ITRS Insights

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Lit by V▲LO

ITRS Insights v1.6

Dashboard, Notebook and Collection User Guide

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CHAPTER 1

ITRS INSIGHTS
COLLECTION, NOTEBOOK
& DASHBOARD USER GUIDE

INTRODUCTION

Notebooks and **Dashboards** give you the means to interact with Valo - the number-crunching analytics engine that powers Insights - using a simple graphical user interface.

Notebooks house your analytic queries and searches, while Dashboards offer an aggregated view of your data visualizations. Notebooks are stored in high-level organizational directories called **Collections**.

Once your installation of Insights is configured to bring in your live or historical data streams, you create Notebooks, add **queries** or **free text searches** to them, and then send your results' **visualizations** to the Dashboards for clutter-free, customizable looks at what your data is telling you.

We have dedicated user guides for both visualization and querying, so check those out here:

ITRS Insights Query, Search and Transform Data User Guide

ITRS Insights Visualizing Results User Guide

In the meantime, this guide is intended to give you an introduction to Collections, Notebooks and Dashboards, and get you on your way to creating them and leveraging their utility to your advantage.

Collection: an organizational tool for grouping together two or more Streams, Domains, Dashboards or Notebooks.

Collections are a high-level, organizational tool for bringing order to your **Notebooks**, **Dashboards**, **Streams** and **Domains**. They exist within the level of the entity they're created in, which means that a Collection you create for a Notebook will not be carried over to a Dashboard, for example.

Example Collection

> In our smart metered houses example, a Collection might consist of two Streams: one from Arcadia Avenue, and the other from Privet Drive.

Collections are created when a Data Stream is imported, or when you manually create one during the process of adding a new (or editing an existing) Notebook, Dashboard or Domain. You can re-assign a Notebook, Dashboard or Domain to another Collection at any time.

Collections are created in the process of adding a new entity (Stream, Notebook, Domain or Dashboard), or editing an existing one.

To Create a Collection at the Same Time as Adding a New Entity

1. Run **ITRS Insights**

2. Click any of the following entities on the main navigation panel, depending on where you want to create the Collection: **Notebook** , **Dashboard** or **Domain**

3. Click **add** - a new tab will open

4. If you chose to create a Collection for a new **Domain** or **Notebook**:

   Select a **Collection** from the **drop-down dialog**, or click inside the text field and type the name of the **Collection** that you want to create. Complete the creation process as normal

5. If you chose to create a new Collection from a new **Dashboard**:

   Select the Dashboard from the Dashboard Panel, then click **edit** . Select a **Collection** from the **drop-down dialog**, or click inside the text field and type the name of the **Collection** that you want to create. Click save

> **Notebook**: a place in which to store one or more queries or free text searches.

An Insights **Notebook** is very similar to the paper notebook on your desk: it is a place where you can record your findings, try hypotheses, jot down notes and build up an understanding of what your data looks like. It's also the place where you define how you want to visualize the results of your queries.

You can run **Free Text Searches** and **Queries** from your Notebook (see [ITRS InsightsQuery, Search and Transform Data User Guide), and review results in a number of different graphing options (see ITRS Insights Visualizing Results User Guide).

You can have multiple Notebooks and you can also share them with others by exporting them to a local or network folder.

You can also categorize your Notebooks into **Collections**, allowing for high-level organizational teams or functional requirements.

Example Notebook

> In our smart street example (see Organizing Data in ITRS Insights for all the examples), if I want to analyze the energy usage in house number 4 then I open a notebook and select `House04`, I am then able to perform searches and queries against that domain, from a simplistic search that requests how many times 'kettle' appears in that stream (that may represent every time a kettle is turned on and off) over a given time frame to complex queries like what is the combined electricity usage of all the smart appliances in the house from 6pm until midnight, displaying the results in a choice of graphical or tabular ways in the notebook.

As with a paper notebook, these investigations and discoveries can be saved and shared with other people and added to. They can also be rerun at just the touch of a button.

The Notebook Interface

Specific information about the **query** and **free text search** interface elements can be found here: The Query and Free Text Search Interface
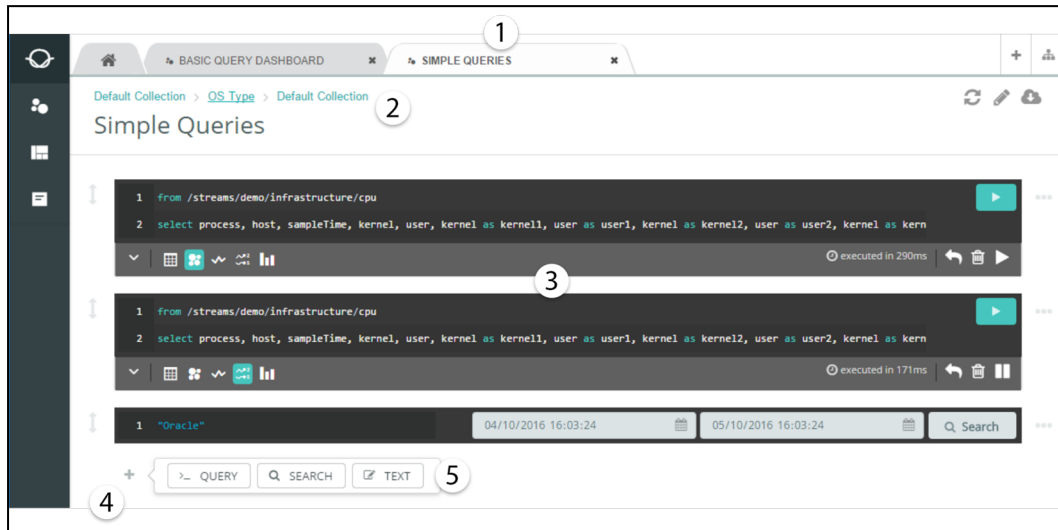
1. **Active tab** - identifies the Domain, Dashboard, Notebook or Collection that is being displayed
2. **Breadcrumbs** - provides a visual indication of which Collection you are working in
3. **Queries & Free Text Searches** - your searches and queries are stored here
4. **Add** - adds a new query, free text search or text comment
5. **Add New Dialog** - when you click Add, this dialog opens to allow you to choose whether to create a new query, free text search or text comment
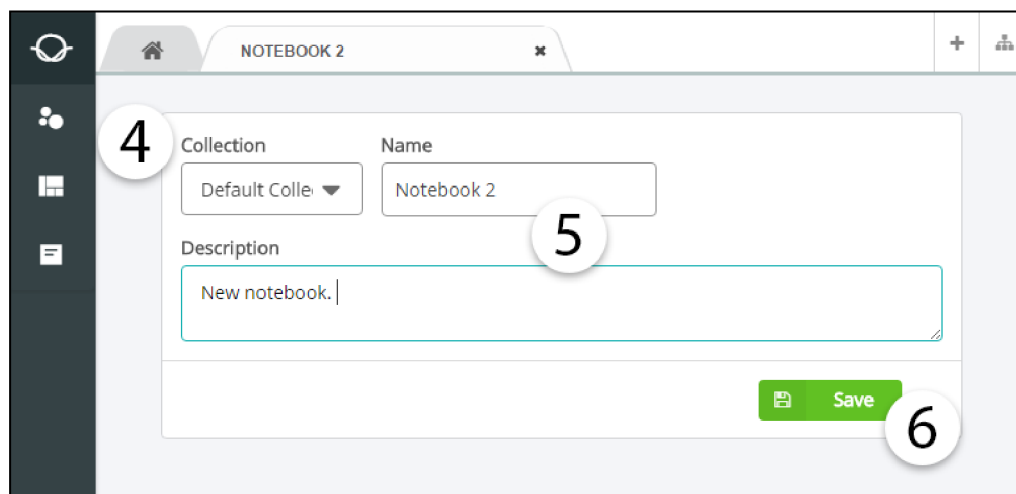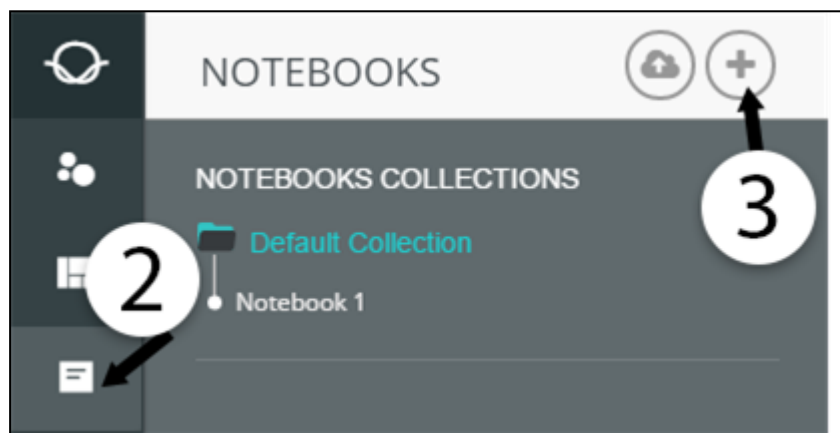
Create A Notebook

By creating an Insights notebook you are creating a window into your data, with the ability to analyze your data, visualize the results, and then save the queries to run again, at any time, over the same, updated or different data.

How to Create a Notebook

1. Run **ITRS Insights**

2. Click **Notebook** ▣ on the main navigation panel

3. Click **add** ⊕ - a new Notebook tab will open

4. Select a **Collection** from the **drop-down dialog**, or click inside the text field and type the name of the **Collection** that you want to create
   MadCap:continue="true">

5. Enter a **name** and **description** for the new Notebook

6. Click **Save** 💾 Save

DASHBOARD

Dashboards provide an aggregated view of your visualizations to enable you to see the results of key in real-time. Once you've created one or more **queries** or **free text searches** in a **notebook**, important results and visualizations can be sent to a Dashboard where changes can be seen in real-time.

For more about visualizing your results, see ITRS Insights Visualizing Results User Guide .

You can drag and drop the visualizations in a Dashboard, allowing you to order the space as you wish. You can also resize each of the visualizations to increase or decrease their prominence - when you do so, the other visualizations in the Dashboard will resize automatically.

Your panel selections, positions and sizes are saved automatically when you exit Insights.

Each time you open a Dashboard, the queries and free text searches that feed the visualizations will automatically run.

The Dashboard interface
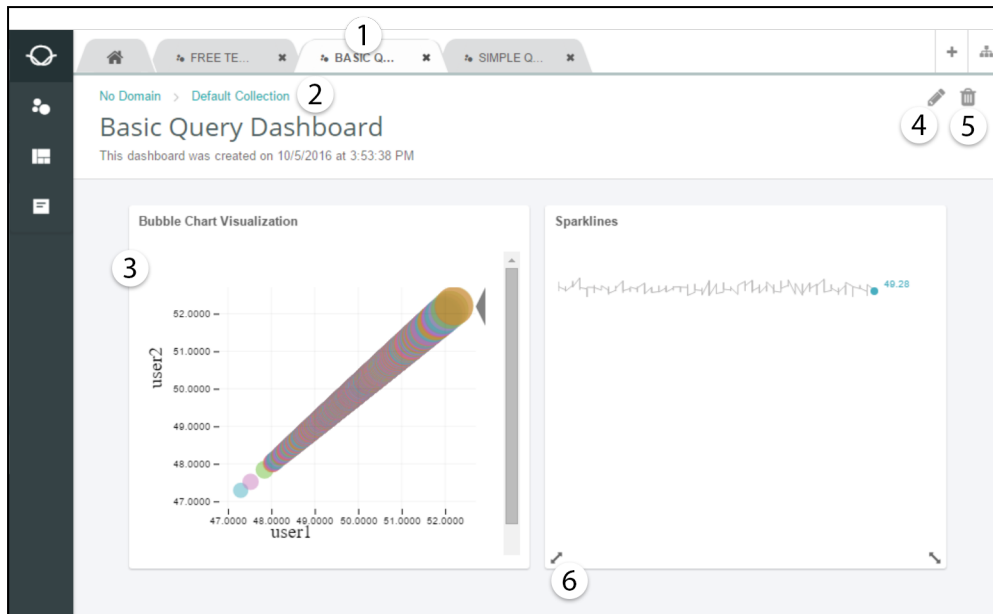
1. **Active tab** - identifies the Domain, Dashboard, Notebook or Collection that is being displayed

2. **Breadcrumbs** - provides a visual indication of which Collection you are working in

3. **Visualization** - a visualization added to your Dashboard from a Notebook

4. **Edit** - allows you to edit the title and description

5. **Delete** - deletes the active component (Domain, Collection, Dashboard or Note-pad)

6. **Resize Handle** - grab and drag the **resize handle** to rescale the visualization

Create a Dashboard

Insights doesn't come with Dashboards created out of the box. So, if you haven't already created one, do so now. It's easy to do and takes only a few clicks of the mouse.

How to Create a Dashboard

1. Run **ITRS Insights**

2. Click **Dashboard** on the main navigation panel

3. Click **add** - a new Dashboard tab will open. Your Dashboard has been created and will be automatically saved

4. (Optional) click **edit** to change the Collection, Dashboard name or Dashboard description. When finished, click **save**
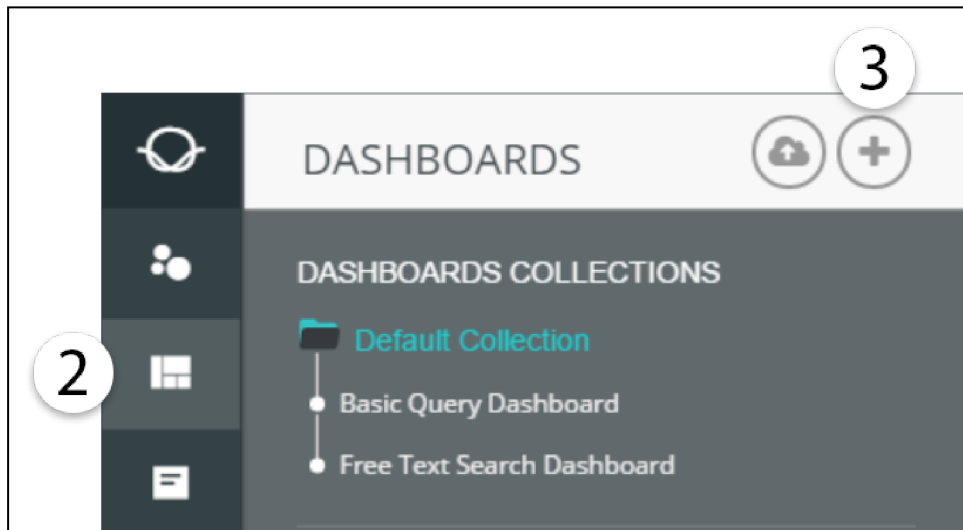
Populate A Dashboard

Once you have created a **Dashboard**, you can start to add visualizations to it.

These visualizations come from the **queries** and **free text searches** you have created in your **Notebooks**. So, before you can populate your Dashboard, you have to have run some queries or free text searches (see ITRS InsightsQuery, Search and Transform Data User Guide).

When you have run a query in a notebook and have either a table or selected a Visualization you can send that Visualization to a Dashboard.

How to Populate a Dashboard

1. Run **ITRS Insights**

2. Click **Notebook** 🔲 on the main navigation panel

3. Select the **Collection** the Notebook is saved in, then select the **Notebook** from the tree

4. Run the **Query** or **Free Text Search** that you want to visualize in your Dashboard, or simply click **Run All** 🔄 to run all the queries and searches in the active Notepad

5. Choose and configure a **Visualization** from the **Visualization Panel** in each of the results that you want to send to the Dashboard

6. Click **Send to Dashboard** ↩ for the first Visualization (repeat steps 6 to 10 for each additional Visualization you want to add to the Dashboard). A Send Visualization to Dashboard dialog will open

7. In the **Destination Dashboard text field**, begin typing the name of the Dashboard you want to select. If you don't know the name, press SPACE BAR and a drop-down list of all available Dashboards will appear

8. Select the **Dashboard** you want, then click **Configure** [Configure >]

9. Enter a **name** for the Visualization, and select whether or not to apply a **domain filter**, then click **Preview** [Preview >]

10. If you are happy with the Visualization, click **Send** [Send >] - an on-screen confirmation will appear. Alternatively, click **Configure** to

return to the previous screen, or **Cancel** ⊗ to return to the

Dashboard view

11. Select the **Dashboard** from the **Dashboard Menu Tree** to view your

Visualization(s) in place
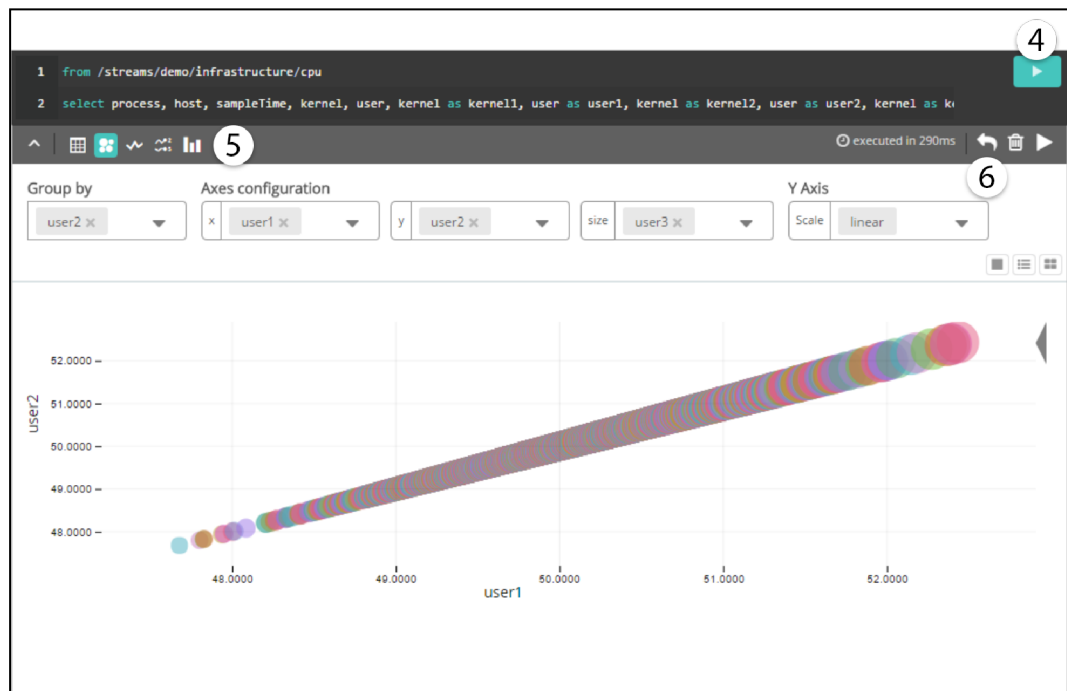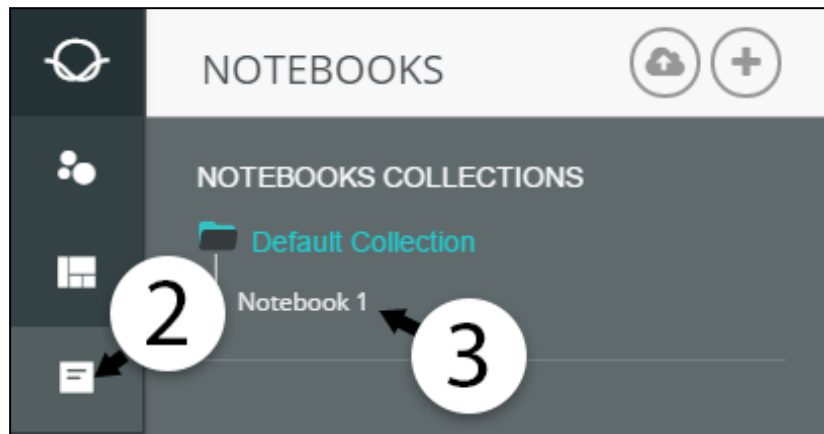
Sending a visualization to a dashboard

1 Select Dashboard — **2** Configure — **3** Preview

Please, select the destination dashboard where you'd like to see

Destination dashboard

⑦ Type name

Configure ＞ ⑧

Sending a visualization to a dashboard

1 Select Dashboard — **2** Configure — **3** Preview

You can change this configuration anytime you want

Name of the visualization

Type name

Domain filter ⑨

○ Query Domain (OS Type)

● No Domain

‹ Select Dashboard   Preview ＞

Sending a visualization to a dashboard
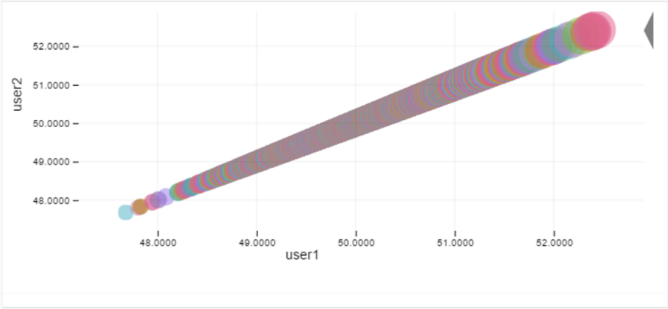
1 — Select Dashboard
2 — Configure
3 — Preview

Take a look to your visualization before you send

Client Types (No Domain)

Configure

Send   10

Organize a Dashboard

Once you've added a few visualization panels to a Dashboard, you may want to start reorganizing it. Insights makes this easy through it's intelligent drag, drop and resize interface.

You can move panels to reorder them, and you can resize them to make them more or less prominent. Your configurations are automatically saved.

How to Move Visualization Panels in a Dashboard

1. Run **ITRS Insights**

2. Click **Dashboard** on the main navigation panel

3. Select the **Dashboard** from the **tree**

4. Position your cursor over the top third of the **visualization panel** until the **move handle** appears

5. **Drag and drop** the panel into its new position

How to Resize Visualization Panels in a Dashboard

1. Run **ITRS Insights**

2. Click **Dashboard** on the main navigation panel

3. Select the **Dashboard** from the **tree**

4. Position your cursor over the **visualization panel**. The **resize handle** appears in the lower corner of the panel

5. **Grab and drag** one of the handles, releasing the mouse button when you are happy with the panel's new size

GLOSSARY

C

Collector

New term for a lightweight monitoring agent, which is deployed on every managed Node. See Netprobe.

Contributor

An external source that provides one or more data streams to Valo. Contributors can be grouped together by common attributes to create Domains.

D

Dashboard

Dashboards provide an aggregated view of Data Visualizations

Domain

Two or more Contributors grouped together by a common attribute. Domains help to organise and group different data sources in intuitive ways.

G

Gateway

A network node that provides access to another network that uses different protocols and enables transmitted data to use its routing paths.

I

Insights

A streaming big data analytics platform that simplifies the complexity involved in analysing vast amounts of data at speed. Insights combines big data storage with a real time computation engine and in-built machine learning and algorithms.

ITRS Geneos

A real-time monitoring tool for managing increasingly complex and interconnected IT estates. Built for financial services and trading organisations, it collects a multitude of data relating to the performance of the servers, infrastructure, connectivity and applications, analyses it to detect anything untoward, and presents it in relevant, intuitive visualisations to help diagnose and fix issues quickly.

N

Netprobe

Lightweight monitoring agent, which is deployed on every managed Node

Notebook

A place in which to store a query or search, or a pipeline of queries or searches.

S

Schema

Document of understanding that defines what data a stream

contains - its structure and shape - and in what format.

SSR

The semi-structured repository (SSR) is based on Lucene which provides very powerful text search capabilities. Even though Lucene is geared towards indexing text, it also has very good index support for numerical data. However, if the data contains purely numerical fields the TSR might be a better fit as a repository for this kind of data.

Stream

A stream is made up of data (messages or events) coming from one or more external contributors. Each stream has a schema that defines what information, in what format is expected. Streams are append only.

T

Tennant

The highest level of data grouping. Within a company, it may be different departments such as Sales or Engineering. If a government is collecting data from its cities, the tenant could be the city name.

Transformational Pipeline

Each query instruction takes an input and produces an output via some form of transformation.

TSR

The Time Series Repository (TSR) is a custom built data repository designed to handle numerical time series oriented data streams. By time series we mean a series of data points each of which has an associated time stamp.

V

Valo

Real-time analytics on data streams

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