

Norris
Node Real-time Intelligence



Norris - Web App Manual

Document Informations

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Summary

This document contains technical and operative informations on the usage of the Norris web application_{|g|}.

Changelog

Version	Date	Author	Role	Description
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v2.1	2015/06/08	Enrico Savoca	Programmer	Creation of the base structure

Tabella 1: Document versioning.

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1 Introduction

1.1 Welcome to Norris-nrti Web-App

Norris-nrti is a Web-APP that lets you display graphs and observe real-time updates of data from a defined URL_{|g|}. The charts come in several types: bar chart_{|g|}, line chart_{|g|}, map chart_{|g|} and table_{|g|}. The application must be used through a browser and must be set in a precise HTML_{|g|} structure in order to be completely functional.

1.2 Document purpose

The main purpose of this document is to aid developers in using the application, explaining how to integrate the HTML_{|g|} code in it. Besides, it aims is to illustrate how to interact and take advantage of the functionalities that this app_{|g|} can offer.

1.3 Glossary

In pursuance of avoiding words' misunderstanding and allowing a clear comprehension of the manual, it's possible to find the explanation to some ambiguous or specific words at the end of the document, in a Glossary. Words that are reported in the glossary are marked with the following symbol: _{|g|}.

1.4 System requirements

The application will work on any recent browser. An internet_{|g|} connection is also required.

1.5 Problems and malfunctioning

For each kind of unexpected problem with the app, please read the specific section.

2 Getting started

2.1 Using the App

In order to use the Web App of a Norris instance, you need the URL where it is located.

Once you have it, you only have to type it on your browser and enter the site.

2.2 What is Web-App Norris-nrti

As previously introduced, Norris-nrti is a web-app that displays data, arranged in several types of graph, which update in real time. The main purpose of the app is showing data to the user in a thorough yet simple way. Further explanations on the app will follow in the next chapters, with a step-to-step guide to interaction supplied by images.

3 App layout

3.1 GUI_{|g|} description

The user can interact with the Norris-nrti Web-App through a simple and clean graphic interface; in fact, users can easily display charts and interact with them. The user interface is composed of:

- a list of pages that shows name and description;
- single pages that display all their charts at the same time;

Many graphs will have radio buttons located at their upper side.

3.2 Pages list

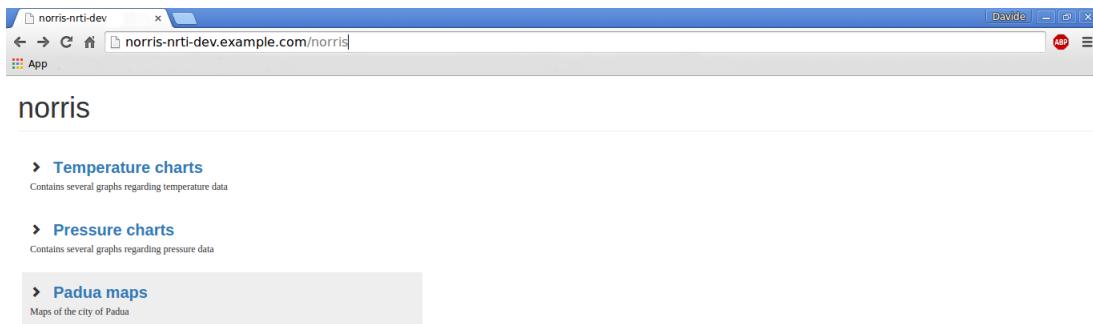


Figura 1: Pages List

A list of links to different pages is the first thing that can be seen entering the application. For each list item, its name and description are displayed. The only possible action in this section is to select a page to access its data. By doing so, the user will be shown the entire content of the clicked page.

3.3 Page

In this section, the following objects are shown:

- buttons for interactions with the page. There's a link to return to the list of pages. It's also possible to move to the following and the previous pages, provided they exist.



Figura 2: Buttons to navigate between pages

- a page composed by a set of graphs, organized as a matrix.

3.4 Map Chart

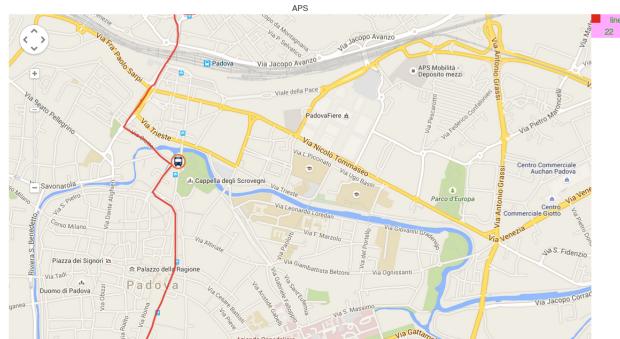


Figura 3: Map Chart

The Map Chart shows the data in a customized Google map. Data may be static or dynamic. Here's a list of features offered by this chart:

- Zoom and Drag: the user can drag and zoom at different levels to display different areas of the map, provided the app developer allowed users to perform these operations. These actions can also be executed through buttons on the left side of the map.
 - Track: Polylines can be used to draw any path on the map. In the example, they are used to show the path of the buses. The track can only be displayed, but not edited. Markers are displayed on the track if they exist, and they are updated in real-time. The marker appearance can either be a geometrical shape, a text or one of the several icons included in Norris, depending on the developer choice. In the APS example, markers track the bus positions, which are constantly updated (a marker is used for each bus).
 - Legend: It shows informations about the flows. It identifies each by its colour and name; it is statically placed outside the graph in a position that is defined by the developer. The legend may be absent.
 - Legend on point: it consists of a little text-box that appear above the marker. It displays informations about the track that the marker is related to. It can be activated by simply clicking on a marker.

3.5 Line Chart

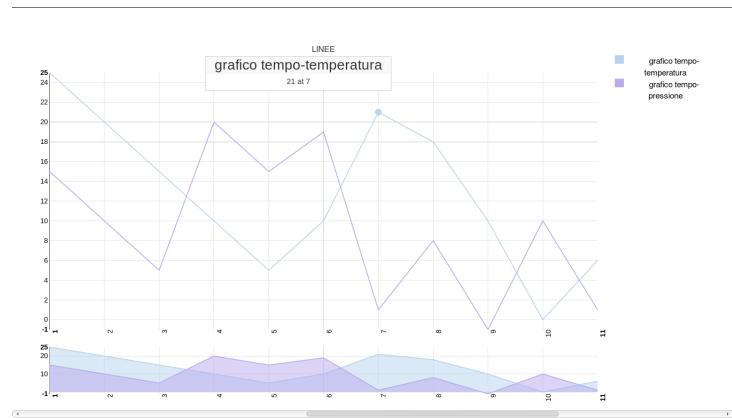


Figura 4: Line Chart

The Line Chart shows the data in lines. Here's a list of features offered by this chart:

- View Finder: it consists of an area located below the main chart, that displays a complete version of it; a colored rectangle-shaped area hovers the graph preview and the user, by reducing its size and moving it, can have the graph portion hovered by it be displayed in the main chart above. The selected area needs to be wider than a certain fixed width in order to be displayed.
- Line controls: checkboxes, one for each line, allow the user to hide and show them. They may be absent, according to developer's decision.
- subtended area: according to developer's choice, the area below the lines could be coloured with a transparency effect.
- Legend: It shows informations about all the lines. It identifies each line by its colour and name; it is statically placed outside the graph in a position that is defined by the developer. The legend may be present.
- Legend on point: it consists of a little text-box that appear above a point. It displays informations about it and about the line that it is related to. It is activated while the cursor passes above it as shown in the image.

3.6 Bar Chart

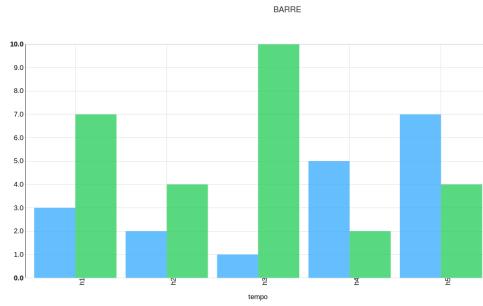


Figura 5: vertical Bar Chart

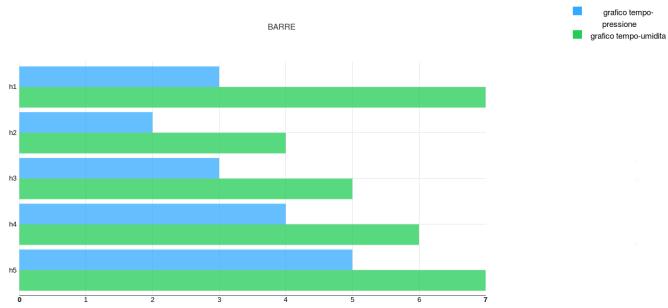


Figura 6: horizontal Bar Chart

The Bar Chart shows data as columns. Here's a list of feature offered by this chart:

- Grouping Controls: bars of different sets, but related by having the same index on the x axis, are always shown close to each other; they can, though, be shown as either grouped or stacked bars. These buttons allow the user to switch between these two options.
- Controls on groups of bars: controls for each bar, allows the user to choose to hide or show them. This option can be not present, according to developer's decision.
- Legend: It shows informations about all the groups of columns. It identifies each group by its colour and name; it is statically placed outside the graph in a position that is defined by the developer. The legend may be absent.
- Legend on point: consist of a little text-box that appears above a selected bar. It displays informations about the column value and the flow which it belongs to. It is activated while the cursor passes above it as shown in the image.

3.7 Table

IDMezzo	WGS84FI	WGS84La
814	45.423728942871	11.8900828132629
814	45.424877166748	11.897101402283
814	45.425630291504	11.903347095055
814	45.434585571289	11.913011550903
814	45.43616104126	11.917216300964
814	45.43616104126	11.917216300964
805	45.41446304213	11.875088991711
805	45.386032104492	11.865413665771
805	45.387706756592	11.868889537048

Figura 7: Table

The Table shows the data arranged in rows and columns. Here's a list of feature offered by this chart:

- Paging: the table only shows a set maximum amount of rows at a time, so the exceeding data is arranged in pages; these can be visited by using the paging controls below the table. These controls consist of buttons that link the user to the correspondent pages: these buttons can't be more than 10, so the displayed numbers will vary as the user scrolls through the pages.
- Sorting: if set, the table data are sorted in an ascending or a descending way, according to the developer's desicion. At every update, the new data are added at the right position.

4 Problems and malfunctioning

The application is still in its early stage, so the user might run into some runtime bugs or technical issues when using some devices. Should any malfunctioning be found, we ask you to please send us an e-mail with the problem description at the following e-mail address: deltagraphs@gmail.com.

5 Glossary

5.1 A

Action bar: is a window feature that identifies the user location, and provides user actions and navigation modes.

Activity: is a single, focused thing that the user can do. Almost all activities interact with the user.

AngularJS: is a mobile operating system (OS) based on the Linux kernel and currently developed by Google. With a user interface based on direct manipulation, Android is designed primarily for touchscreen mobile devices such as smartphones and tablet computers, with specialized user interfaces for televisions (Android TV), cars (Android Auto), and wrist watches (Android Wear).

AngularJS: is an open-source web application framework maintained by Google and by a community of individual developers and corporations to address many of the challenges encountered in developing single-page applications.

5.2 B

Bar chart: is a chart that presents Grouped data with rectangular bars with lengths proportional to the values that they represent. The bars can be plotted vertically or horizontally. A vertical bar chart is sometimes called a column bar chart.

Browser: is a software application for retrieving, presenting and traversing information resources on the World Wide Web.

5.3 C

5.4 D

5.5 E

5.6 F

5.7 G

internet: a graphical user interface or GUI, is a type of interface that allows users to interact with electronic devices through graphical icons and visual indicators such as secondary notation, as opposed to text-based interfaces, typed command labels or text navigation.

5.8 H

5.9 I

internet: is a global system of interconnected computer networks that use the standard Internet protocol suite (TCP/IP) to link several billion devices worldwide.

5.10 L

Line chart: is a type of chart which displays information as a series of data points called 'markers' connected by straight line segments.

5.11 M

Map chart: is a type of chart which displays information about a map and its markers.

MB: is a multiple of the unit byte for digital information.

5.12 N

5.13 O

5.14 P

Packet Data: is a formatted unit of data carried by a packet-switched network. Computer communications links that do not support packets, such as traditional point-to-point telecommunications links, simply transmit data as a bit stream. When data is formatted into packets, the bandwidth of the communication medium can be better shared among users than if the network were circuit switched.

Polyline: is a list of points, where line segments are drawn between consecutive points.

5.15 Q

5.16 R

Repository: is an on-disk data structure which stores metadata for a set of files and/or directory structure. Depending on whether the version control system in use is distributed (for instance, Git or Mercurial) or centralized (Subversion or Perforce, for example), the whole set of information in the repository may be duplicated on every user's system or may be maintained on a single server.

5.17 S

5.18 T

5.19 U

URL: a Uniform Resource Locator (URL) is a reference to a resource that specifies the location of the resource on a computer network and a mechanism for retrieving it.

5.20 V

5.21 W

WiFi: is a local area wireless computer networking technology that allows electronic devices to network.

5.22 Z