initMAX

Enhancing Zabbix frontend with own widget modules

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About initMAX s.r.o.

Zabbix
Monitoring
LOG Management
& Wazuh
OpenSource
IDM
PostgreSQL DBA
& Consulting
DevOps
& Automation

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Our Zabbix certifications

4x

3x

2x

ZABBIX
CERTIFIED TRAINER

1x

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Our Zabbix customers

- One of the largest online consumer electronics retailers in Central Europe

- Provider of complete spectrum of telco services

- Company which mainly operates number games and bets

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Our Zabbix customers

- Providing courier, package delivery and express mail service

- Providing IT and product engineering services

- It is among the largest suppliers of information technologies

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About us

Tomáš
CEO

Our Team

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DEVELOPER

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Vojta
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Petr
DEVELOPER

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History of UI Modules

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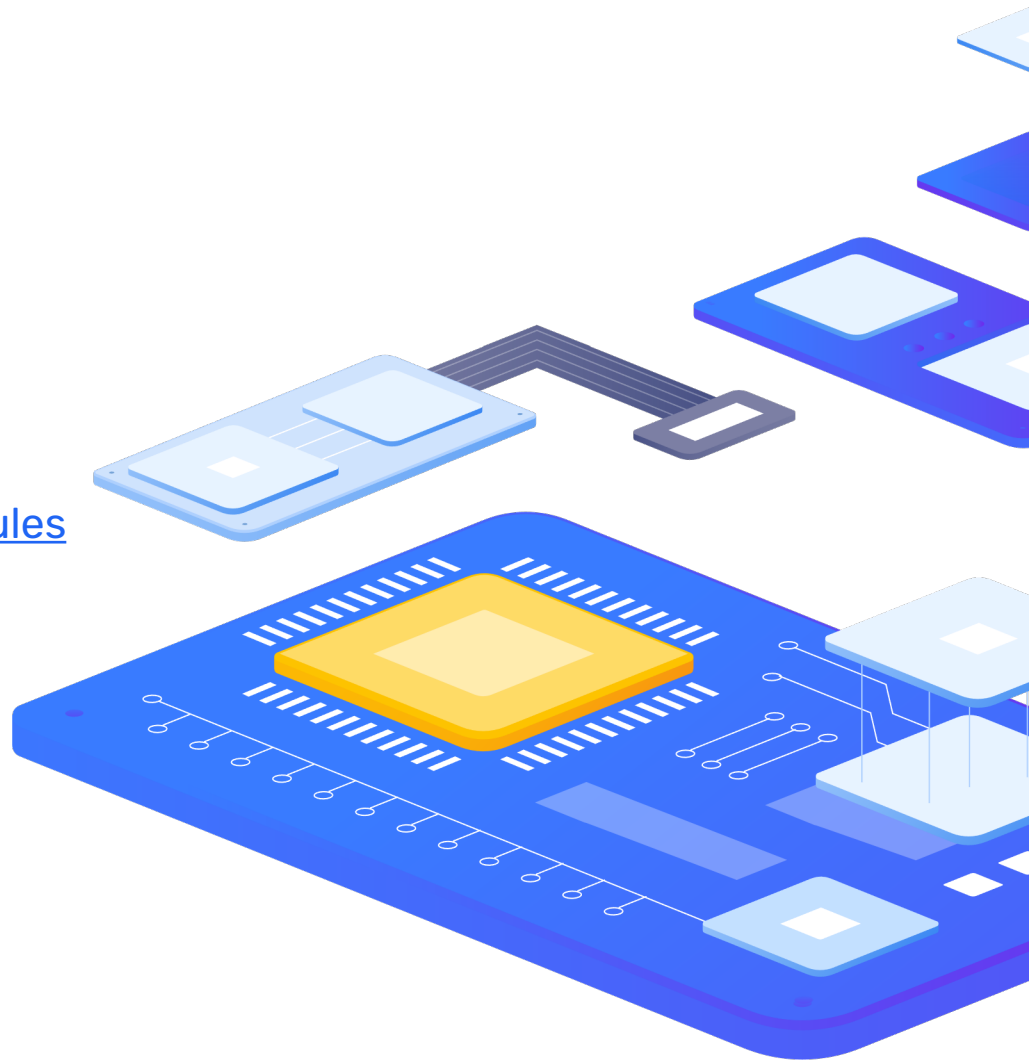
History of UI Modules

- First introduced in Zabbix 5.0
- Simple installation
- No changes required in Zabbix frontend source code
- Written in PHP and JavaScript
- More informations in Zabbix documentation: https://www.zabbix.com/documentation/current/en/manual/modules



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Installation and configuration

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Installation and configuration

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Copy your module files in to /usr/share/zabbix/modules (the default file path of your Zabbix fronted)

```
$ cd /usr/share/zabbix/modules/
$ git clone https://git.initmax.cz/initMAX-Public/Zabbix-UI-Modules-My-Module.git
```

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Installation and configuration

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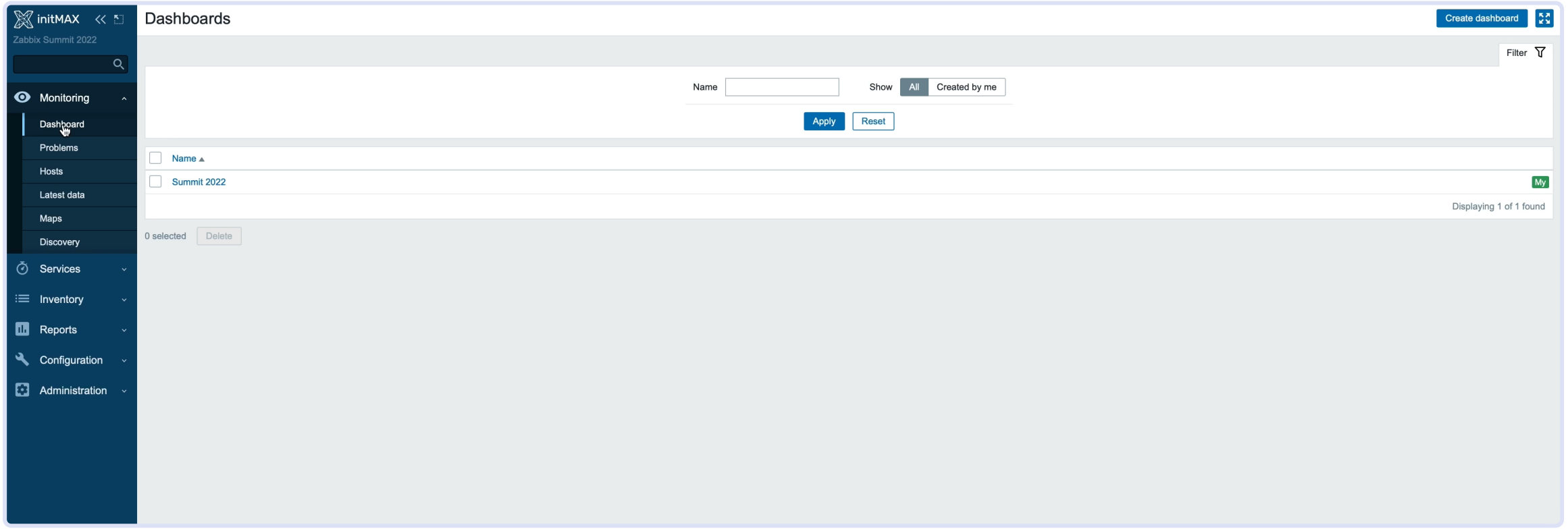
Go into Administration > General > Modules to scan for modules



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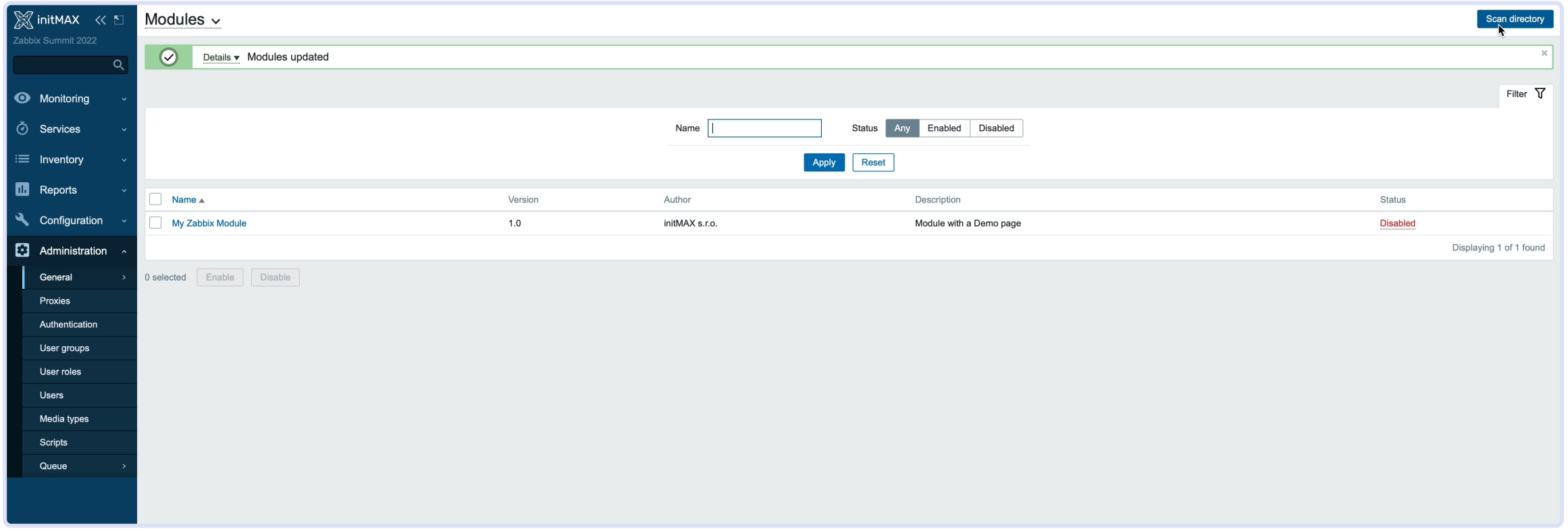
Installation and configuration

3/4

Select and enable module, wait for confirmation message - Module enabled



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Installation and configuration

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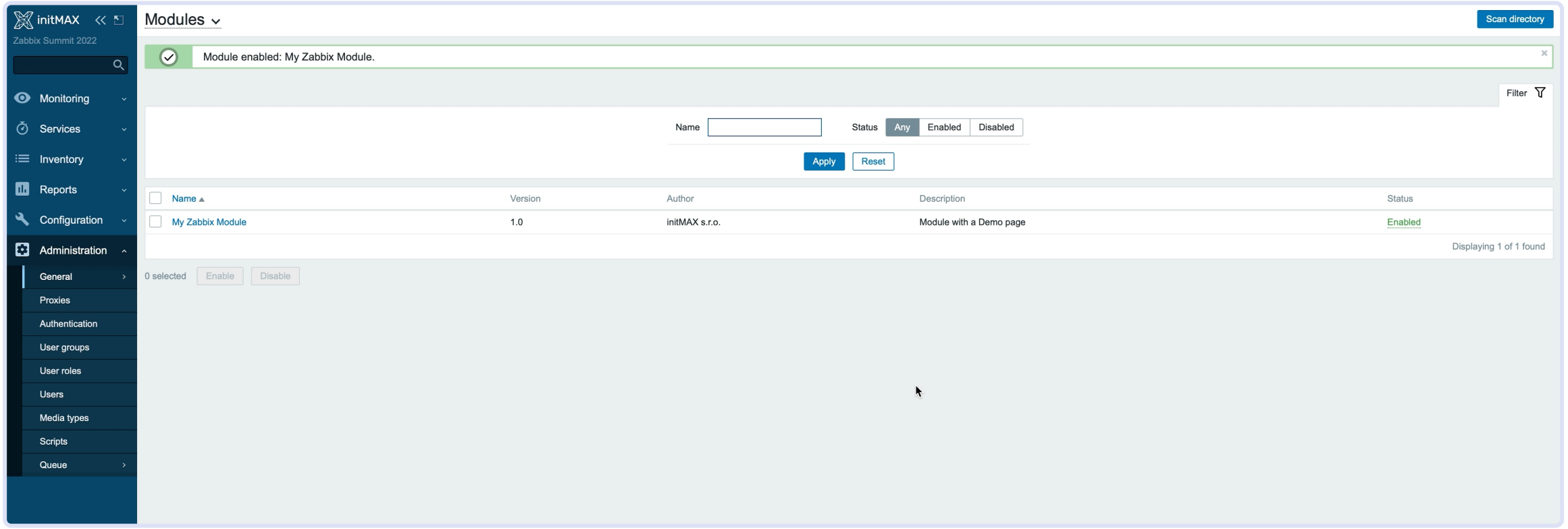
Start using newly activated module



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What can be done by module?

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What can be done by module?

- Modify or extend existing built-in widgets
- Can be used variety of field types in configuration popups
- Make custom context menu with rich functionalities
- Easily selecting multiple rows by using mouse dragging and make mass operations
- Can be add more filtering options in events etc…
- Own popup windows with custom content (forms, tables, images, external sources…)
- Unlimited options of data presentations (tables, graphs, diagrams, maps, formatted text)
- Creating new items in Zabbix menu and link to new or existing pages
- Variety style possibilities with displaying content
- Interconnect with other application via API

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Examples

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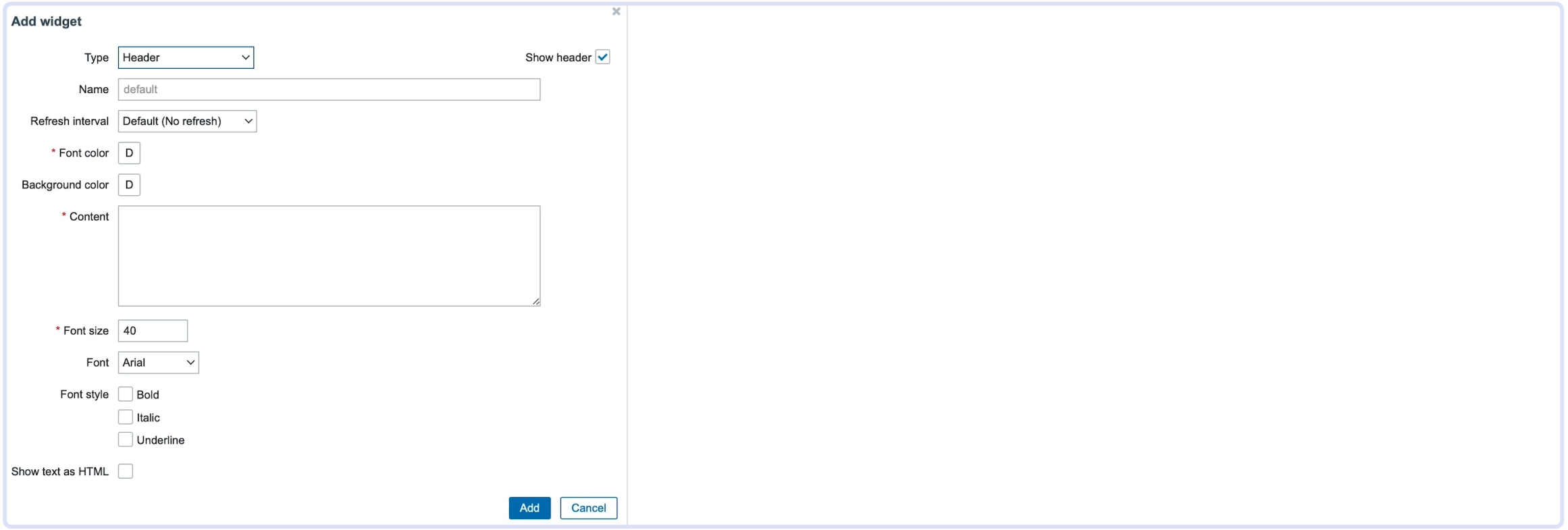
Example – Widget Header

- Very simple module
- Can be placed on a dashboard and used as header for other widgets or as page separator



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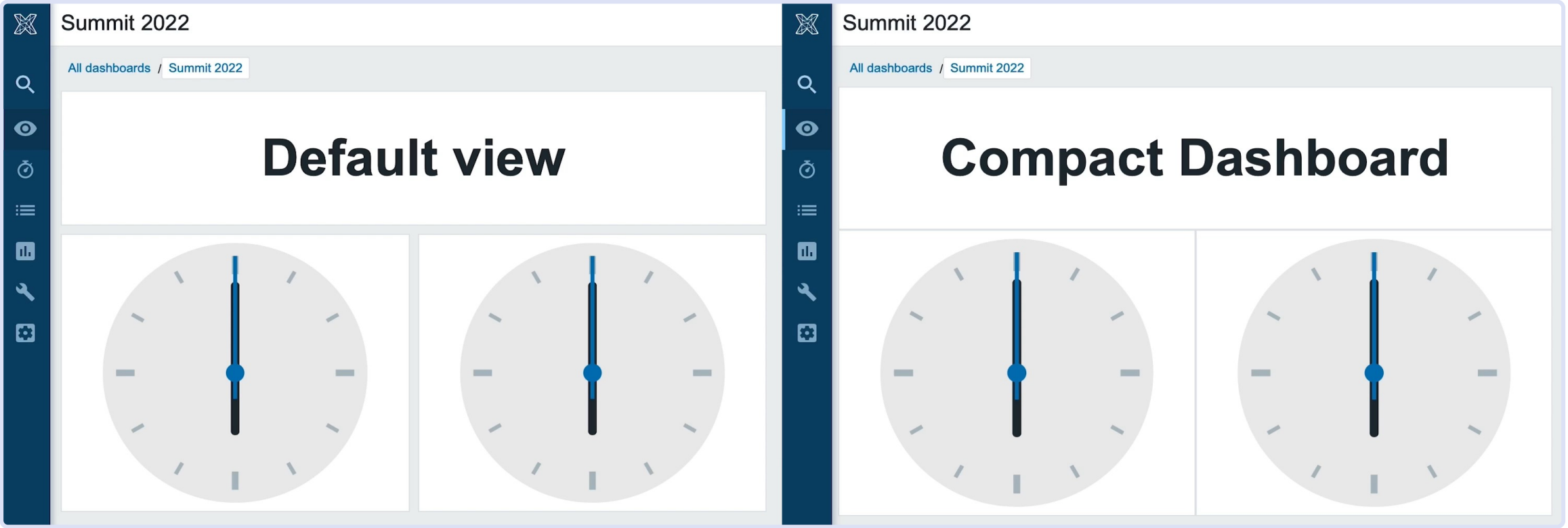
Example – Zabbix Compact Dashboard

- Change spacing between widgets
- Save every pixel of screen space



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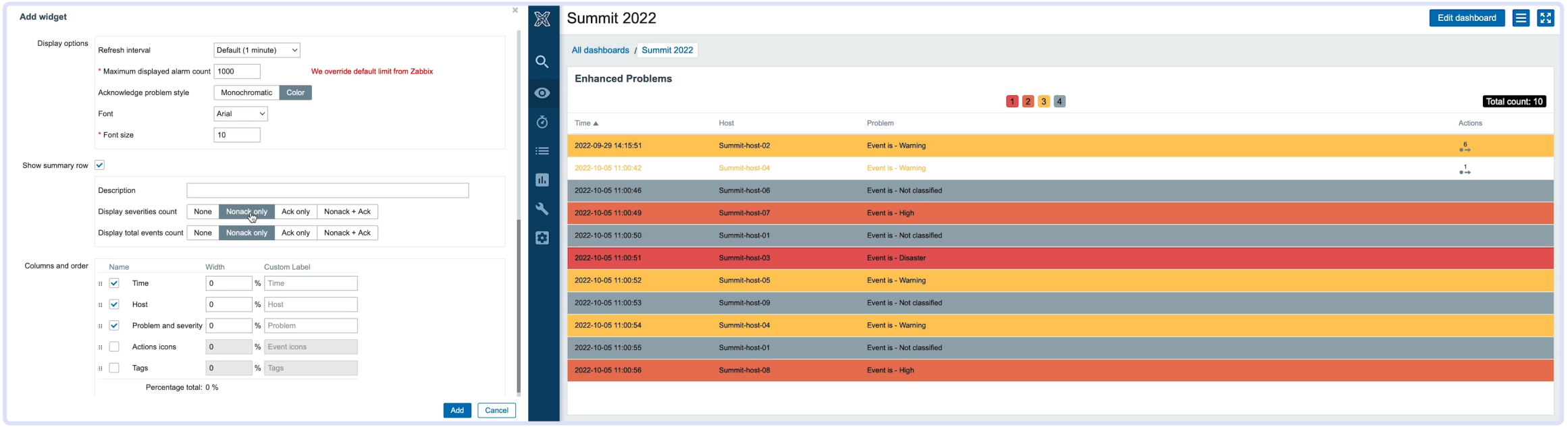
Example – Enhanced Problems

- Based on built-in Problem widget
- New feature counter events by severities and total events with variations of Ack and Nonack options



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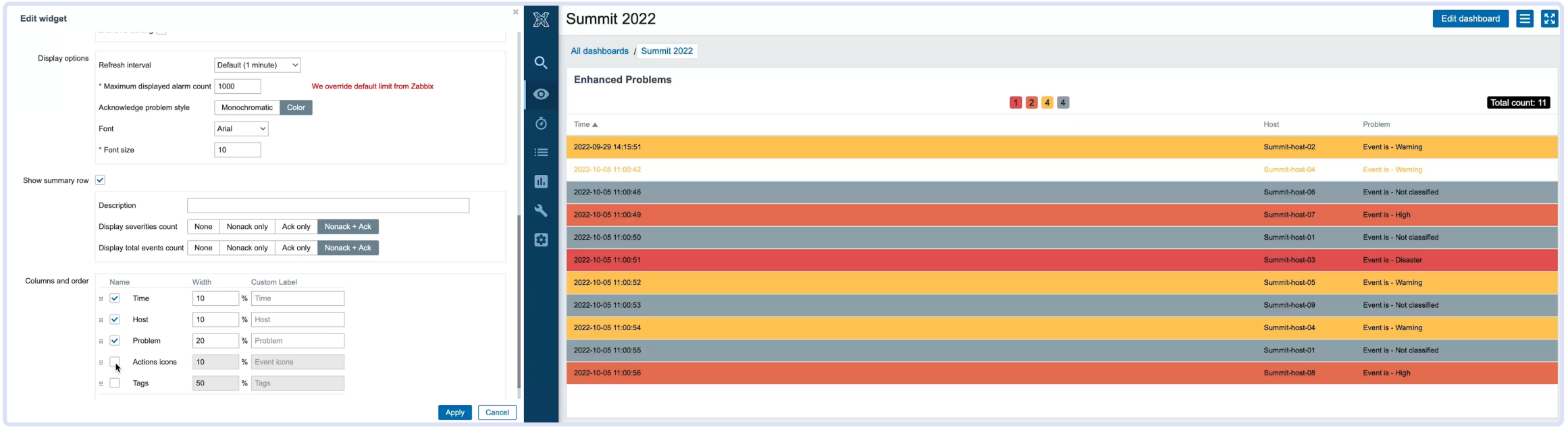
Example – Enhanced Problems

- Based on built-in Problem widget
- New feature choose desired columns you need with custom order, column width and label



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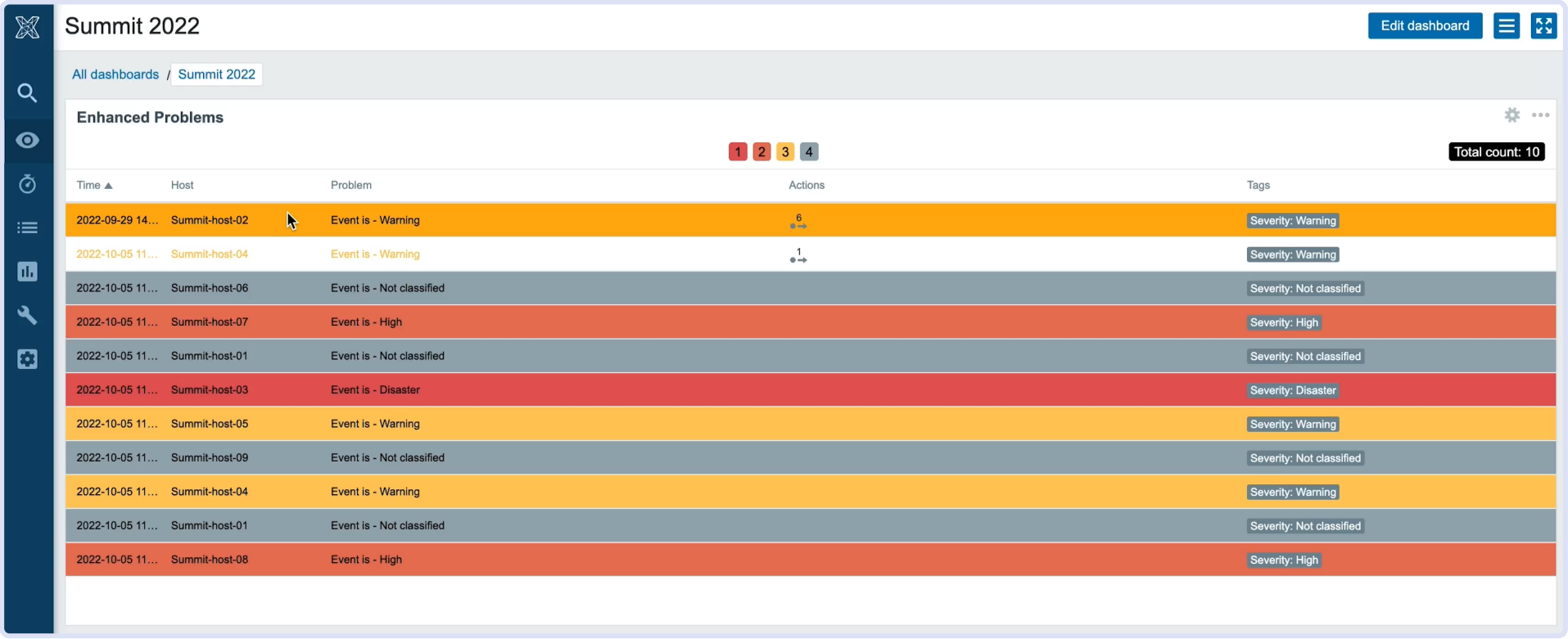
Example – Enhanced Problems

- Provides modern user comfort - operator can select multiple events by combination of mouse dragging and mouse clicking within pressed CTRL or SHIFT keys
- Context menu is available on right-click by mouse and operator can easily make bulk operations



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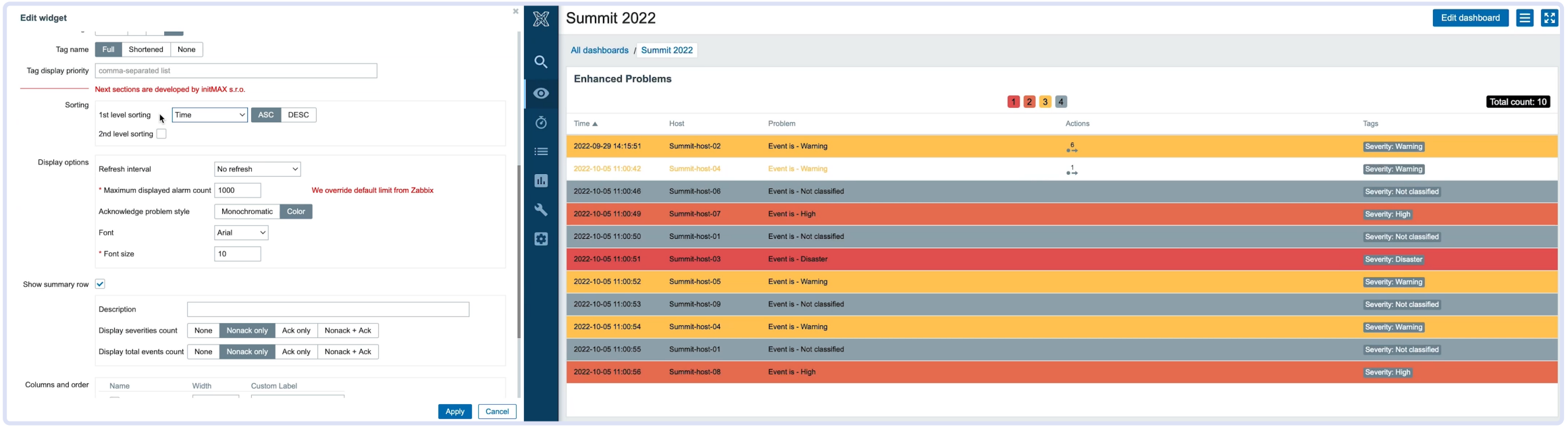
Example – Enhanced Problems

- Multi-level sorting of events for every columns
- Ability to change ascending or descending direction for each level of sorting



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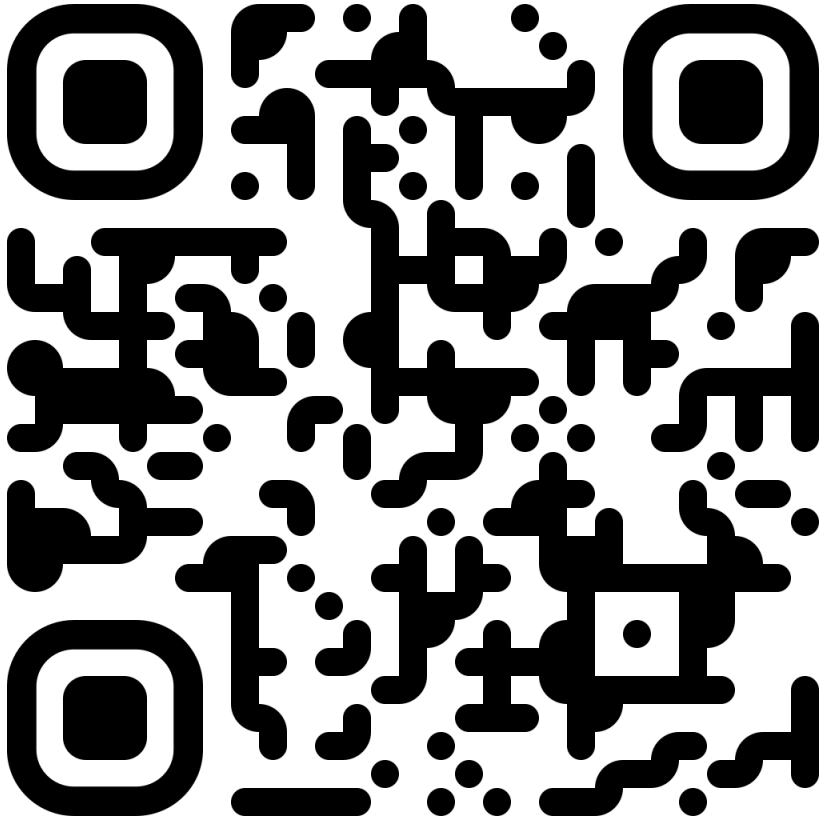
Example

- Every our example is freely available in our GIT repository
- https://git.initmax.com/initMAX-Public
- Source code is commented and provides examples

- Widget Header
  https://git.initmax.com/initMAX-Public/Zabbix-UI-Modules-Header-Widget
- Zabbix Compact Dashboard
  https://git.initmax.com/initMAX-Public/Zabbix-UI-Modules-Compact-Dashboard
- Enhanced Problems
  https://git.initmax.com/initMAX-Public/Zabbix-UI-Modules-Enhanced-Problems-Widget



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How to develop Your own modules

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Structure of Widget module

- Widget base files – defines basic information about module
  - manifest.json
  - Module.php
  - CWidgetConfig.php
- Widget configuration files - defines content of „Edit widget“ button
  - actions/widgets/MyWidgetForm.php
  - views/widgets/mywidget.form.view.php
  - views/widgets/mywidget.form.view.js.php
- Widget frontend files – defines look of widget on dashboard
  - actions/widgets/MyWidgetView.php
  - views/widgets/mywidget.view.php
  - public/js/class.widget.mywidget.js

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Problems with modules

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Problems with modules

There are currently following limitations

- It is not possible to have more than one module with widgets enabled …
- … but one module can contain more than one widget
- The file CWidgetConfig.php is same as in Zabbix UI source files and we use it to register the widget, widget file overrides the default one
- We need to modify lot of files for each new release of Zabbix
- Adding new fields to already existing widgets is difficult
- Have patience …

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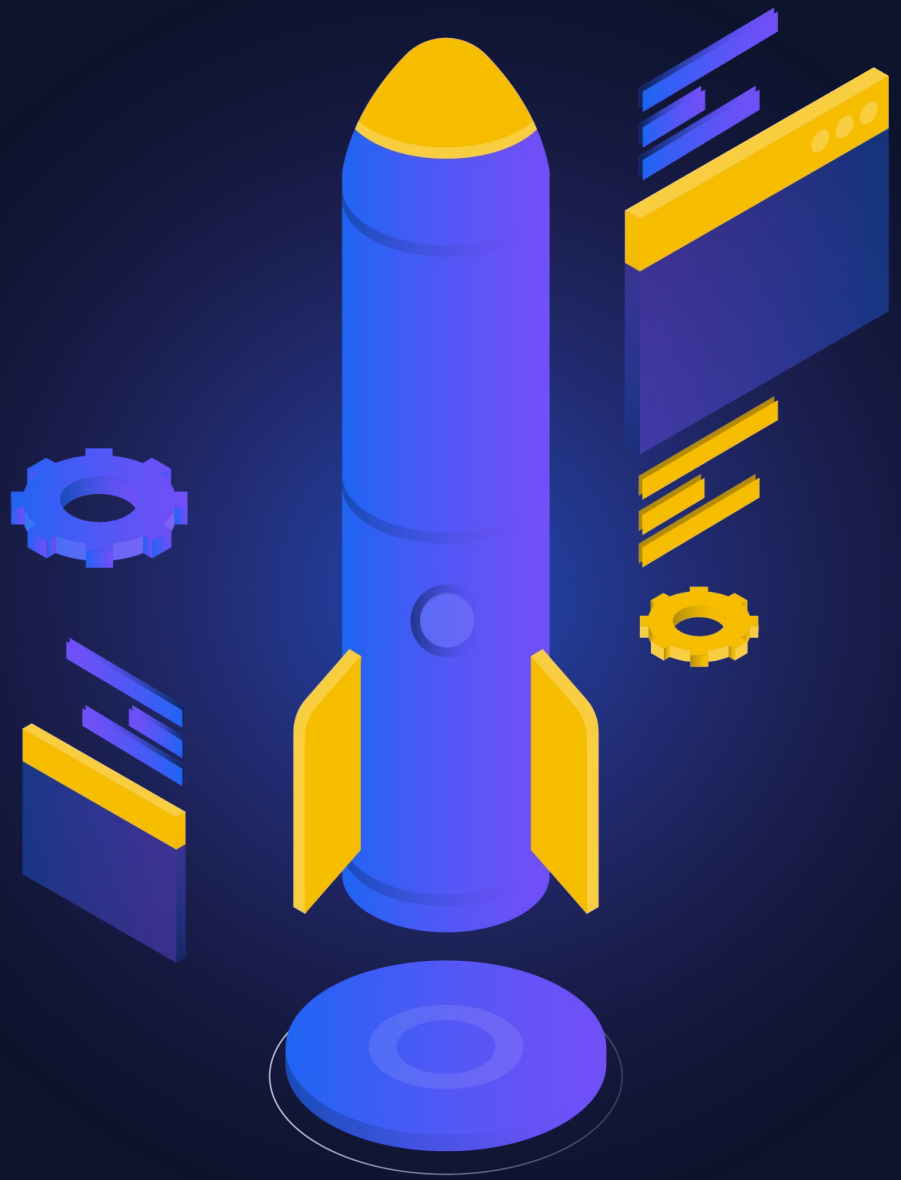
Future



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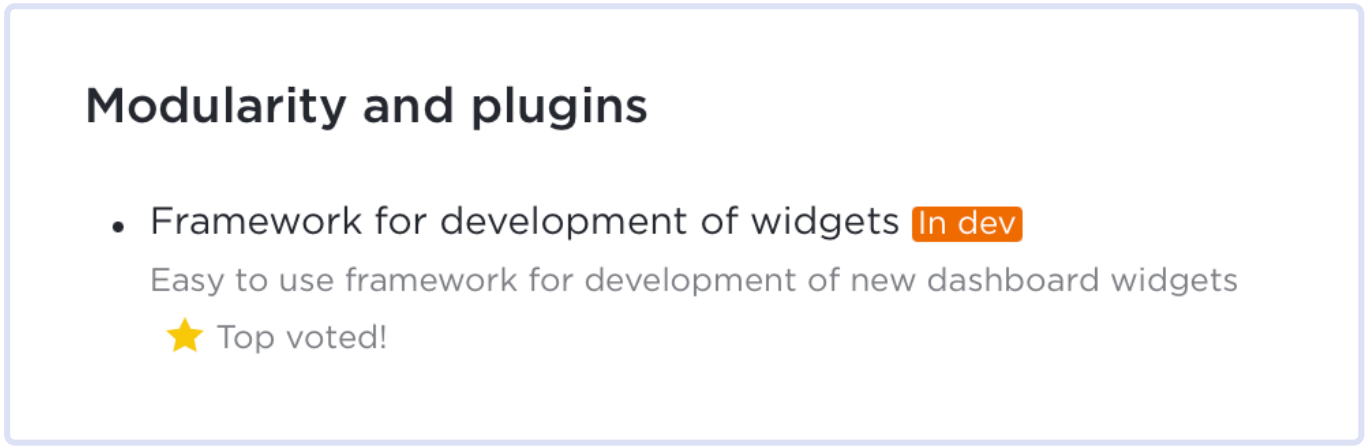
Future of UI Modules

- Big changes are coming soon in version 6.4 – dedicated framework for widgets
- Possibility stop of limitation to have only one enabled module with widgets
- Simplified including of custom CSS files, JS files and other asset files (images, fonts, icons)
- Assuming of better compatibility of next Zabbix versions
- Current modules with widgets need to be rewritten for the new framework
- ZBXNEXT-7469 **RESOLVED**



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Community

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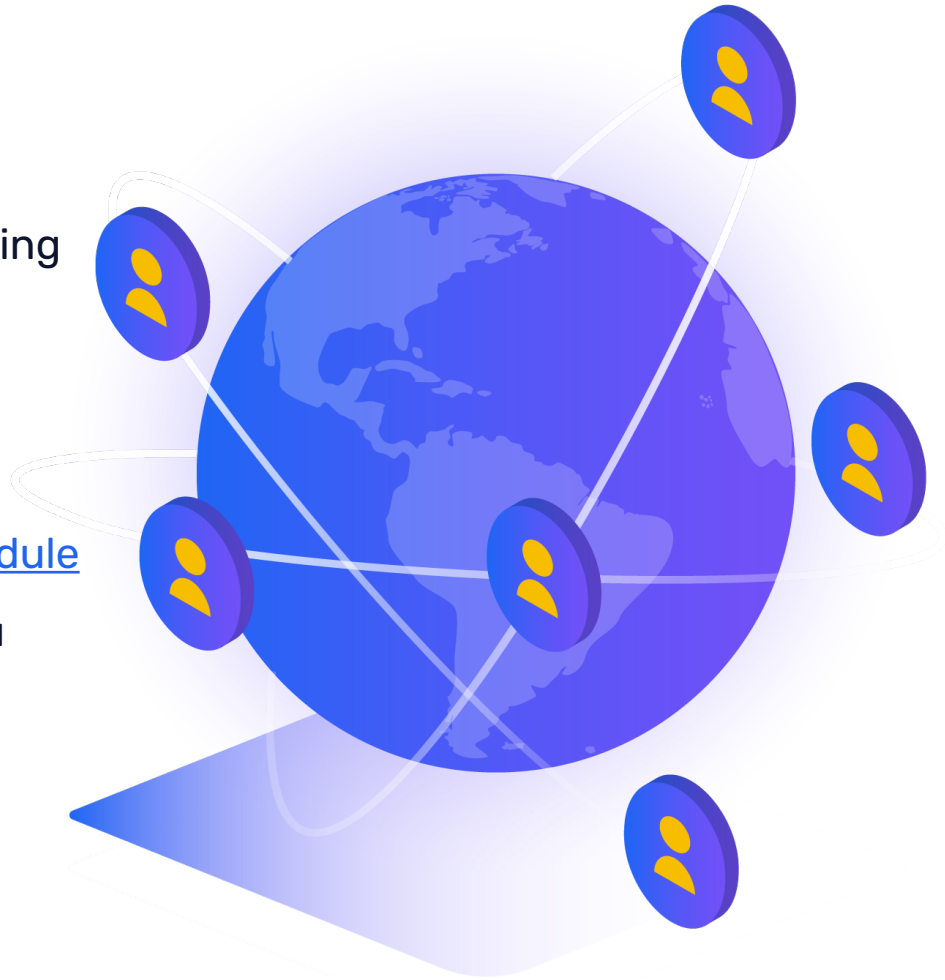
Community

Great community examples

- Zabbix module to show groups/hosts as a tree under Monitoring
  https://github.com/BGmot/zabbix-module-hosts-tree
- Zabbix Wallboard
  https://github.com/zbxwallboard/ZbxWallboard
- CSV host importer
  https://github.com/intellitrend/zabbix-csv-host-import-module
- These frontend Modules can extend the Zabbix sidebar menu
  https://github.com/xenadmin/zabbix-frontend-modules
- Host popup menu with loading data from inventory
  https://github.com/gr8b/zabbix-module-experiments
- Module allow to make queries to database
  https://github.com/gr8b/zabbix-module-sqlexplorer



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Meet us on Summit

www.initmax.com

info@initmax.com

Visit our booth or explore hands on examples at our GIT on git.initmax.com