

ZABBIX 2020 Conference CHINA

演讲主题

Zabbix 5.0 & TimescaleDB

演讲嘉宾

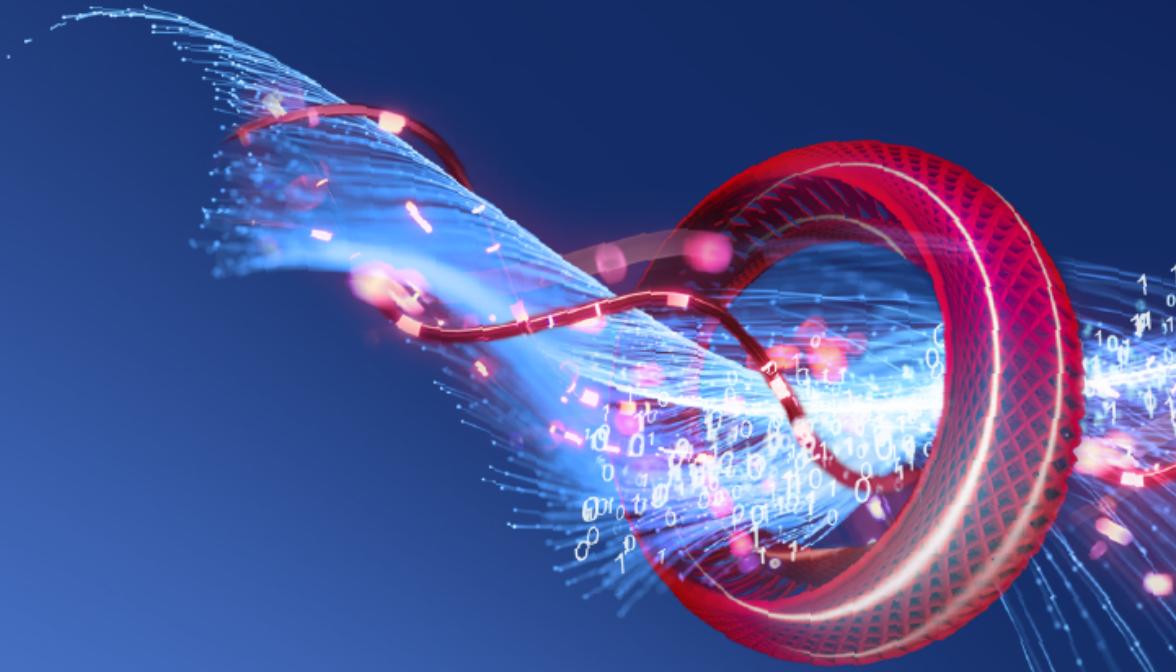
张世宏 社区专家



01

TimescaleDB

基本介绍



TimescaleDB

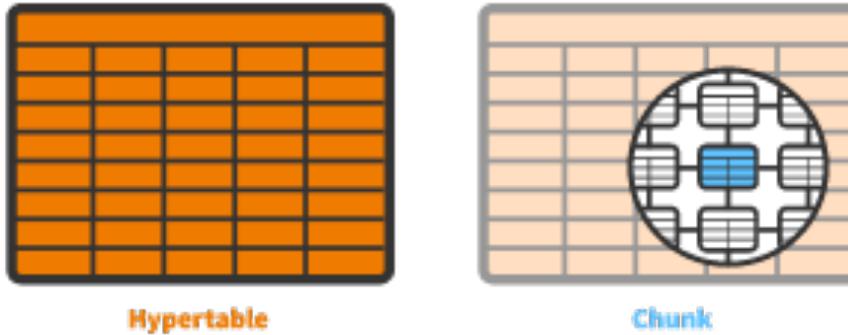


- TimescaleDB is the leading open-source relational database for time-series data.
- Fully managed or self-hosted.
- Built on PostgreSQL



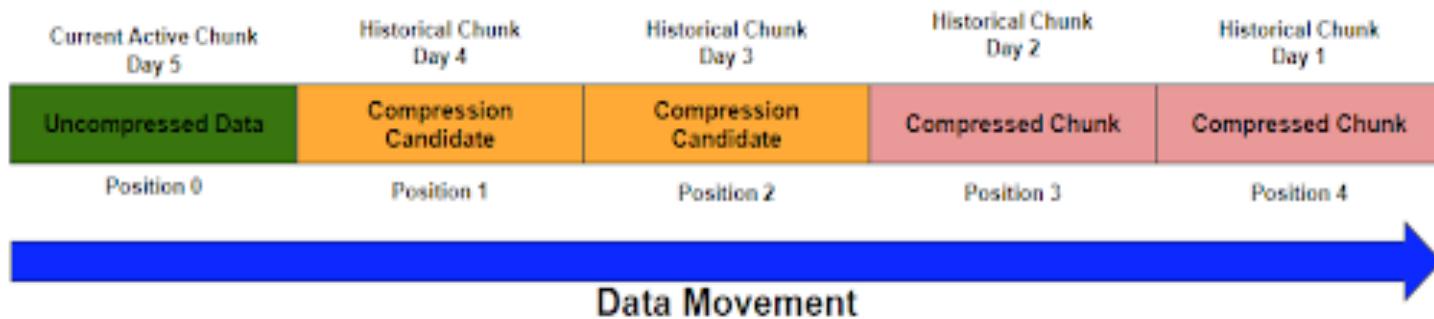
基本概念

- **hypertable (超表)** : 用于创建表和索引 , 更改表 , 插入数据 , 选择数据的数据的抽象层表
- **Chunks** : 超级表会自动拆分为多个块 ; 每个块对应一个特定的时间间隔和分区键空间的一个区域



主要特性

- **数据压缩**：数据按列压缩，节省90%存储空间
- **自动分片**：自动分片（按时间、空间自动分片(chunk)）



02

配置使用

Zabbix 5.0配置使用TimescaleDB



环境介绍

- Centos 7.8 x86_64
- PostgreSQL 12.4
- TimescaleDB 1.7.4
- Zabbix server 5.0.4



系统初始化

#更新系统

```
yum update -y
```

#关闭selinux/firewall并重启

```
systemctl disable --now firewalld
```

```
setenforce 0
```

```
sed -i 's/SELINUX=enforcing/SELINUX=disabled/' /etc/selinux/config
```

```
reboot
```

#安装基础组件

```
yum install lrzsz wget unzip screen chrony yum-utils -y
```

#开启时间同步

```
systemctl enable --now chronyd
```

安装Zabbix

#安装zabbix源

```
rpm -Uvh https://mirrors.aliyun.com/zabbix/zabbix/5.0/rhel/7/x86_64/zabbix-release-5.0-1.el7.noarch.rpm
```

#切换为阿里云源

```
sed -i "s#http://repo.zabbix.com#https://mirrors.aliyun.com/zabbix#g" /etc/yum.repos.d/zabbix.repo
```

#安装zabbix server及agent

```
yum install zabbix-server-pgsql zabbix-agent -y
```

#安装scl源

```
yum install centos-release-scl -y
```

#修改源

```
/etc/yum.repos.d/zabbix.repo
```

```
[zabbix-frontend]
```

```
enabled=1
```

#修改安装zabbix web

```
yum install zabbix-web-pgsql-scl zabbix-nginx-conf-scl -y
```

配置LNMP

#nginx配置文件

```
vi /etc/opt/rh/rh-nginx116/nginx/conf.d/zabbix.conf  
listen 8099;  
server_name zabbix2020.com;
```

#php

```
vi /etc/opt/rh/rh-php72/php-fpm.d/zabbix.conf
```

```
listen.acl_users = apache,nginx  
php_value[date.timezone] = Asia/Shanghai
```

安装PostgreSQL

#安装PostgreSQL源

```
yum install -y  
https://download.postgresql.org/pub/repos/yum/reporpms/EL-7-x86_64/pgdg-redhat-repo-latest.noarch.rpm
```

#安装PostgreSQL

```
yum install -y postgresql12-server
```

#初始化数据库

```
/usr/pgsql-12/bin/postgresql-12-setup initdb
```

#启动PostgreSQL

```
systemctl enable --now postgresql-12
```

安装TimescaleDB

#安装timesacledb源

```
tee /etc/yum.repos.d/timescale_timescaledb.repo <<EOL
[timescale_timescaledb]
name=timescale_timescaledb
baseurl=https://packagecloud.io/timescale/timescaledb/el/7/$basearch
repo_gpgcheck=1
gpgcheck=0
enabled=1
gpgkey=https://packagecloud.io/timescale/timescaledb/gpgkey
sslverify=1
sslcacert=/etc/pki/tls/certs/ca-bundle.crt
metadata_expire=300
EOL
yum update -y
```

#安装timescaledb

```
yum install -y timescaledb-postgresql-12
```

#初始化配置

```
timescaledb-tune --pg-config=/usr/pgsql-12/bin/pg_config
```

#重启pg

```
systemctl restart postgresql-12
```

Zabbix数据库准备

#建立zabbix用户

```
sudo -u postgres createuser --pwprompt zabbix  
sudo -u postgres createdb -O zabbix zabbix
```

#开启timescaledb

```
echo "CREATE EXTENSION IF NOT EXISTS timescaledb CASCADE;" | sudo -u postgres psql zabbix
```

#导入基础SQL

```
zcat /usr/share/doc/zabbix-server-pgsql*/create.sql.gz | sudo -u zabbix psql zabbix
```

#导入timescaledb

```
zcat /usr/share/doc/zabbix-server-pgsql*/timescaledb.sql.gz | sudo -u zabbix psql zabbix
```

PostgreSQL配置

#远程连接

```
vi /var/lib/pgsql/12/data/postgresql.conf
listen_addresses = '*'
port = 5432
max_connections = 500
```

#认证

```
vi /var/lib/pgsql/12/data/pg_hba.conf
host all all 0.0.0.0/0 md5
```

#重启PostgreSQL

```
systemctl restart postgresql-12
```

Zabbix配置

#数据库信息

```
vi /etc/zabbix/zabbix_server.conf
```

```
DBHost=127.0.0.1
```

```
DBPassword=zabbixpwd123
```

#启动

```
systemctl restart zabbix-server zabbix-agent rh-nginx116-nginx rh-php72-php-fpm
```

```
systemctl enable zabbix-server zabbix-agent rh-nginx116-nginx rh-php72-php-fpm
```

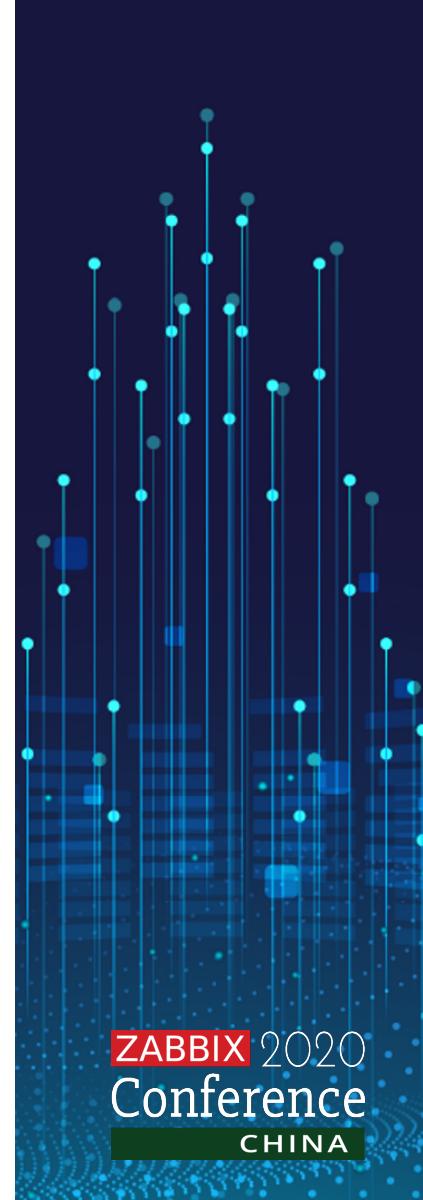
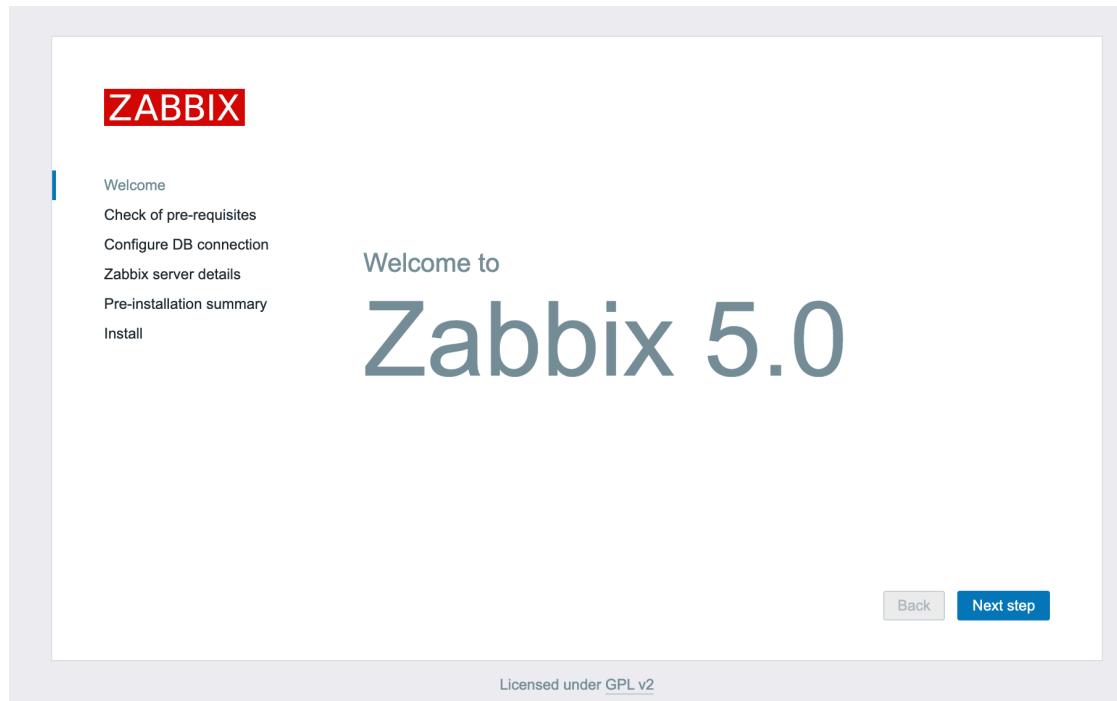
03

初始化



WEB初始化

访问地址 : <http://ip:8099/>



环境检查

ZABBIX

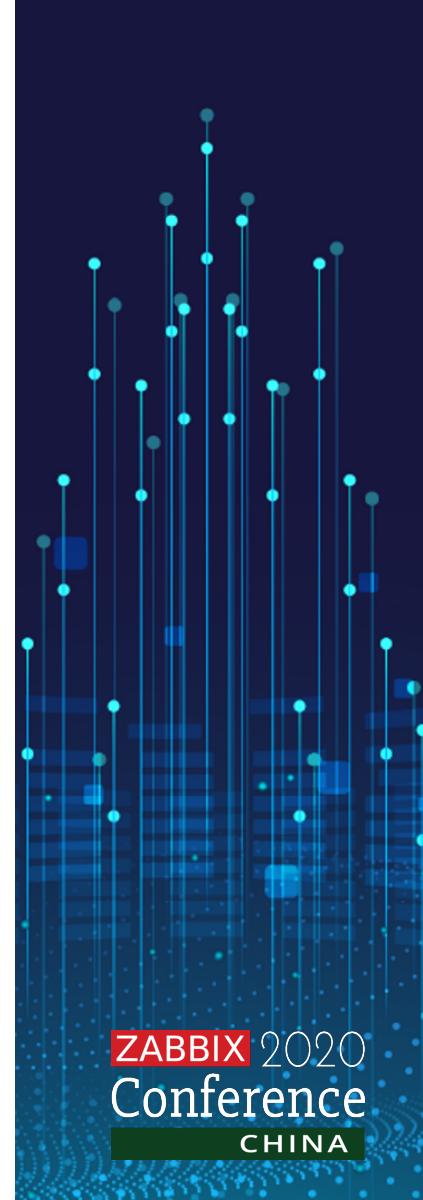
Welcome
Check of pre-requisites
Configure DB connection
Zabbix server details
Pre-installation summary
Install

Check of pre-requisites

	Current value	Required	
PHP version	7.2.24	7.2.0	OK
PHP option "memory_limit"	128M	128M	OK
PHP option "post_max_size"	16M	16M	OK
PHP option "upload_max_filesize"	2M	2M	OK
PHP option "max_execution_time"	300	300	OK
PHP option "max_input_time"	300	300	OK
PHP option "date.timezone"	Asia/Shanghai		OK
PHP databases support	PostgreSQL		OK
PHP bcmath	on		OK
PHP mbstring	on		OK

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数据库配置

ZABBIX

Welcome
Check of pre-requisites
Configure DB connection
Zabbix server details
Pre-installation summary
Install

Configure DB connection

Please create database manually, and set the configuration parameters for connection to this database.
Press "Next step" button when done.

Database type: PostgreSQL

Database host: 127.0.0.1

Database port: 0 0 - use default port

Database name: zabbix

Database schema:

User: zabbix

Password:

TLS encryption:

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基本信息

ZABBIX

- Welcome
- Check of pre-requisites
- Configure DB connection
- Zabbix server details
- Pre-installation summary
- Install

Zabbix server details

Please enter the host name or host IP address and port number of the Zabbix server, as well as the name of the installation (optional).

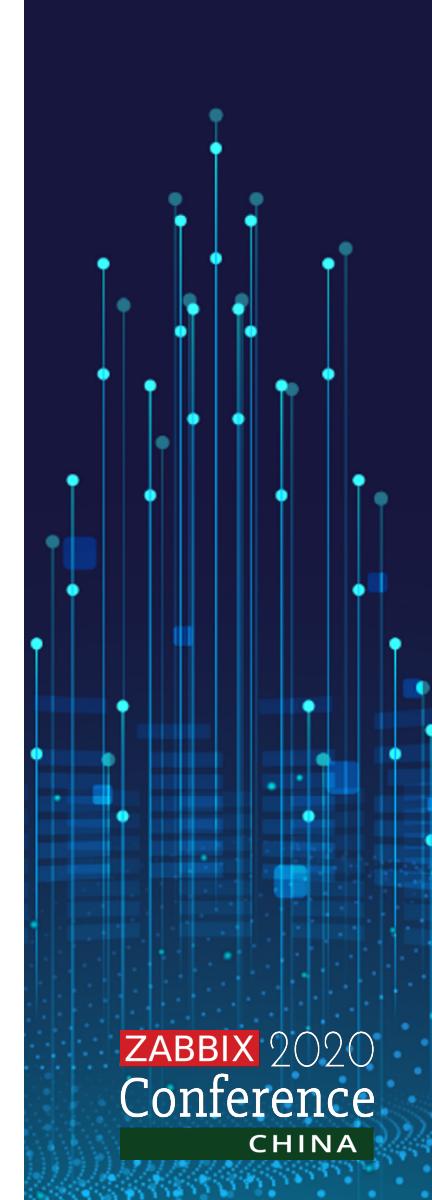
Host

Port

Name

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安装汇总

ZABBIX

- Welcome
- Check of pre-requisites
- Configure DB connection
- Zabbix server details
- Pre-installation summary

Install

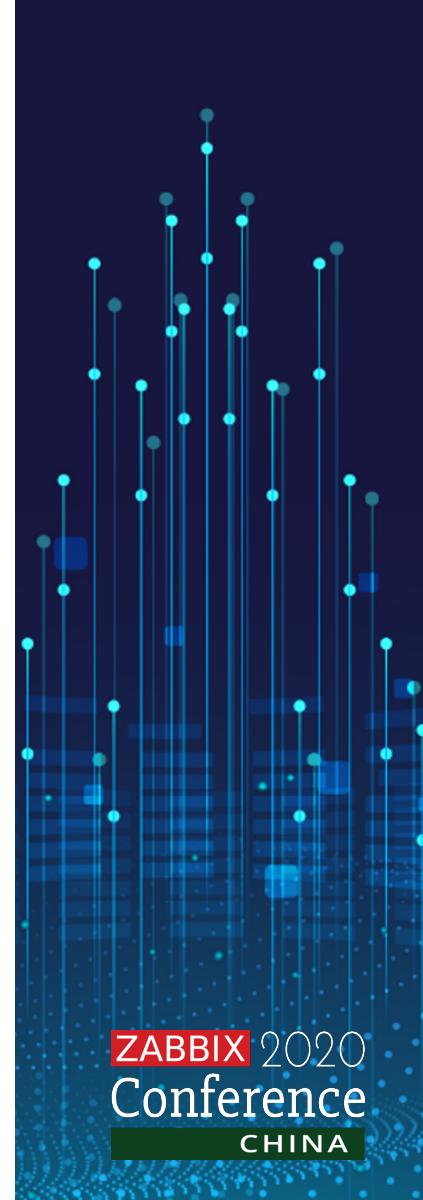
Pre-installation summary

Please check configuration parameters. If all is correct, press Next step button, or Back button to change configuration parameters.

Database type	PostgreSQL
Database server	127.0.0.1
Database port	default
Database name	zabbix
Database user	zabbix
Database password	*****
Database schema	
TLS encryption	false
Zabbix server	localhost
Zabbix server port	10051
Zabbix server name	

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安装完成

ZABBIX

Install

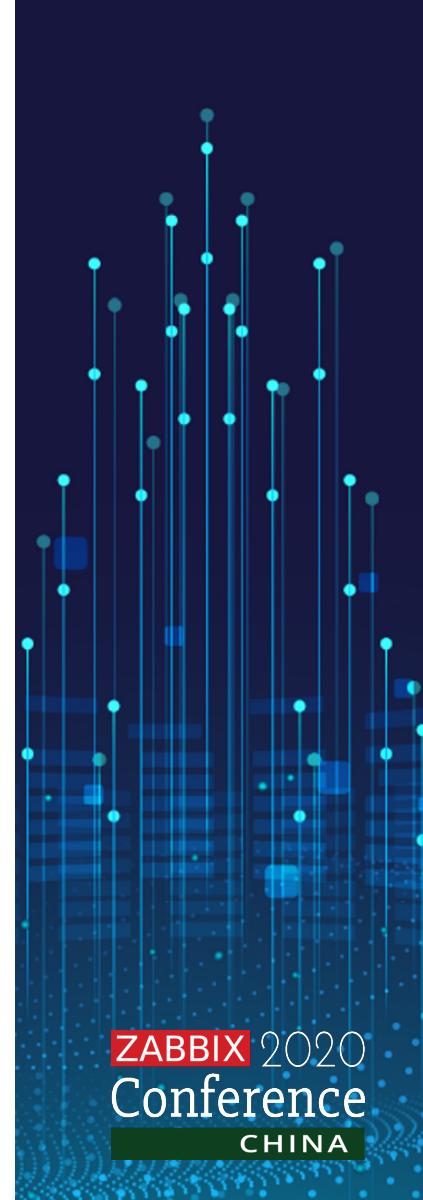
- Welcome
- Check of pre-requisites
- Configure DB connection
- Zabbix server details
- Pre-installation summary
- Install

Congratulations! You have successfully installed Zabbix frontend.

Configuration file "/etc/zabbix/web/zabbix.conf.php" created.

[Back](#) [Finish](#)

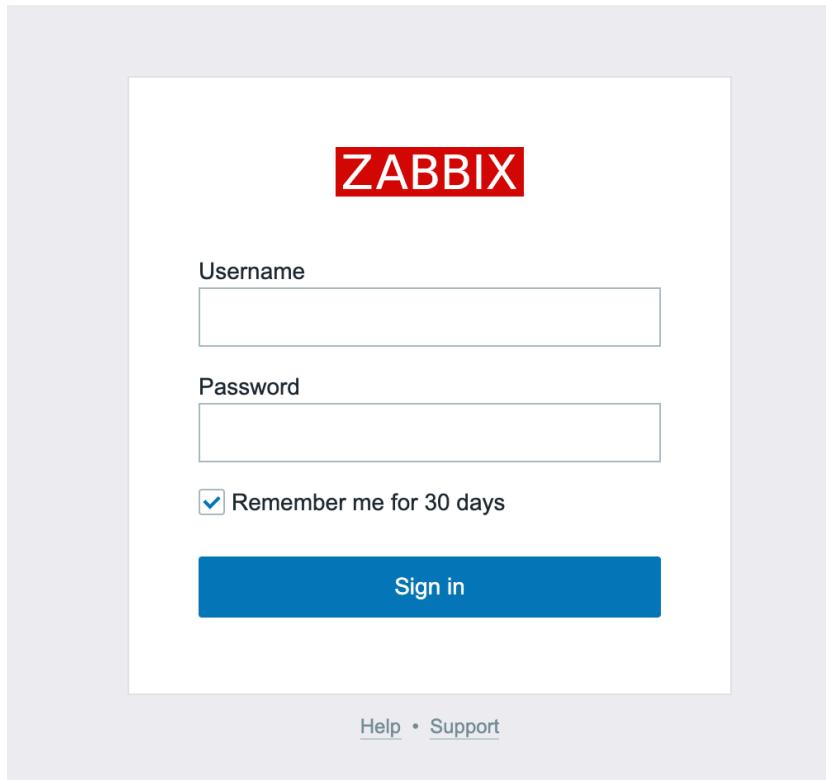
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登录

默认账号 : Admin

默认密码 : zabbix



The image shows the Zabbix login interface. It features a large red "ZABBIX" logo at the top center. Below it are two input fields: "Username" and "Password", each with a corresponding text input box. A "Remember me for 30 days" checkbox is located below the password field. At the bottom is a blue "Sign in" button. At the very bottom of the page, there are links for "Help" and "Support".



首页

ZABBIX < >

Monitoring

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- Services

Inventory

Reports

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Administration

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User settings

Sign out

Global view

All dashboards / Global view

Edit dashboard

System information

Parameter	Value	Details
Zabbix server is running	Yes	localhost:10051
Number of hosts (enabled/disabled)	1	1 / 0
Number of templates	142	
Number of items (enabled/disabled/not supported)	88	82 / 0 / 6
Number of triggers (enabled/disabled [problem/ok])	48	48 / 0 [0 / 48]
Number of users (online)	2	1
Required server performance, new values per second	1.26	

Available: 1 Not available: 0 Unknown: 0 Total: 1

Disaster: 0 High: 0 Average: 0 Warning: 0 Information: 0 Not classified: 0

Problems

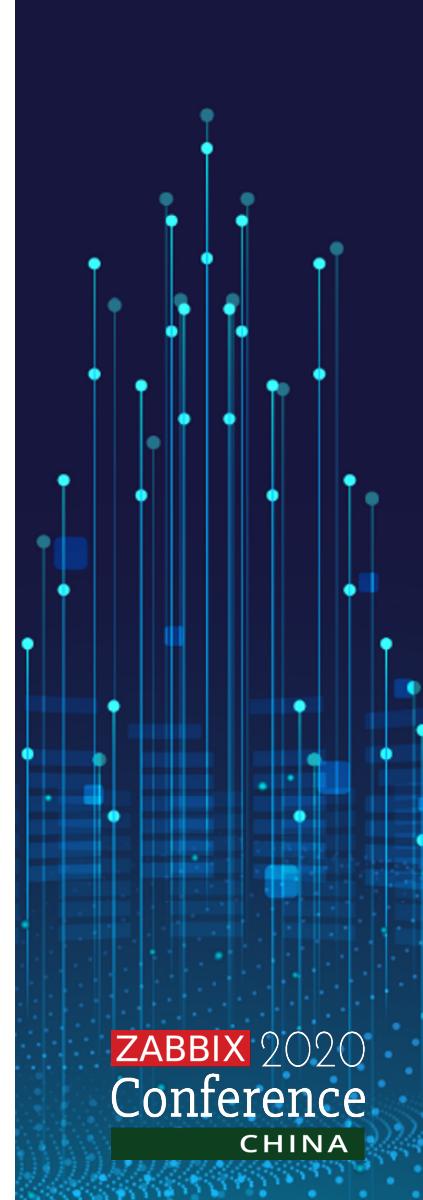
Time ▾	Info	Host	Problem + Severity	Duration	Ack	Actions	Tags
No data found.							

Favourite maps

No maps added.

Favourite graphs

No graphs added.



数据压缩

Administration

- General
- Proxies
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- User groups
- Users
- Media types
- Scripts
- Queue

Support

Share

Help

Enable internal housekeeping

* Data storage period

History

Enable internal housekeeping

Override item history period

* Data storage period

Trends

Enable internal housekeeping

Override item trend period

* Data storage period

History and trends compression

Enable compression

* Compress records older than

[Update](#) [Reset defaults](#)



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THANK YOU

