CESGA VNMS

A mobile client for Zabbix

November 22th, 2011

Galicia Supercomputing Center

Current Version

Date	***Version***
20/11/2011	*0.8*
20/10/2011	*0.7*
20/09/2011	*0.6*

Version control

Date	***Version***	***Changes***	***Autors***
20/11/2011	*0.8*	*- Host logs support* *- Solved bugs*	*David Rodriguez Penas*
20/10/2011	*0.7*	*- Screens support* *- Solved bugs*	*David Rodríguez Penas*
20/09/2011	*0.6*	*First version* *- Issues, hosts monitoring.* *- Configuration options* *- Migrated to jquery mobile*	*David Rodríguez Penas*

Content

Introduction

CESGA VNMS is a light web client for Zabbix network monitoring tool developed by CESGA (Galicia Supercomputing Center). It has been targeted to mobile clients. It allows the following functionalities:

- Display issues (last issues and active issues, ordered or not by group).
- Display host information (searchable by host it retrieves IP, group, issues, graphs and allows basic checks like ping or traceroute).
- Display screen information (graphs groups from different hosts defined in ZABBIX interface).
- Provides network query tools like nslookup, whois, ping, traceroute, etc. to any IP address/port.

CESGA VNMS has been deployed in CentOS release 5.7 (Final), and it has been tested on the following platforms:

- Google Android 2.3.
- Apple IOS 4 and 5 (Iphone and Ipad).
- Amazon Kindle

Besides, it is a normal web application, therefore it has been tested on:

- Firefox 8.0
- Google Chrome 15.0.874.106
- Internet Explorer 9

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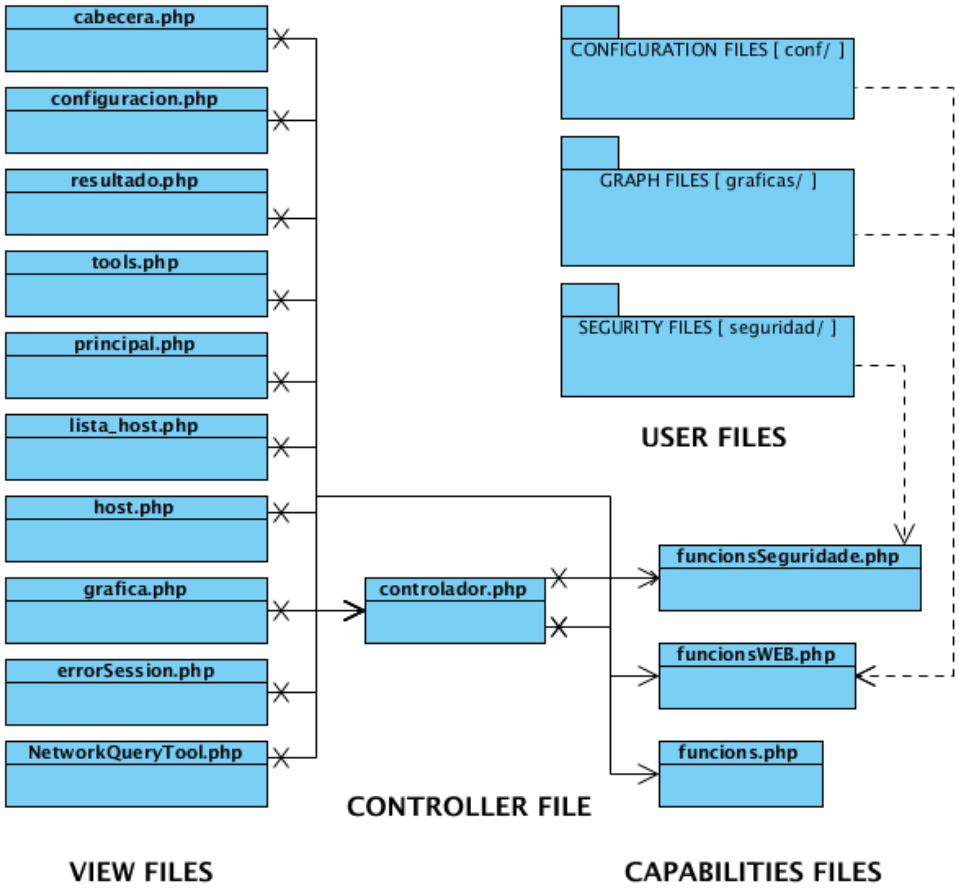
Architecture definition

CESGA VNMS client has been developed in PHP language without oriented object paradigm. Below the system architecture design is shown.

The **view files** section includes PHP and HTML code that prints the visual elements on the browser.

The **controller** section handles the view files requests. This module responses with data that is sent to the view files.



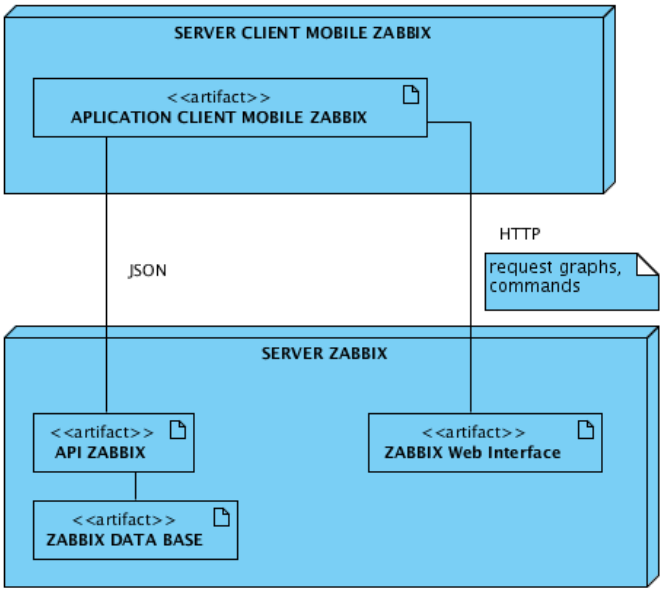
[Image 01] Architecture Diagram

The controller also uses capabilities module to obtain required information. The capabilities module contains operations for obtaining graphs, executing commands, security functionalities, etc.

Finally, **user** module stores information related to graphs generated, hosts/hostgroups configuration and filter, and security modules.

Below, the deployment diagram is shown where the situation of elements in a real context is depicted. There are two servers, one for the mobile client, and the other for ZABBIX server deployment. Both applications can be installed on the same server too. Both entities will communicate with each other.

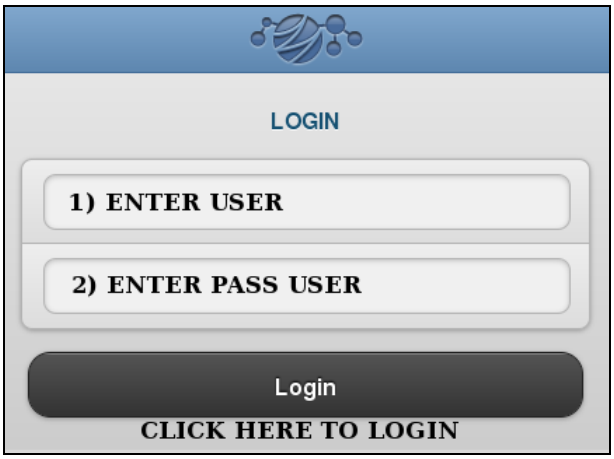
The Zabbix API is accessed by means of JSON interface. For obtaining graphs or running commands for a host, CESGA VNMS sends HTTP requests to Zabbix user interface.



[Image 02] Deployment Diagram

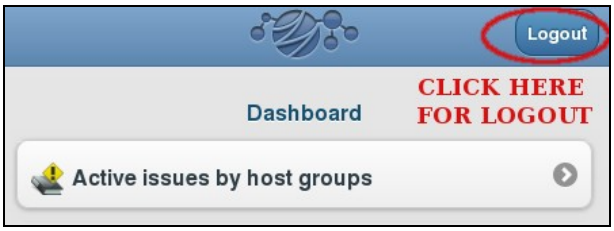
User Guide

Login / Logout : First provide user identification to the system. For this, you must have Zabbix access credentials.



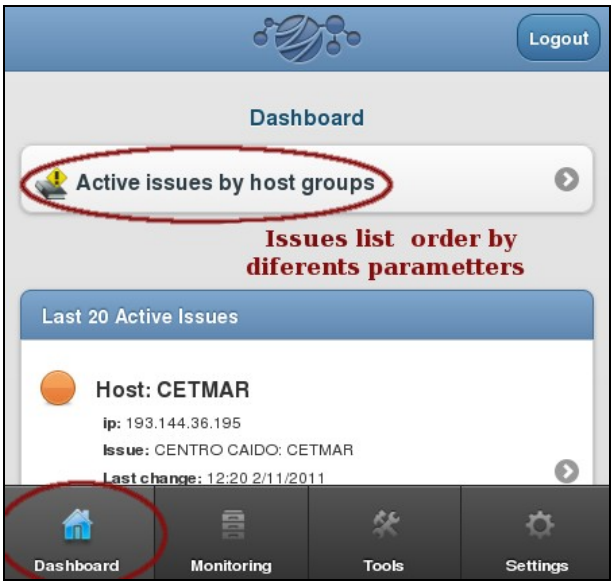
[Image 03] Login

Once the user is logged in, a log out option is provided in case the user want to exit the application. Just clicking on the "Logout" button on top right in all pages.



[Image 04] Logout

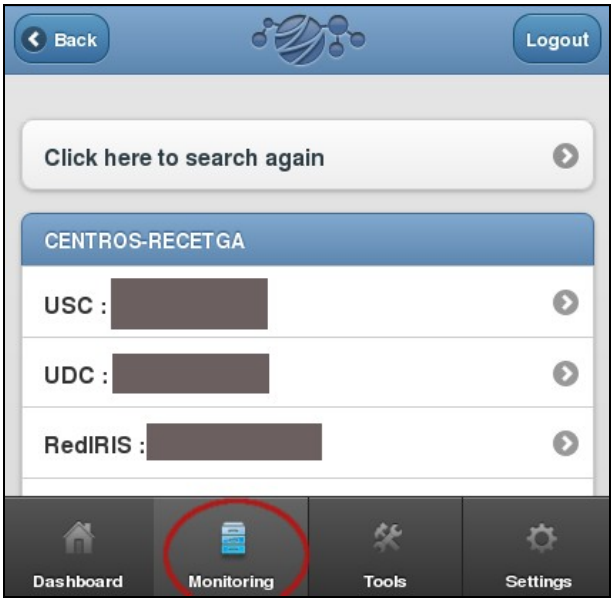
View Issues : The Dashboard section displays issues. These are classified by groups or by date.



[Image 05] Issues

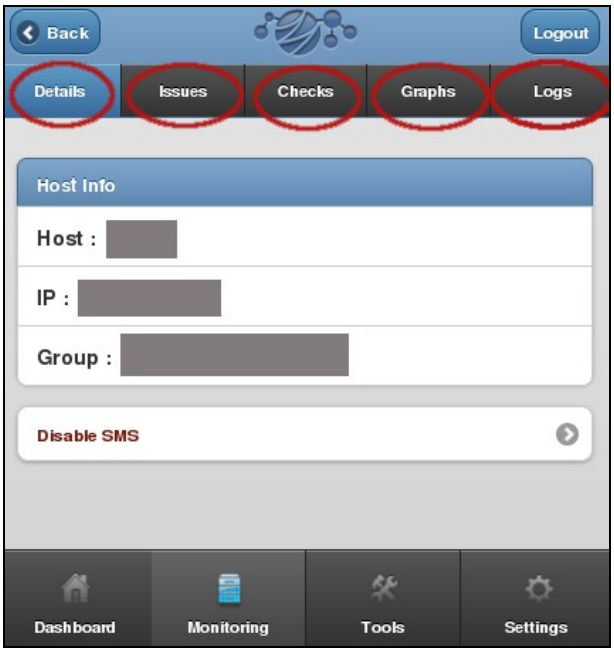
View Hosts: The Monitoring section allows the user to access information related to a specific host. There, he/she must click the “Search Host” or “View all host” option.

After performing a search, you should get a host list sorted by hostgroup.



[Image 06] Hosts list

When the users selects a host, CESGA VNMS displays a specific host page where he/she can see host information, issues, graphs, running commands and logs.

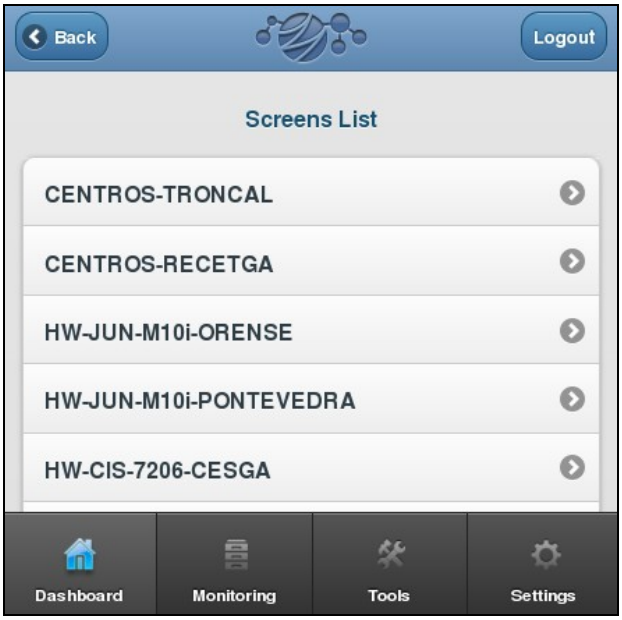


[Image 07] Hosts page

View Screens : The user can also access screens stored. This option is accessed by means of the Monitoring section.

[Image 08] Go to Screens

Once the user clicks on Screens section, a lists of the screens that he/she has right permissions are shown. which The screens are defined in Zabbix server.

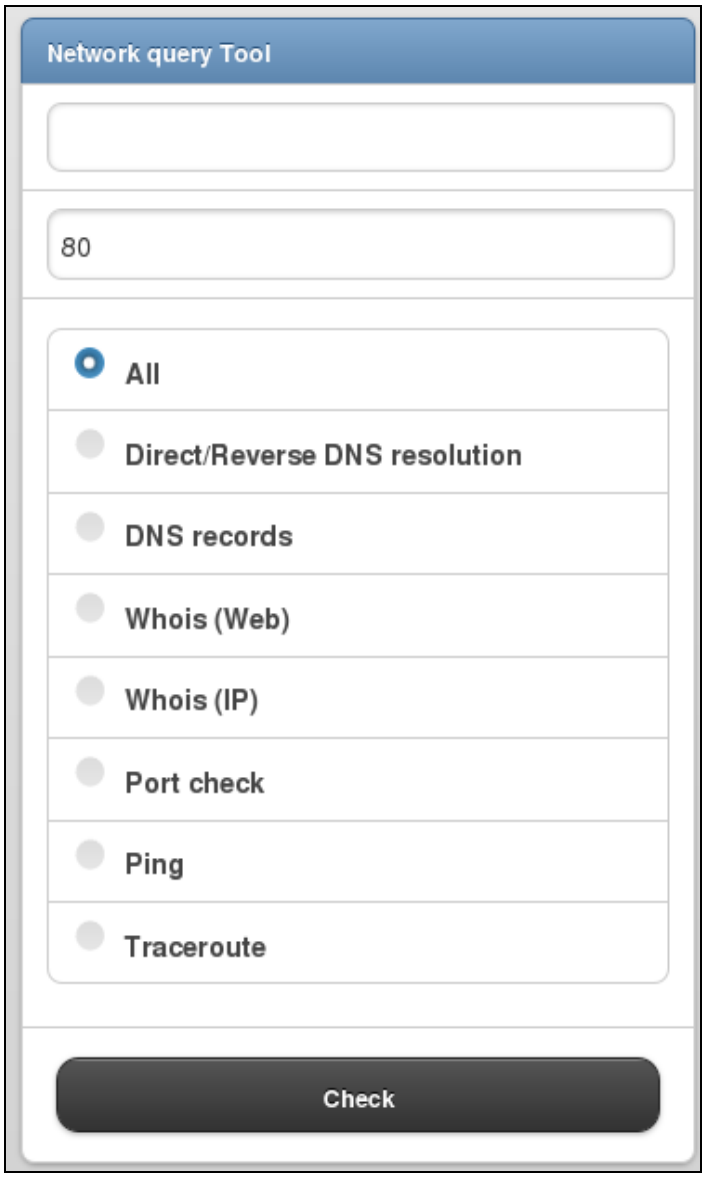


[Image 09] Screens List

When the user selects one screen, the graphs are shown in a column.

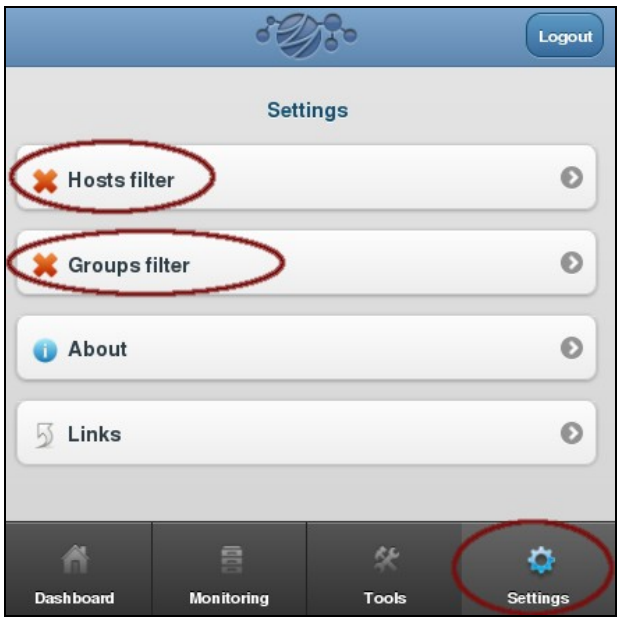
[Image 10] Graph List

Use Network Query Tool : Under the Tools section, typical network query tools are provided. Introducing on the textfield a host name or IP address and, optionally a port, some queries can be performed as direct/reverse DNS lookup, whois query, ping, etc.



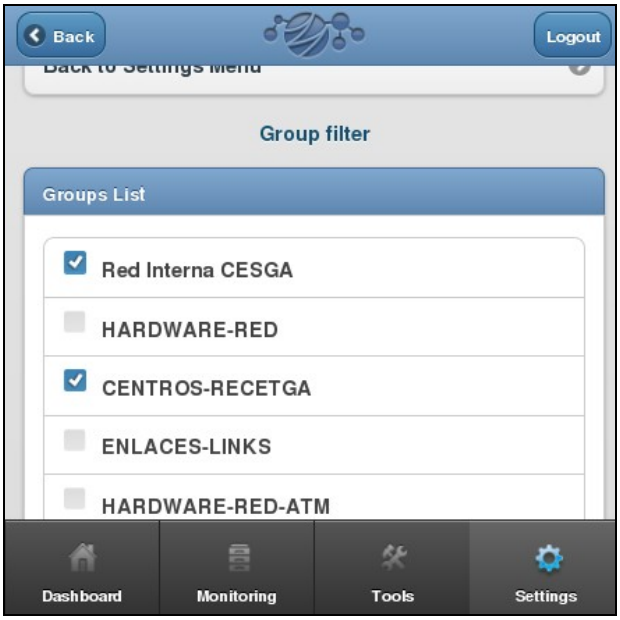
[Image 11] Network query Tool

Filter & Defilter: When the system is monitoring a big number of hosts and/or groups, some of them might not be of interest when using the mobile client. The user has the option of filtering the information shown. To achieve this, access the Settings section at the footer toolbar. There Hosts and Groups filtering options are provided.



[Image 12] Configuration Page

In both sections, you have one or more lists of items. When you want to filter or to defilter hosts/groups, you should select/deselect each checkbox and press filter/defilter button.



[Image 13] Filter page