initMAX

EXTENDED OUT OF THE BOX MONITORING WITH

AGENT 2

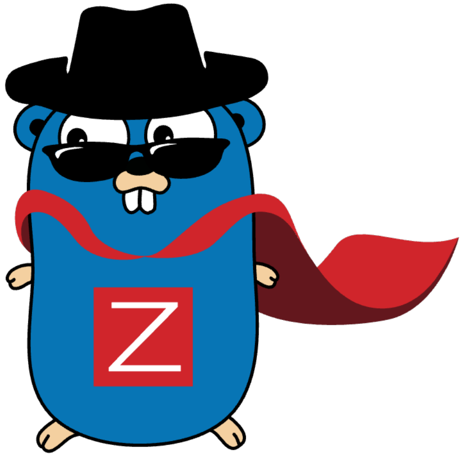
all our microphones are muted

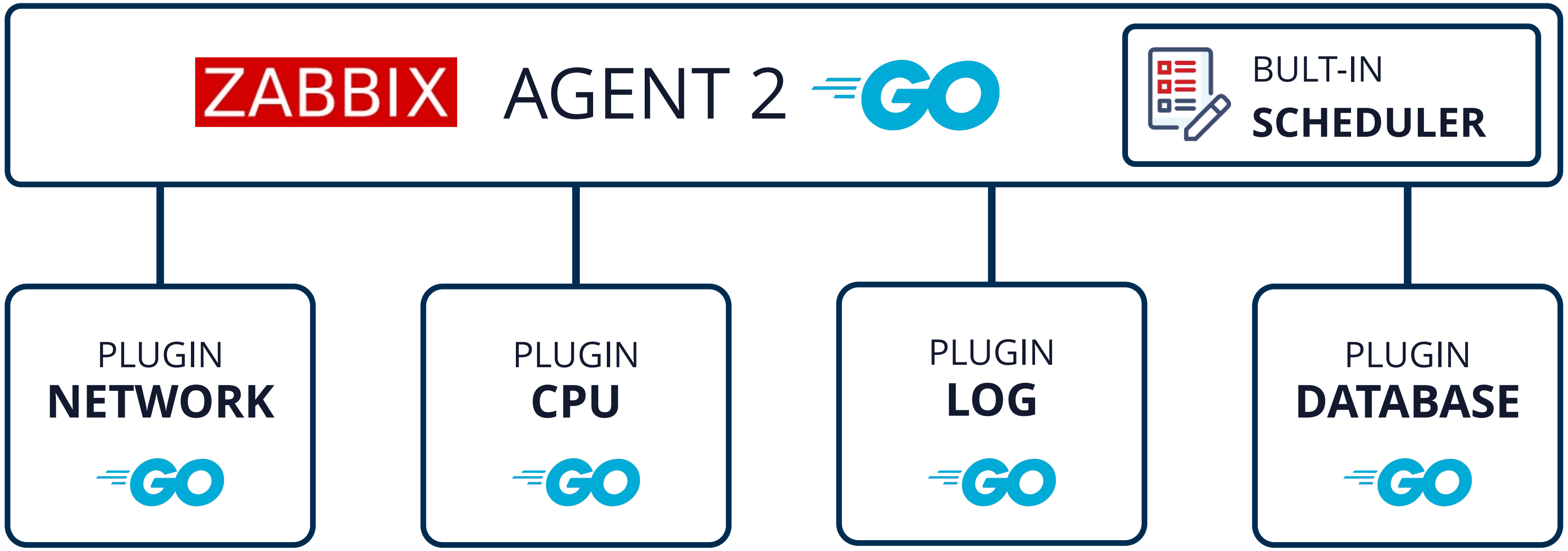
ask your questions in Q&A, not in the Chat

use Chat for discussion, networking or applause

Agent 2

AGENT 2 OVERVIEW





- scheduled/flexible intervals
- written in Go
- less TCP connections
- older configuration file support
- easily extendable
- out-of-the-box systemd monitoring

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New Functionality

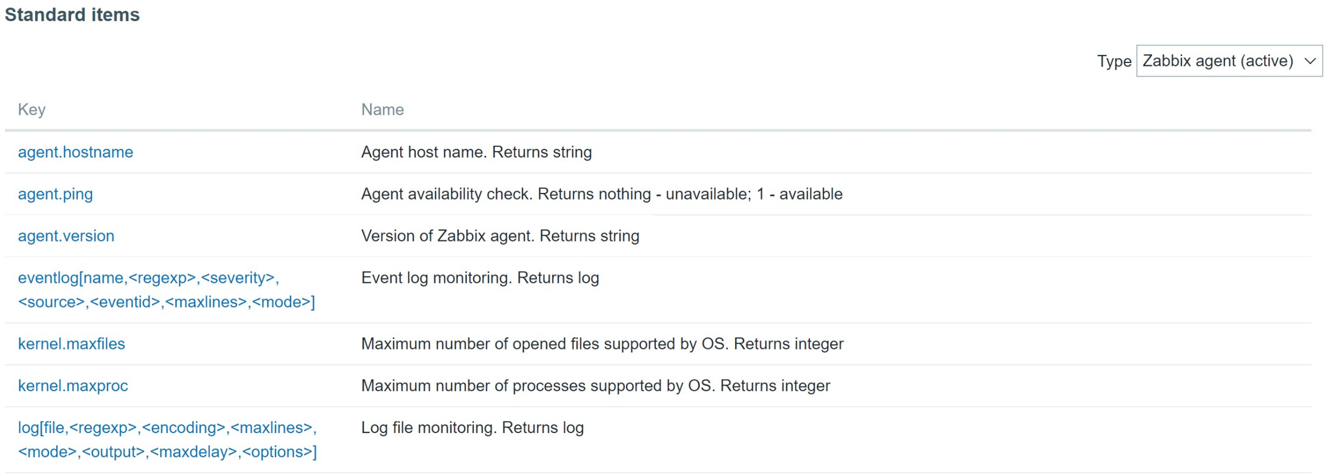
Agent 2

NEW FUNCTIONALITY

Zabbix Agent 2 is written in Go (Golang)

Drop-in replacement for Zabbix agent

- Supports all previous functionality (same item keys)
- Supports old configuration file format



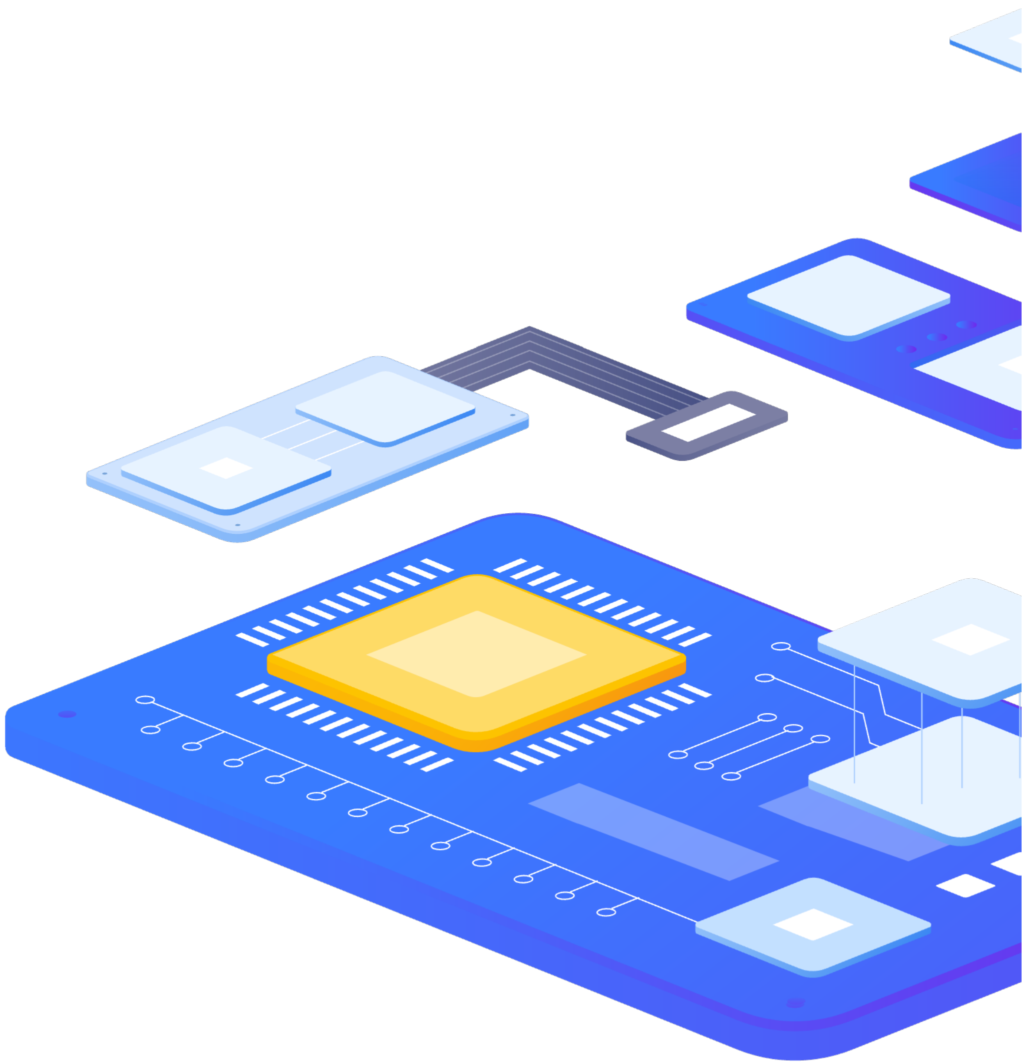
Standard items

Type Zabbix agent (active)

Key	Name
agent.hostname	Agent host name. Returns string
agent.ping	Agent availability check. Returns nothing - unavailable; 1 - available
agent.version	Version of Zabbix agent. Returns string
eventlog[name,<regexp>,<severity>,<source>,<eventid>,<maxlines>,<mode>]	Event log monitoring. Returns log
kernel.maxfiles	Maximum number of opened files supported by OS. Returns integer
kernel.maxproc	Maximum number of processes supported by OS. Returns integer
log[file,<regexp>,<encoding>,<maxlines>,<mode>,<output>,<maxdelay>,<options>]	Log file monitoring. Returns log

Has been developed to

- Reduce the number of TCP connections
- Be easily extendable with plugins

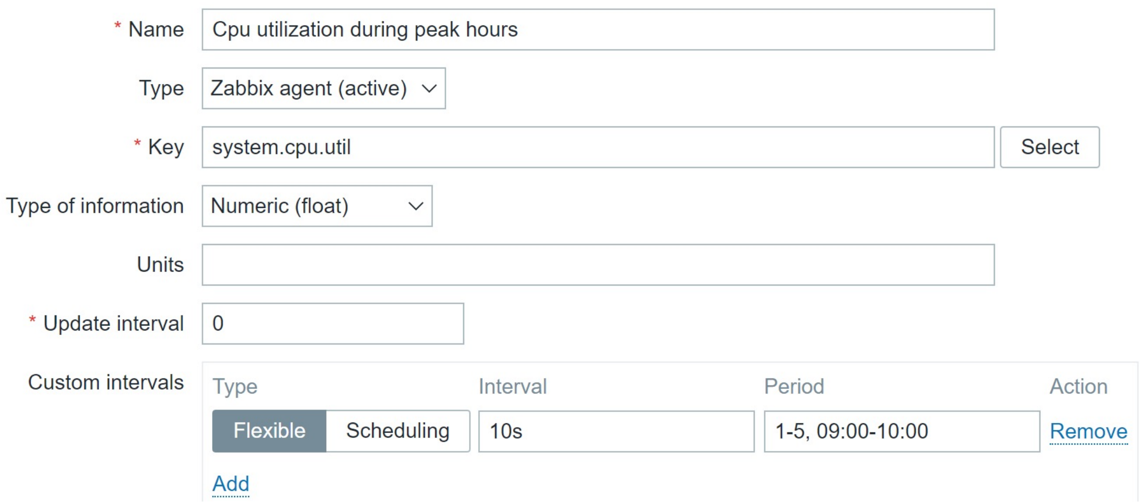


Agent 2

NEW FUNCTIONALITY

Improved active checks

- Active checks support scheduled/flexible intervals
- Parallel execution of multiple active checks for each ServerActive

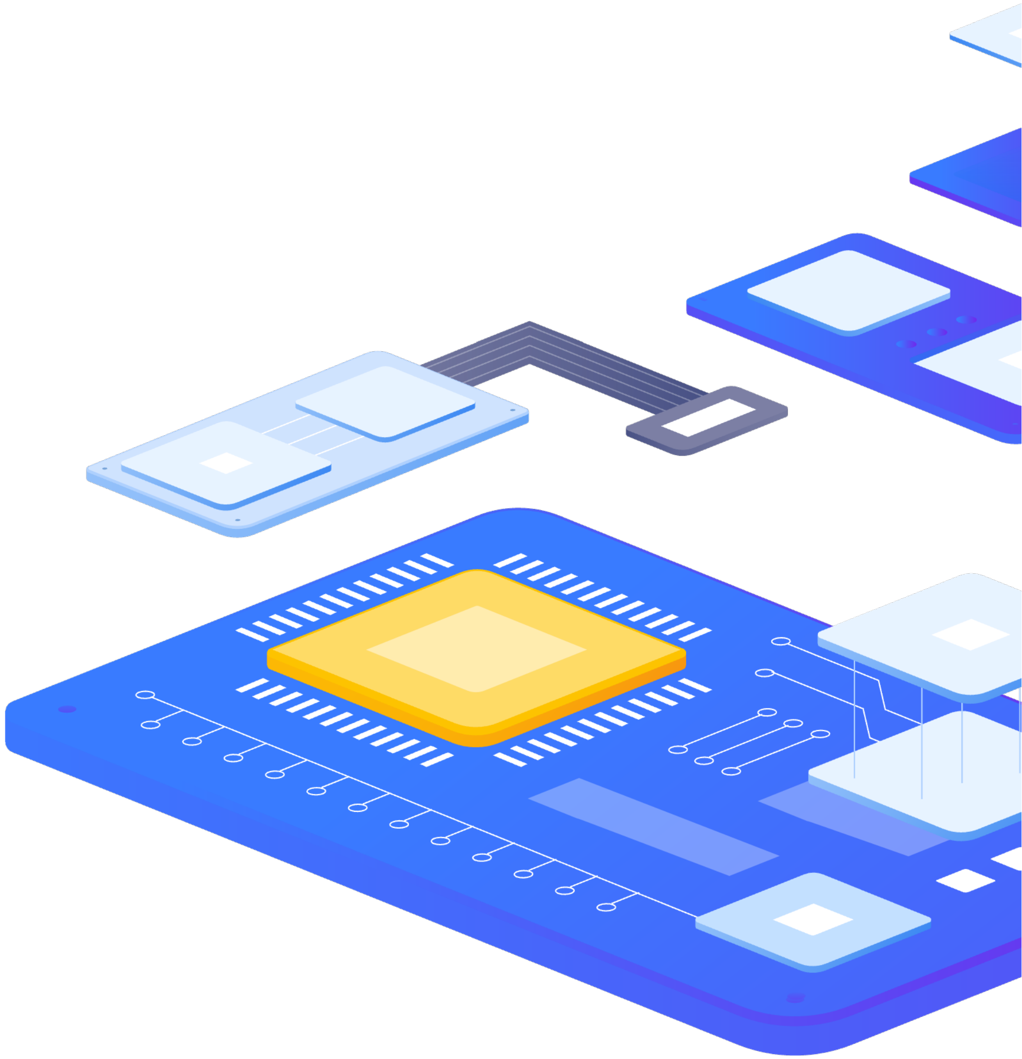


* Name	Cpu utilization during peak hours
Type	Zabbix agent (active)
* Key	system.cpu.util
Type of information	Numeric (float)
Units	
* Update interval	0

Custom intervals

Type	Interval	Period	Action
Flexible Scheduling	10s	1-5, 09:00-10:00	Remove

- Limited system support



AGENT 2 BUFFER

Two types of buffer are supported by Agent2 in active mode

- Memory buffer
- Buffer using SQLite engine

Persistent buffer is supported both on Unix-like systems and Windows hosts

Configurable via Agent 2 configuration file

- Enable persistent buffer:

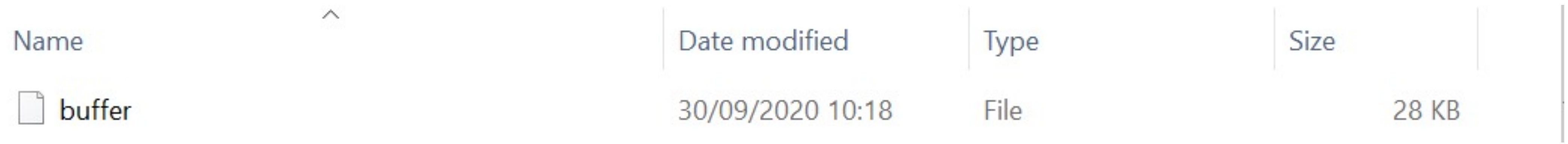
```
EnablePersistentBuffer=1
```

- Specify the location of the buffer file:

```
PersistentBufferFile=C:\temp\buffer
```

AGENT 2 BUFFER

The buffer file is created on agent startup in your specified location



Name	Date modified	Type	Size
buffer	30/09/2020 10:18	File	28 KB

Additionally, persistent buffer period can be configured

- Default is 1 hour

```
PersistentBufferPeriod=1h
```

Remember that persistent buffer is used only for active checks

If persistent buffer is disabled, then in memory buffer is used

AGENT 2 BUFFER

We can always take a look at what data is stored in the persistent buffer

```
sqlite> select * from data_1;
9|1601470098|31578|-1|-1|-1|491974656||-1|-1|-1|1601470098|461886
10|1601470099|31579|-1|-1|-1|47.336478||-1|-1|-1|1601470099|683697
11|1601470100|31580|-1|-1|-1|1039331328||-1|-1|-1|1601470100|605187
12|1601470155|31575|-1|-1|-1|859828224||-1|-1|-1|1601470155|973576
13|1601470156|31576|-1|-1|-1|100.000000||-1|-1|-1|1601470156|1253467
```

- Using persistent buffer adds a layer of redundancy
- If server for some reason is unreachable, the data is still stored in the persistent buffer
- The data is still preserved after the agent restart, as opposed to in memory buffer

Agent 2

ZABBIX 6.0 NEWS - agent/agent 2

agent.variant

- New Item for instaled variant since agent version 5.0.18

6.0 – HA settings

Count matching TCP/UDP sockets

- net.tcp.socket.count[<laddr>,<lport>,<raddr>,<rport>,<state>]

Additional file information such as file owner and file permissions

- vfs.dir.get[dir,<regex_incl>,<regex_excl>,<types_incl>,…….]
- Parameter changes:
    - vfs.file.cksum[file,<mode>], vfs.file.get[file], vfs.file.owner[file,<ownertype>,<resulttype>]

Collect agent host metadata as a metric

- agent.hostmetadata

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

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Installation

Agent 2

AGENT 2 INSTALLATION

Install Zabbix Agent2

```
# dnf install https://repo.zabbix.com/zabbix/5.2/rhel/8/x86_64/zabbix-release-5.2-
1.el8.noarch.rpm
# dnf install zabbix-agent2
```

Start Zabbix Agent2

```
# systemctl start zabbix-agent2
```

Enable auto start

```
# systemctl enable zabbix-agent2
```

AGENT 2 INSTALLATION

Konfigurace

```
Server=<IP/DNS> for passive agent checks
```

```
ServerActive=<IP/DNS> for active agent checks
Hostname=Name of host for active checks
```

```
# systemctl restart zabbix-agent2
```

AGENT 2 INSTALLATION on windows – command line

- Available for download as archive or MSI install
- To install a single instance of Zabbix agent with the default configuration file c:\zabbix_agentd.conf:

```
zabbix_agent2.exe --install
```

- If you wish to use a configuration file other than c:\zabbix_agentd.conf, you should use the following command for service installation:

```
zabbix_agentd.exe --config <your_configuration_file> --install
```

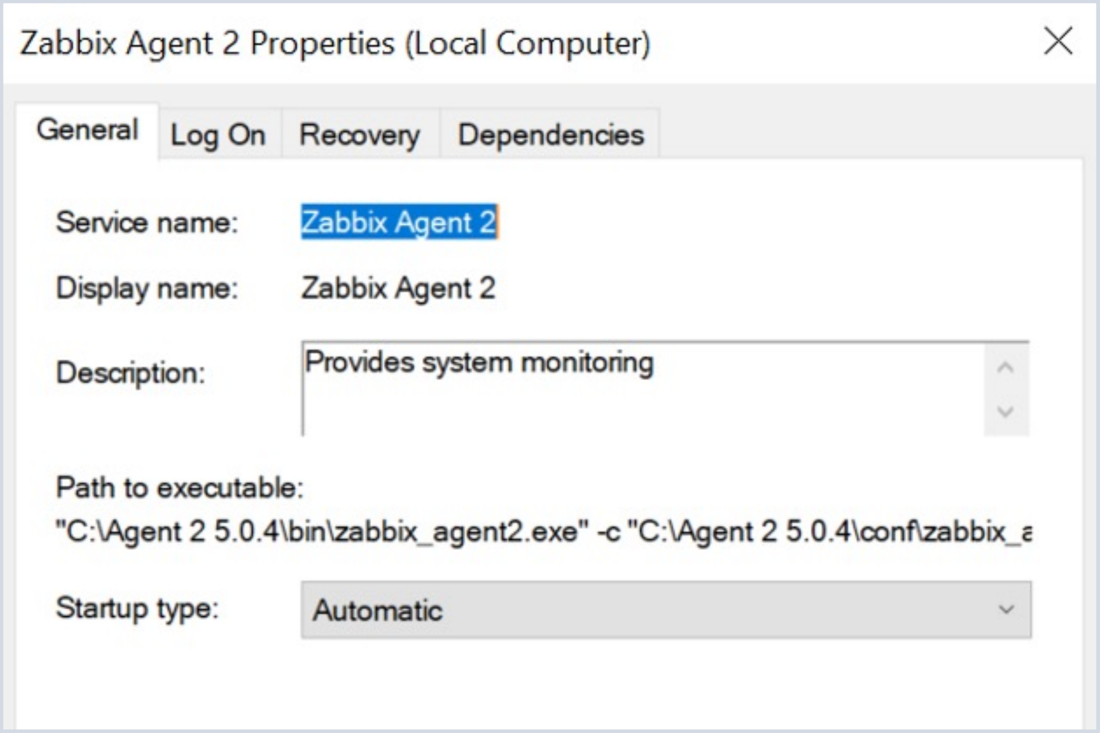
```
"C:\Agent 2 6.0.4\bin\zabbix_agent2.exe" --install --config "C:\Agent 2
6.0.4\conf\zabbix_agent2.conf"
```

Agent 2

AGENT 2 INSTALLATION on windows – command line

Once installed, runs as a service under Local System account

```
zabbix_agent2 [20268]: 'Zabbix Agent 2' installed succesfully
```



Zabbix Agent 2 Properties (Local Computer)

Service name: Zabbix Agent 2

Display name: Zabbix Agent 2

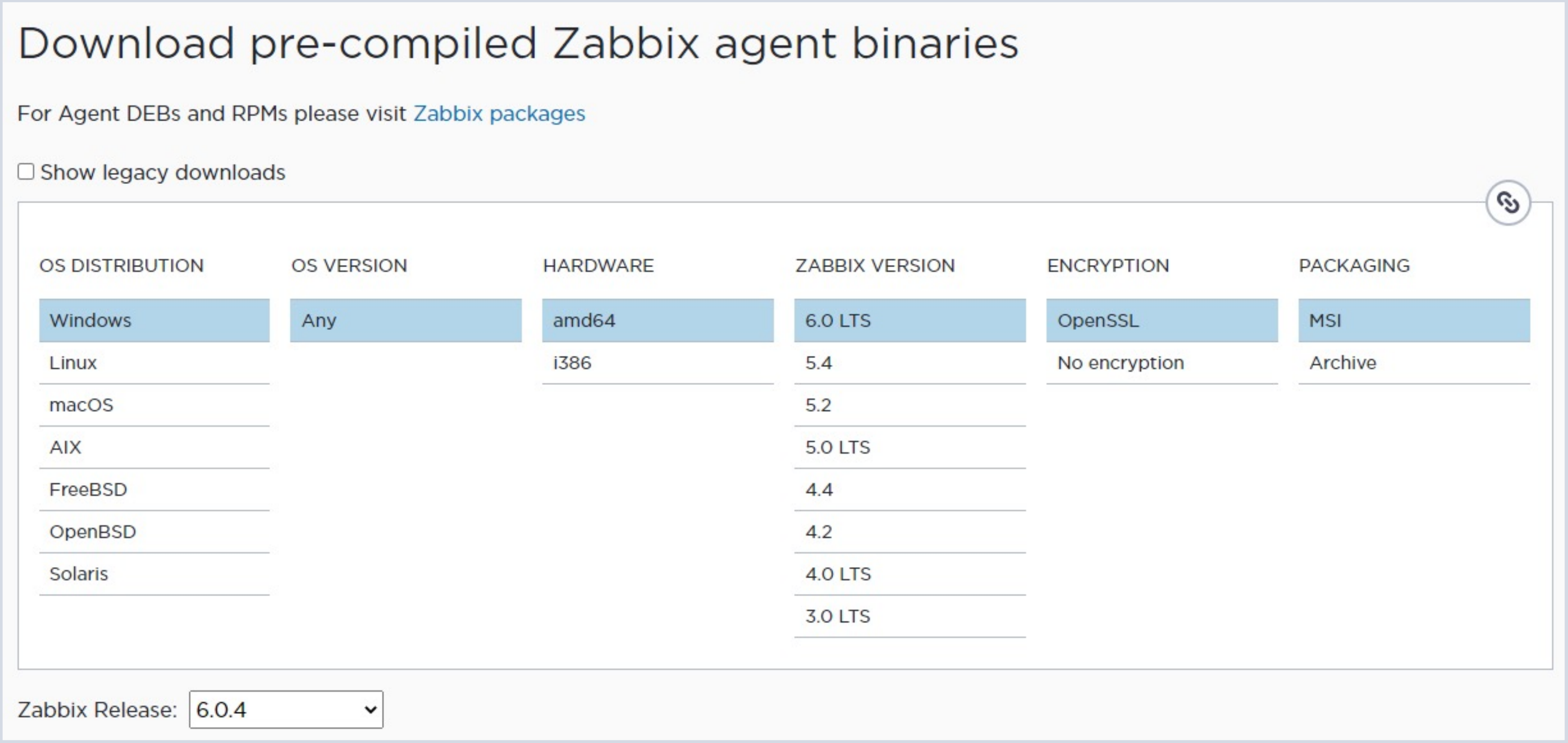
Description: Provides system monitoring

Path to executable:
"C:\Agent 2 5.0.4\bin\zabbix_agent2.exe" -c "C:\Agent 2 5.0.4\conf\zabbix_a

Startup type: Automatic

AGENT 2 INSTALLATION on windows – MSI

MSI Installer can be downloaded from Zabbix website



Download pre-compiled Zabbix agent binaries

For Agent DEBs and RPMs please visit Zabbix packages

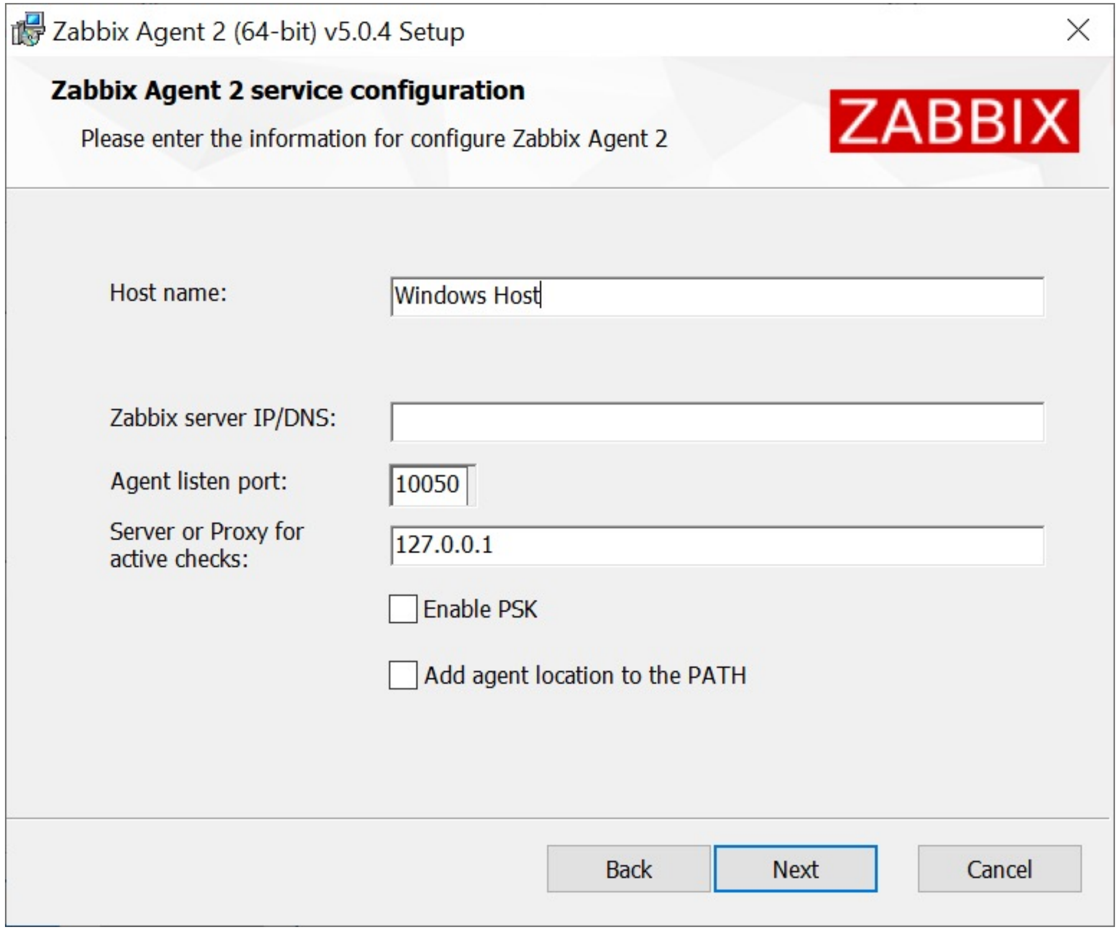
□ Show legacy downloads

OS DISTRIBUTION	OS VERSION	HARDWARE	ZABBIX VERSION	ENCRYPTION	PACKAGING
Windows	Any	amd64	6.0 LTS	OpenSSL	MSI
Linux		i386	5.4	No encryption	Archive
macOS			5.2		
AIX			5.0 LTS		
FreeBSD			4.4		
OpenBSD			4.2		
Solaris			4.0 LTS		
			3.0 LTS		

Zabbix Release: 6.0.4

AGENT 2 INSTALLATION on windows – MSI

- Host name – Hostname parameter for active agent checks
- Zabbix server IP/DNS – Server parameter for passive checks
- Agent listen port - port on which the agent will listen for passive check requests
- Server or Proxy for active checks – ServerActive parameter for sending active agent datax



Zabbix Agent 2 (64-bit) v5.0.4 Setup

Zabbix Agent 2 service configuration

Please enter the information for configure Zabbix Agent 2

Host name: Windows Host

Zabbix server IP/DNS:

Agent listen port: 10050

Server or Proxy for active checks: 127.0.0.1

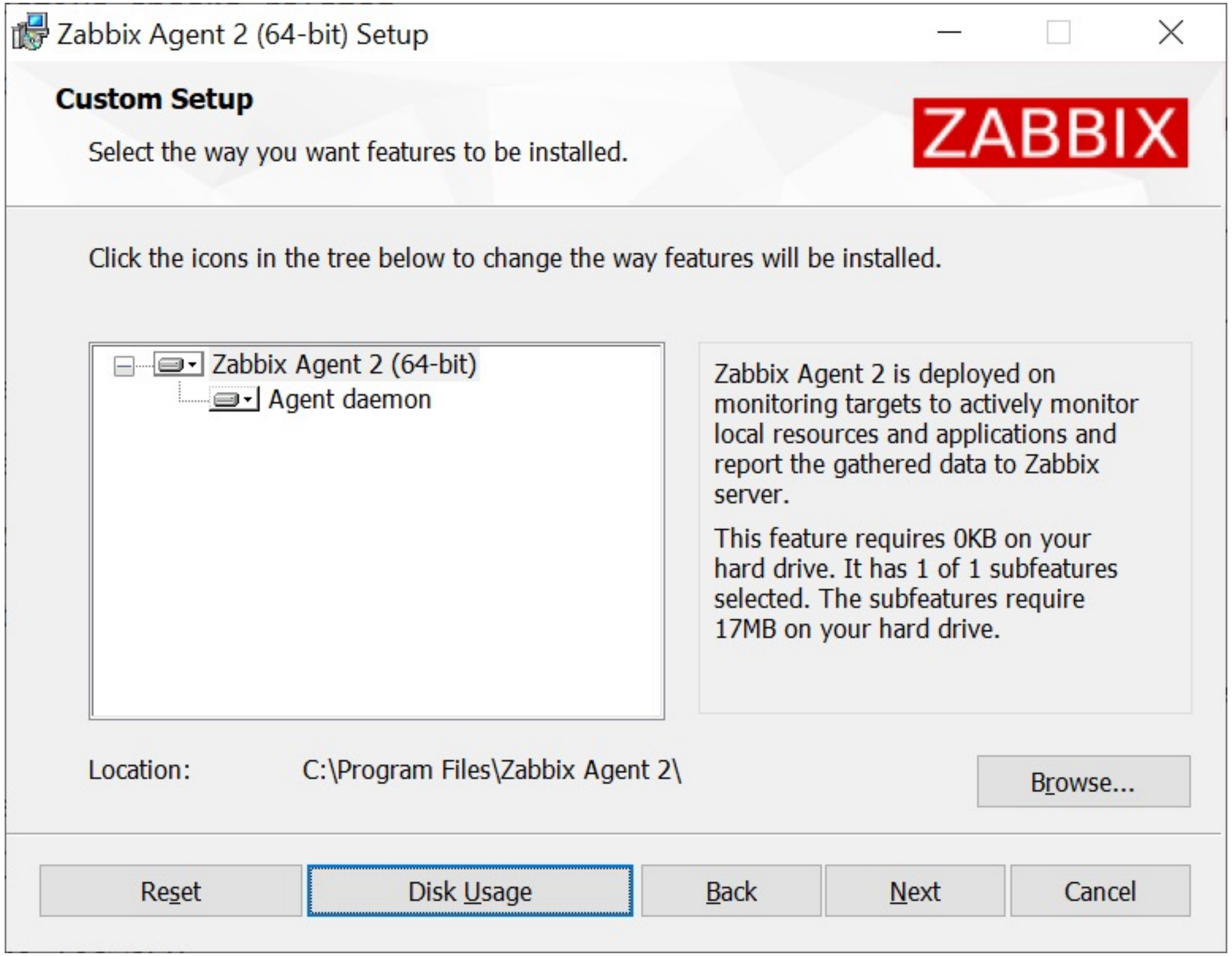
□ Enable PSK

□ Add agent location to the PATH

Agent 2

AGENT 2 INSTALLATION on windows – MSI

- Location – Agent 2 install location
- Disk Usage – disk space usage statistics
- Agent 2 takes up ~17MB of disk space



Zabbix Agent 2 (64-bit) Setup

Custom Setup

Select the way you want features to be installed.

Click the icons in the tree below to change the way features will be installed.

- Zabbix Agent 2 (64-bit)
  - Agent daemon

Zabbix Agent 2 is deployed on monitoring targets to actively monitor local resources and applications and report the gathered data to Zabbix server.

This feature requires 0KB on your hard drive. It has 1 of 1 subfeatures selected. The subfeatures require 17MB on your hard drive.

Location: C:\Program Files\Zabbix Agent 2\

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COMMAND LINE OPTIONS

AGENT 2 COMMAND LINE OPTIONS

```
# zabbix_agent2 -R help
Remote control interface, available commands:
        loglevel increase - Increase log level
        loglevel decrease - Decrease log level
        metrics - List available metrics
        version - Display Agent version
        help - Display this help message
```

- Other C agent parameters such as – p (print), – t (test) etc. are also fully supported by Agent 2

```
#zabbix_agent2 -t agent.hostname
agent.hostname                                [s|LinuxHost]
```

AGENT 2 PLUGIN STATUS

Available metric list is divided into plugin sections

- Displays per plugin statistics

```
# zabbix_agent2 -R metrics
[NetIf]
active: true
capacity: 0/100
tasks: 2
net.if.in: Returns incoming traffic statistics on network interface.
net.if.out: Returns outgoing traffic statistics on network interface.
net.if.total: Returns sum of incoming and outgoing traffic statistics on network
interface.
```

Agent 2

AGENT 2 PLUGIN STATUS

Status of running agent can be viewed via web browser

- Status page will be accessible from anywhere
- Can be set to any unused port
- No default port setting
- Agent restart is still required after making configuration changes

```
### Option: StatusPort
#       Agent will listen on this port for HTTP status requests.
StatusPort=10080
```

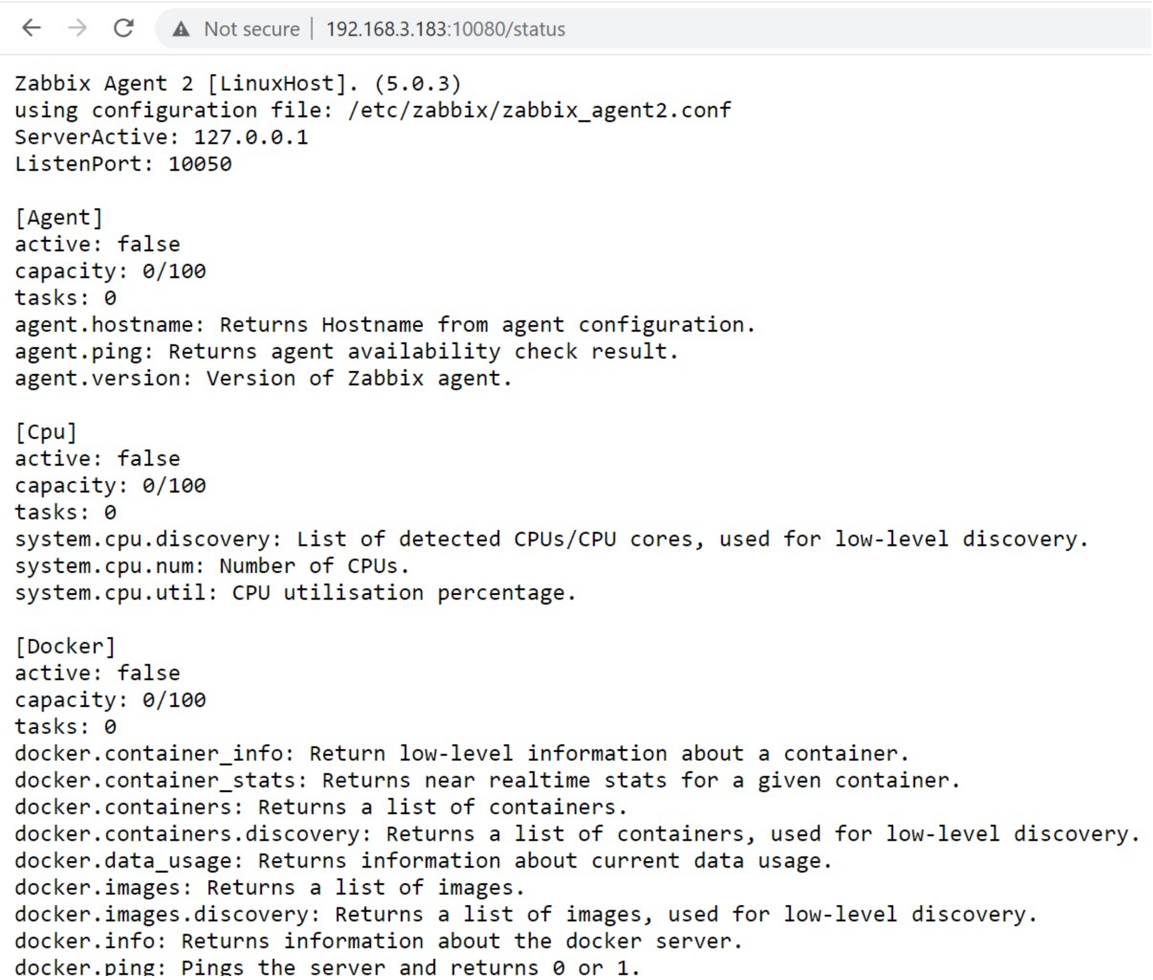
Agent 2

AGENT 2 PLUGIN STATUS

In browser navigate to:

- http://<IP/DNS>:10080/status

Same as from the command line



```
Zabbix Agent 2 [LinuxHost]. (5.0.3)
using configuration file: /etc/zabbix/zabbix_agent2.conf
ServerActive: 127.0.0.1
ListenPort: 10050

[Agent]
active: false
capacity: 0/100
tasks: 0
agent.hostname: Returns Hostname from agent configuration.
agent.ping: Returns agent availability check result.
agent.version: Version of Zabbix agent.

[Cpu]
active: false
capacity: 0/100
tasks: 0
system.cpu.discovery: List of detected CPUs/CPU cores, used for low-level discovery.
system.cpu.num: Number of CPUs.
system.cpu.util: CPU utilisation percentage.

[Docker]
active: false
capacity: 0/100
tasks: 0
docker.container_info: Return low-level information about a container.
docker.container_stats: Returns near realtime stats for a given container.
docker.containers: Returns a list of containers.
docker.containers.discovery: Returns a list of containers, used for low-level discovery.
docker.data_usage: Returns information about current data usage.
docker.images: Returns a list of images.
docker.images.discovery: Returns a list of images, used for low-level discovery.
docker.info: Returns information about the docker server.
docker.ping: Pings the server and returns 0 or 1.
```

Agent 2

AGENT 2 PLUGIN CONFIGURATION

- Each Agent 2 item belongs to a specific plugin
- Plugins can be individually configured by changing plugin parameters
- All plugins are configured using "Plugins.*" parameter in "zabbix_agent2.conf"

C Agent MaxLines configuration (plugin-less):

```
MaxLinesPerSecond=20
```

«Go Agent MaxLines configuration – Via Log Plugin:

```
Plugins.Log.MaxLinesPerSecond=20
```

AGENT 2 PLUGINS

All of Zabbix agent 2 items utilize some sort of a plugin written by Zabbix developers

Plugins provide an option to extend the monitoring capabilities of Zabbix

- Written in Go programming language and supported for Zabbix agent 2 only
- Alternative to "loadable modules" (written in C)

Each plugin can be configured by editing the plugin specific parameters in Zabbix agent 2 configuration file

- Syntax: Plugins.<PluginName>.<Parameter>=<Value>

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NAMED SESSIONS

AGENT 2 NAMED SESSIONS

Named sessions

- Represent an additional level of plugin parameters
- Can be applied only to specific plugins
  - Mysql
  - Postgres
  - Redis
  - Memcached
  - More as they are released in the future
- Mostly related to Agent 2 DB monitoring plugins
- Used to define separate sets of authentication parameters
  - URI - Uniform Resource Identifier
  - User – Username which is used for obtaining the metrics from the resource
  - Password – Password for the specified user

AGENT 2 NAMED SESSIONs

Example:

- Monitoring of two sessions "MySQL1" and "MySQL2“

```
Plugins.Mysql.Sessions.MySQL1.Uri=tcp://127.0.0.1:3306
Plugins.Mysql.Sessions.MySQL1.User=<UsernameForMySQL1>
Plugins.Mysql.Sessions.MySQL1.Password=<PasswordForMySQL1>
Plugins.Mysql.Sessions.MySQL2.Uri=tcp://127.0.0.1:3307
Plugins.Mysql.Sessions.MySQL2.User=<UsernameForMySQL2>
Plugins.Mysql.Sessions.MySQL2.Password=<PasswordForMySQL2>
```

- We can now use the defined session names – "MySQL1" and "MySQL2" as connString parameters in our mysql agent 2 item keys

AGENT 2 NAMED SESSIONS

Example keys:

- mysql.db.size[connString,username,password,dbName]
- mysql.ping[connString,username,password]
- mysql.db.discovery[connString,username,password]

Using named session names in key parameters:

- mysql.db.size[MySQL1,,,productionDB]
- Note that we still need to specify the DB name "productionDB" directly in the key

Parameters also can be specified directly if needed:

- mysql.db.size[tcp://localhost,root,P445W0RD,productionDB]

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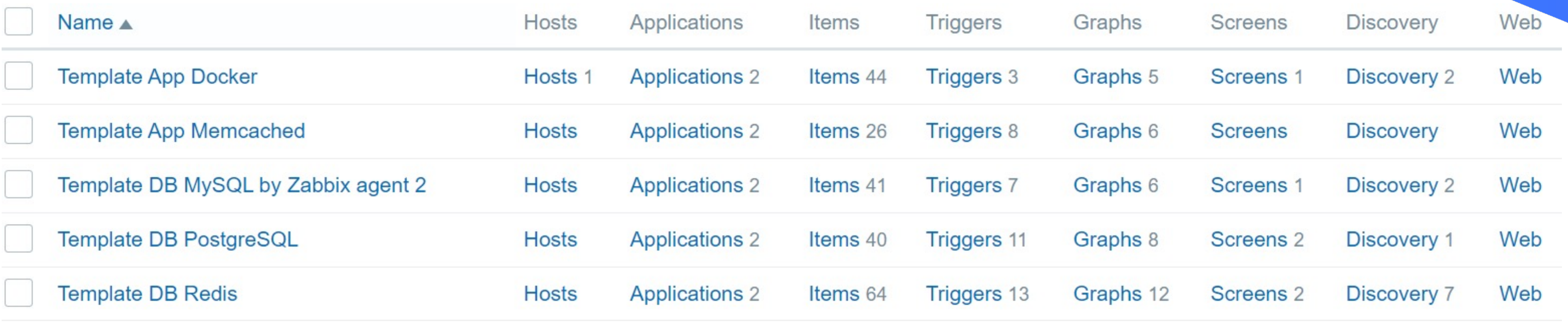
TEMPLATES

Agent 2

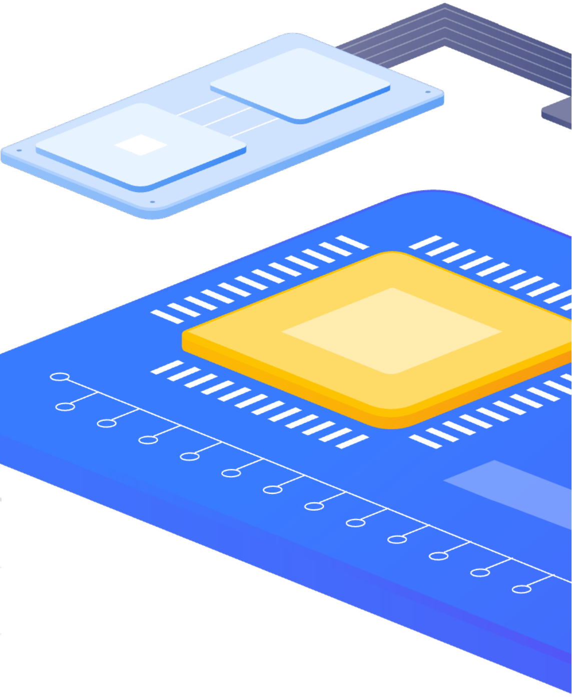
AGENT 2 TEMPLATES

Integrated plugins and templates are available out of the box

- DB MySQL
- DB PostgreSQL
- DB Redis
- App Docker
- App Memcached
- More templates will be published in the future



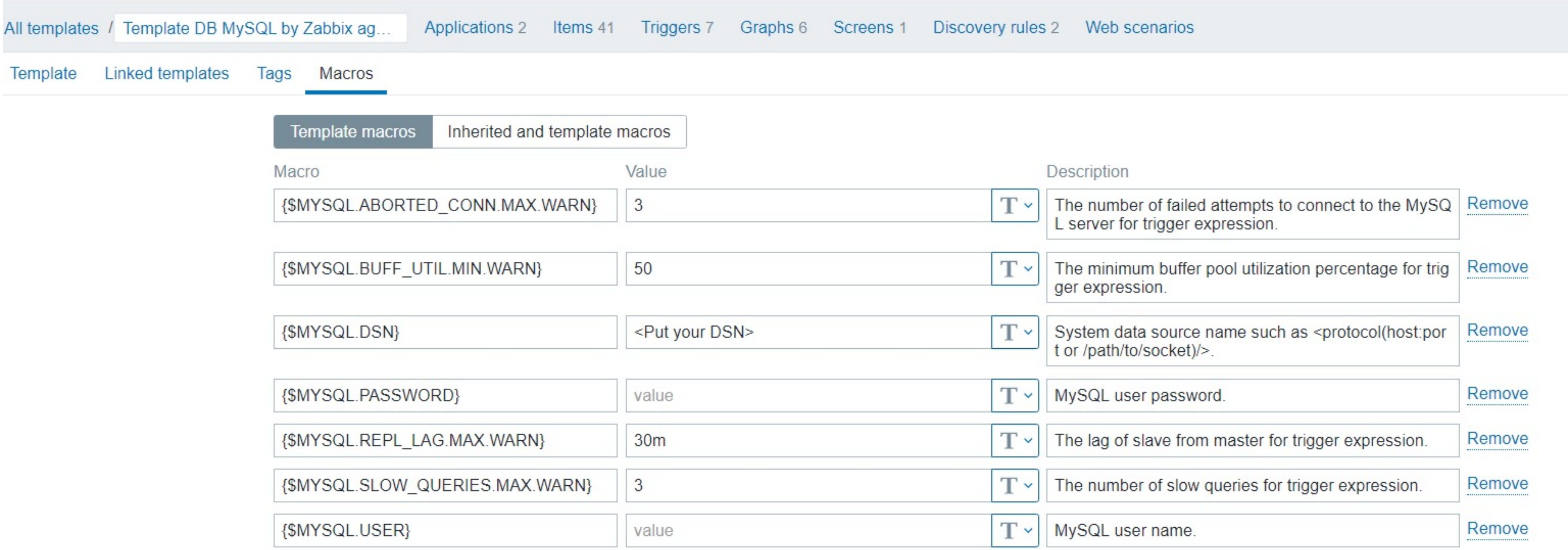
☐	Name ▲	Hosts	Applications	Items	Triggers	Graphs	Screens	Discovery	Web
☐	Template App Docker	Hosts 1	Applications 2	Items 44	Triggers 3	Graphs 5	Screens 1	Discovery 2	Web
☐	Template App Memcached	Hosts	Applications 2	Items 26	Triggers 8	Graphs 6	Screens	Discovery	Web
☐	Template DB MySQL by Zabbix agent 2	Hosts	Applications 2	Items 41	Triggers 7	Graphs 6	Screens 1	Discovery 2	Web
☐	Template DB PostgreSQL	Hosts	Applications 2	Items 40	Triggers 11	Graphs 8	Screens 2	Discovery 1	Web
☐	Template DB Redis	Hosts	Applications 2	Items 64	Triggers 13	Graphs 12	Screens 2	Discovery 7	Web



Agent 2

AGENT 2 TEMPLATES

- Zabbix agent 2 out of box templates can be further configured by customizing User Macros or Plugin parameters
- Basic configuration can be done by simply adjusting the user macros



Macro	Value		Description	
{$MYSQL.ABORTED_CONN.MAX.WARN}	3	T	The number of failed attempts to connect to the MySQL server for trigger expression.	Remove
{$MYSQL.BUFF_UTIL.MIN.WARN}	50	T	The minimum buffer pool utilization percentage for trigger expression.	Remove
{$MYSQL.DSN}	<Put your DSN>	T	System data source name such as <protocol(host:port or /path/to/socket)/>.	Remove
{$MYSQL.PASSWORD}	value	T	MySQL user password.	Remove
{$MYSQL.REPL_LAG.MAX.WARN}	30m	T	The lag of slave from master for trigger expression.	Remove
{$MYSQL.SLOW_QUERIES.MAX.WARN}	3	T	The number of slow queries for trigger expression.	Remove
{$MYSQL.USER}	value	T	MySQL user name.	Remove

AGENT 2 TEMPLATES

Deeper customization can be achieved by configuring the plugin itself

```
### Option: Plugins
#       A plugin can have one or more plugin specific configuration parameters in format:
#     Plugins.<PluginName>.<Parameter1>=<value1>
#     Plugins.<PluginName>.<Parameter2>=<value2>
```

```
### Option: Plugins.Redis.Uri
#       Connection string. Can be overwritten by the first parameter of an item's key.
#
# Mandatory: no
# Range: Must matches the URI format.
# Default:
# Plugins.Redis.Uri=tcp://localhost:6379
```

AGENT 2 Exclusive keys

Zabbix agent 2 has many new built-in keys

For Docker

- docker.data_usage - Information about current data usage
- docker.containers.discovery - A list of containers. Used for low-level discovery

For MySQL

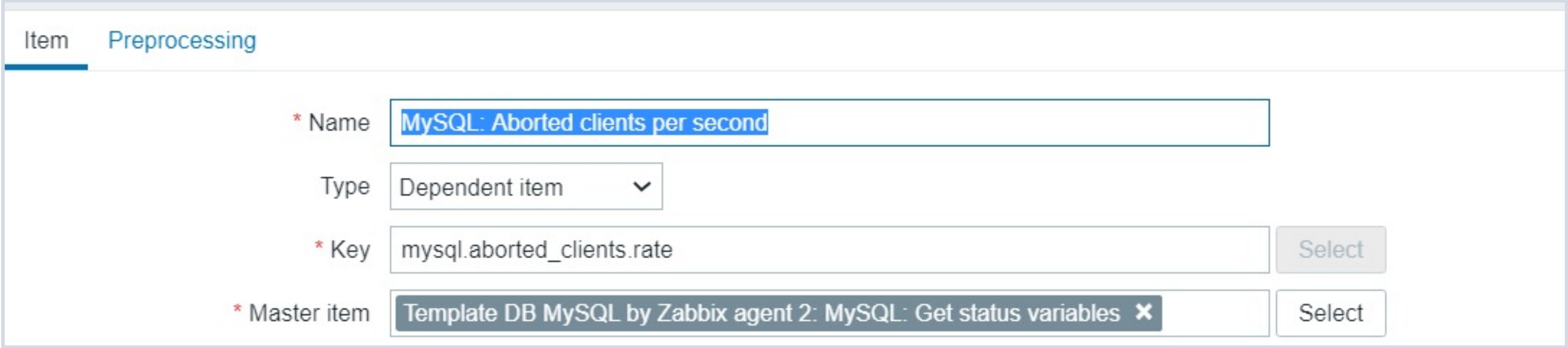
- mysql.get_status_variables – get mysql variable data
- mysql.db.discovery - Result of the “show databases” SQL query in LLD JSON format

For PostgreSQL

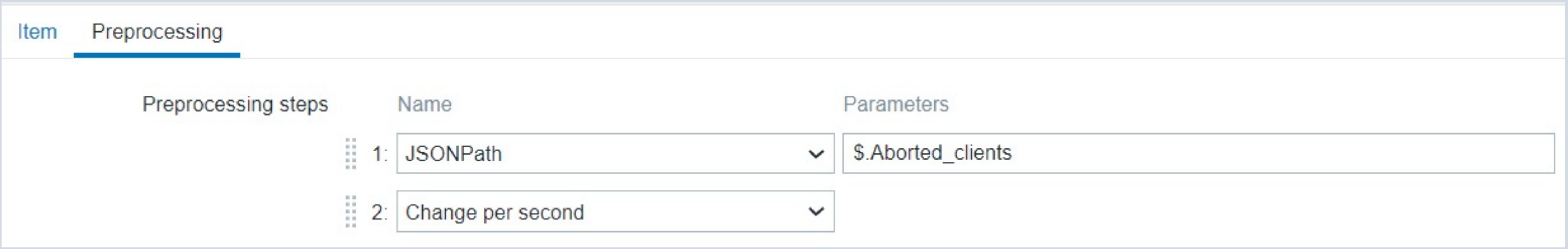
- pgsql.dbstat - Collects statistics per database
- pgsql.db.discovery - List of the PostgreSQL databases

AGENT 2 Exclusive keys

- Many more Agent 2 keys are available
- Many of those keys are used as master items
- Dependent items preprocess the obtained values and provide more granular and detailed data overview



* Name	MySQL: Aborted clients per second
Type	Dependent item
* Key	mysql.aborted_clients.rate
* Master item	Template DB MySQL by Zabbix agent 2: MySQL: Get status variables



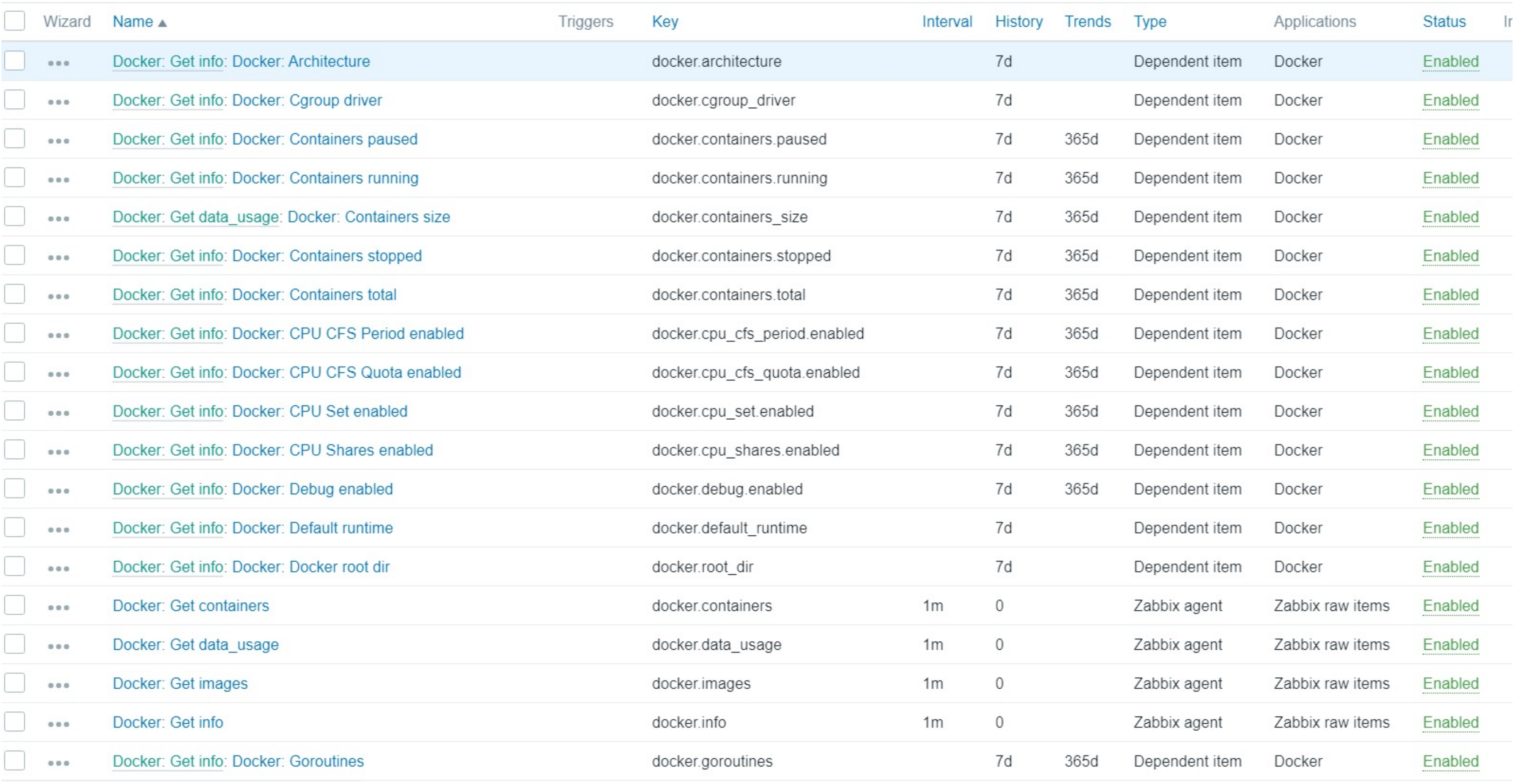
Preprocessing steps

	Name	Parameters
1:	JSONPath	$.Aborted_clients
2:	Change per second	

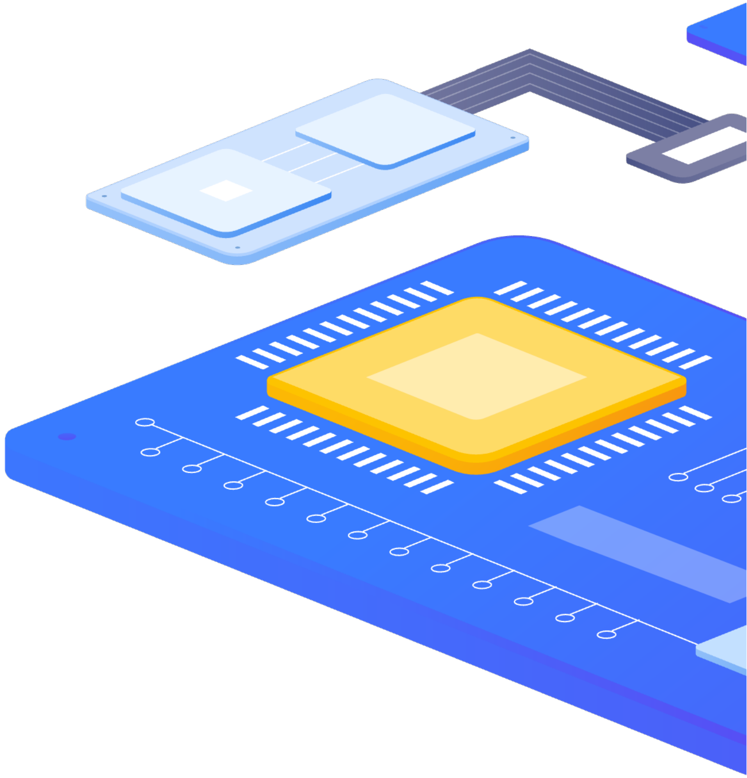
initMAX

Agent 2

AGENT 2 Master/dependent items - Docker

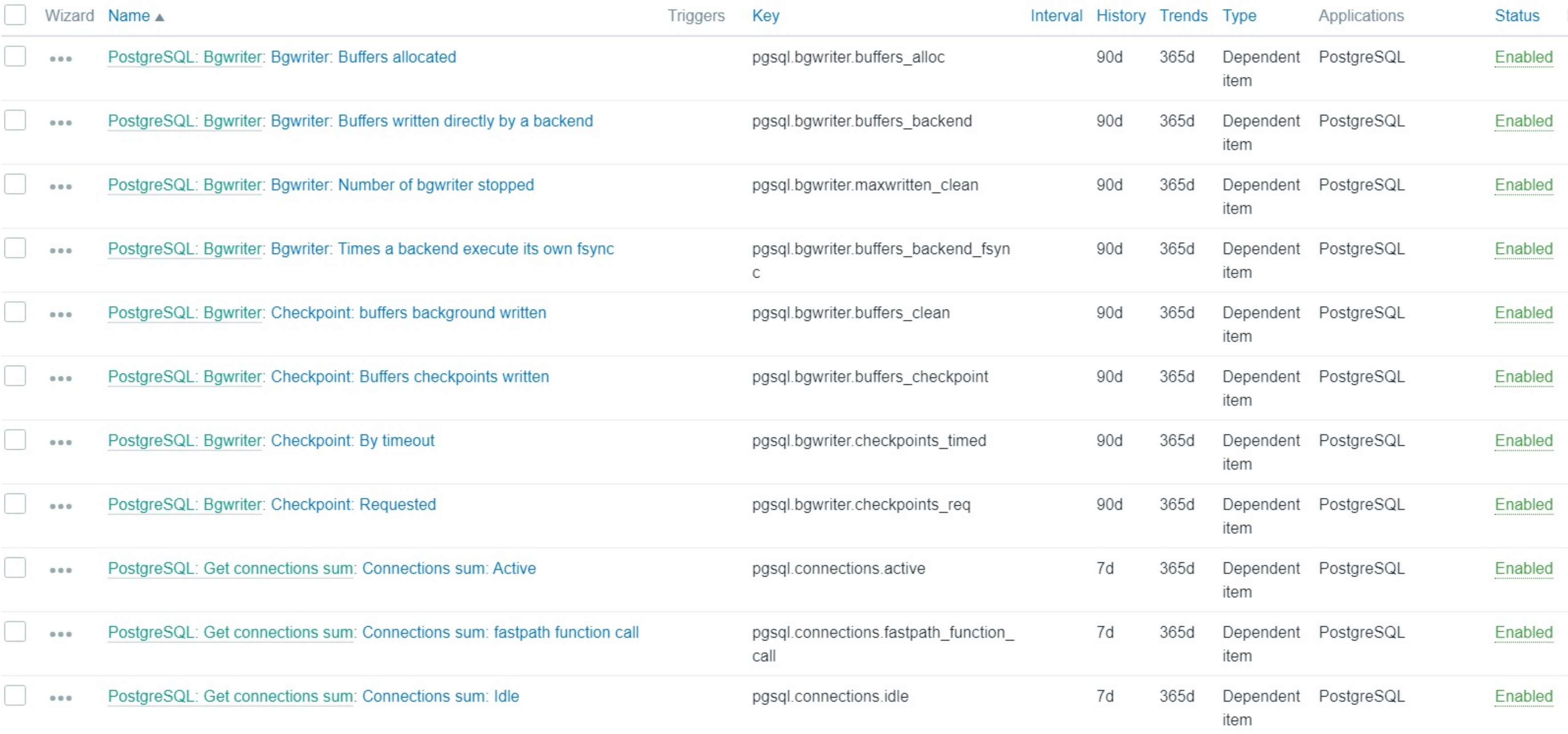


□	Wizard	Name ▲	Triggers	Key	Interval	History	Trends	Type	Applications	Status	Ir
□	•••	Docker: Get info: Docker: Architecture		docker.architecture		7d		Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: Cgroup driver		docker.cgroup_driver		7d		Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: Containers paused		docker.containers.paused		7d	365d	Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: Containers running		docker.containers.running		7d	365d	Dependent item	Docker	Enabled	
□	•••	Docker: Get data_usage: Docker: Containers size		docker.containers_size		7d	365d	Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: Containers stopped		docker.containers.stopped		7d	365d	Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: Containers total		docker.containers.total		7d	365d	Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: CPU CFS Period enabled		docker.cpu_cfs_period.enabled		7d	365d	Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: CPU CFS Quota enabled		docker.cpu_cfs_quota.enabled		7d	365d	Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: CPU Set enabled		docker.cpu_set.enabled		7d	365d	Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: CPU Shares enabled		docker.cpu_shares.enabled		7d	365d	Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: Debug enabled		docker.debug.enabled		7d	365d	Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: Default runtime		docker.default_runtime		7d		Dependent item	Docker	Enabled	
□	•••	Docker: Get info: Docker: Docker root dir		docker.root_dir		7d		Dependent item	Docker	Enabled	
□	•••	Docker: Get containers		docker.containers	1m	0		Zabbix agent	Zabbix raw items	Enabled	
□	•••	Docker: Get data_usage		docker.data_usage	1m	0		Zabbix agent	Zabbix raw items	Enabled	
□	•••	Docker: Get images		docker.images	1m	0		Zabbix agent	Zabbix raw items	Enabled	
□	•••	Docker: Get info		docker.info	1m	0		Zabbix agent	Zabbix raw items	Enabled	
□	•••	Docker: Get info: Docker: Goroutines		docker.goroutines		7d	365d	Dependent item	Docker	Enabled	

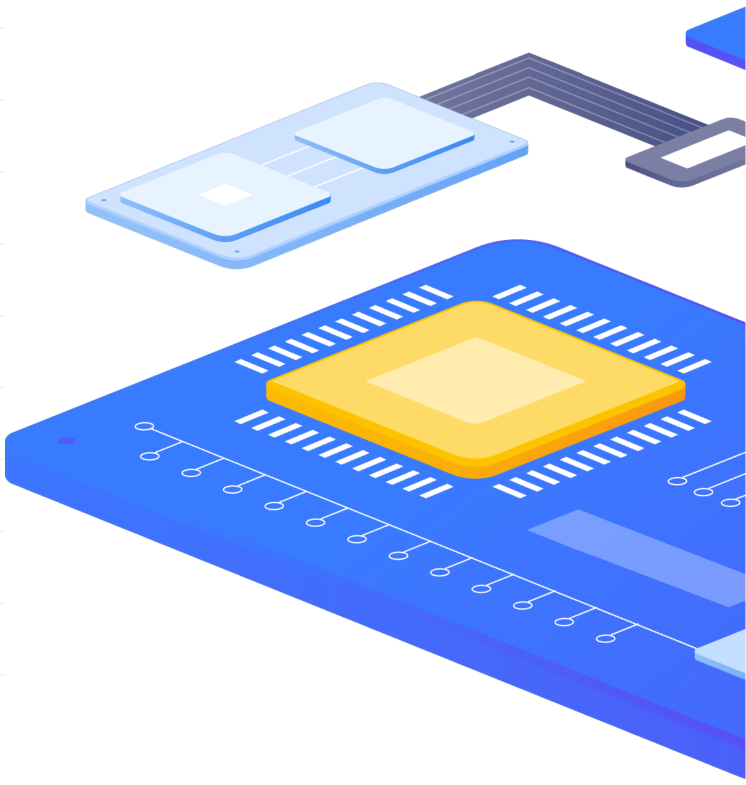


Agent 2

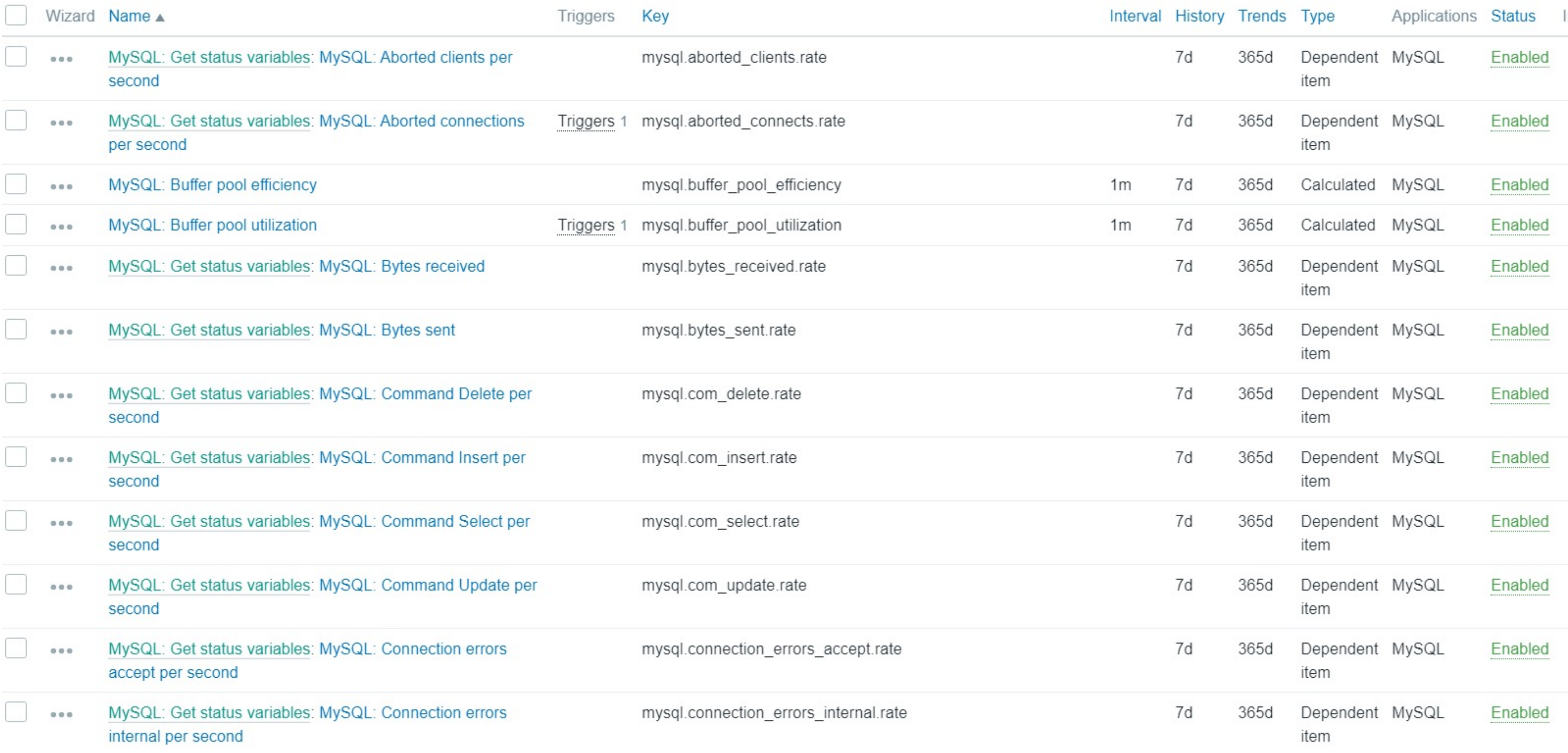
AGENT 2 Master/dependent items - PostgreSQL



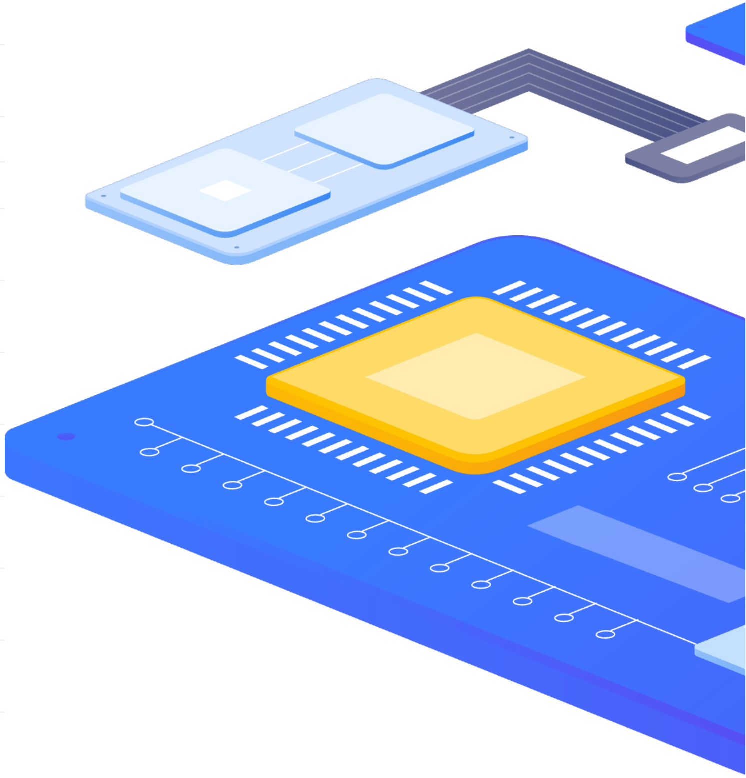
☐	Wizard	Name ▲	Triggers	Key	Interval	History	Trends	Type	Applications	Status	I
☐	•••	PostgreSQL: Bgwriter: Bgwriter: Buffers allocated		pgsql.bgwriter.buffers_alloc		90d	365d	Dependent item	PostgreSQL	Enabled	
☐	•••	PostgreSQL: Bgwriter: Bgwriter: Buffers written directly by a backend		pgsql.bgwriter.buffers_backend		90d	365d	Dependent item	PostgreSQL	Enabled	
☐	•••	PostgreSQL: Bgwriter: Bgwriter: Number of bgwriter stopped		pgsql.bgwriter.maxwritten_clean		90d	365d	Dependent item	PostgreSQL	Enabled	
☐	•••	PostgreSQL: Bgwriter: Bgwriter: Times a backend execute its own fsync		pgsql.bgwriter.buffers_backend_fsync		90d	365d	Dependent item	PostgreSQL	Enabled	
☐	•••	PostgreSQL: Bgwriter: Checkpoint: buffers background written		pgsql.bgwriter.buffers_clean		90d	365d	Dependent item	PostgreSQL	Enabled	
☐	•••	PostgreSQL: Bgwriter: Checkpoint: Buffers checkpoints written		pgsql.bgwriter.buffers_checkpoint		90d	365d	Dependent item	PostgreSQL	Enabled	
☐	•••	PostgreSQL: Bgwriter: Checkpoint: By timeout		pgsql.bgwriter.checkpoints_timed		90d	365d	Dependent item	PostgreSQL	Enabled	
☐	•••	PostgreSQL: Bgwriter: Checkpoint: Requested		pgsql.bgwriter.checkpoints_req		90d	365d	Dependent item	PostgreSQL	Enabled	
☐	•••	PostgreSQL: Get connections sum: Connections sum: Active		pgsql.connections.active		7d	365d	Dependent item	PostgreSQL	Enabled	
☐	•••	PostgreSQL: Get connections sum: Connections sum: fastpath function call		pgsql.connections.fastpath_function_call		7d	365d	Dependent item	PostgreSQL	Enabled	
☐	•••	PostgreSQL: Get connections sum: Connections sum: Idle		pgsql.connections.idle		7d	365d	Dependent item	PostgreSQL	Enabled	



AGENT 2 Master/dependent items - MySQL



□	Wizard	Name ▲	Triggers	Key	Interval	History	Trends	Type	Applications	Status	I
□	•••	MySQL: Get status variables: MySQL: Aborted clients per second		mysql.aborted_clients.rate		7d	365d	Dependent item	MySQL	Enabled	
□	•••	MySQL: Get status variables: MySQL: Aborted connections per second	Triggers 1	mysql.aborted_connects.rate		7d	365d	Dependent item	MySQL	Enabled	
□	•••	MySQL: Buffer pool efficiency		mysql.buffer_pool_efficiency	1m	7d	365d	Calculated	MySQL	Enabled	
□	•••	MySQL: Buffer pool utilization	Triggers 1	mysql.buffer_pool_utilization	1m	7d	365d	Calculated	MySQL	Enabled	
□	•••	MySQL: Get status variables: MySQL: Bytes received		mysql.bytes_received.rate		7d	365d	Dependent item	MySQL	Enabled	
□	•••	MySQL: Get status variables: MySQL: Bytes sent		mysql.bytes_sent.rate		7d	365d	Dependent item	MySQL	Enabled	
□	•••	MySQL: Get status variables: MySQL: Command Delete per second		mysql.com_delete.rate		7d	365d	Dependent item	MySQL	Enabled	
□	•••	MySQL: Get status variables: MySQL: Command Insert per second		mysql.com_insert.rate		7d	365d	Dependent item	MySQL	Enabled	
□	•••	MySQL: Get status variables: MySQL: Command Select per second		mysql.com_select.rate		7d	365d	Dependent item	MySQL	Enabled	
□	•••	MySQL: Get status variables: MySQL: Command Update per second		mysql.com_update.rate		7d	365d	Dependent item	MySQL	Enabled	
□	•••	MySQL: Get status variables: MySQL: Connection errors accept per second		mysql.connection_errors_accept.rate		7d	365d	Dependent item	MySQL	Enabled	
□	•••	MySQL: Get status variables: MySQL: Connection errors internal per second		mysql.connection_errors_internal.rate		7d	365d	Dependent item	MySQL	Enabled	



Agent 2

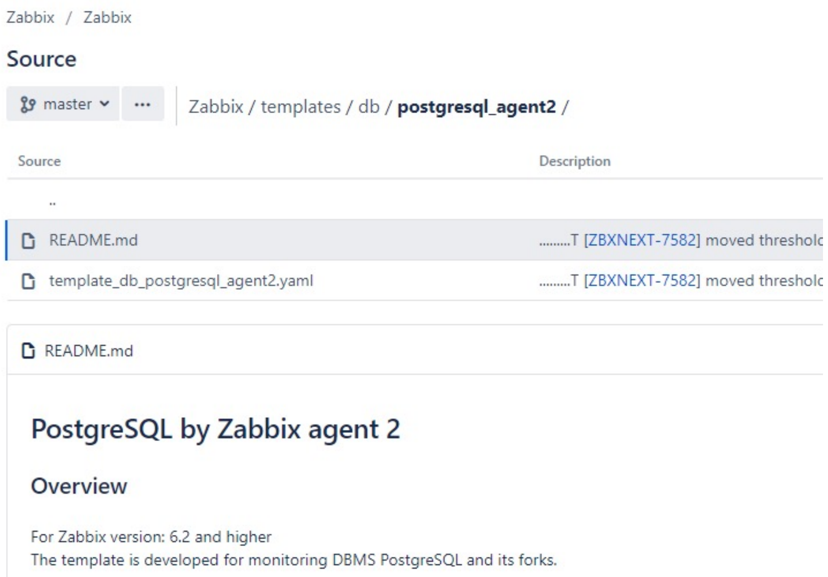
AGENT 2 TEMPLATES

Documentation

- https://www.zabbix.com/documentation/current/en/manual/config/items/itemtypes/zabbix_agent/zabbix_agent2

GIT

- https://git.zabbix.com/projects/ZBX/repos/zabbix/browse/templates



Zabbix / Zabbix

Source

master ··· Zabbix / templates / db / **postgresql_agent2** /

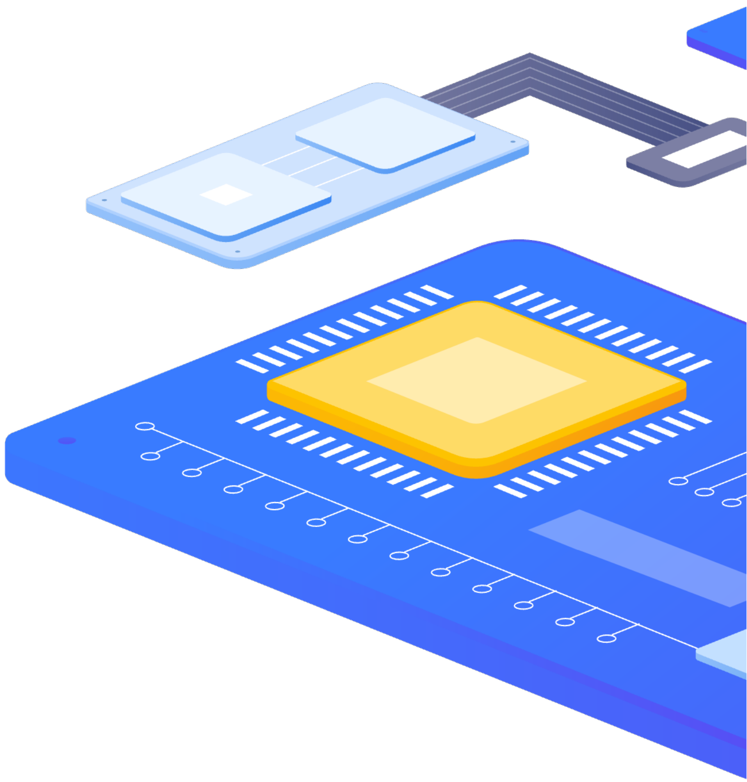
Source	Description
..	
README.md	........T [ZBXNEXT-7582] moved thresholc
template_db_postgresql_agent2.yaml	........T [ZBXNEXT-7582] moved thresholc

README.md

PostgreSQL by Zabbix agent 2

Overview

For Zabbix version: 6.2 and higher
The template is developed for monitoring DBMS PostgreSQL and its forks.



4

DEVELOPING PLUGINS

Agent 2

DEVELOPING an AGENT 2 PLUGIN

The Go agent features multiple plugin interfaces which can be used for different types of tasks

- Exporter interface
- Watcher interface
- Collector interface
- Runner interface
- Configurator interface

A Go agent plugin must implement one or several plugin interfaces.

ZABBIX BLOG

https://blog.zabbix.com/developing-plugins-for-zabbix-agent-2/9682/

DEVELOPING AN AGENT 2 plugin

Exporter is a very simple interface that polls metrics and returns a value, several values, an error, or nothing at all. It accepts a preparsed key, its parameters and context

```
type Exporter interface {
Export(key string, params []string, context ContextProvider) (result interface{}, err
error)
}
```

Agent 2

DEVELOPING AN AGENT 2 plugin

With **Watcher** you can implement a metric polling process without using Scheduler. This interface is mostly used to wait for data and upon receiving it send the results to the server, e.g. log file monitoring.

```
type Watcher interface {
Watch(requests []*Request, context ContextProvider)
}
```

Agent 2

DEVELOPING AN AGENT 2 plugin

Collector is used for plugins that need to collect data regularly. However, it can’t return data, so you’ll need **Exporter** for that.

```
type Collector interface {
Collect() error
Period() int
}
```

- The main use case for this interface is when we need to collect data often and store it in cache until Zabbix server requests it.

DEVELOPING AN AGENT 2 plugin

Runner provides a way to perform initialization when a plugin is activated (the Start() function) and deinitialization when it is stopped (the Stop() function).

```
type Runner interface {
    Start()
    Stop()
}
```

- With this interface a plugin can, for example, start or stop a background thread, release unused resources, close connections, etc.
- Activates plugins when there are metrics ready to be processed for passive checks or a task is assigned to it for active checks.

DEVELOPING AN AGENT 2 plugin

Configurator serves for configuring plugins.

```
type Configurator interface {

    Configure(globalOptions *GlobalOptions, privateOptions interface{})

    Validate(privateOptions interface{}) error

}
```

- Configure() loads configuration parameters in a structure defined by the developer.
- Validate() checks the configuration file for errors. If it finds any, the agent won’t start, and we’ll get an error notification.

DEVELOPING AN AGENT 2 plugin

Agent 2 is constantly in development. We have many new features planned for future releases:

- Building loadable plugins as dynamic libraries
  - Removes the need to rebuild the agent to add a new plugin
- Updating agent configuration in runtime
  - No need restart the agent when changing configuration
- New out of the box plugins to use with Agent 2
  - Support for new applications and systems
- Ongoing optimizations, bug fixes and other new features

Agent 2

FAQ

Should I use the C agent or the Go agent?

- Use the Go agent if you need the extra monitoring features or want to implement your own custom plugin
- systemctl won't report back the agent status on startup

Will you still support the C agent?

- Yes, of course! C agent will still get updates, fixes, etc. We have no plans to deprecate it.

Can I use both agents in my environment?

- Yes! You can use the Go agent in environments where you need the new features and keep the C agent on all other hosts.

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Demonstration

initMAX

Questions?

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