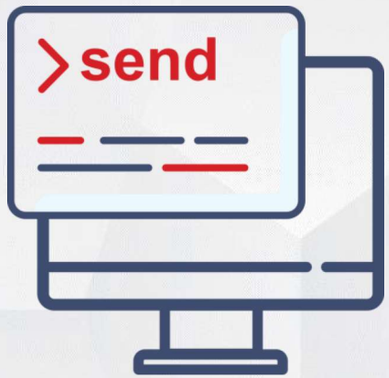
Zabbix sender

ZABBIX TRAPPER ITEM

Zabbix trapper items accept incoming data instead of querying for it

- Useful for any data you might want to “push” into Zabbix
- Data can be accepted by Zabbix server or proxy

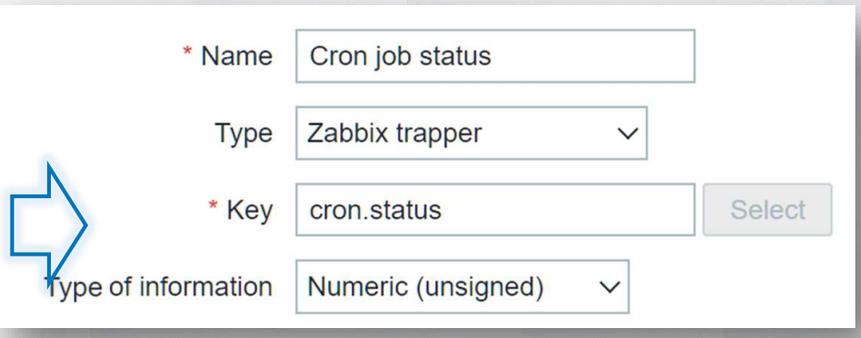


To use a trapper item:

- Set up a trapper item in Zabbix
- Use zabbix_sender command-line utility to send in the data

Zabbix sender is a standalone utility and can be executed from any Windows or Linux machine

Any unique free-form item key

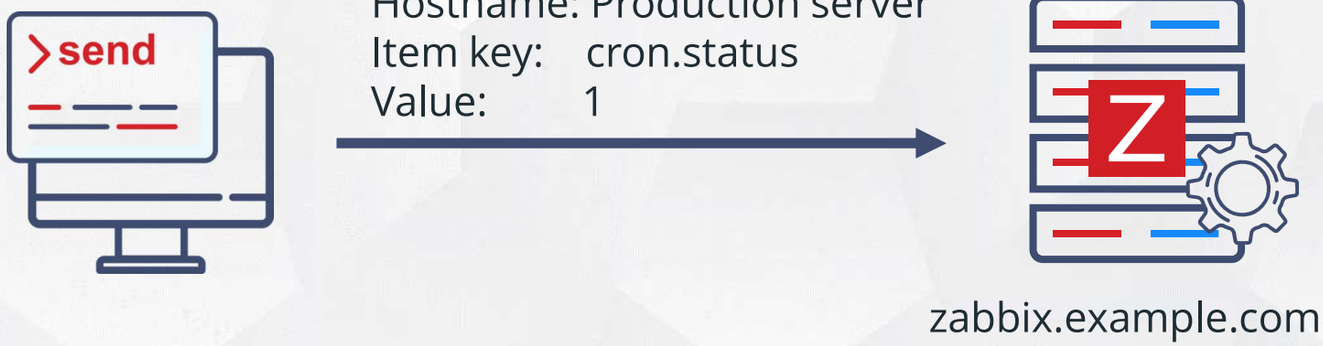


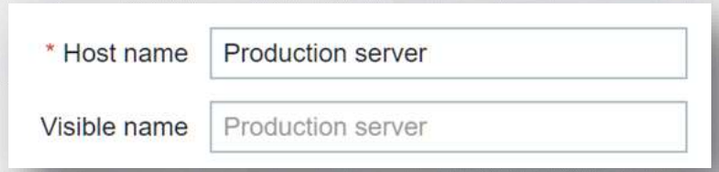
ZABBIX SENDER

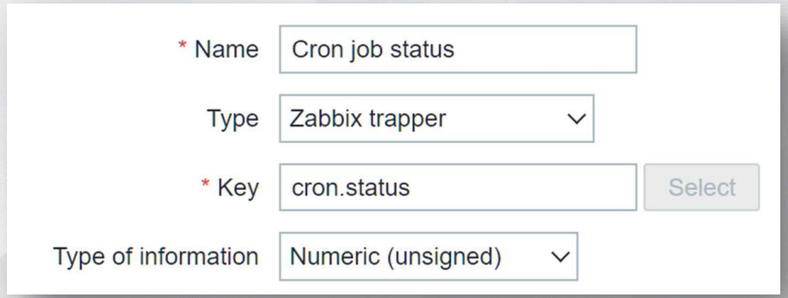
To send information to Zabbix server, it is required to specify:

Zabbix server address	-z	IP or DNS
Host name	-s	case-sensitive, visible name is not used
Item key	-k	case-sensitive, item name is not used
Value	-o	must match the type of information

```
# zabbix_sender -z zabbix.example.com -s "Production server" -k cron.status -o 1
```

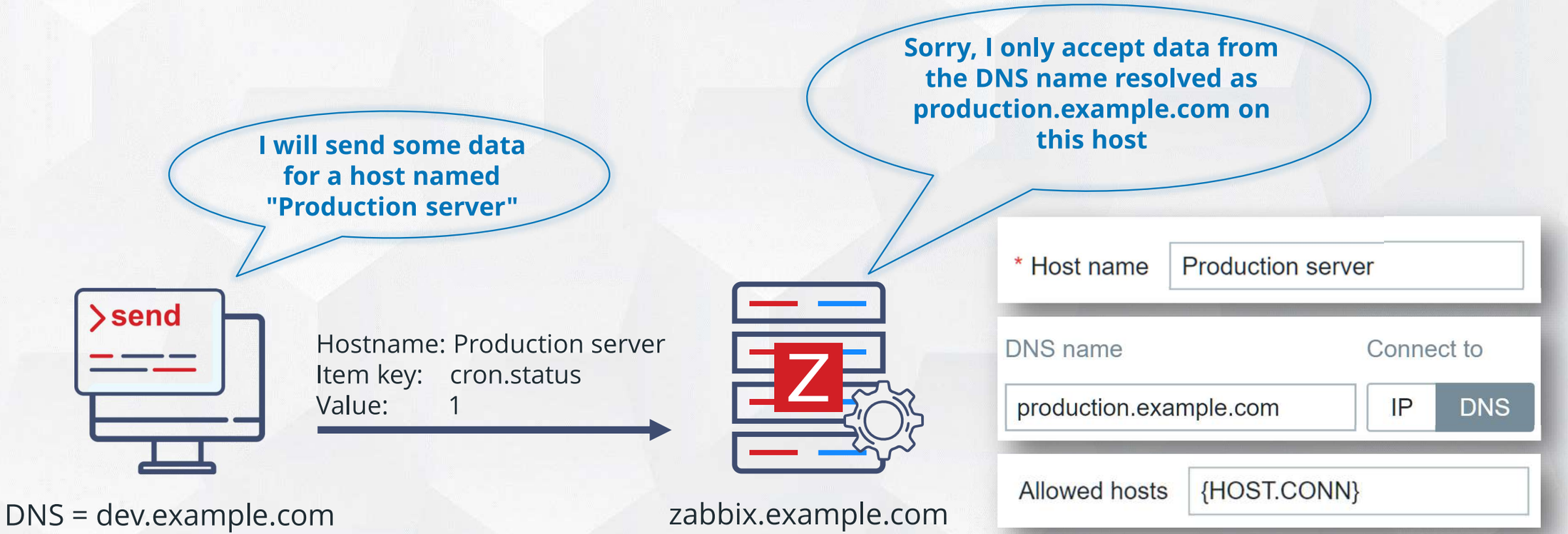






For additional security, it is also possible to specify allowed hosts:

- Incoming connections will be accepted only from the hosts listed there
- User macros or built-in macros can be used in this field
  - ✓ {HOST.HOST}, {HOST.NAME}, {HOST.IP}, {HOST.DNS}, {HOST.CONN}



SENDING MULTIPLE VALUES

It is possible to send multiple values using a whitespace delimited file

- Additional option -i, --input-file <file name> is used
- Each line of file contains whitespace delimited: <hostname> <key> <value>
- Each value must be specified on its own line

```
"MySQL DB" db.connections 43
```

Custom timestamps can be added to the file with option -T, --with-timestamps

- Each line of the file must contain a timestamp: <hostname> <key> <timestamp> <value>

```
"MySQL DB" db.connections 1429533600 43
"MySQL DB" db.connections 1429533610 44
```

For even more precise results, nanoseconds can be added with -N, --with-ns

- Each line now must contain nanoseconds: <hostname> <key> <timestamp> <ns> <value>

```
"MySQL DB" db.connections 1429533600 363197142 43
"MySQL DB" db.connections 1429533600 638219087 44
```

`Every value sent by zabbix sender must have unique timestamp!`

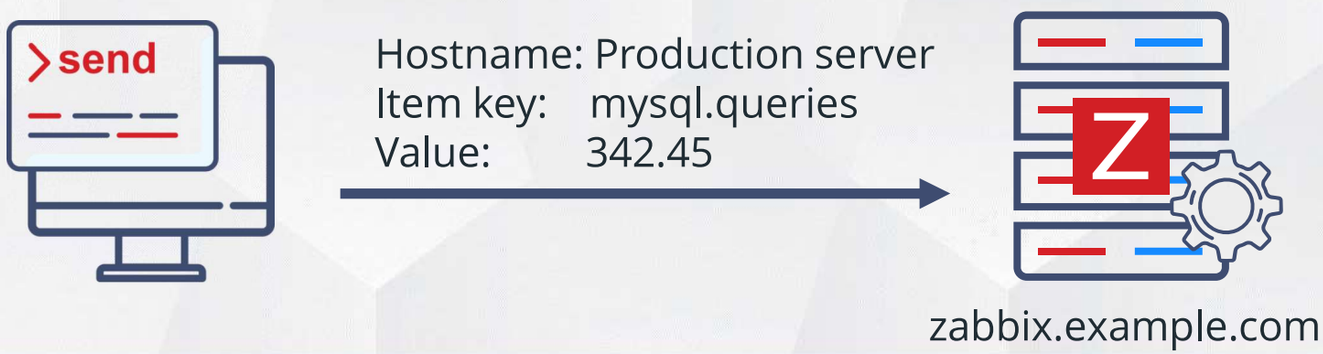
USING AGENT CONFIGURATION

Zabbix agent configuration file settings may be used to send data:

- Agent is not required, but may be installed on the same system independently
- Additional option -c, --config config-file <filename> must be used
- Only the following configuration options are used:
  - ✓ Hostname, ServerActive, SourceIP
  - ✓ Encryption settings (TLSConnect, TLSPSKIdentity, TLSPSKFile etc.)

```
# zabbix_sender -c /etc/zabbix/zabbix_agentd.conf -k mysql.queries -o 342.45
```

```
Hostname=Production server
ServerActive=zabbix.example.com
```



A few additional zabbix_sender parameters:

- Use "-" to read from the standard input.

```
# echo DB01 db.tps 10 | zabbix_sender -z 127.0.0.1 -i -
```

- Use "-r" to send values one by one as soon as they are received

```
# echo DB01 db.tps 10 | zabbix_sender -z 127.0.0.1 -r -i -
```

- Specify custom port using -p option

```
# zabbix_sender -z zabbix.example.com -h "Production server" -k cron.status -o 1 -p 20051
```

Successful response must not contain any failed items:

- One item is sent and accepted

```
Response from "zabbix.example.com:10051": "processed: 1; failed: 0; total: 1; seconds spent: 0.01226"
sent: 1; skipped: 0; total: 1
```

- One item is sent, but not accepted

```
Response from "zabbix.example.com:10051": "processed: 0; failed: 1; total: 1; seconds spent: 0.01432"
sent: 1; skipped: 0; total: 1
```

- Multiple items are sent, some accepted

```
Response from "127.0.0.1:10051": "processed: 3; failed: 2; total: 5; seconds spent: 0.000112"
sent: 5; skipped: 0; total: 5
```

- A value may be accepted, but the item will become "not supported" if the data type does not match

```
Response from "zabbix.example.com:10051": "processed: 1; failed: 0; total: 1; seconds spent: 0.01226"
sent: 1; skipped: 0; total: 1
```

PRACTICAL SETUP

1) Create an item on "Template Basic":
   - ✓ Name: Number of persons in the room
   - ✓ Key: persons
   - ✓ Units: !persons
   - ✓ Accept incoming connections only from the training hosts
2) Add a preprocessing rule to this item to validate data
   - ✓ Accept values from 1 to 20. Use user macros {$PERSONS.MIN},{$PERSONS.MAX}
   - ✓ If the received value is out of range, set error to "Value not in range"
3) Send values via Zabbix sender (e.g. 5, 10000, etc.)
   - ✓ Make sure that the item receives data
4) Create a trigger on "Template Basic":
   - ✓ Name: Only 1 person is attending the training! (use a macro)
   - ✓ Expression: last value for persons = 1
5) Send some values to check , whether the trigger works