PROFISIGHT

USER MANUAL

PROFITAP

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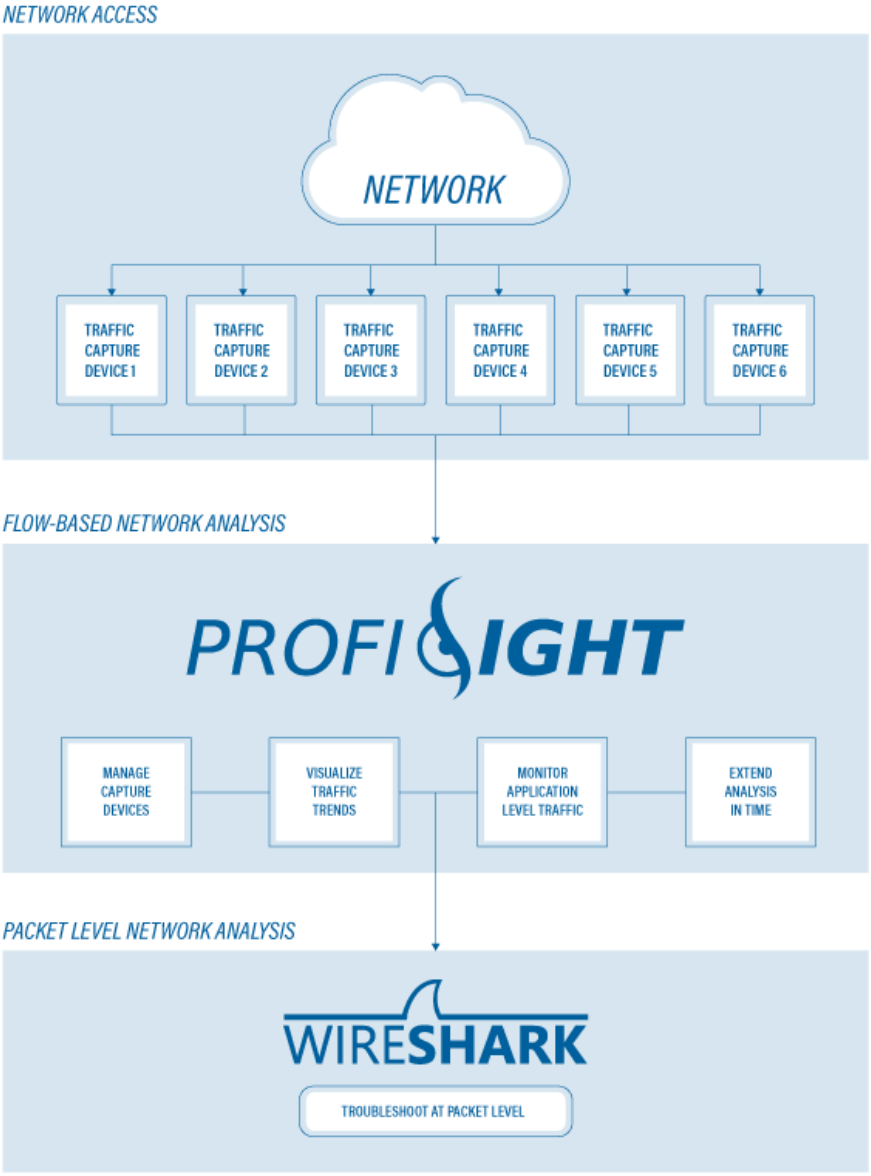
1. INTRODUCTION

ProfiSight is a web-based network traffic monitoring application, giving a complete insight of the network and infrastructure, providing remote capturing, seven layers (OSI model) overview, flow based analysis, APM, trend reports and much more.

Understanding network traffic, discovering trends or pinpoint issues is what ProfiSight has been designed for, offering users across teams a platform to visualize, filter and highlight potential weak spots, collaborating in better understanding how network resources are allocated and utilized, ultimately rendering your network mode secured.

ProfiSight further improves by allowing acquisition and analysis of captured traffic data from ProfiShark network TAPs or customer's own capture files, by expanding its functionality through additional plugins.

Moreover, ProfiSight complements packet level analyzers such as WireShark, offering a much better overview of the traffic flow, emphasizing on the application layer in a plethora of beautiful visual histograms, graphs and statistics.


NETWORK ACCESS
NETWORK
TRAFFIC CAPTURE DEVICE 1
TRAFFIC CAPTURE DEVICE 2
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TRAFFIC CAPTURE DEVICE 5
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FLOW-BASED NETWORK ANALYSIS
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MANAGE CAPTURE DEVICES
VISUALIZE TRAFFIC TRENDS
MONITOR APPLICATION LEVEL TRAFFIC
EXTEND ANALYSIS IN TIME
PACKET LEVEL NETWORK ANALYSIS
WIRESHARK
TROUBLESHOOT AT PACKET LEVEL

1.1 ARCHITECTURE OVERVIEW

By default, ProfiSight is deployed as a single host configuration or a Full ProfiSight configuration, where its back- end components all run on the same machine (localhost).

The ProfiSight solution consists of 3 main components:

1. The ProfiSight Capture Machine.
2. The ProfiSight Database.
3. The ProfiSight Dashboard.

The ProfiSight Capture Machine is the brain behind the ProfiSight logic and where most of the heavy lifting is performed. It contains the drivers, the APIs and also hosts the ProfiSight Manager - the user interface. Not only the traffic data can be captured here using connected ProfiShark devices but all the capture files are processed and sent to the ProfiSight Database. Licenses are also managed through the ProfiSight Manager.

The ProfiSight Database contains all the captured traffic processed into useful data metrics feeding the ProfiSight Dashboard, ensuring a really fast search engine based on the smart indexing engine.

The ProfiSight Dashboard is where all the data is brought together, offering better context and allowing users to query, visualize and share the analytics across multiple teams. This acts as the ProfiSight front-end or the GUI.

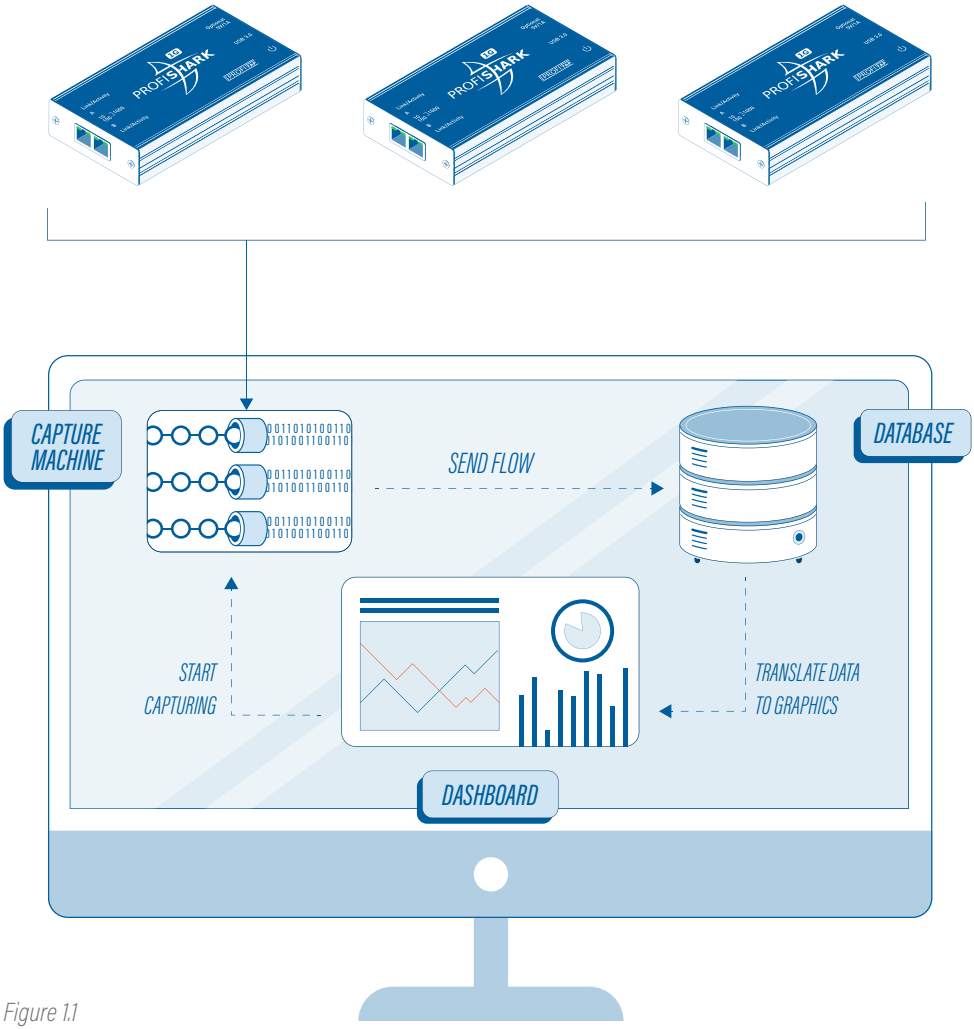

CAPTURE MACHINE
SEND FLOW
DATABASE
START CAPTURING
TRANSLATE DATA TO GRAPHICS
DASHBOARD

Figure 1.1

► *Note:* As an alternative, ProfiSight can be deployed on multiple machines in order to spread the workload, as covered in the 2.3 Installation on Multiple Machines.

1.2 CONCEPTS

1.2.1 Dashboards

Dashboards are composed of individual Panels arranged in a grid. ProfiSight offers a variety of Panels, that can be customized on queries and display properties and can even display data from multiple Data Sources.

Users can choose a Dashboard from an existing library or create a new one if they have admin privileges, to display the metrics best suiting their requirements.

1.2.2 Panels

The Panel is the basic visualization building block in ProfiSight combining graphical, tabular and statistical data analysis. There are a wide variety of styling and formatting options that each Panel offers.
Panels can be dragged and dropped and rearranged on the Dashboards. They can also be resized.

Panels can also be shared easily by using the Snapshots feature to encode all the data currently being viewed into a static and interactive JSON document.

As a convenient way to store key markers, or just bookmark network events, each Panel allows users to use the Annotation feature by holding the CTRL key while clicking on the graph in the desired location.

► ***Note:*** For additional information on Panels, read the 6.9 Configured Panels chapter.

1.2.3 DataSources

ProfiSight supports multiple database types or DataSources (ProfiSight & other sources) and it is even capable of combining data from multiple DataSources into a single Dashboard.

The list of configured DataSources is displayed, also offering the possibility to add new ones into the system.

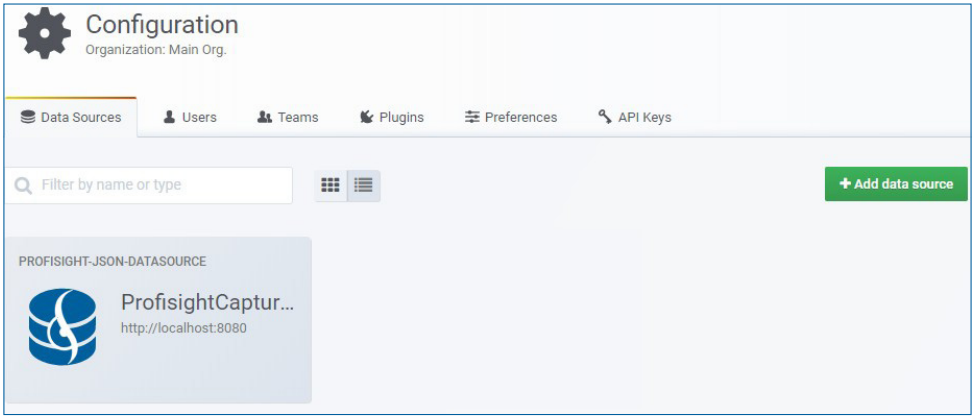


Figure 1.2

► ***Note:*** For information on adding a new DataSource, please read the 5.2 Add New DataSources Chapter.

1.2.4 Plugins

A comprehensive list of Plugins can be accessed and installed in this tab, each provided with a description and links to further details.

> ► ***Note:*** There are 3 types of Plugins: Panel Plugins, App Plugins and DataSource Plugins.

Third party plugins are supported, enhancing DataSources and Dashboards panel's functionality and adding complete applications that further enhance the data analysis.

> ► ***Note:*** Do not disable the default Plugins, they provide critical functionality for ProfiSight.

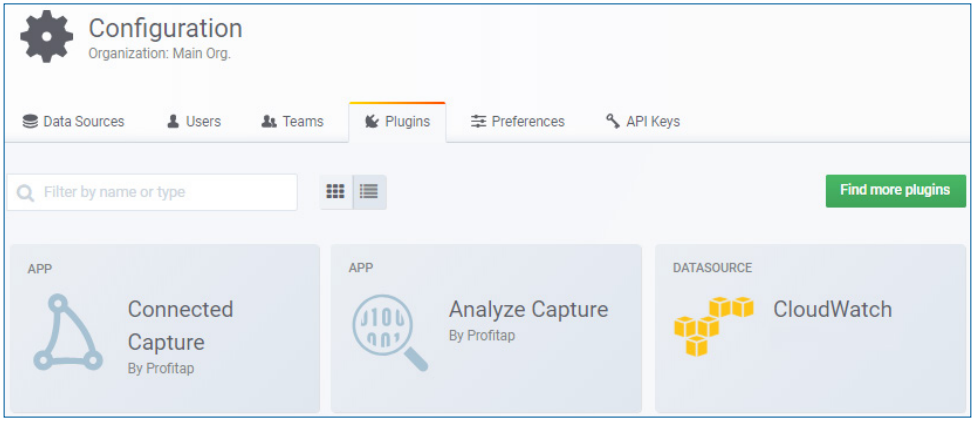


Figure 1.3

To discover additional plugins, check out the official Plugin Repository.

1.3 MINIMUM HARDWARE AND SOFTWARE REQUIREMENTS

In a default standalone deployment or a Full ProfiSight configuration, all 3 components (Capture Machine, Database, Dashboard) are running on the same machine, therefore the hardware requirements will reflect that. This deployment type is recommended for evaluation purposes, POCs (proof-of-concept) and small to medium size deployments.

Although ProfiSight can be deployed in this manner, accommodating a heavier workload requires deployment on multiple machines, if the host analyzer machine is not powerful enough, as covered in the 2.3 Installation on Multiple Machines Chapter.

Software Requirements

- OS: 64bit Windows 10, 64bit Linux Ubuntu Family.
- Internet Browser: Google Chrome (preferred), Firefox Web Browser, Microsoft Edge (Windows 10)

Hardware Requirements

- Minimum: Intel Core Duo 2.4GHz, 8GB Ram.
- Recommended: Intel Quad 3.0GHz, 8GB Ram or more.
- Network: Compatible Ethernet, Fast Ethernet, or Gigabit network adapter.

1.4 CAPTURE PERFORMANCE CONSIDERATIONS

Important: Up to 6 devices and network interfaces, including ProfiShark network TAPs, can be simultaneously managed by ProfiSight but concurrent captures are dependent on the available hardware resources. Please keep in mind the hardware requirements overviewed in the 1.3 Minimum Hardware and Software Requirements chapter.

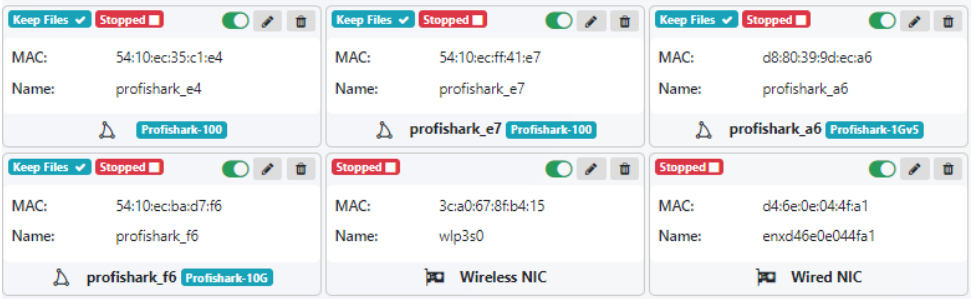


Figure 1.4

2. INSTALLATION

In a typical deployment, where ProfiSight is run from a single machine (localhost), installation is done by executing the appropriate package for your environment: Windows 10 64bit or Linux Ubuntu Family 64bit.

The latest software releases can be found in the Profitap Resource Center at www.profitap.com/resource-center/.

> ► ***Note:*** As an alternative, ProfiSight can be deployed on multiple machines, accommodating a heavier workload, as covered in the 2.3 Installation on Multiple Machines Chapter.

2.1 WINDOWS 10 INSTALLATION

Locate the 64bit installation package from the Profitap Resource Center at www.profitap.com/resource-center/, download it on the target machine, run it and follow the on-screen steps to complete the installation of the ProfiSight components and related dependencies.

> ► ***Note:*** During installation, a working Internet connection may be required.

After the installation finishes, reboot the machine then continue with configuring and running the ProfiSight components by launching the ProfiSight Manager user interface.

2.2 UBUNTU LINUX INSTALLATION

Locate the 64bit installation package from the Profitap Resource Center at www.profitap.com/resource-center/, download it on the target machine, run it with sudo rights and follow the on-screen steps to complete the installation of the ProfiSight components and related dependencies.

> ► ***Note:*** During installation, a working Internet connection may be required.

After the installation finishes, reboot the machine then continue with configuring and running the ProfiSight components by launching the ProfiSight Manager user interface.

2.3 INSTALLATION ON MULTIPLE MACHINES

ProfiSight has been designed to take advantage of the processing power at hand. This is why ProfiSight can be accommodated on a single machine or across multiple servers, splitting the workload between its components.
Balancing the workload between several machines requires multiple installations on separate machines and as many licenses. The final step is assigning a running Mode for each installation, procedure that can be done from the ProfiSight Manager > ProfiSight tab.

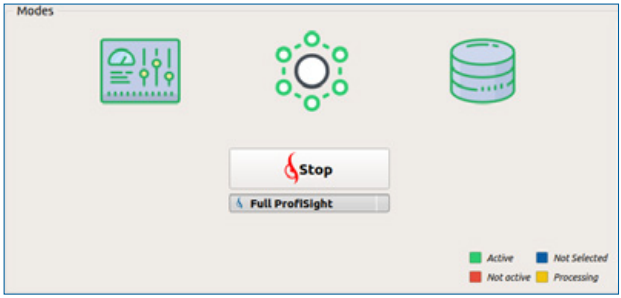


Figure 2.1

► *Important:* Regardless of how many machines are used to split the workload among components (maximum 3 machines, 1 per component), in order for the ProfiSight solution to properly work, all 3 components must be started.

2.4 LICENSE ACTIVATION

In order for ProfiSight to work, a valid license needs to be provided in the ProfiSight Manager > License tab, either a trial or a perpetual license.

► ***Note:*** For requesting a license, please visit http://www.profitap.com/profisight/

1. Once ProfiSight is installed, open ProfiSight Manager.
2. In case the license activation pop-up does not appear, go to License tab, fill in the license number then click Activate.

Figure 2.2

► *Important:* Trial licenses only offer 15 days of ProfiSight use.

ProfiSight licensing scheme supports migrating the installation to another machine up to 3 times, hence allowing the user to deactivate the license on the old machine and re-activating it on the newer one. For additional re-activations, please contact Profitap.

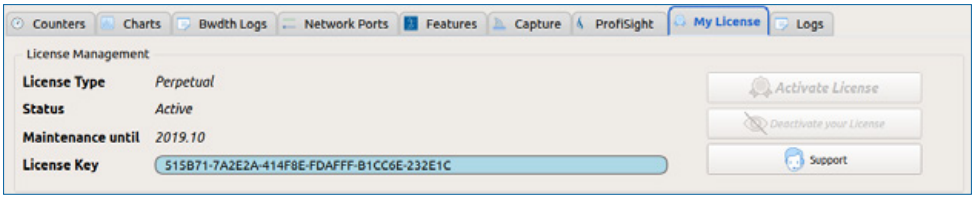


Figure 2.3

> ► ***Note:*** Scaling up the requirements in terms of capturing throughput and concurrent Dashboard sessions can motivate balancing the workload among multiple machines, requiring additional licenses or a special license with multiple activations.

2.5 UPGRADING TO THE LATEST VERSION

Download the latest version of ProfiSight from the ProfiTAP Resource Center at www.profitap.com/resource- center/. and follow the same installation procedure covered in the 2.1 Windows 10 Installation and 2.2 Ubuntu Linux Installation chapters.

> ► ***Note:*** Upgrading to a newer version will allow users to select whether captured data and logs will be kept or overwritten. However, configuration files are always overwritten, something to keep in mind in case ProfiSight is deployed on multiple machines.

3. PROFISIGHT MANAGER CONFIGURATION

3.1 PROFISIGHT TAB

The ProfiSight tab allows users to configure the settings for each component and to assign paths for the captured data and for the uploaded files to be analyzed, feeding the database.

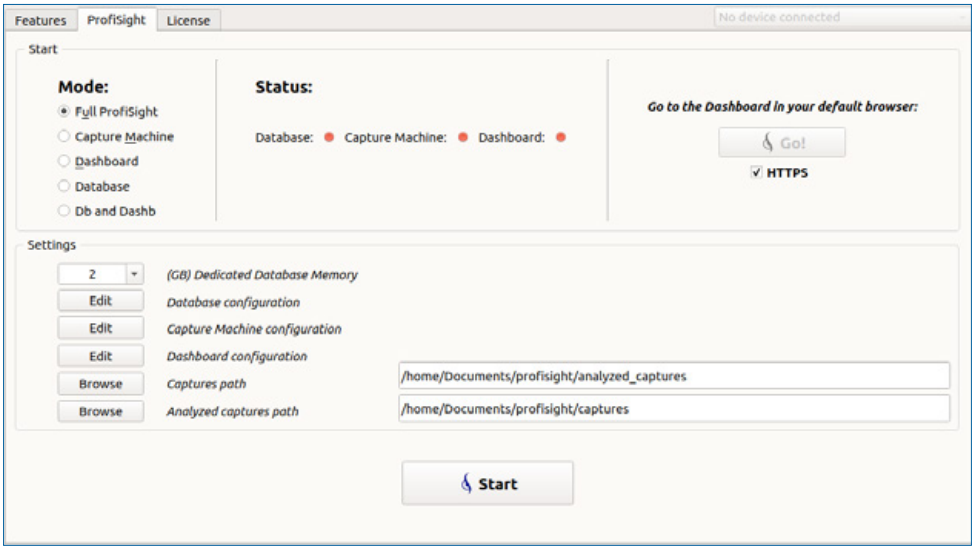


Figure 3.1

The Dedicated Database Memory is only taken into account if the Mode setting in the ProfiSight tab is set to either Full ProfiSight, Database or Db and Dashb. Depending on the workload and performance metrics, this setting allows customizing the amount of system RAM dedicated to the database and its indexing service. By default value is set to 50% of the available system RAM. The rest of the functionality can be tailored for each individual component by editing their configuration file.

Database Configuration: Allows customization for naming, paths, allocated memory and the network settings for the internal/external databases used for storing and indexing the processed captured traffic.

Capture Machine Configuration: Allows customization for network address, communication port and the path to the database storing session metadata.

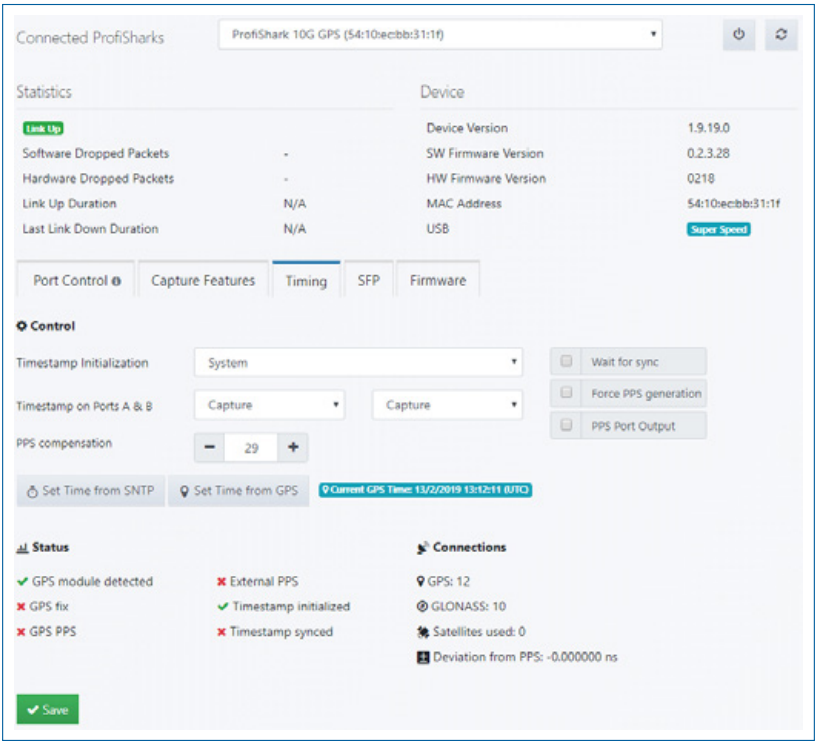
Dashboard Configuration: Allows customization for various paths used by the application, the network settings for the hosting web server and many other proprietary options supported by the framework.

- *Important:* It is strongly advised not to change the default configurations unless ProfiSight is operating on multiple machines in a load split.

3.2 PROFISHARK MANAGEMENT - CAPTURE AND CONFIGURE

ProfiSight supports capturing and analyzing network traffic captured through ProfiShark devices. Customizing the way these ProfiShark devices work, acquire and filter the passing traffic is done by accessing the following tabs in the ProfiSight Manager: the Network Ports tab, the Timing tab, the Features tab and the Capture tab.

Select the desired ProfiShark device to be configured and switch between the configuration tabs to make the required changes. Click Save for changes to take effect.



- *Important:* In case of flashing the firmware of one of the attached ProfiShark devices, it is important to take into account that physical access to the device is mandatory, as once the flash is complete, the device needs to be disconnected then reconnected in order to finish the update process. Additionally, during the flashing process, the system will be unavailable for tasks related to ProfiShark devices.

Remember: Configuring multiple ProfiShark devices is done independently for each connected ProfiShark, by selecting its MAC address in the application's upper right corner.

For in-depth information on operating ProfiShark devices, please read their respective User Guides available in the Profitap Resource Center at www.profitap.com/resource-center/

4. GET STARTED

Once ProfiSight has been installed, configured and its modules started through the ProfiSight Manager, the user interface or the ProfiSight Dashboard can be accessed in a browser (Google Chrome preferred) by typing the following address:

```
https://host_machine_IP:port
```

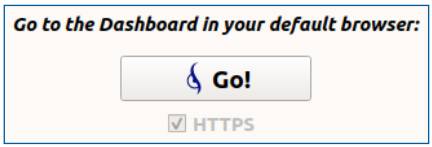
In a typical deployment, where ProfiSight is run from a single machine, the address for accessing the Dashboard component is:

```
https://localhost:3000
```

► *Note:* By default, ProfiSight comes with the following administrative credentials:

```
user: admin
password: admin
```

As an alternative, the Profitap Dashboard can also be reached by clicking on the GO button in the ProfiSight Manager > ProfiSight tab.



4.1 MODES

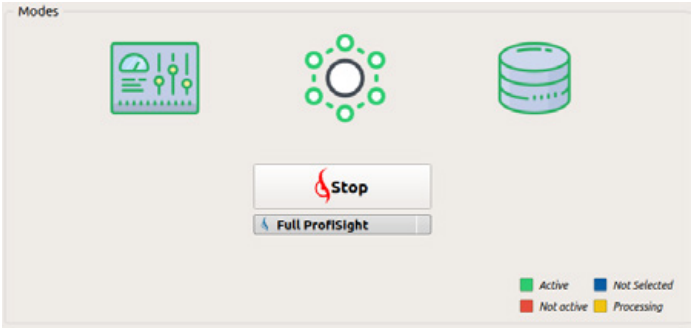


Figure 4.2

In a typical installation, all three ProfiSight components are running on the same machine, the default Mode being Full ProfiSight.
However, accommodating an extended workload implies installation on multiple machines that are configured to run separate components by selecting different Modes in the ProfiSight Manager:

- *Full ProfiSight:* default Mode; selecting this mode will result in running all 3 components on the same machine.
- *Capture Machine:* selecting this mode will result in only running the Capture Machine component on the machine, while the Dashboard and the Database components are expected to run on remote machines.
- *Dashboard:* selecting this mode will result in only running the Dashboard component on the machine, while the Capture Machine and the Database components are expected to run on remote machines.
- *Database:* selecting this mode will result in only running the Database component on the machine, while theCapture Machine and the Dashboard components are expected to run on remote machines.
- *Database and Dashboard:* selecting this mode will result in only running the Database and Dashboardcomponent on the machine, while the Capture Machine component is expected to run on a remote machine.

► ***Note:*** Deciding on balancing the workload on multiple machines require multiple licenses and additional configuration for each component assuring their communication to each other, procedure covered in the 3.1 ProfiSight Tab chapter.

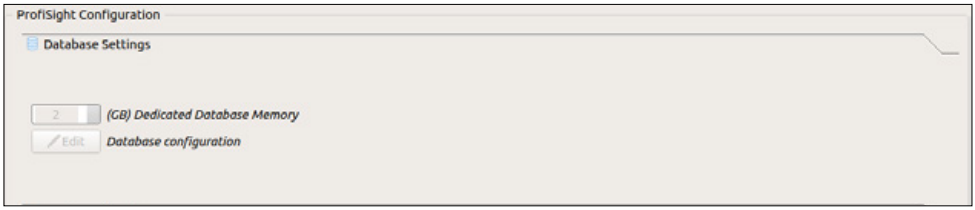


Figure 4.3

4.2 DASHBOARDS INTRODUCTION

For an introduction to the Dashboard concept, read the 1.2.1 Dashboards chapter.
Every time users access the ProfiSight Dashboard interface they are presented with the Dashboard home screen, displaying information on the installed applications, recently viewed Dashboards and an overview of the preliminary steps required for a full ProfiSight experience.

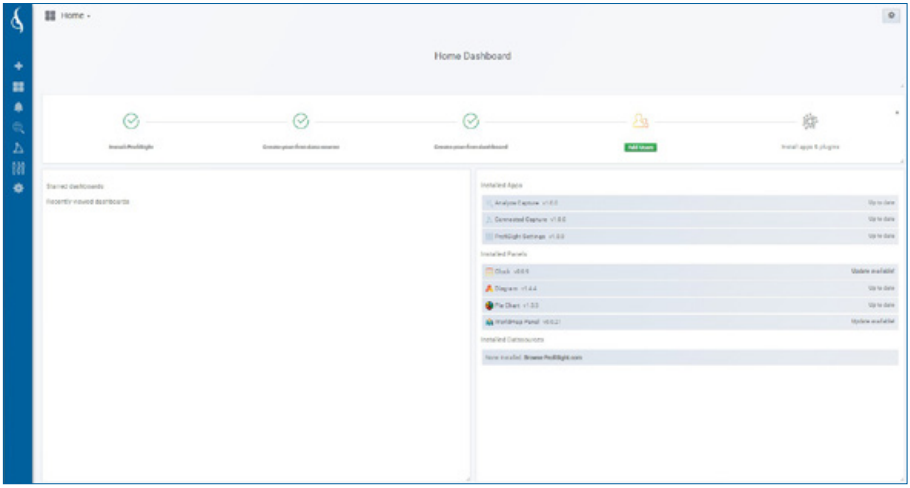


Figure 4.4

Once a Dashboard is accessed, the data displayed by the containing Panels can be customized using 4 menus.

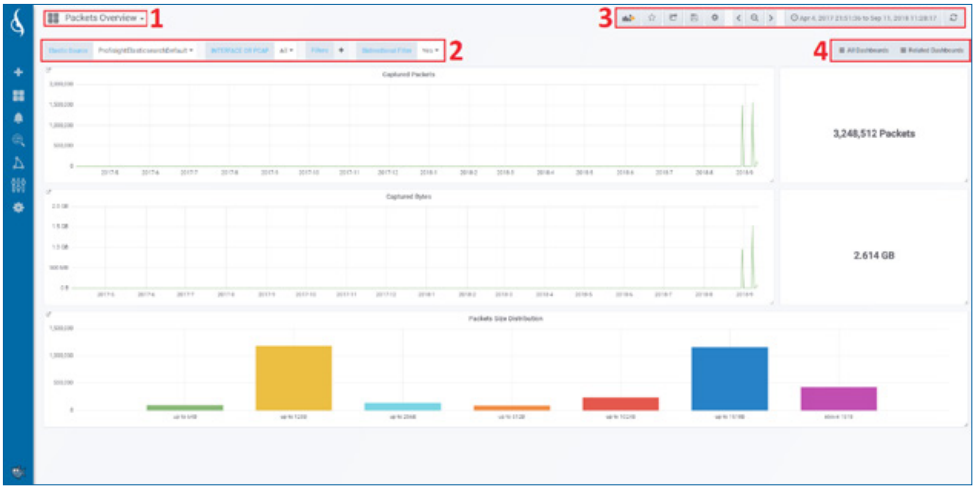


Figure 4.5

1. The main Dashboard selection, allowing users to switch from one Dashboard to another, depending on their analysis requirements. For more details on Dashboards and their troubleshoot indicators, please read the 4.3 Dashboard Coverage chapter.
2. The source and filters menu, allowing users to visualize the address of the Capture Machine and the Database components from which data should be retrieved and displayed in the Panels.
3. The time interval menu, allowing the fine tuning of the interval for which data should be retrieved from the database and displayed in the Panels. By default, this value is set to 30 minutes.
4. The secondary Dashboard selection, allowing users to switch from one Dashboard to another while keeping their filters in place.

Additionally, a .pcap file can be downloaded for the selected time interval, filters and source, by clicking the icon, if available. For more information on downloading traffic data directly from a Dashboard, please read the 4.6 Extract Pcap Files Chapter.

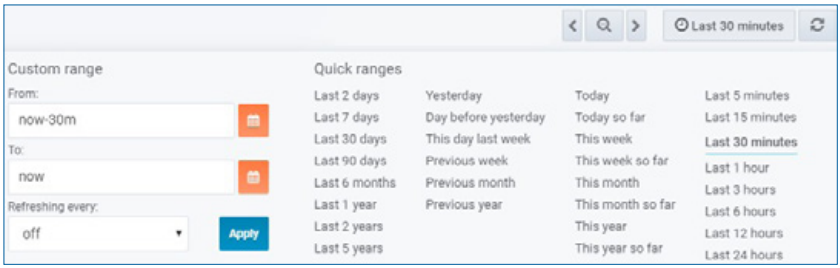


Figure 4.6

4.3 DASHBOARD COVERAGE

ProfiSight is delivered with a set of comprehensive and ready to use Dashboards, covering an array of Protocols or troubleshoot indicators, each one carefully developed to highlight a particular aspect of the network traffic.

All of these Dashboards support flexible user queries by fields and timestamps to allow a faster analysis of the problems. ProfiSight covers a large array of troubleshoot network indicators, crafted to help network engineer pinpoint issues or highlight trends that would otherwise pass unnoticed:

- Bandwidth Utilization: microbursts, statistics per host, statistics per L4 and L7 protocols.
- Packet statistics: counters for packets in/out, bytes in/out, size distribution.
- IP statistics: sources and destinations, geolocation.
- Flows: flow counters per interface, active flows,statistics per flow like usage, protocols.
- Hosts: top talkers, statistics per host.
- TCP indicators: flags, lost packets, retransmissions, zero windowing.
- Latency: network and application latency. Per server and location.
- Layer 4 protocol statistics: most used ports, TCP VS UDP.
- Protocol specific dashboards: DNS, HTTP, SSL and others.
- Network overview dashboards: discover, home dashboard.

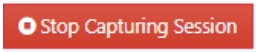
4.4 PROFISHARK REMOTE CAPTURE

From this tab, users can control the most important capture aspects of all connected ProfiShark devices.

> ► *Note:* Settings applied here override the ProfiShark capture configuration made in the ProfiSight Manager machine running the Capture Machine component.

After all the settings covered in 4.41, 4.4.2 and 4.4.3 chapters have been configured, the capturing process can be commenced:

Starts the capture process for the ready devices



Stops the capture process for the ready devices

4.4.1 Connected Devices & Interfaces

The list of all ProfiShark devices connected to the ProfiSight Manager machine running the Capture Machine component will be displayed in the Connected Device(s) drop down menu. Once a device is selected, it can be added in a local list of ProfiShark devices and remotely configured as necessary.

Except for Interface Name, Device ID, Device Model and Device MAC, the ProfiShark device can be configured to capture traffic according to the following rules, overriding its initial configuration in the ProfiSight Manager machine running the Capture Machine component:

- File Name: all files captured by this device will have the prefix configured in this field.

- File Time: (advanced configuration) represents the maximum time duration of data capture for a single file. The default value is taken from the suggested value configured in ProfiSight Settings.
- Nr. Files: (advanced configuration) represents the maximum number of files to be created for each capture. The default value is taken from the suggested value configured in ProfiSight Settings.
- Keep Files: unchecking this option will force the capture to delete analyzed files, this way avoiding a further download.

  CAUTION: Having this option disabled, a later download of the Pcap file will not be possible since the capture files are not stored separately but instead they are continuously deleted.

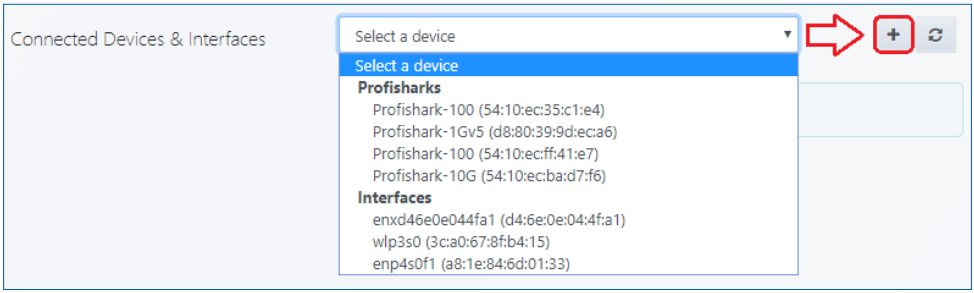


Figure 4.7

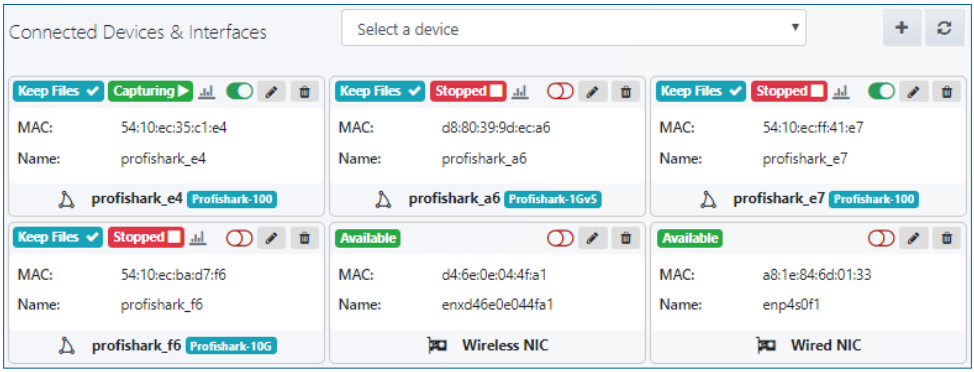


Figure 4.8

This slider controls whether the device should be seen as ready and taken into account when starting or stopping the traffic capture.

Available Capturing Stopped Information sticker displaying the device's state.

Hovering over this icon displays live statistics for the connected device. Restarting the capturing session for the monitored connected device will reset the statistics.

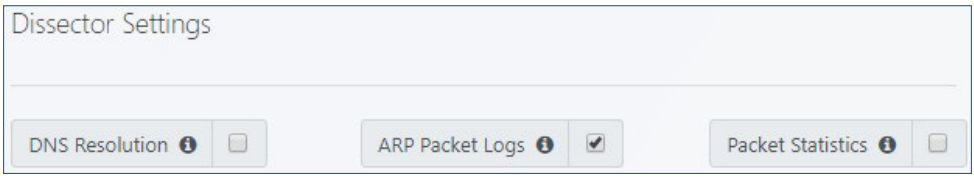
Stopped Information sticker displaying the device's state.

Allows users to edit the configuration for the particular ProfiShark device.

Removes the particular ProfiShark device from the local list of connected capturing devices.

4.4.2 Dissector Settings

Selecting one or multiple options in this section will trigger the Capture Machine to append additional information in the processed captured traffic.



- *DNS Resolution:* selecting this option will result in decoding all DNS responses, resolving all numeric IPs and including this information in the database along with the processed traffic capture.

- *ARP Packet Logs:* selecting this option will result in indexing all the ARP packets in the database along with the processed traffic capture.
  CAUTION: Depending on the captured traffic volume, this option might put a high pressure on the database workload.

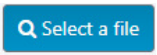
- *Packet Statistics:* selecting this option will result in adding packet statistics (ex: size distribution) in the database along with the processed traffic capture.

4.4.3 ProfiSight Indexing

By default, the database, the index and its type used for capturing are preloaded from the values configured as defaults in Data Sources and Capture Machine Settings.
However, these settings can be edited to better suit the requirements of the moment.

4.5 ANALYZE CAPTURED FILES

This section of ProfiSight allows users to analyze capture files (up to 10G) produced by any source, not just the ones captured by ProfiShark devices. For analyzing a new file, follow these steps:

1. Select the capture file, by clicking 

2. Select the database where the capture file will be processed into. The default database is the one configured in ProfiSight Settings.

3. Select an existing index in the database or create a new one, used as insertion point for the added data.
   Important: Indexes must always have the "*profisight*" prefix.

4. Select a session keyword. This acts as an index subtype, further organizing data under the selected index.

5. Click 

. Allow some time for the file to be uploaded, analyzed and processed in the database.

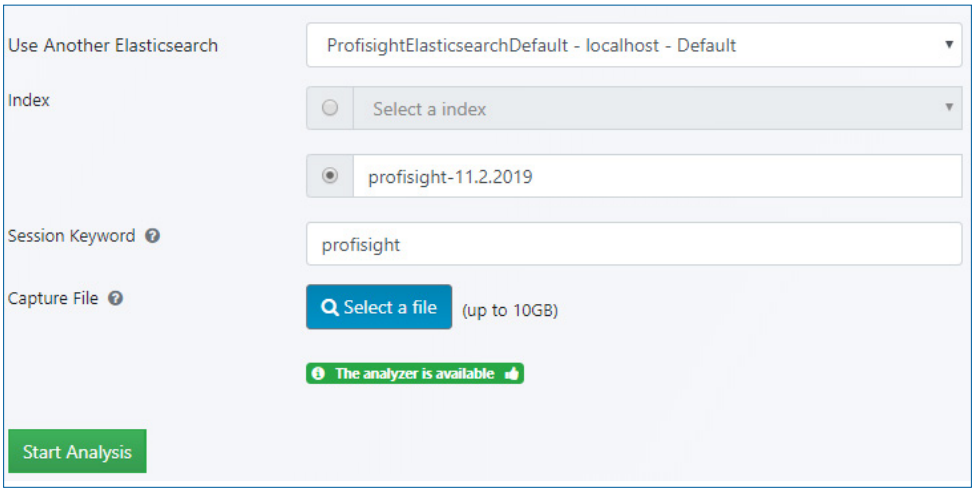


Figure 4.10

Remember: After the file is processed, the results can be viewed in any provided Dashboard by selecting the file in the Interface or Pcap drop-down menu.

4.6 EXTRACT Pcap FILES

Many of the Dashboards provided by ProfiSight include a Get Pcap link used to download the selected traffic data as a .pcap file, allowing users moving from a flow-graph based analysis to a packet level in WireShark.

- ***Note:*** In case filters are applied, the .pcap file is preprocessed to deliver only the requested packets, resulting in a slightly reduced download speed, due to the processing of the data. The following filters are known to effect the download: IP addresses, ports, layer 4 protocol names, mac addresses, arp, dns, ssh, mpls, http fields, tcp flags and zero windowing.

Bidirectional Filter (Yes/No): if enabled and selected filters are applied, the .pcap file will contain packets related to the selected filters for both source or destination.

Example: If the selected filter is IP_SRC= X.X.X.X and Bidirectional Filter is set to Yes, the .pcap file will contain packets from IP=X.X.X.X either as source or destination.
The selected filters that can be used for applying Bidirectional Filter option are:

- IN_SRC_MAC/OUT_DST_MAC
- IPV4_DST_ADDR/ IPV4_SRC_ADDR
- IPV6_DST_ADDR/ IPV6_SRC_ADDR
- IP_DST / IP_SRC
- L4_DST_PORT/ L4_SRC_PORT

Important: If different filters are applied, the Bidirectional Filter option will be ignored.

4.7 PROFISIGHT SETTINGS

4.7.1 Capture Machine Settings

This tab allows users to configure the Capture Machine component, crucial to the ProfiSight Dashboard front-end.

Additional to the Capture Machine component address and port (by default localhost:8080), further customization can be done for the connected capturing devices by editing several default values that will be pre-filled in the Connected Capture section.

Capture Time: represents the default maximum time duration of data capture for a single file. The maximum accepted value is 30s.

Number of Files: represents a default value for the database index used when capturing new traffic, a useful value when searching a DataSource for specific captures. This value must always start with the profisight prefix.

Index Prefix: represents a default value for the database index used when capturing new traffic, a useful value when searching a DataSource for specific captures.

Session keyword: sub-index, used to further differentiate captures.

> ► *Note:* All the above variable are optimized values and can be changed in the Connected Capture section at a later date.

4.7.2 My license

Depending on the license purchased for the ProfiSight solution, all its details are displayed in this tab, showing the status, type, version and expiration date of the currently installed license.

4.7.3 Disk Management

A good practice is to check every once in a while the amount of free storage left and make an assessment on whether a cleanup is in order or not, as there are limitations for capturing and indexing related to the available space:

- New captures can only start if at least 5% of disk space is available.
- Database indexing can only start if at least 10% of disk space is available. If already running, indexing will stop if less than 10% of disk space remains available.

Additional to the total size and the available space on the storage, a visual ratio is displayed.

► *Note:* Click  to refresh the available storage space value.

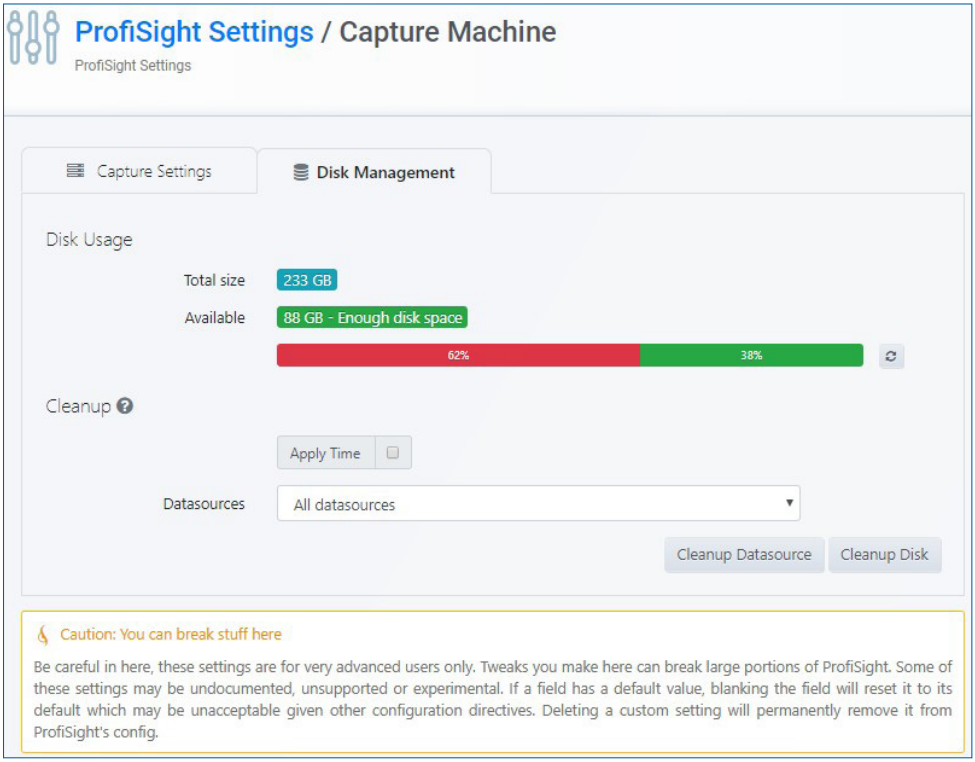


Figure 4.11

CAUTION: Using the Cleanup Disk feature will result in erasing capture files with the selected parameters.

5. OTHER SETTINGS

5.1 ENABLE / DISABLE DASHBOARD PLUGINS

For an introduction to the Plugins concept, read the Plugins Chapter.

In order to make use of the functionality a plugin brings, follow these steps:

1. Go to Configuration > Plugins.
2. A list with the default plugins is displayed. Select the one you are interested in.
3. Click Enable.
4. The new functionality is now accessible from the left menu bar.

Important: Indexes must always have the "*profisight*" prefix.

5.2 ADD NEW DATASOURCES

> ► ***Note:*** For an introduction to DataSources, please read the 1.2.3 DataSources chapter.

Editing or creating a new DataSource requires the following details:

- Name: Represents the name of the data source which will be used when selecting data sources in the dashboard panels.
- Type: Represents the expected type of database. Declaring a wrong type of database triggers an error when saving and testing the new data source. Furthermore, based on the database format, additional configuration options can be selected in the Database details section.

- Default: Selecting this option will result in preselecting this data source in new dashboard panels.
- HTTP: Represents the URL where the database can be reached. Depending on the Access type selected, the configured URL needs to be accessible in browser or from the ProfiSight backend.

> ► ***Note:*** In case Server Access is selected, all requests will be made from the browser to the ProfiSights backend/server which in turn will forward the requests to the data source and by that circumvent possible Cross-Origin Resource Sharing (CORS) requirements.
>
> In case Browser Access is selected, all requests will be made from the browser directly to the data source and may be subject to Cross-Origin Resource Sharing (CORS) requirements.

- Auth: This section configures the expected authentication method. Basic authentication with user credentials and TLS authentication with or without TLS certificates are both supported.
- Advanced HTTP Settings: ProfiSight proxy deletes forwarded cookies by default. This field allows adding cookies by name to be forwarded to the data source(s).
- Database details: Specific to each database type, these settings further customize the way data is retrieved from the database.
- Save & Test: When saving the new data source, all entered details are tested and an error message is displayed in case inaccuracies are encountered.
- Delete: Deletes the data source. Prior to deletion, a confirmation dialog box is displayed.

5.3 ADD NEW DASHBOARDS

Besides the default Dashboards the ProfiSight solution is delivered with, additional Dashboards can be created by starting from a blank canvas and progressively adding the Panels that offers the best metrics for your analysis.
The process of creating a new Dashboard can be described in the following steps:

Figure 5.1

1. Following the action of creating a new Dashboard, the user is presented with a blank Dashboard and a list of available Panels that can be added in the Dashboard.
2. After selecting the first panel to become part of the Dashboard, users can add additional Panels by clicking 1.
3. Panels can be rearranged and resized, but more importantly, each Panel can be further customized and it's metrics tailored to match specific requirements, by clicking its title and selecting Edit.
4. After finishing adding Panels, the new Dashboard must be saved in a Folder by clicking
5. A saved Dashboard can be removed, shared with others (3), starred (2) or further configured (5), procedure covered in the 4.2 Dashboards Introduction chapter.

6. APPENDIX

6.1 USERS

This section allows administering Users that are allowed access to the ProfiSight Dashboard. A User can belong to one or more Teams and can be assigned different levels of

privileges through roles (admin, editor or viewer). Adding new Users is done by invitation via email from where they must follow a link and edit their credentials.

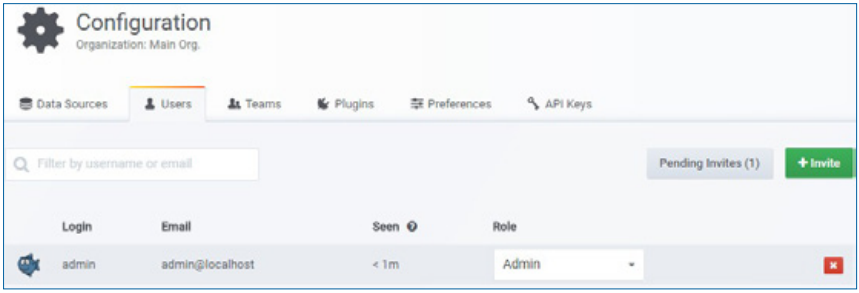


Figure 6.1

6.2 PREFERENCES TAB

Particular to each customer, the ProfiSight Dashboard appearance and the organization name can be customized in this section.

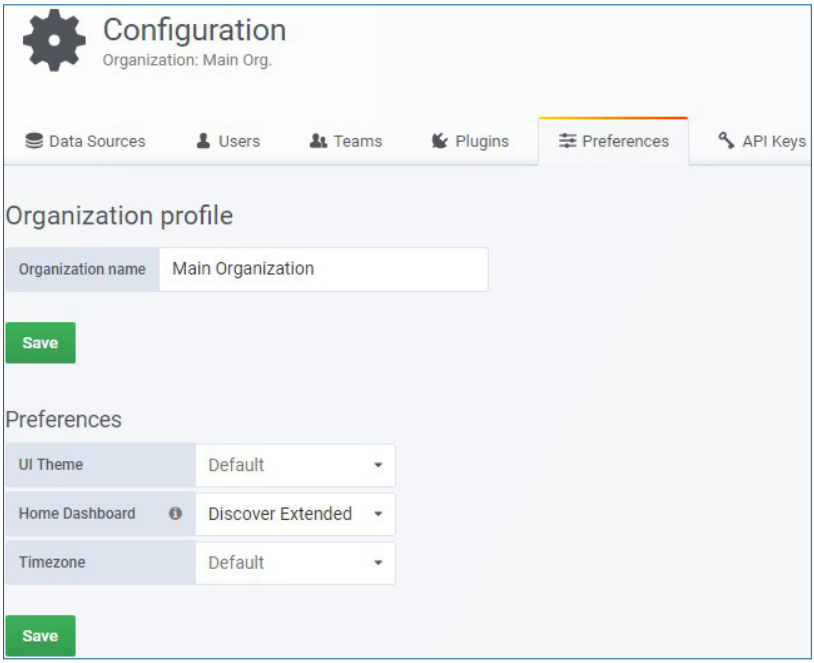


Figure 6.2

6.3 TEAMS

Team membership represents an efficient method for granting certain permissions to a large number of users sharing the same privileges.

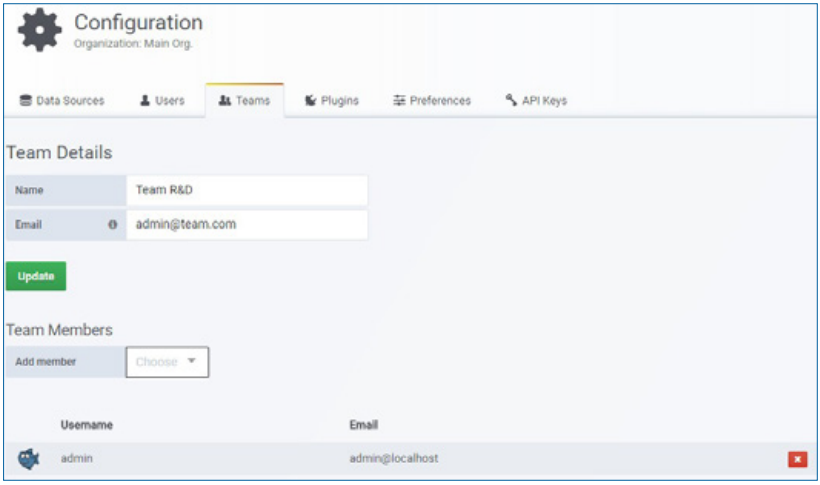
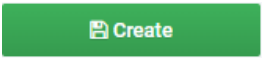


Figure 6.3

Fill in the team name and an email address used for sending team related information.



Once the team is created, users can be added or removed from the team.

Go to any Dashboard settings > Permissions tab > Add Permission. Permissions can be added for both teams and individual users.

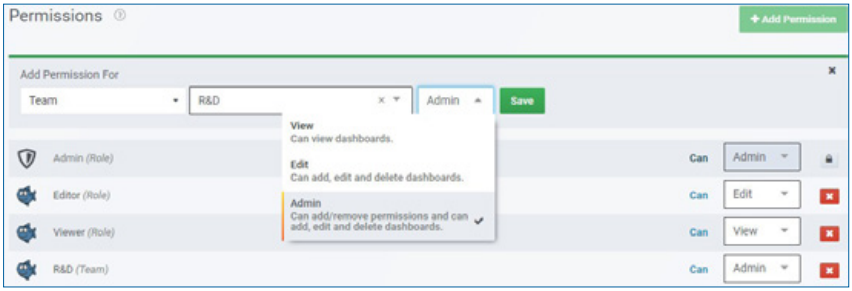


Figure 6.4

6.4 SNAPSHOTS

A Dashboard Snapshot is an instant way to share an interactive Dashboard publicly.

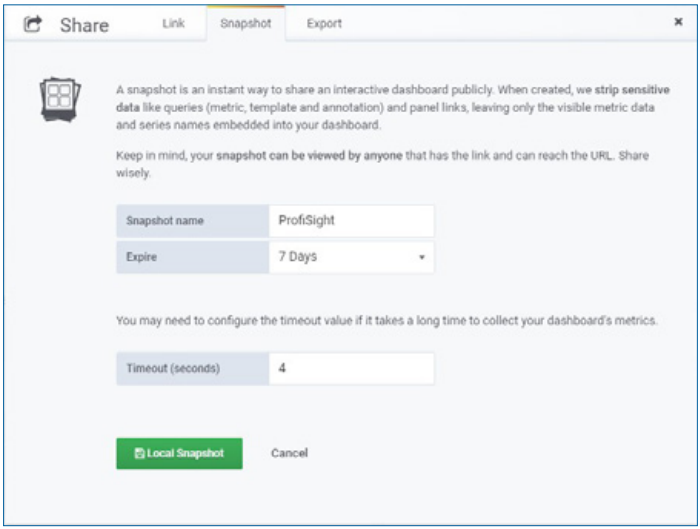


Figure 6.5

Once created using the Share button in the Dashboard view, the Snapshot URL can be copied to clipboard and shared while a list of all created Snapshots can be overviewed in the Snapshots tab.

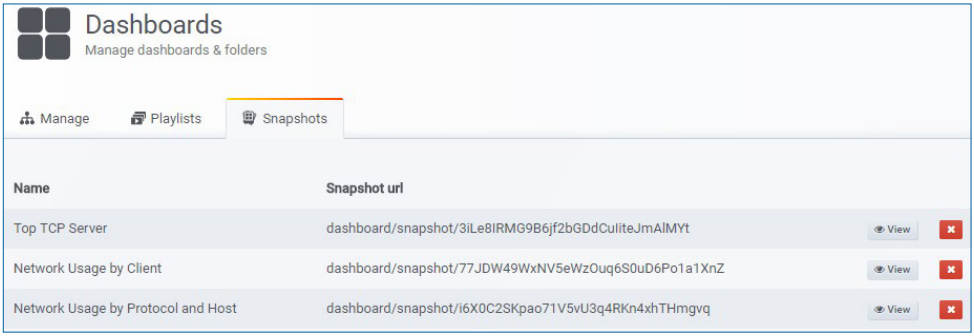


Figure 6.6

Given the sensitive data a Snapshot might carry, queries (metric, template and annotation) and panel links are removed automatically, leaving visible only the metric data and the series names into the Snapshot.

> ► *Note:* Dashboard Snapshots can be accessed by anyone who has the link and can reach the URL.

6.5 FOLDERS

Folders are a convenient way to organize Dashboards, especially when dealing with a large number of Dashboards or accommodating multiple teams working in the same ProfiSight instance with multiple streams of data.

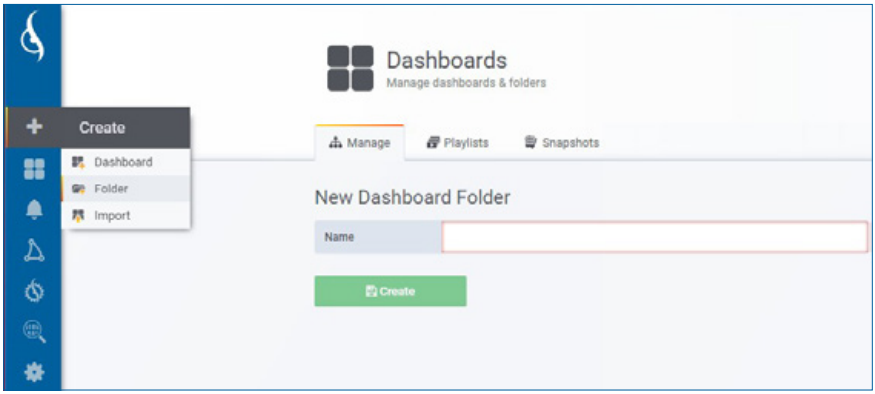


Figure 6.7

There are several ways to create a folder.

- By selecting the Folder link in the Create side menu.
- By using the Create button in the Manage Dashboards page.
- By creating a new Folder when saving a newly added Dashboard.

Permissions can be assigned to a folder and inherited by the containing dashboards by selecting what actions can be performed by each of the user roles: Admin, Editor and Viewer.

For modifying the permissions of a Folder, follow these steps:

1. Select Dashboards > Manage.
2. Hover over the Folder for which permissions have to be modified.
3. Click the configuration icon ⚙ .
4. Select the Permissions tab in the next displayed window.
5. Apply the required settings.

After a folder has been created, it can be furter managed by following the previous steps 1 to 3.

6.6 IMPORT A DASHBOARD

An easy alternative to create a Dashboard from scratch is to take advantage of extensive community work and simply import a Dashboard by supplying its URL or ID or by uploading its JSON source code or even by pasting the Dashboard JSON text directly into the text area.

Next, ProfiSight allows users to change the name of the dashboard, pick what data source is desired to pull data from and specify any metric prefixes, provided the new Dashboard uses any.

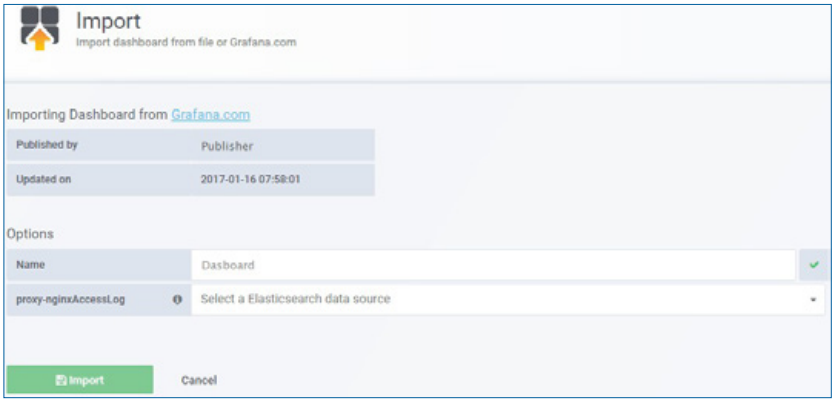


Figure 6.8

Once imported, the new Dashboard will be available for use or further customization.

6.7 PLAYLISTS

A Playlist is a simple way of automatically cycling through a list of Dashboards at predefined time intervals, being a great tool for showing off metrics to a wide audience.
And since ProfiSight automatically scales Dashboards to fit any resolution, Playlists make special sense on big screens!

In order to create a new Playlist, follow these steps:

1. Click 

to create a new Playlist.

2. Name the playlist and configure the time interval (example: 30s or 5m) for ProfiSight to wait on a particular Dashboard before advancing to the next one in the Playlist.

3. Click to add the Dashboards you want to the Playlist or add tags which will include all the dashboards that belongs to a tag when the playlist start playing.

4. From the Selected list, reorder the Dashboards as required, using the arrow keys or remove the ones added by mistake.

5. Click 

to save the Playlist.

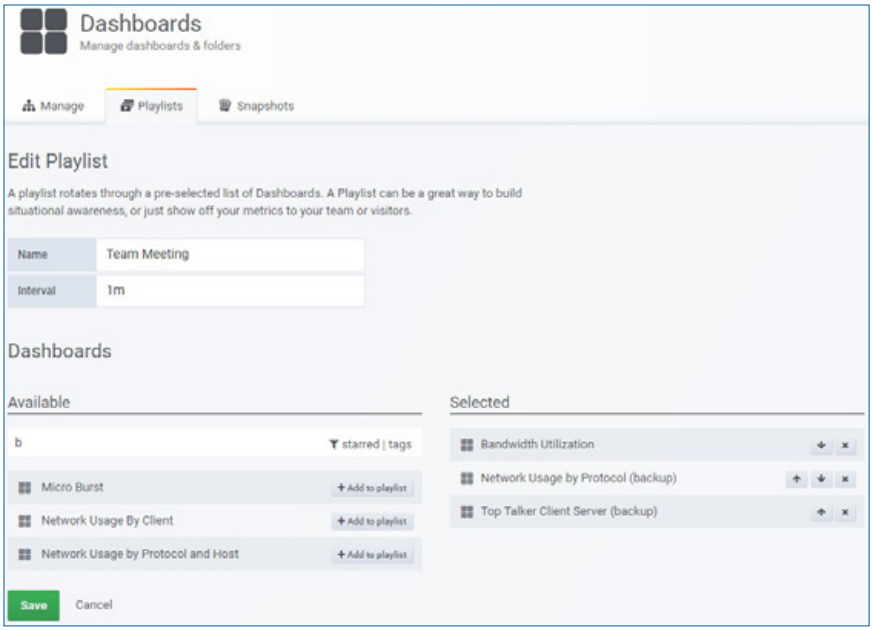


Figure 6.9

After the Playlist is saved, it can be edited, deleted or played, as required.

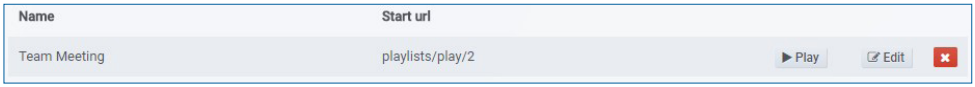


Figure 6.10

6.8 CONFIGURE DASHBOARDS

CAUTION: It is strongly advised not to change the default settings as it can lead to undesired or unexpected behavior.

Both size and metrics can be changed for each Panel in the Dashboard.
Click the cog icon ⚙ in the right upper corner of the screen to enter the configuration section for the Dashboard you are viewing.

► ***Note:*** For more information on how to create a new Dashboard, go to Add New Dashboards Chapter.

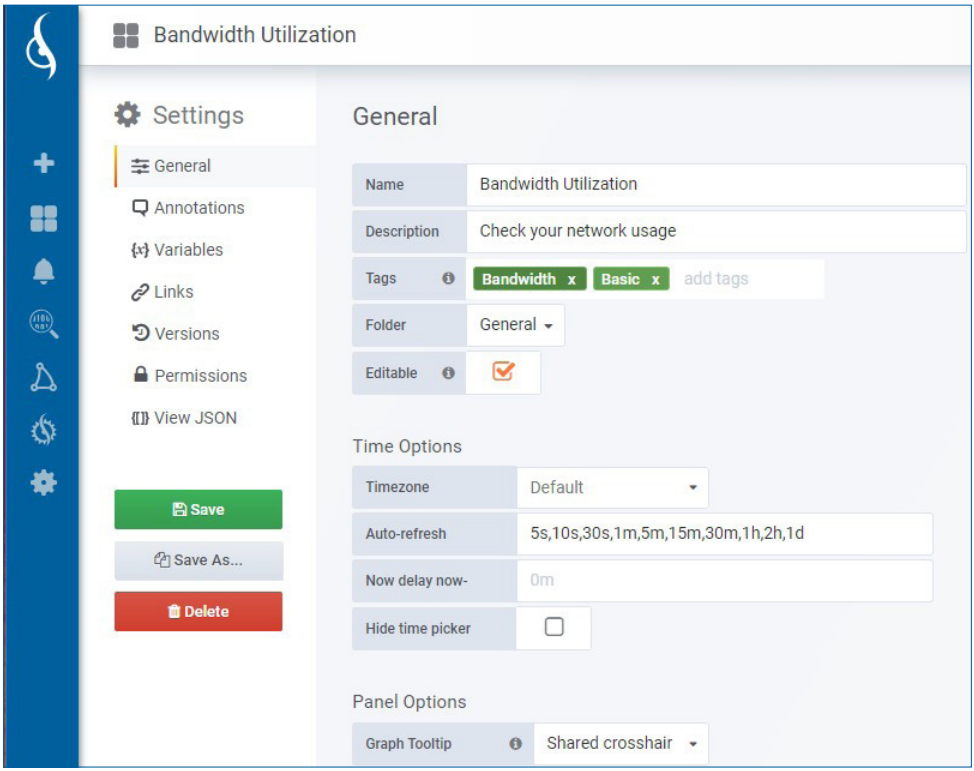


Figure 6.10

Variable	Explanation
Name, Description	Edit the name and description of the Dashboard. Useful when one or more Panels have been changed.
Tags	You can associate multiple tags with a Dashboard, making it more easy to be searched for.
Folder	Select the location where the Dashboard is stored.
Editable	Mark whether this Dashboard can be edited by users with lower credentials.

Annotations

Annotations provide a simple way to integrate event data into graph Panels, visualized as vertical lines and icons in the graph Panels. Hovering over an annotation icon will display the event text & tags. Annotation events can be added directly in a graph Panel by holding CTRL or CMD + click on the graph and will be stored in the ProfiSight annotation database.

For more information on Annotations, please visit the Grafana Website.

{x} Variables

Using variables contributes to more interactive and dynamic dashboards as opposed to hard-code things like server, application and sensor name in your metric queries. Variables are shown as drop-down select boxes at the top of the dashboard. These drop-downs make it easy to change the data being displayed in your dashboard.

For more information on Variables, please visit the Grafana website.

Versions

The Versions tab provides a history of changes for the current Dashboard, including an automatic version number for every change and the change date, the name of the user who made the changes and optional notes in case the user left any.

Permissions

The Permissions tab allows setting permissions for viewing, editing and further administering the current Dashboard for individual user roles (Viewer, Editor, Admin) or for multiple users part of a Team, sharing the same permissions.

{[]} View JSON

The View JSON tab displays the source code for the Dashboard, allowing context code editing or copying the code and share it for others to reuse.
All changes must be first saved under the same name or a different Dashboard name for changes to take effect.

6.9 CONFIGURE PANELS

CAUTION: It is strongly advised not to change the default settings as it can lead to undesired or unexpected behavior.

Panels offer a great degree of customization and besides they can be shared with others, users can further tailor their metrics as required. Clicking a Panel title exposes a menu.

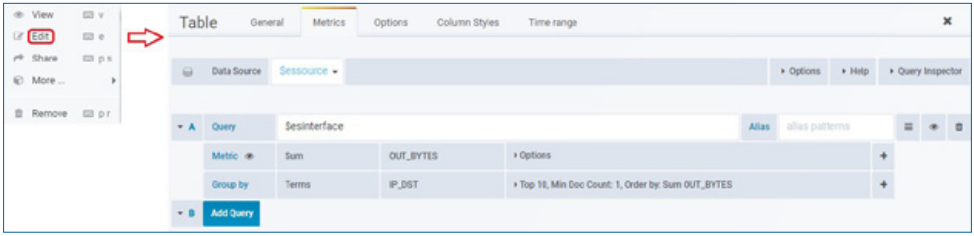


Figure 6.11

Covering a large variety of needs and requirements, there are multiple types of Panels:

- Graph Panels.
- Statistical Panels.
- Table Panels.
- Heatmap Panels.
- Text Panels.

Depending on the type of Panel chosen for further customization, different options may be displayed. Although most of the options are self-explanatory, for more details on the variables that can affect Panels, please contact Profitap Support.

7. LEGAL

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