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Webinar

Zabbix Proxy high availability and load balancing

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ask your questions in Q&A, not in the Chat

use Chat for discussion, networking or applause

Zabbix Proxy high availability and load balancing

Zabbix 7.0

- ▶ Proxy High Availability
- ▶ Proxy Memory Buffer
- ▶ Override timeouts on a per-proxy level

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Proxy high availability and load balancing



Proxy groups

- ▶ Proxy groups are introduced to support LB and HA logic
- ▶ Hosts can be monitored by a proxy group or a single proxy

Host

Host IPMI Tags Macros Inventory Encryption Value mapping

* Host name

Visible name

Templates

Name	Action
Linux by Zabbix agent active	Unlink Unlink and clear

* Host groups

Interfaces No interfaces are defined.

[Add](#)

Description

Monitored by

Assigned proxy Proxy is not assigned yet.

Enabled ☒

Zabbix Proxy high availability and load balancing

Proxy groups

- ▶ **Proxy groups** are introduced to support LB and HA logic
 - ▶ Hosts can be monitored by a proxy group or a single proxy

Proxy group

* Name

* Failover period

* Minimum number of proxies

Description

Proxies [initMAX-proxy1](#), [initMAX-proxy2](#)

[Update](#) [Clone](#) [Delete](#) [Cancel](#)

Proxy groups [Create proxy group](#)

State [Any](#) [Online](#) [Degrading](#) [Offline](#) [Recovering](#) [Filter](#)

[Apply](#) [Reset](#)

<input type="checkbox"/> Name	State	Failover period	Online proxies	Minimum proxies	Proxies
<input type="checkbox"/> initMAX	Online	1m	2	1	2 initMAX-proxy1 , initMAX-proxy2

Displaying 1 of 1 found

Host

[Host](#) [IPMI](#) [Tags](#) [Macros](#) [Inventory](#) [Encryption](#) [Value mapping](#)

* Host name

Visible name

Templates

Name	Action
Linux by Zabbix agent active	Unlink Unlink and clear

[Select](#)

* Host groups [Select](#)

Interfaces [No interfaces are defined.](#)

[Add](#)

Description

Monitored by [Server](#) [Proxy](#) [Proxy group](#)

[Select](#)

Assigned proxy [Proxy is not assigned yet.](#)

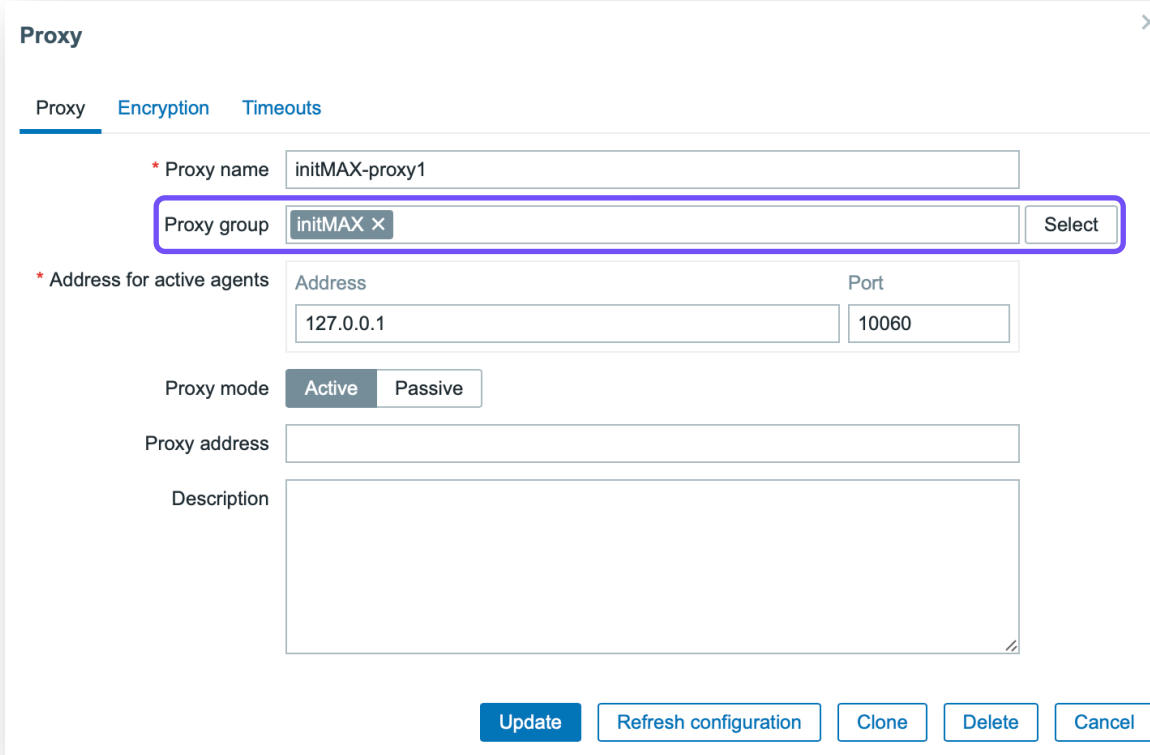
Enabled ☒

Proxy groups

- ▶ More about proxy groups:
 - ▶ Failover period is used to decide when a proxy is online/offline
 - ▶ A minimal number of online proxies can be configured for a proxy group to be online
 - ▶ Proxies of older versions (and hosts assigned to them) will be excluded from host rebalancing
 - ▶ If a proxy group is offline (less than minimum number of proxies online), hosts assigned to that group will stop being monitored

Proxy groups

- ▶ Proxies are assigned to proxy groups using the proxy configuration form:



The screenshot shows the 'Proxy' configuration form in Zabbix. The form has tabs for 'Proxy', 'Encryption', and 'Timeouts'. The 'Proxy' tab is active. The form contains the following fields and controls:

- Proxy name:** A text input field containing 'initMAX-proxy1'.
- Proxy group:** A dropdown menu showing 'initMAX' with a close icon (X). A 'Select' button is to the right of the dropdown. This field is highlighted with a red rectangle.
- Address for active agents:** A section with two sub-fields:
 - Address:** A text input field containing '127.0.0.1'.
 - Port:** A text input field containing '10060'.
- Proxy mode:** Two radio buttons, 'Active' (selected) and 'Passive'.
- Proxy address:** A text input field.
- Description:** A large text area.

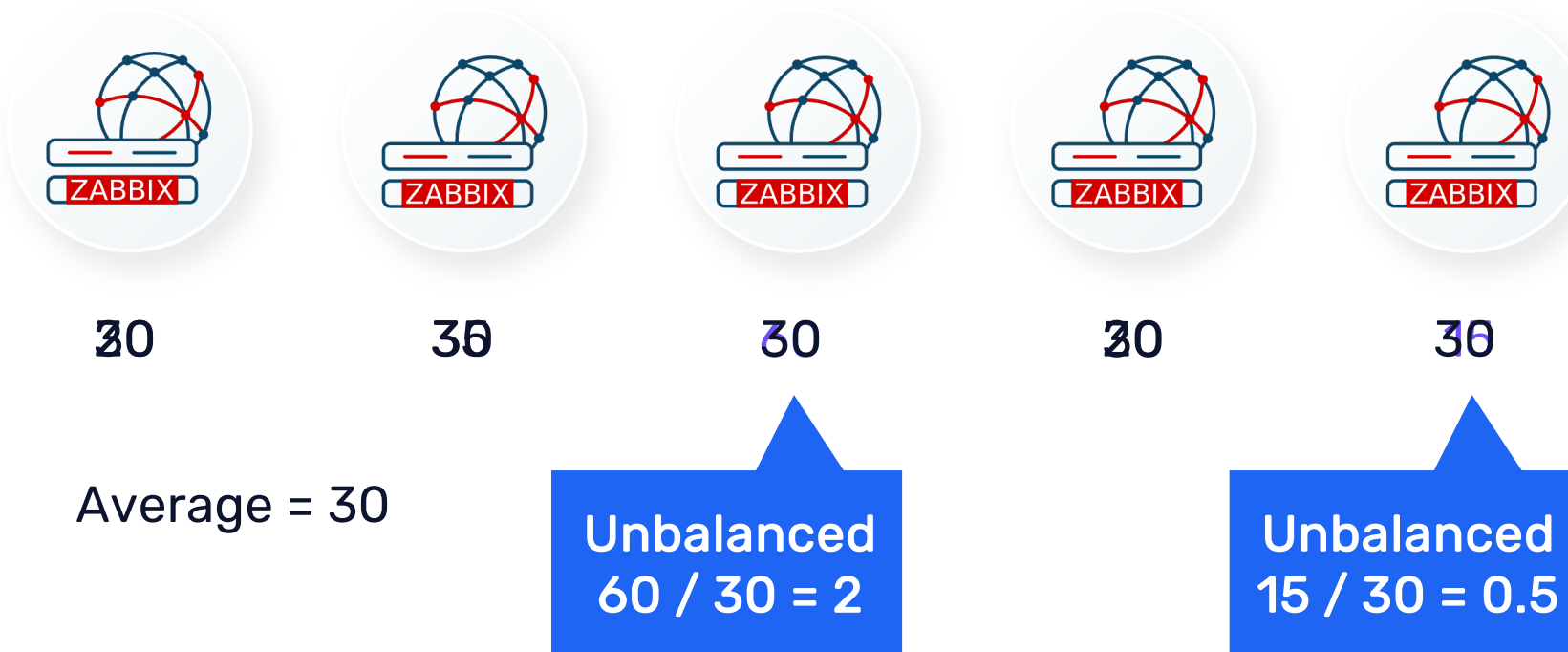
At the bottom of the form, there are five buttons: 'Update' (highlighted in blue), 'Refresh configuration', 'Clone', 'Delete', and 'Cancel'.

Proxy groups

- ▶ Hosts are rebalanced if the following conditions are met:
 - ▶ The number of hosts assigned to a proxy differs from the average by twice or more
 - ▶ Difference is not less than 10 hosts
 - ▶ Hosts exceeding the average are unassigned from proxies
 - ▶ The unassigned hosts are then assigned to proxies with fewer hosts

Proxy groups

► Proxy rebalancing example:



Proxy groups

- ▶ When a new proxy is added, the group is automatically rebalanced
 - ▶ New average is calculated
 - ▶ Excess hosts are unassigned
 - ▶ Unassigned hosts are reassigned between proxies

Zabbix Agent

- ▶ Agents need to be configured to accept connections from proxies in a proxy group:
 - ▶ For active agent mode, ServerActive needs to contain the IP of at least one (preferably multiple) proxy node groups
 - ▶ For passive agent mode, Server parameter needs to include IP addresses of all proxy nodes in a proxy group

```
# zabbix_proxy.log
2594:20240620:082058.199 cannot send list of active checks to „initMaxProxy01”: host „initMAX_srv” is monitored by another proxy
```

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Proxy memory buffer



New proxy buffer modes

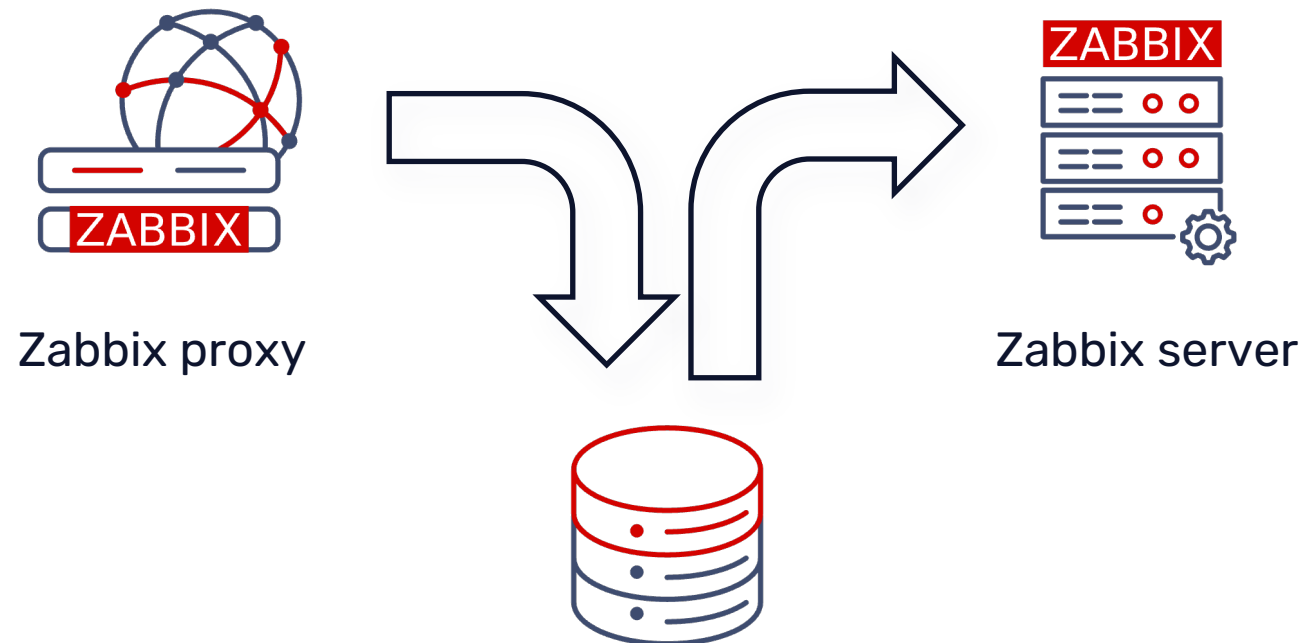
- ▶ Zabbix 7.0 will introduce new proxy buffer modes:
 - ▶ Disk Current behavior
 - ▶ Memory Data stored only in shared memory
 - ▶ Hybrid Buffer works in memory mode with DB as backup (Default now)

```
### Option: ProxyBufferMode
#   Specifies history, discovery and auto registration data storage
#   mechanism:
#   disk      - data are stored in database and uploaded from database
#   memory    - data are stored in memory and uploaded from memory.
#   hybrid    - the proxy buffer normally works like in memory mode until it
#               runs out of memory or the oldest record exceeds the configured
#               age
# Default:
# ProxyBufferMode=disk

ProxyBufferMode=hybrid
```

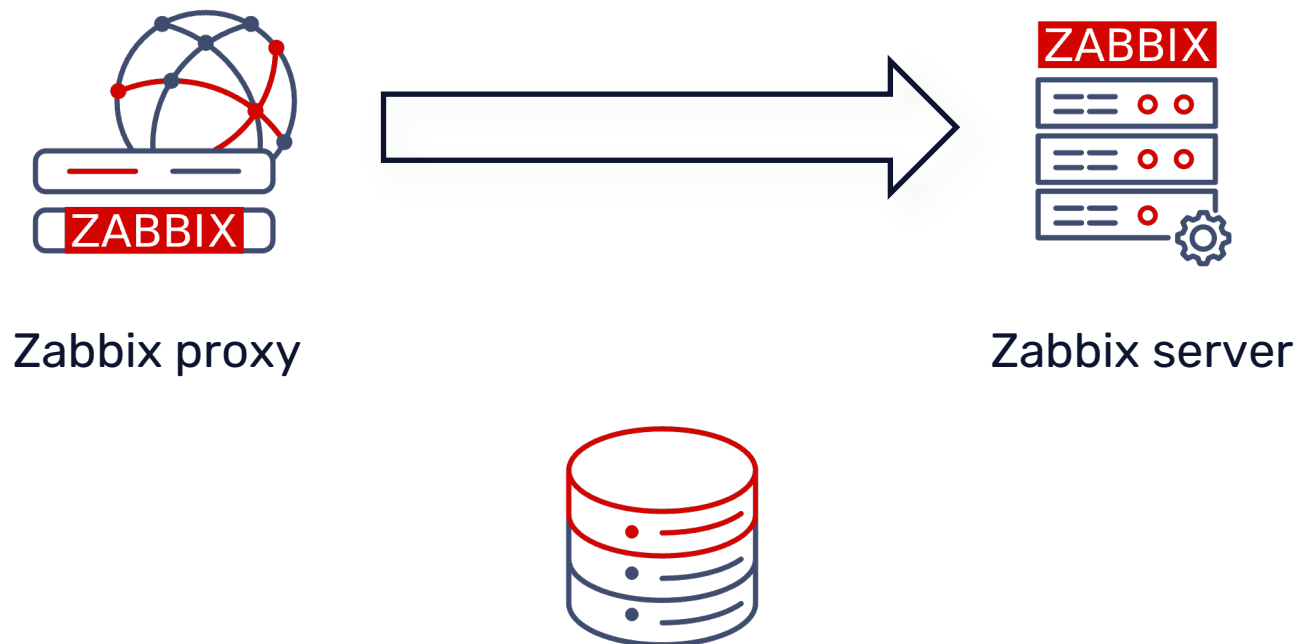
Disk mode

- ▶ Each value collected by Zabbix proxy goes through a database:
 - ▶ Database (MySQL, Postgres, or SQLITE) required on each proxy
 - ▶ This may cause a bottleneck on large proxies



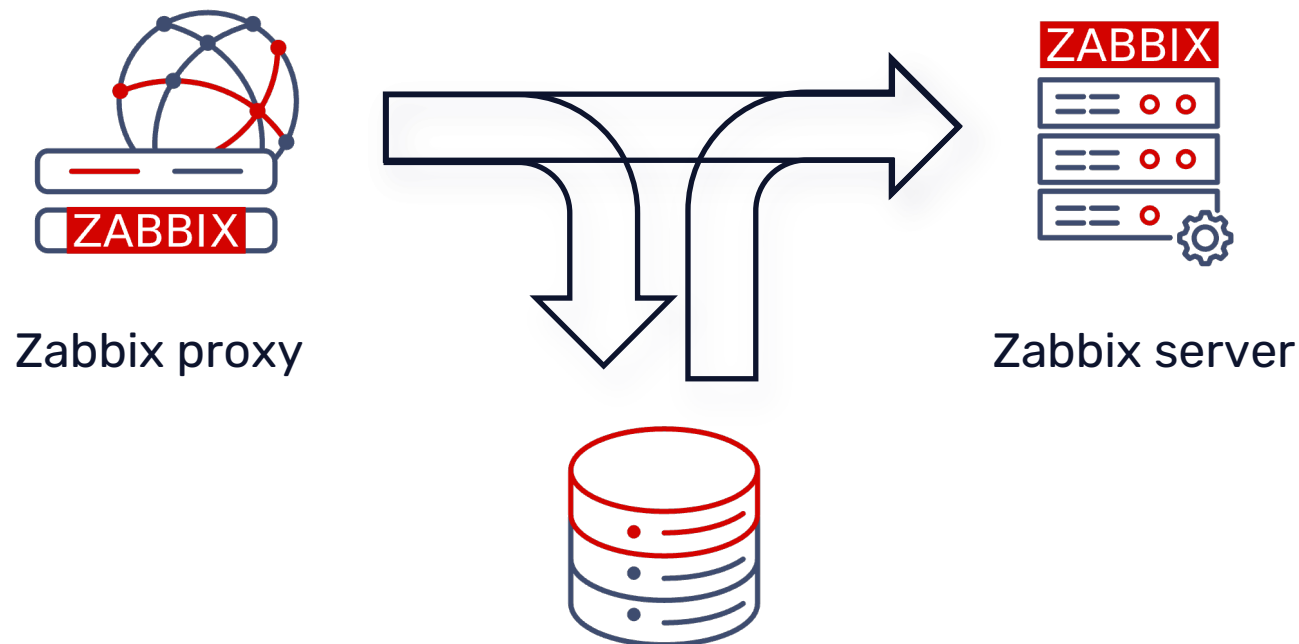
Memory mode

- ▶ Data is sent to Zabbix server directly:
 - ▶ The history data is being stored in shared memory and uploaded from it
 - ▶ If buffer runs out of memory the old data will be discarded

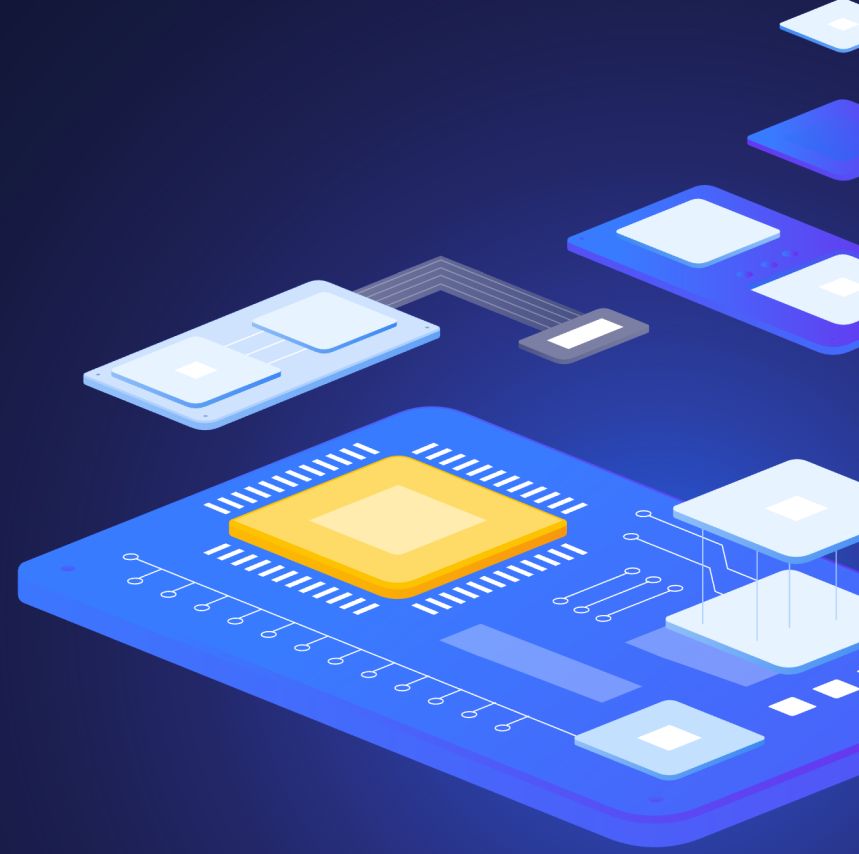


Hybrid mode

- ▶ Data is sent to the Zabbix server directly:
 - ▶ Buffer normally works like in the memory mode
 - ▶ The buffer is flushed in database if buffer does not have enough space



Demo



Questions?



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