ZABBIX SUMMIT ONLINE /2021

WHAT'S NEW IN ZABBIX 6.0 LTS

ARTŪRS LONTONS

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ZABBIX 6.0 LTS

Many of Zabbix 6.0 LTS features are focues on solving complex enterprise-elvel requirements.

Zabbix 6.0 focuses on:

- Solving enterprise level security and redundancy requirements
- Improving performance for large Zabbix instances
- Providing additional value to different types of Zabbix users – DevOPS and ITOps teams, Business process owner, Managers
- Further extending Zabbix monitoring and data collection capabilities
- Continued deliver of official integrations with 3rd party systems

01

ZABBIX SERVER HIGH AVAILABILITY CLUSTER

ZABBIX SERVER HIGH AVAILABILITY CLUSTER

Zabbix administrators now have the ability to define Zabbix server HA clusters, consisting of multiple nodes:

- Define one or multiple redundant nodes
- All nodes use the same database
- New table – server nodes listing HA cluster nodes and their statuses
- Ability to define failover delay period

ZABBIX SERVER HIGH AVAILABILITY CLUSTER

New parameter in Zabbix Server configuration file – *HANodeName*:

- Empty by default
- This parameter should contain an arbitrary name of the HA node

Standby nodes monitor last access time of the active node from the server nodes table:

- If *last access time* > *failover delay*, the cluster fails over to the standby node
- Failover operation is logged in the Zabbix server log

ZABBIX SERVER HIGH AVAILABILITY CLUSTER

For proxy, the *Server* configuration parameter must support multiple addresses, separated by a semi-colon ';' :

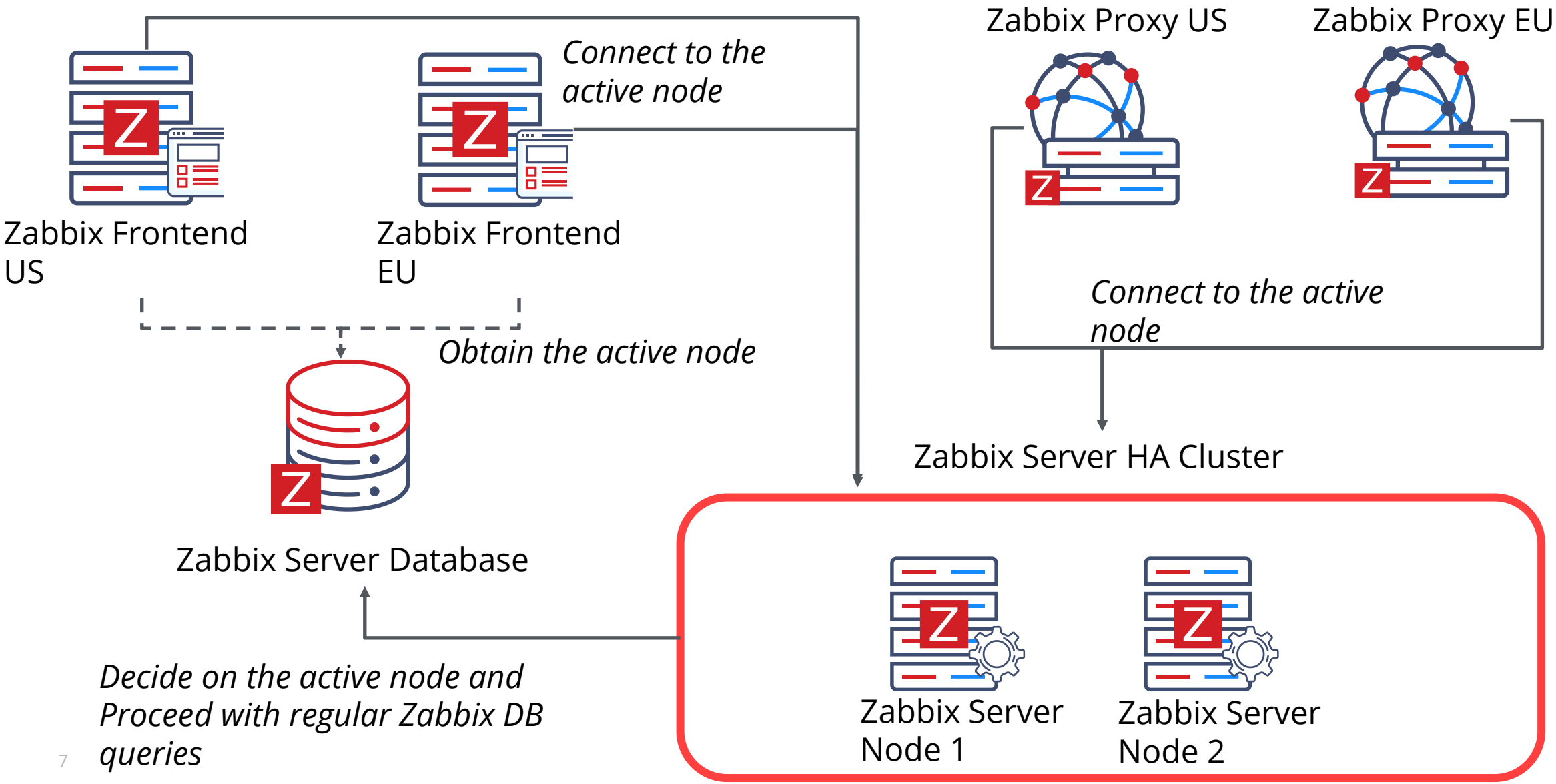
```
Server=192.168.1.91;192.168.1.92
```

- The proxy will attempt to connect to all of the nodes until it succeeds

Other HA cluster related features:

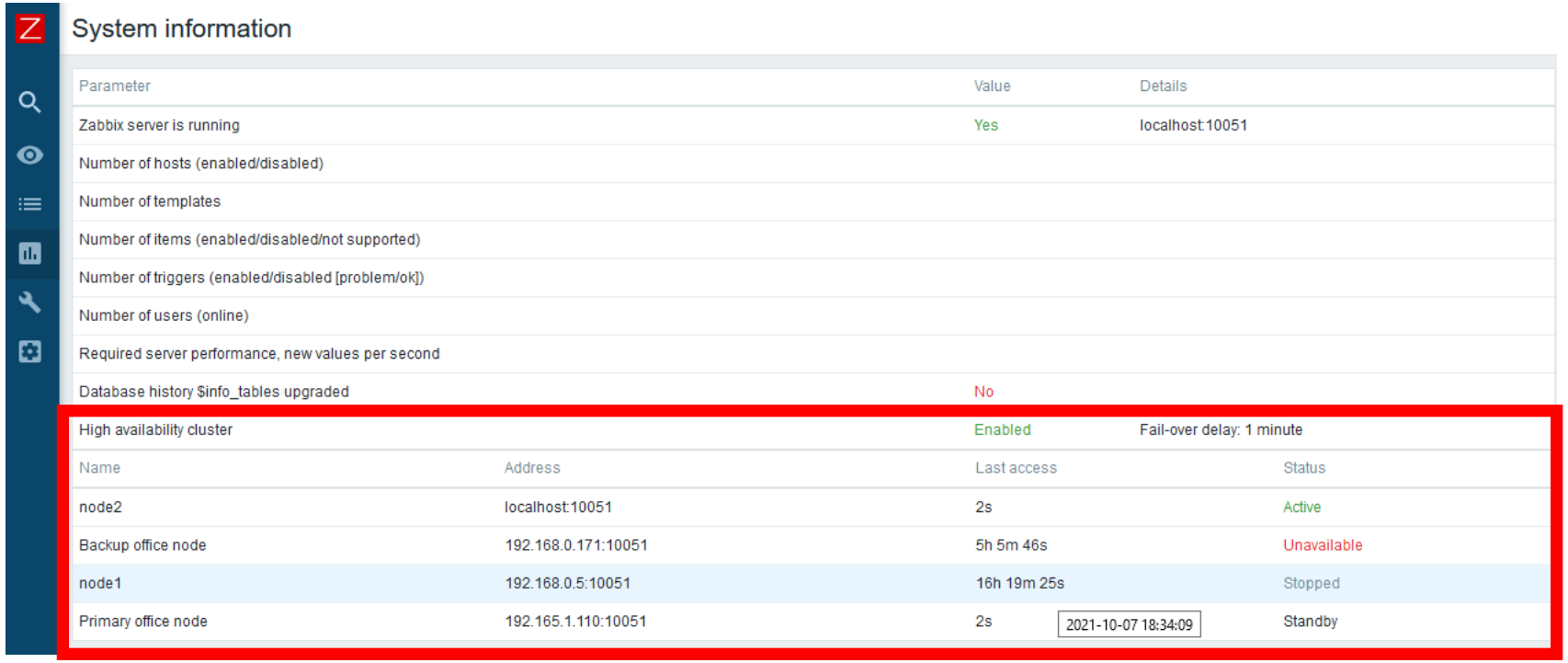
- New command-line options to check HA cluster status
- hanode.get API method to obtain the list of HA nodes
- New internal check provides LLD information to discover Zabbix server HA nodes
- HA Failover event logged in the Zabbix Audit log
- Frontend will automatically correct to the active Zabbix server node

ZABBIX SERVER HIGH AVAILABILITY CLUSTER



ZABBIX SERVER HIGH AVAILABILITY CLUSTER

Zabbix Server HA cluster status can be observed in *System information* section or in the *System information* dashboard widget



02

BUSINESS SERVICE MONITORING

BUSINESS SERVICE MONITORING

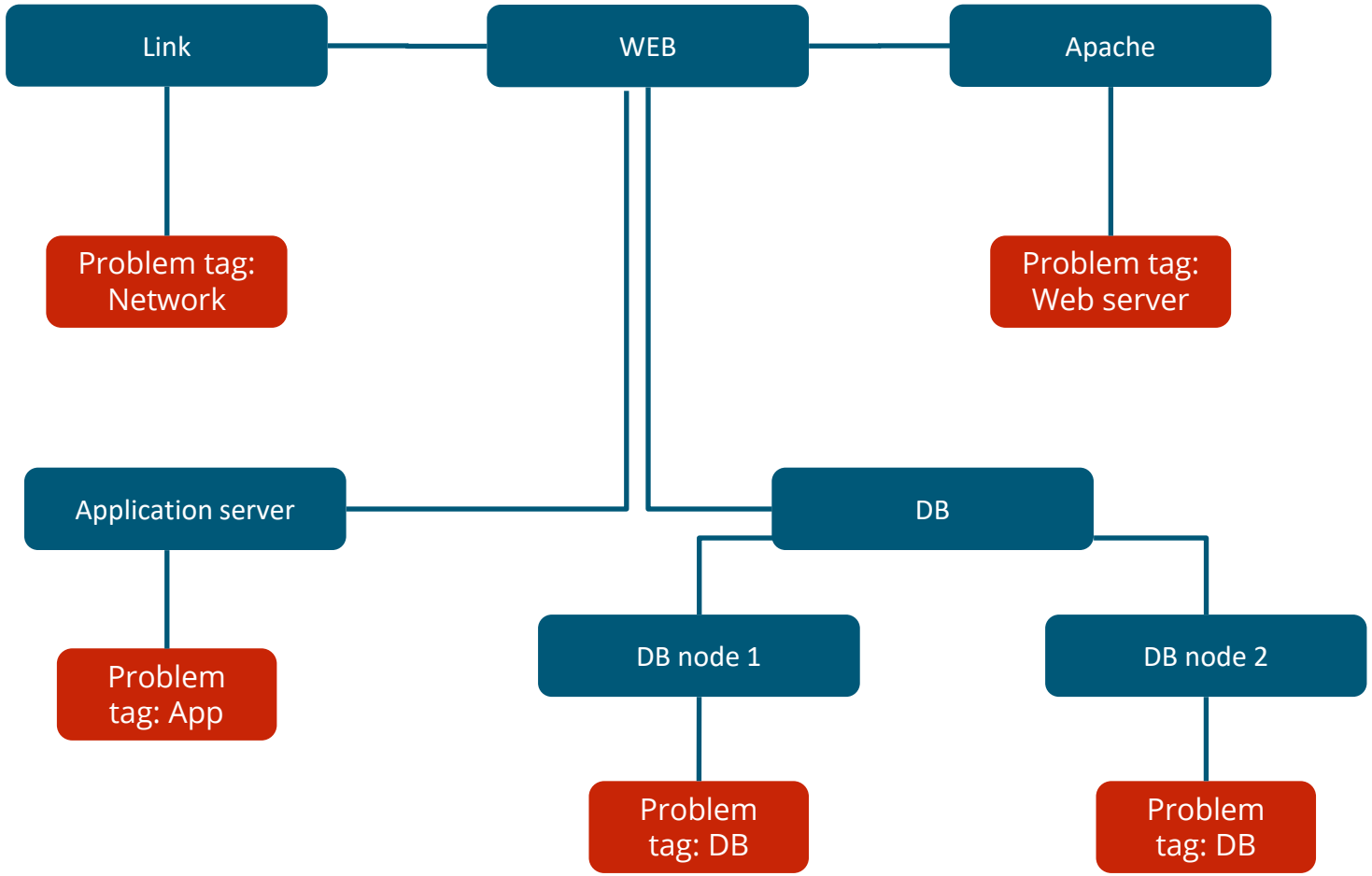
Business Service monitoring (BSM) enables Zabbix administrators to define services of varying complexity and monitor their status

Most common use cases:

- Server clusters
- Services that utilize load balancing
- Services which consist of a complex IT stack
- Systems with redundant components in place

Business service monitoring is extremely scalable with support for over 100k services.

BUSINESS SERVICE EXAMPLE

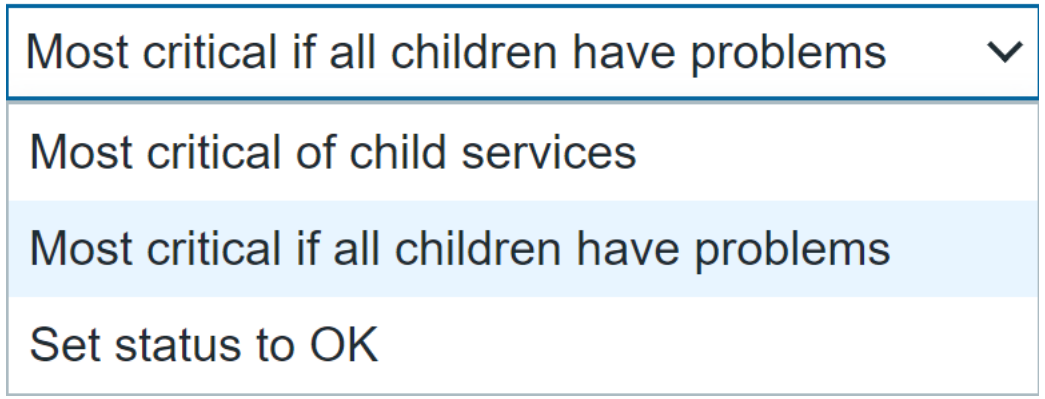


CALCULATING SERVICE STATUS

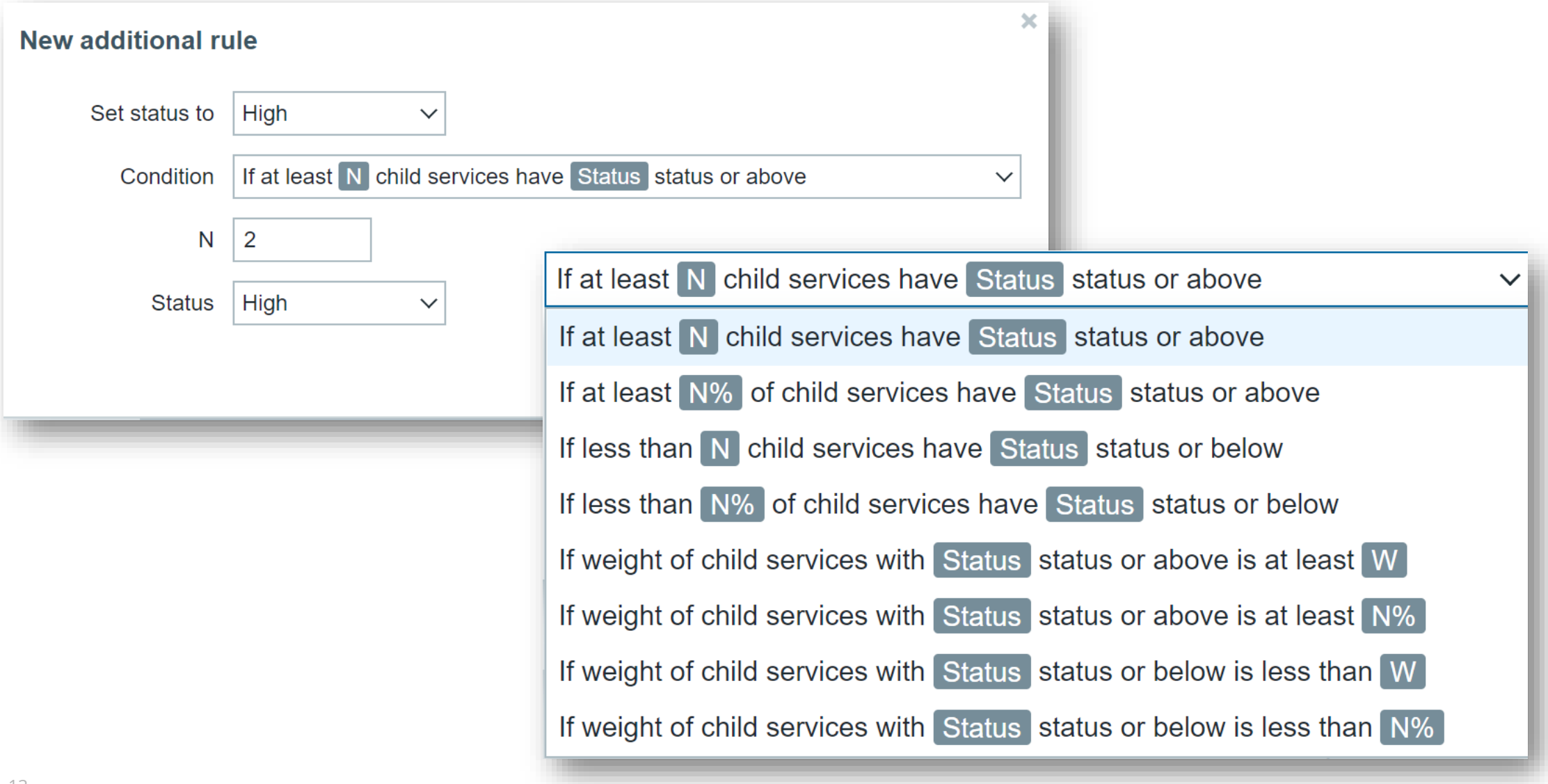
There are multiple approaches to calculating service status

In case of a problem, the service state can be changed to:

- The most critical problem severity based on the child service problem severities
- The most critical problem severity based on the child service problem severities, only if **all** child services are in a problem state
- The service is set to constantly be in an OK state



CALCULATING SERVICE STATUS – ADDITIONAL RULES



BUSINESS SERVICE MONITORING - NOTES

Many other additional features and improvements:

- Ability to define permissions on specific services
- SLA monitoring
- Business Service root cause analysis
- Receive alerts and react on Business Service status change
- Define Business Service permissions for multi-tenant environments

03

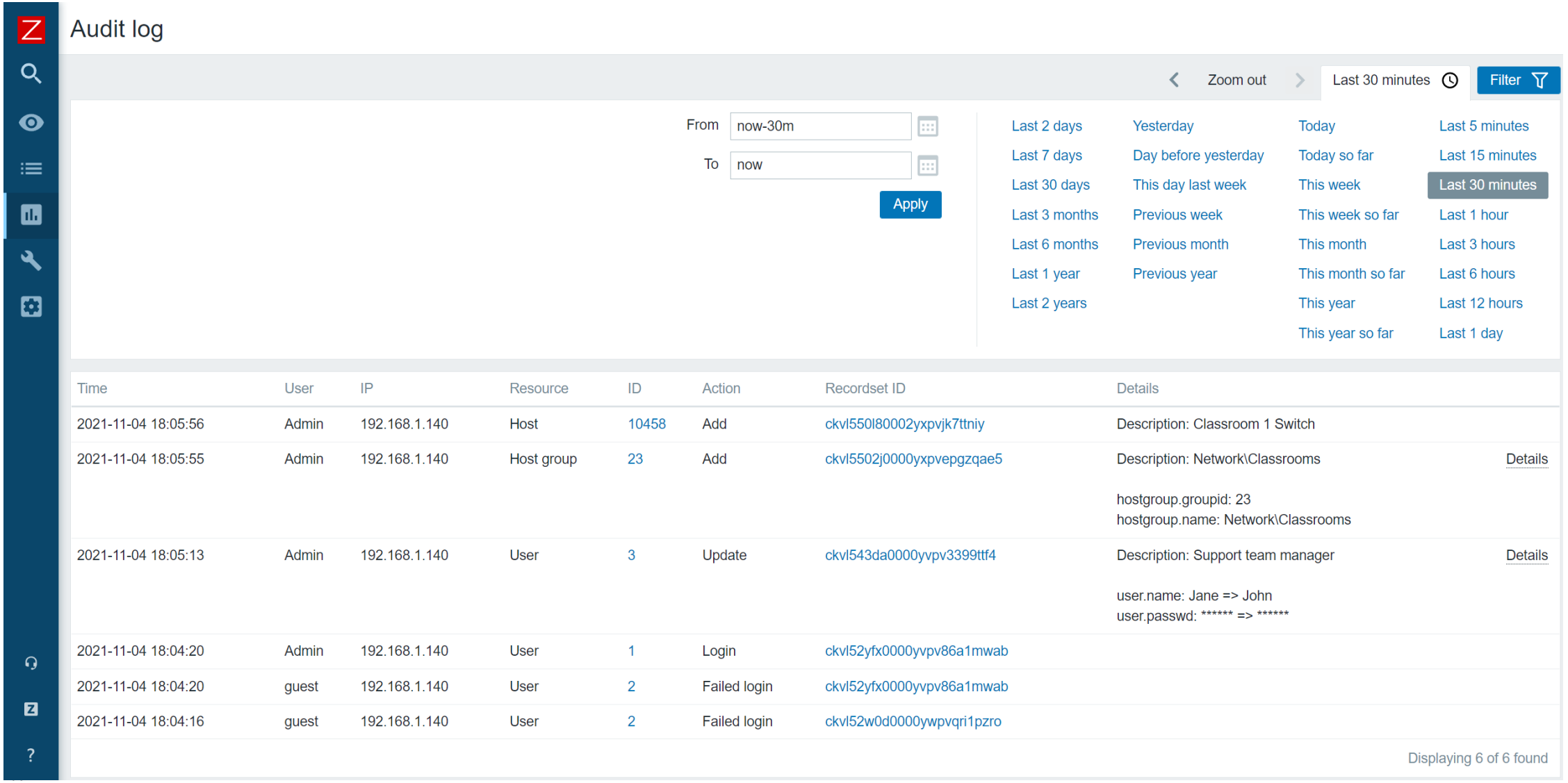
NEW AUDIT LOG SCHEMA

NEW AUDIT LOG SCHEMA – TECHNICAL DETAILS

Many new changes had to be made under the hood when designing the new audit log

- Zabbix 6.0 LTS introduces a new database structure for the Audit log
- Collision resistant IDs (CUID) will be used for ID generation to prevent audit log row locks
- Audit log records will be added in bulk SQL requests
- Introducing *Recordset ID* column. This will help users recognize which changes have been made in a particular operation

NEW AUDIT LOG SCHEMA – EXAMPLE



NEW AUDIT LOG SCHEMA

The goal of the Zabbix 6.0 LTS audit log rework is to make a reliable and detailed audit log which would provide logging for both Frontend and Zabbix server

- Detailed logging of both Zabbix frontend and Zabbix server records
- Designed with minimal performance impact in mind
- Accessible via Zabbix API
- Implementing the new audit log schema is an ongoing effort – further improvements will be done throughout Zabbix update life-cycle

04

MACHINE LEARNING

MACHINE LEARNING TRIGGER FUNCTIONS

The new baseline monitoring and anomaly detection trigger functions allow you to avoid static threshold creation and detect problems in a dynamic manner:

- New trigger function - *trendbaseline*, allows you to detect values outside of the baseline threshold
- New trigger function - trendanomalystl, allows you to detect anomalous metric behaviour
- Ability to specify anomaly detection seasonality, detection period and more

05

NEW WAYS TO VISUALIZE YOUR DATA

NEW DASHBOARD WIDGETS

The new widgets introduced in Zabbix 6.0 grant you many new ways to display information about your environment:

- The data table widget allows you to create a summary view for the related metric status on your hosts
- The top N and bottom N functions of the data table widget allow you to have an overview of your highest or lowest item values
- The single item widget allows you to display values for a single metric
- Improvements to the existing vector graphs such as the ability to reference individual items and more
- The SLA report widget displays the current SLA for services filtered by service tags

INTRODUCING - GEOMAPS

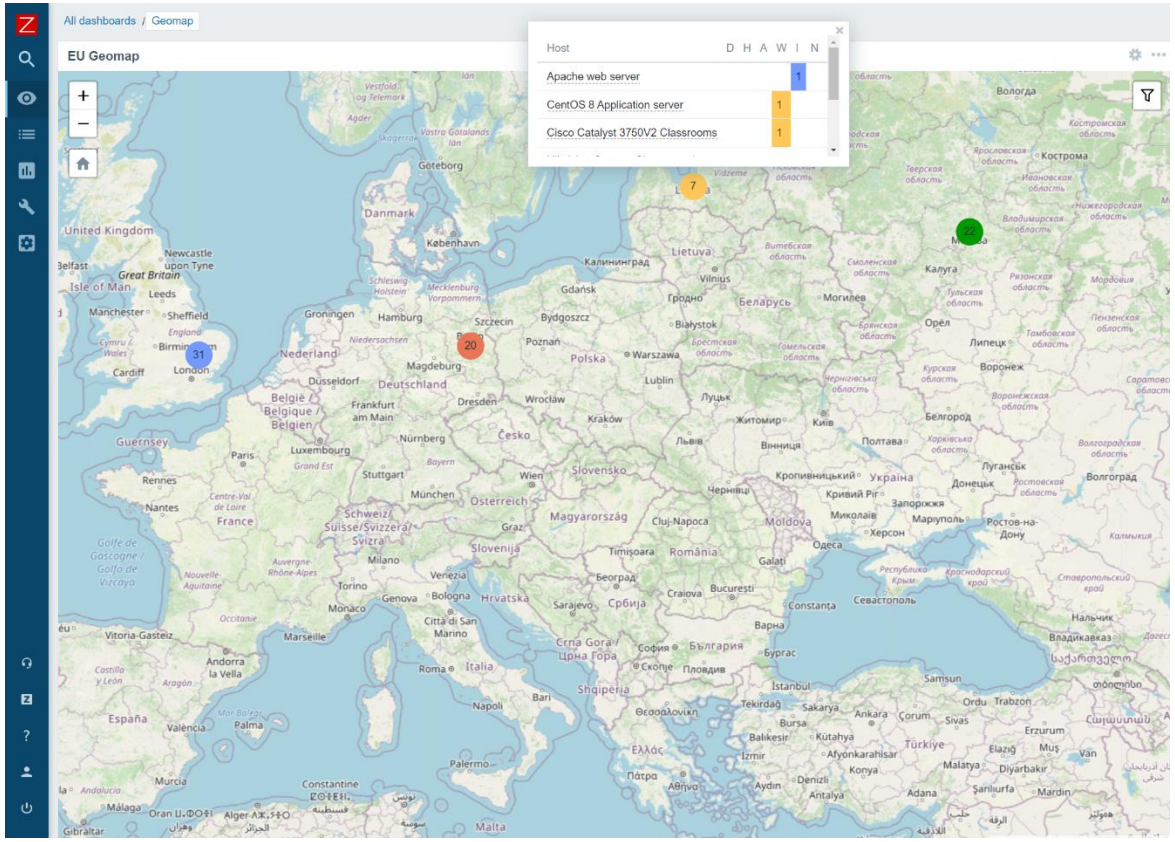
Now Zabbix users have the ability to see their host location on a geographical map in their dashboard

- The host coordinates are provided in the host inventory fields
- Filter by host groups and tags

INTRODUCING - GEOMAPS

Now Zabbix users have the ability to see their host location on a geographical map in their dashboard

- Depending on the Zoom level – the hosts will be grouped into a single object
- Multiple Geomap providers, such as: OpenStreetMap, OpenTopoMap, Stamen Terrain, USGS US Topo and others



06

ZABBIX AGENT – IMPROVEMENTS AND NEW ITEMS

ZABBIX AGENT IMPROVEMENTS AND NEW ITEMS

Multiple new items have been added for both *Zabbix Agent* And *Zabbix Agent2.* These items give you the ability to:

- Obtain additional file information such as file owner and file permissions
- Collect agent host metadata as a metric
- Count matching TCP/UDP sockets
- You can now natively monitor your SSL/TLS certificates with a new Zabbix Agent2 item. The item can be used to validate a TLS/SSL certificate and provide you additional certificate details.

Zabbix Agent2 now supports loading stand-alone plugins without having to recompile the Agent2.

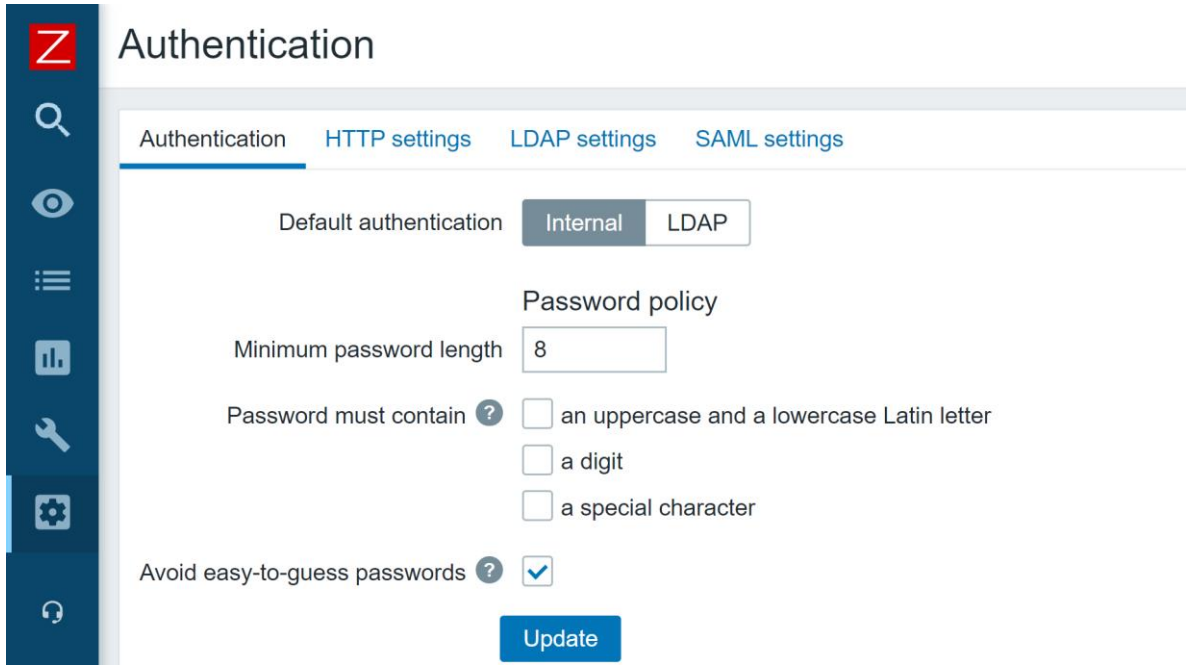
07

CUSTOM ZABBIX PASSWORD COMPLEXITY REQUIREMENTS

ZABBIX PASSWORD COMPLEXITY REQUIREMENTS

Zabbix Super admins now have the ability to define the password complexity requirements. Now you can:

- Set the minimum password length
- Define password character requirements
- Mitigate the risk of a dictionary attack by prohibiting the usage of the most common password strings.



08

UI/UX IMPROVEMENTS

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Multiple UI/UX improvements have been added, based on the community feedback

- Create hosts directly from 'Monitoring' - 'Hosts'
- Removed 'Monitoring' - 'Overview' section. For improved user experience, the trigger and data overview functionality can now be accessed only via dashboard widgets.
- The default type of information for items will now be selected automatically depending on the item key.
- The simple macros in map labels and graph names have been replaced with expression macros to ensure consistency with the new trigger expression syntax.

09

NEW TEMPLATES AND INTEGRATIONS

NEW TEMPLATES AND INTEGRATIONS

Zabbix 6.0 comes pre-packaged with many new templates for the most popular vendors:

- f5 BIG-IP
- Cisco ASAv
- HPE ProLiant servers
- Cloudflare
- InfluxDB
- Travis CI
- Dell PowerEdge

Zabbix 6.0 also brings a new *GitHub* webhook integration which allows you to generate *GitHub* issues based on Zabbix events!

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OTHER CHANGES AND IMPROVEMENTS

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Many other improvements have been added in Zabbix 6.0 LTS. Some of the more noteable of those are:

- Detect continuous increase or decrease of values with new *monotonic* history functions
- Added *utf8mb4* as a supported MySQL character set and collation
- Added the support of additional HTTP methods for webhooks
- Timeout settings for Zabbix command-line tools
- Performance improvements for Zabbix Server, Frontend and Proxy


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