.150.2.zip	
Kibella (see section 4.5 below for more information)	http://download.timi.eu/Kibella/Kibella_UwAmp.zip	
Python v3.x Engine (Anaconda) (see section 4.11 below for more information)	http://download.timi.eu/Python/	
TrueCrypt (see section 4.12 below for more information)	http://download.timi.eu/ThirdParty/TrueCrypt_Setup_7.1a.exe	
*Tableau Data File creator (see section 4.13 below for more information)	TableauServer_w32.zip	TableauServer_x64.zip
Versioning System	We suggest (but TIMi will work with any versioning tool): GIT: https://tortoisegit.org/download/ SVN (Subversion): https://tortoisesvn.net/downloads.html	
IoT Broker	Any MQTT-compatible broker is ok. We suggest: Mosquitto (already included inside the TIMi distribution), Kafka , RabbitMQ .	
*Spatialite GIS extention (see section 4.15.1 below for more information)	spatialite-w32.zip	spatialite-x64.zip
OleDB driver : SAS dataset (see section 4.17 below for more information)	http://download.timi.eu/ThirdParty/sasoledb_64bit_and_32bit.zip	

* : already included inside the “TIMi Maximal Install (portable)”

2.1. Maximal install using the portable version.

This is the preferred installation procedure when installing (or upgrading) TIMi on a server.

The “maximum installation” contains all the files from the “minimal installation” plus:

- R engine + extra R libraries (see section 3.4 below for more information)
- Stardust VR extension (see section 4.3. below for more information)
- Tableau Date File creator (see section 4.13 below for more information)
- Spatialite GIS extension (see section 4.15.1 below for more information)

The installation procedure is:

- Download the 3 files from:
 - For a 64-bit PC:
 - http://download.timi.eu/TIMi64_Full/unzip.exe
 - http://download.timi.eu/TIMi64_Full/unzip_TIMi64_Portable_in_C_SOFT.bat
 - http://download.timi.eu/TIMi64_Full/TIMiPortableFull_x64.zip
 - For a 32-bit PC:
 - http://download.timi.eu/TIMi32_Full/unzip.exe
 - http://download.timi.eu/TIMi32_Full/unzip_TIMi32_Portable_in_C_SOFT.bat
 - http://download.timi.eu/TIMi32_Full/TIMiPortableFull_win32.zip
- Place the 4 downloaded files inside the same directory and execute (double-click) the file “unzip_TIMi??_Portable_in_C_SOFT.bat”. This will install TIMi inside the (default) directory:
C:\soft\TIMiPortable
- **Optional (admin required):** Run the executable:
"<root_of_install_dir>\Add_TIMi_ShortCut_On_All_Desktops.exe"
This will add 2 shortcuts (one shortcut to run TIMi and one shortcuts to run Anatella) on **all** the desktops from all the users from the server.
- Follow the procedure described in the document [TIMi License Guide en.pdf](#) to get the Serial Number for TIMi
- Install and configure the required additional components (see the sections 3 and 4 below). In particular, you should still decide if you want to install the additional components:
 - Kibella (dashboarding: see section 4.5 below for more information)
 - Jenkins (scheduler: see section 4.4 below for more information)
 - Python (see section 4.11 below for more information)
 - TrueCrypt (disk encryption: see section 4.12 below for more information)
 - TortoiseSVN or TortoiseGIT (code versioning: see section 4.14 below for more information)
 - A IoT broker (Kafka, RabbitMQ, etc.) (see section 4.16 below for more information)

2.2. Minimal installation using the portable version.

Coming soon

2.3. Minimal installation with the Wizard-based Installation tool.

 **Admin Privileges Required** to run the installation software.



We advise you to install TIMi inside the directory “C:\Soft\TIMi” rather than inside the directory “C:\Program Files\TIMi” because it’s easier for the users working on the server to upgrade TIMi when TIMi is installed inside “C:\Soft\TIMi” (i.e. no administrative privileges are required to upgrade TIMi when TIMi is installed inside the directory “C:\Soft\TIMi”).

Coming soon

3. Minimum Configuration tasks to perform when installing TIMi

When installing TIMi on a new machine, your IT department has to perform the following configuration tasks:

3.1. MS-Office

 **Admin Privileges Required** to install MS-Office


Microsoft Office 2007 (or a later version) is installed. MSWord and MExcel software are required to view (and not to generate) the reports created by Timi Modeler and Anatella.

It’s strongly suggested to:

- Avoid using any Free Office solutions like “OpenOffice” because these free solutions are usually not able to open the large reports generated by TIMi (and, anyway, the text formatting is terrible).
- Use the MSOffice 2010 (or later) rather than MSOffice 2007 (because MSOffice 2010 and later version are a lot faster to open large documents).

Upon request, we can provide you with any number of Microsoft Office 2016 licenses and perform the installation.

3.2. Installation of ODBC & OleDB drivers

 **Admin Privileges Required** to install the required ODBC/OleDB drivers to connect to your databases.


ODBC or OleDB drivers required to connect to your databases must be installed and configured. If you want to use the 64 bit version of Timi Anatella or Stardust (this is the default version), you must install the 64-bit version of your ODBC & OleDB drivers (i.e. 32 bit ODBC/OleDB drivers cannot be used inside a 64 bit application).

Here are some common ODBC drivers that are known to work perfectly with Anatella:

- Oracle ODBC drivers:
http://download.timi.eu/ODBC/ODBC_drivers_Oracle/

- My SQL ODBC drivers:
http://download.timi.eu/ODBC/ODBC_drivers_MySQL/
- Teradata ODBC drivers:
http://download.timi.eu/ODBC/ODBC_drivers_Teradata/
- MS-Access ODBC drivers:
http://download.timi.eu/ODBC/ODBC_drivers_Access/
- MS-SQL Server ODBC drivers:
http://download.timi.eu/ODBC/ODBC_drivers_SQLServer/
- SQLite ODBC drivers (it's always a good idea to install these):
http://download.timi.eu/ODBC/ODBC_drivers_SQLite/
- IBM-DB2 ODBC drivers:
http://download.timi.eu/ODBC/ODBC_drivers_IBM_DB2/
- Sybase ODBC drivers:
http://download.timi.eu/ODBC/ODBC_drivers_Sybase/

3.3. Configuration of ODBC & OleDB links

 **Admin Privileges Required** to configure the required ODBC/OleDB links to connect to your databases (in some uncommon situations, this can also be configured by a “standard user without any privileges”).

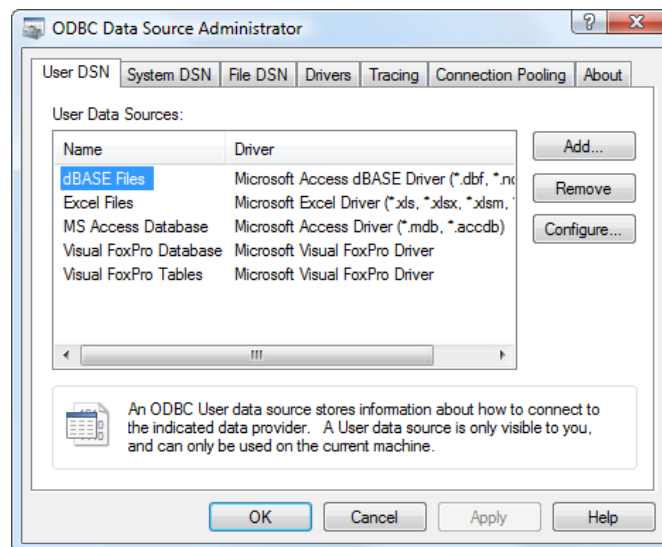
The ODBC or OleDB links or “DSN” required to connect to your databases must be configured.

Each user can have different ODBC connections that allow different access privileges to the database. ODBC links are configured using the software "Microsoft ODBC Data Source Administrator" available in the Windows Control Panel.

For more information, please refer to:

- the MSWindows documentation about ODBC links
- the documentation about the ODBC drivers of your specific database.
- the section 5.1.6. of the AnatellaQuickGuide.pdf (press F1 inside Anatella to read this PDF). This section includes documentation on:
 - how to open the correct "Microsoft ODBC Data Source Administrator" (there are two of them)
 - how to properly configure the Oracle ODBC driver (see section 5.1.6.4)
 - how to properly configure the Teradata ODBC driver (see section 5.1.6.3)
 - how to properly configure the MySQL ODBC driver (see section 5.1.6.6)
 - how to properly configure the Sybase ODBC driver (see section 5.1.6.5)
 - how to properly configure the IBM-DB2 ODBC driver (see section 5.1.6.7)
- to test your ODBC connection with Anatella, please refer to the section 5.1.6. and 5.2.2. of the AnatellaQuickGuide.pdf (press F1 inside Anatella to read this PDF).

Here is a screenshot of the "Microsoft ODBC Data Source Administrator":



3.4. (This is optional but strongly encouraged): To use the R engine inside Anatella

This is required if you want to use all the R-based Actions available inside Anatella.


If you want to benefit from the integration of the R Language inside Anatella, you must install & configure a standard R engine. A standard R engine is available here:

http://download.timi.eu/R/R_with_libraries.zip

A locally installed R engine is required to use all the Anatella Actions that are written in R. There are now many R-based-actions included inside Anatella and the installation of an R engine is strongly encouraged.

3.5. Firewall configuration: Data Access (1/3)

This is required if you want to access data located on remote computers.

 **Admin Privileges Required** to configure the firewall(s) to allow the functionalities listed below to work properly.

During normal operation, Anatella does not access the web (or any remote servers): There are however some exceptions such as the action listed below. For these actions, you need to open you firewall (or you can also add some additional rules in your firewall) to allow these Actions to work properly. These exceptions are:

- When Anatella accesses a remote database (such as Oracle, Teradata, SQLServer, etc.). It's actually not Anatella in itself that access the computer network but it's the database ODBC/OleDB driver.

When the database ODBC/OleDB driver starts to communicate with the database, you will see a new network connection initiated by the "Anatella.exe" process. Thus, you must change your firewall configuration to allow the "Anatella.exe" process to access your database.

As the developers from Anatella, we have no control or information on how the ODBC drivers communicates with the remote databases. Please, consult your database manual to have more information about this subject (e.g. to know which TCP/IP port to open).

For added security, you can create rules inside your firewall such that only the communications between the Anatella server(s) and the database server(s) are allowed.

- When Anatella is used to automatically download (or upload) every day some data files from some data provider (this is a very common scenario when working with “open data” or external data providers).

For all download/upload tasks, Anatella uses one tool named “Curl”. This tool is a well-known, famous, open source tool without any security vulnerability. You’ll find more information about this tool here: <https://curl.haxx.se/>

For added security, you can replace the default “curl.exe” executable (installed by default with Anatella) with some equivalent executables verified by your local security expert.

You must allow the “curl.exe” process (the “curl.exe” tool is automatically installed with Anatella) to access internet when using these Actions:



Extract information about companies from their VAT code



and



: send/receive files automatically through the HTTP/HTTPS/FTP/SFTP/SCP protocol.

- When Anatella accesses web-based services such as the following services (...but this is quite obvious that an access to the web is required to use these functionalities):
 - You must allow the “Anatella.exe” process to access internet when using these Actions:



and



to get/send email from POP, IMAP, SMTP servers




Geocoding (from “geocode farm” or from “Google”)



Google translate





Rosette API (text mining)

 Extract info from IP (for web intrusion detection techniques)

,  and : to send/receive SMS


- You must allow the “Anatella.exe” process to access other PCs inside your LAN when using these Actions:

 and : for map-reduce capabilities inside Anatella

- You must allow the “Anatella.exe” process to access your local MQTT Broker (IoT protocol) when using these Actions:


 and  and : for “Internet Of Things” or MQTT messaging inside Anatella.

3.6. Firewall configuration: Remote Desktop (2/3)

 to configure the firewall(s) to allow a Remote desktop connection to a TIMi server.

If you installed TIMi on a central server, you need to configure your firewall to allow a “Remote Desktop Connection” between your central server and the dataminer’s laptops (see also the section 4 from this document)

3.7. Firewall configuration: Network License (3/3)

 to configure the firewall(s) to allow a connection to the TIMi Licensing servers.

When you are using a Network License (rather than a normal serial number), TIMi connect once a day to a “License server” using the HTTP (port 80) or the HTTPS (port 445) protocol. If the connection fails, you cannot use TIMi (since it’s impossible to verify that your license is “in order”). There are currently two TIMi Licensing servers:

- Business-insight.com
- Actionalytics.com

If one Licensing Server is down, TIMi automatically switches to the other one.


You’ll find more information about the configuration of Network Licenses here:

http://download.timi.eu/docs/TIMi_network_license.pdf


4. Optional configuration tasks to perform when installing TIMi

4.1. (This is optional but strongly encouraged) Configure temporary directory

Timi, Stardust and Kibella do not create big temporary files. However, it can happen that Anatella produces large files (that are named "HD Cache" files). By default, these temporary files are saved in the standard "temporary directory" of each MS-Windows user. It's a good idea to change the default location of the temporary directory to a drive with plenty of space (...and it's a good idea to do that even if you are not using the "Timi Suite"!).

 **Admin Privileges Required** :To change the default location of the "temporary directory" *for all the users*, you need to change the "%TEMP%" MS-Windows Environment Variable: See the section 4.5.1.1. of the AnatellaQuickGuide.pdf (press F1 inside Anatella to read this PDF) to know the exact procedure to change the "%TEMP%" MS-Windows Environment Variable.

4.2. To use Stardust

 **Admin Privileges Required** to install the updated drivers for your video card or Virtual Reality Headset.

If you want to use Stardust, the specific OpenGL drivers from your video-card manufacturer must be installed. The "generic" OpenGL drivers automatically installed with Windows are usually useless since they are not hardware accelerated: i.e. You really need the correct drivers for your video card.

4.3. To use the VR extension for Stardust

If you want to use the VR Extension (Virtual Reality Extension) for Stardust, you must have a DirectX 10 compliant video card. To install the VR extensions:

- Download:
<http://download.timi.eu/StardustVR.zip>
- Unzip the zip file inside the TIMi installation directory.

4.4. To use Jenkins (job scheduling tool with a web interface)

This is required if you want an easy-to-use job scheduling tool with a web interface

 **Admin Privileges Required** to install Jenkins

To run Anatella graphs automatically (e.g. at regular intervals), you can use any scheduling software: i.e. you can use, for example, the simple "Windows Task Scheduler" or Jenkins. Jenkins is a good (and free) solution. **Jenkins is the preferred solution to schedule Anatella jobs.** To install Jenkins:

- Download Jenkins:
<https://jenkins.io/download/thank-you-downloading-windows-installer/>
<http://download.timi.eu/ThirdParty/jenkins-2.150.2.zip>
- Unzip the downloaded zip file and run the .msi file.

- Follow the installation instructions given inside the section 4.7.8.2.1. of the AnatellaQuickGuide.pdf (press F1 inside Anatella to read this PDF).
- Configure your firewall: see the sections 4.7. and 4.8

4.5. Local Kibella installation

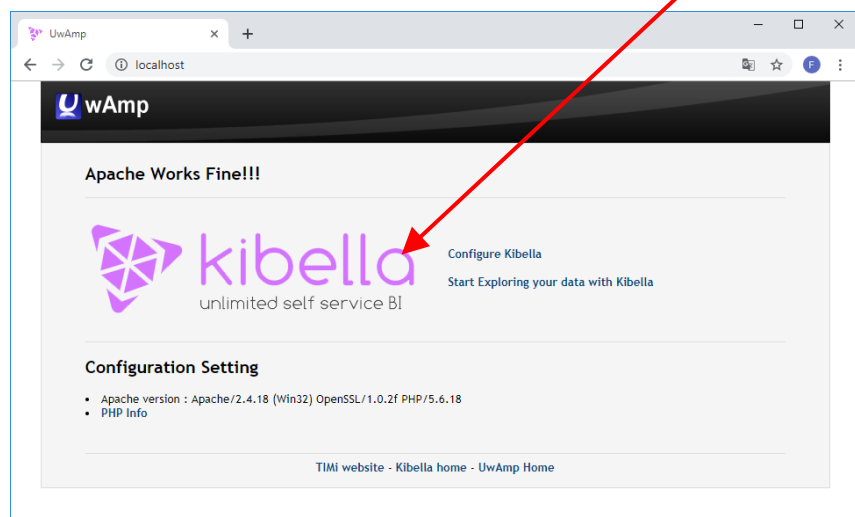
Kibella is the web-based dashboarding tool included inside TIMi. You can install Kibella on any machine supporting Apache (and PHP). Usually, to install Kibella, the best option is a Linux-based server (because it's more secure than a Windows webserver).

This local Kibella installation is required if you want to use and create Kibella dashboards using the locally installed Kibella Server (instead of, classically, a remote Linux server)

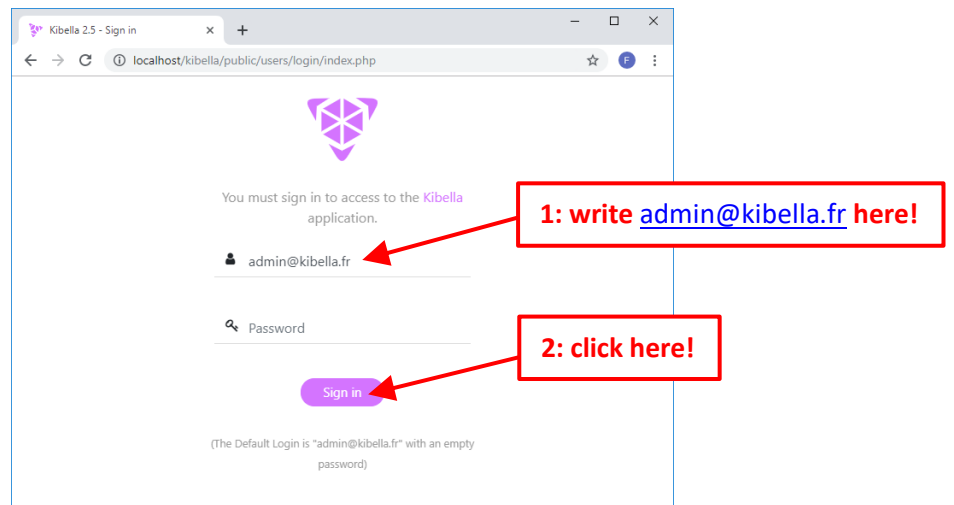
By default, to create a new Kibella dashboards, you simply open (using a standard internet browser) a webpage on a live Kibella server installed on your private LAN or installed on an Internet server. If you want to create new dashboards with Kibella without any live internet connection, you need to install Kibella on your local machine.


To install Kibella locally on a Windows Machine:

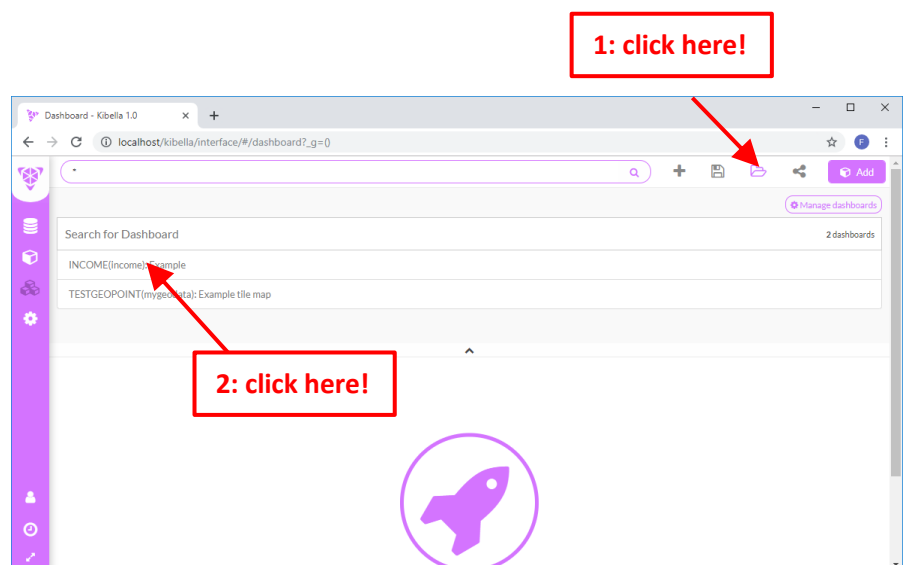
- Download Kibella :
http://download.timi.eu/Kibella/Kibella_UwAmp.zip
- Unzip the downloaded zip file inside "c:\soft\uwamp".
- Run "c:\soft\uwamp\UwAmp.exe"
- Configure your firewall: see section 4.6.
- Optional: Check that Kibella is properly installed : There is already a small "demo" dashboard directly available for checking the installation : To see the demo dashboard, follow these steps:
 - Open <http://localhost> inside a Browser and click on the Kibella logo:



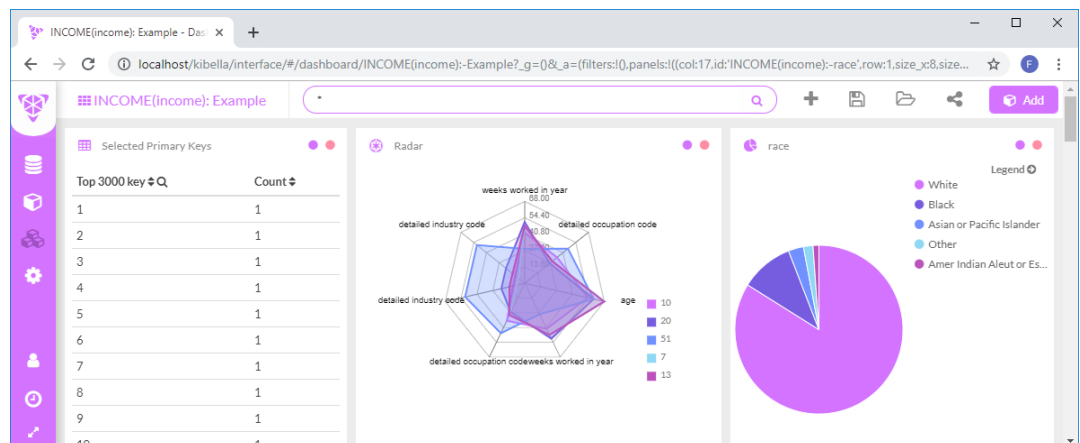
- Enter as your login admin@kibella.fr (leave the password field empty) and click on the “Sign in” button:




- Click on the  icon in the top-right corner of the browser window, and click on “INCOME(income): Example” to open the example dashboard:



- After a short computing time, you should see:



4.6. Firewall configuration: Kibella (1/5)

 **Admin Privileges Required** to configure the firewall(s) to allow a connection to the Apache/Kibella server.

Kibella is the web-based dashboarding tool included inside TIMi. It's an optional component: see the section 3.4. above. Kibella is a webserver (based on the famous Apache webserver).

All the users that requires editing or simply viewing the Kibella dashboards must be allowed to access the Kibella webserver. To enable the users to access Kibella, you should open the port 80 (by default: you can change the port inside the Apache configuration files) to the Kibella server.

4.7. Firewall configuration: Jenkins (2/5)

 **Admin Privileges Required** to configure the firewall(s) to allow a connection to the Jenkins server.

Jenkins is the default scheduling software that is suggested when using TIMi. See the section 3.3. above to know how to install Jenkins. Jenkins is accessed and configured via a web server (the default port is: 8080). All the users that requires viewing the status of their recurrent TIMi jobs (and/or running jobs manually) must be allowed to access the Jenkins webserver.

4.8. Firewall configuration: "TIMi Notifier for Jenkins" (Android app) (3/5)

 **Admin Privileges Required** to configure the firewall(s) to allow a connection to the Jenkins server.

The "[TIMi Notifier for Jenkins](#)" is an Android application (optimized for Smartwatch users) that automatically checks the status of your Jenkins jobs and automatically reports to you (with an Android Notification) if there has been a problem. In case of problem, you can (in one click of a button) re-run the jobs that did not executed properly, directly from your android device or Smartwatch.


All the users that are using the "TIMi Notifier for Jenkins" (e.g. to view the status of their recurrent TIMi jobs or to re-run jobs on-demand) must be allowed to access the Jenkins webserver (default port: 8080) from their Android device.

4.9. Firewall configuration: IoT broker (4/5)

 **Admin Privileges Required** to configure the firewall(s) to allow a connection to the IoT broker.

See the section 4.16 below for more details.

4.10. Firewall configuration: Hadoop (5/5)

 **Admin Privileges Required** to configure the firewall(s) to allow a connection to the Hadoop Name Node server and to the (many) Hadoop Data Nodes.

Anatella directly connects to the Hadoop Data Nodes, so you need to open the firewall accordingly.

4.11. To use a Python engine inside Anatella

You don't need any administrative privileges to install Python 3 (but it's easier). If you don't have any administrative privileges, you can still install python using the provided ZIP files.

If you want to benefit from the integration of the Python Language inside Anatella, you must install & configure the Python v3.x engine named "Anaconda" (The old Python 2.7 is not supported). For your comfort, a Python v3.x engine is available here:

<http://download.tim.eu/Python/>

4.12. File-level encryption

 **Admin Privileges Required** to install & configure Bitlocker.

Alternatively, you can also use TrueCrypt instead of Bitlocker (You don't need any Administrative privileges to install and run TrueCrypt)

Anatella is a data transformation engine. Each different data transformation is saved inside a different ".anatella" file. The data manipulated with Anatella are typically stored inside a proprietary "flat" file-format with the extension ".gel_anatella" (Each ".gel_anatella" file contains one data-table).

All these files (".anatella" files or ".gel_anatella" files) are stored inside a drive (typically the "C:" or the "D:" drive). When working with sensitive data on your local computer/laptop, it's quite common to store all your files inside an encrypted drive. There exists now many different tools to create and manage encrypted drives. TIMi supports all these tools.

Here are two famous tools that provides encrypted drives:

- **Bitlocker:** It's a free tool with the Professional version of MS-Windows.
<https://en.wikipedia.org/wiki/BitLocker>
- **TrueCrypt:** It's a free & very secure tool. No vulnerabilities or "backdoor" are known.
<https://en.wikipedia.org/wiki/TrueCrypt>
For your comfort, you can download TrueCrypt from here:
http://download.tim.eu/ThirdParty/TrueCrypt_Setup_7.1a.exe

4.13. To create .Hyper or .TDE files (for Tableau) directly from Anatella

Tableau is a third-party tool used to create dashboards.

Anatella can generate natively Tableau Hyper Data files or Tableau Data Extract files (TDE Files) at very high speed. This allows you to get easy connectivity between your data lake and your (Tableau) dashboards.


To install the Tableau extension:

- Download the Tableau extension:
 - 32 bit:
http://download.tim.eu/Tableau/TableauServer_w32.zip
 - 64 bit:
http://download.tim.eu/Tableau/TableauServer_x64.zip
- Unzip the downloaded zip file inside the subdirectory "Tableau" inside the TIMi installation dir. Very often, you'll unzip the zip file here:

C:\Program Files\TIMi\tableau
 C:\soft\TIMiPortable\tableau

- Run the “vcredist_*.exe” executable located inside the downloaded zip file.

4.14. Versioning System

 **Admin Privileges Required** to install TortoiseGIT or TortoiseSVN.

To manage to different versions of your Anatella graphs and of your Anatella Actions/Boxes, you can use a *versioning system*. A *versioning system* is mainly useful when there are several analysts that works together with Anatella: For more details on this subject, see the section 5.9. about “collaborative work”. Anatella is compatible with nearly all versioning systems.

Some common versioning system that you can use with Anatella are:

- **SVN (Subversion):**
 To use SVN to manage your Anatella files, you should install TortoiseSVN:
<https://tortoisesvn.net/downloads.html>
 SVN (Subversion) was one of the most commonly used versioning system (before the age of GIT). **It’s very easy to use and it’s my own personal choice.**
- **GIT:**
 To use GIT to manage your Anatella files, you should install TortoiseGIT:
<https://tortoisegit.org/download/>
 GIT is currently the most commonly used versioning system. It’s very flexible but quite complex to use.

4.15. GIS System

4.15.1. To run advanced GIS queries

Anatella supports the Spatialite Exentions to do advanced GIS queries on your GIS databases. The Spatialite library offers mostly the same set of GIS functionalities that are available in PostgreSQL + PostGIS (but faster), Oracle Spatialite or SQL Server. The spatialite library is mostly OGC-SFS compliant (i.e. it’s compliant with the “Open Geospatial Consortium” standard).

To install the GIS extentions :

- Download Spatialite:
 - **32 bit version:**
<http://download.timi.eu/gis/spatialite-w32.zip>
 - **64 bit version:**
<http://download.timi.eu/gis/spatialite-x64.zip>
- Unzip the downloaded zip file inside the TIMi installation dir.
 Very often the TIMi installation dir is:
 C:\Program Files\TIMi
 C:\soft\ TIMi

4.15.2. To visualize graphically the results of your GIS queries


 **Admin Privileges Required** to install QGIS

If you want to visualize graphically the results of your GIS queries, you can:

- Use the “Spatialite-GUI” tool included inside the Anatella Spatialite Extensions. This is a small tool, that helps you to design & create your GIS queries but the visualization capabilities of the tool are somewhat limited.
- Use the Kibella “Tile Map” visualization. This is quite limited compared to QGIS or compared to the Spatialite-GUI but it’s very easy to deploy.
- Use the “Quantum GIS” (also named “QGIS”) tool. QGIS is one of the best tool to graphically display the results of your GIS queries. QGIS is a really popular and widespread desktop GIS app: You can download the latest QGIS from: <http://www.qgis.org/>




4.16. “Internet Of Things” support

This required if you want to use a MQTT Broker - “Internet Of Things” protocol.

 **Admin Privileges Required** to configure the firewall(s) to allow the MQTT broker to access the internet: see section 4.9.

 **Admin Privileges Required** to install a MQTT broker that is different from “Mosquitto”.



These Actions:  and  and : allows Anatella to connect to a MQTT broker. A MQTT broker is a webserver that manages small messages using a publish/subscribe type of protocol. Anatella is compatible with any MQTT broker: Mosquitto, Kafka, RabbitMQ, etc. For more comfort, the small MQTT broker “Mosquitto” is now directly included inside the TIMi distribution.

4.17. To read SAS datasets (to read .sas7bdat files)

 **Admin Privileges Required** to install the SAS OleDb drivers (if it’s really needed, which is unlikely)

Anatella and TIMi are now able to read 99% of the datasets produced by SAS (.sas7bdat files) ***without*** requiring the installation of any SAS driver. However, if you are using compressed or encrypted SAS files (these kind of SAS files are exceptionally rare), then the OleDb driver created by SAS has to be installed. You can download these OleDb drivers directly on the SAS website here:

<http://support.sas.com/demosdownloads/setupcat.jsp?cat=SAS+Providers+for+OLE+DB>

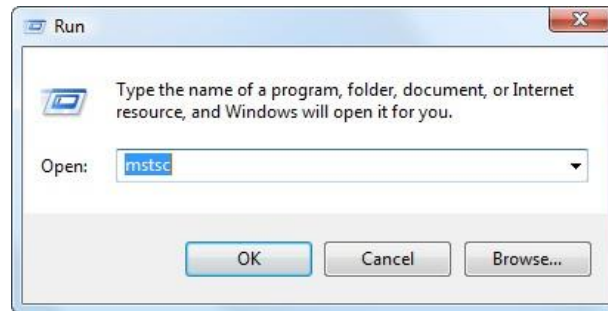
For your comfort, a local copy of these drivers is also available here:

http://download.timi.eu/ThirdParty/sasoledb_64bit_and_32bit.zip

5. Configuration tasks for the Remote Servers containing TIMi

I’m personally not a big fan of “Server Installation” but some companies prefer, for internal management reasons, to deploy all their software on servers. In general, it’s more profitable and more efficient to have one copy of TIMi installed on the laptop of each DataMiner. If your IT department allows it, I think, it’s the best solution. For more information about the advantages and the disadvantages of installing TIMi on one unique server, please refer to the section 2 (“Common infrastructures to run TIMi/Anatella”) of the document “[TIMi infrastructure.pdf](#)”.

Typically, you access your remote server (where TIMi is installed) using the "Remote Desktop" functionality in MS-Windows. On the client desktop, open the "start menu", select "Run" and type "mstsc":

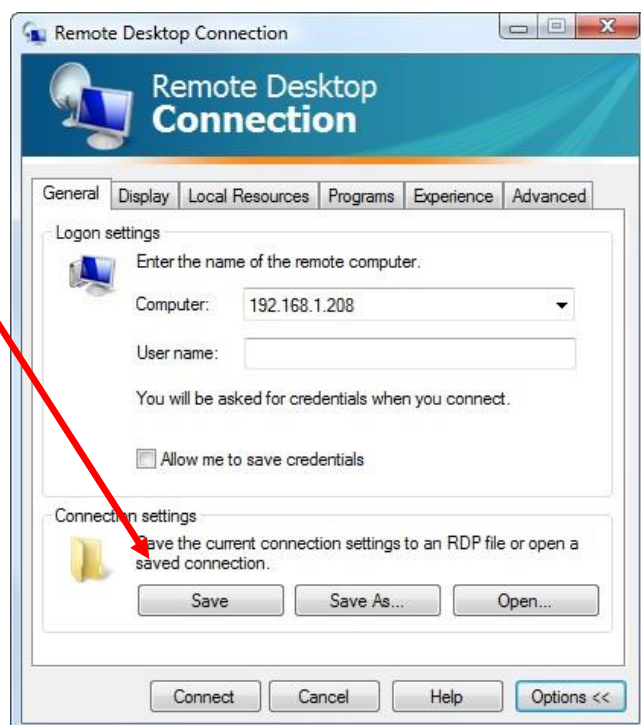


The "Remote Desktop" client of MSWindows is starting:



Once the connection to the server is correctly configured, you can save all the connection parameters in a small file with extension .rdp (that is typically saved on the desktop). From now on, to connect to the server, simply double-click the .rdp file for direct access to the server. To create the .rdp file:

1. Click the "Options>>" button
2. Configure the connection
3. Click the "Save" button:



For more information on how to configure and manage the "Remote Desktop" connections on the server, please refer to the Microsoft documentation.



By default, "Remote Desktop" connections allows you to easily copy files from the server to the client: To do this, simply turn on the option "*remotely share my local devices (disk)*" on the client PC. It is located in the clients Remote Desktop control panel on the "Local Resources" panel, click the button "more", click on "Drives".

This feature is handy but it can be a "security hole" as it is possible to copy to the remote client some files from the server. Therefore, it is possible to disable this feature on the server: For more information on this topic:

<http://technet.microsoft.com/fr-fr/library/cc775863%28WS.10%29.aspx> (in French)

<http://technet.microsoft.com/en-us/library/cc775863%28WS.10%29.aspx> (in English)

Firewalls located between the client and the server must allow the passage of the RDP Protocol (RDP = "Remote Desktop Protocol"). Please contact the network manager for the required changes to the firewalls (see also section 3.6 from this document).