

ZABBIX

6.0

COMMUNITY  
ERWEITERUNGEN  
FÜR ZABBIX



Wolfgang Alper

wolfgang.alper@intellitrend.de



# 01

ZABBIX  
6.0

ZabbixAPI für PHP



## API Basics

- Zabbix unterstützt nahezu alle Frontendfunktionen über eine HTTP basierte JSON-RPC API
- Die API wird über das Zabbix Frontend über den Endpunkt „api\_jsonrpc.php“ aufgerufen
- Der Zugriff erfolgt über die HTTP Methode „POST“
- Der Request muss den HTTP Header „Content-Type: application/json“ definieren
- Der Funktionsaufruf und die Parameter werden JSON-RPC codiert im Body angegeben

```
POST https://myzabbixserver.mydomain.com/zabbix/api_jsonrpc.php HTTP/1.1  
Content-Type: application/json-rpc
```

```
{"jsonrpc": "2.0", "method": "apiinfo.version", "id": 1, "auth": null, "params": {}}
```

## API Basics

- Typischerweise erfolgt zuerst eine Anmeldung (Login) via Benutzername / Passwort
- Ab Zabbix Version 5.4 kann alternativ ein API Token verwendet werden, dann entfällt die Anmeldung
- Die Zabbix API antwortet mit mit einer JSON-RPC Nachricht

```
{  
  "jsonrpc": "2.0",  
  "method": "user.login",  
  "params": {  
    "user": "Admin",  
    "password": "zabbix"  
  },  
  "id": 1,  
  "auth": null  
}
```



```
{  
  "jsonrpc": "2.0",  
  "result":  
    "0abcdef12345674191e7d77572075dda",  
  "id": 1  
}
```

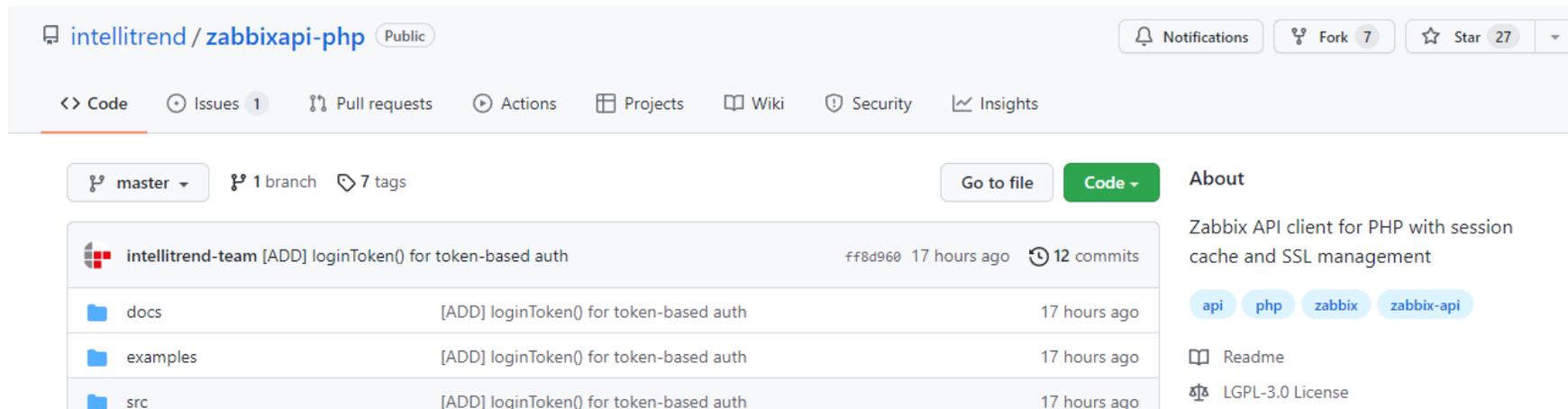
Beispiel: user.login

## API Bibliotheken – Session Caching

- Es gibt verschiedene Bibliotheken um API Zugriffe zu vereinfachen (PHP, Pearl, Python, etc.)
- Die meisten Bibliotheken unterstützen kein eingebautes „Session-Caching“. D.h. immer dann wenn eine neue Anmeldung initiiert wird und die „Session“ vorher nicht geschlossen wurde, wird eine neue „Session“ erstellt.
- Jedoch verwendet das Frontend ebenfalls „Sessions“ um Benutzerzugriffe zu autorisieren (z.B. auch dynamische Updates der Dashboard Widgets). In der Folge werden Zugriffe auf das Zabbix Frontend werden ohne erkennbaren Grund langsamer.
- Info: Der Default Wert für das „Housekeeping“ bei „Sessions“ liegt bei 365 Tagen und kann unter Administration / General / Housekeeping konfiguriert werden.

## ZabbixAPI für PHP by IntelliTrend auf Github

- IntelliTrend pflegt die freie Zabbix API Bibliothek auf Github
- Einfache Nutzung - Zusätzlicher Support für Composer
- Regelmässige Updates – Die aktuelle Version unterstützt Zabbix 5.x und 6.0
- Support von Login via Username / Password und API Tokens
- Native Unterstützung von Session-Caching und SSL (Zertifikate)



The screenshot shows the GitHub repository page for `intellitrend/zabbixapi-php`. The repository is public and has 7 forks and 27 stars. The main branch is `master`, with 1 branch and 7 tags. The repository contains a commit by `intellitrend-team` titled "[ADD] loginToken() for token-based auth" from 17 hours ago, with 12 commits. The commit message is followed by a list of files: `docs`, `examples`, and `src`, each with a commit message "[ADD] loginToken() for token-based auth" and a timestamp of 17 hours ago. The repository description is "Zabbix API client for PHP with session cache and SSL management". The repository has tags for `api`, `php`, `zabbix`, and `zabbix-api`. The repository also has a `Readme` and is licensed under `LGPL-3.0 License`.

<https://github.com/intellitrend/zabbixapi-php>

## Changelog und Dokumentation

☰ README.md

### License

This software is licensed under the GNU Lesser General Public License v3.0.

### Changelog

#### Version 3.1.0

- Tested with Zabbix 6.0.
- Added missing namespace in examples.
- Added function `loginToken()` to log in via API tokens.

#### Version 3.0.2

- Fixed bug in `getApiVersion()` with invalid credentials.
- Added example and documentation using composer. See `examples/composer`.

#### Version 3.0.1

- Tested with Zabbix 5.0 - 5.4.
- Added support for Zabbix 5.4 API change in `user.login` method.
- Added namespace `IntelliTrend\Zabbix`.
- Added `composer` support.
- Moved to `semver` version numbers.

Debug Function - can be used any time:

```
# Turn debug on
$zbx = new ZabbixApi();
$zbx->setDebug(true);
try {
    $options = array('sslVerifyPeer' => false, 'sslVerifyHost' => false);
    $zbx->login('https://my.zabbixurl.com/zabbix', 'myusername', 'mypassword', $options);
    ...
    # Can be turned off anytime
    $zbx->setDebug(false);
    ...
    # And turned on again
    $zbx->setDebug(true);
}
```

## Functions reference

### Basic functions

#### login(\$zabUrl, \$zabUser, \$zabPassword, \$options)

Initial login. Configures the class and loads a cached session if it exists. It does not executes a request to the remote server to test the credentials or session at this time. This happens automatically during the first call to the Zabbix-API. One can enforce the validation by calling `getAuthKey()` after `login()`.

**Note:** If debug is enabled via option, or via function before calling `login()`, `login()` issues a call to the Zabbix-API to check whether the session is re-used.

- `return` void
- `throws` Exception \$e. Invalid options, session issues or connection problems.
- `param` string \$zabUrl



## „Ready-To-Go“ Code Beispiele

intellitrend / zabbixapi-php Public

<> Code Issues 1 Pull requests Actions Projects

master zabbixapi-php / examples /

- intellitrend-team [ADD] loginToken() for token-based auth
- ..
- composer [ADD] log
- filter.php [ADD] log
- filterByHostGroupIds.php [ADD] log
- filterByHostGroupNames1.php [ADD] log
- filterByHostGroupNames2.php [ADD] log
- filterByHostIds.php [ADD] log
- filterByHostNames.php [ADD] log
- hostlistNoSslCheck.php [ADD] loginToken() for token-based auth
- simple.php [ADD] loginToken() for token-based auth
- simpleNoSslCheck.php [ADD] loginToken() for token-based auth
- simpleToken.php [ADD] loginToken() for token-based auth

```
$zabUrl = 'https://my.zabbixurl.com/zabbix';
$zabUser = 'myusername';
$zabPassword = 'mypassword';

$zbx = new ZabbixApi();
try {
    // $zbx->setDebug(true);
    // default is to verify certificate and hostname
    $zbx->login($zabUrl, $zabUser, $zabPassword);
    // this is similar to: $result = $zbx->call('apiinfo.version');
    $result = $zbx->getApiVersion();
    print "Remote Zabbix API Version:$result\n";
    // get number of host available to this useraccount
    $result = $zbx->call('host.get',array("countOutput" => true));
    print "Number of Hosts:$result\n";
    // calling logout will logout from zabbix (deleteing the session) and also delete the local session cache
    // if your application is called periodically, the do not logout to benefit from session cache
    // $zbx->logout();
} catch (Exception $e) {
    print "==== Exception ===\n";
    print 'Errorcode: '.$e->getCode()."\n";
    print 'ErrorMessage: '.$e->getMessage()."\n";
    exit;
}
```

# 02

ZABBIX

6.0

Zabbix Frontend Module  
„CSV Host Importer“



# ZABBIX CSV HOST IMPORTER

## Import von Hosts aus Excel / CSV Listen

- Anwender möchten Listen von Systemen inclusive der Interface Konfiguration, Hostgruppen und Templates in Excel erstellen
- Diese Listen sollen dann in Zabbix importiert werden
- Klassisch wird hierzu häufig die Zabbix API verwendet

	A	B	C	D	E	F	G	H	I	J
1	NAME	VISIBLE_NAME	HOST_GROUPS	TEMPLATES	AGENT_IP	AGENT_DNS	SNMP_IP	SNMP_DNS	SNMP_VERSION	DESCRIPTION
2	example1	Example Host Agent	First host group, second host group	Linux by Zabbix agent	127.0.0.1	localhost				Example Zabbix Agent host
3	example2	Example Host SNMP	Third host group	Generic SNMP			127.0.0.1	localhost		2 Example SNMPv2 host
4										

# ZABBIX CSV HOST IMPORTER

Neues Frontend Modul erlaubt den Import aus CSV Dateien.

## Admin Sektion

ZABBIX Zabbix 6.0 (WA)

Modules Scan directory

Filter

Name  Status Any Enabled Disabled

Apply Reset

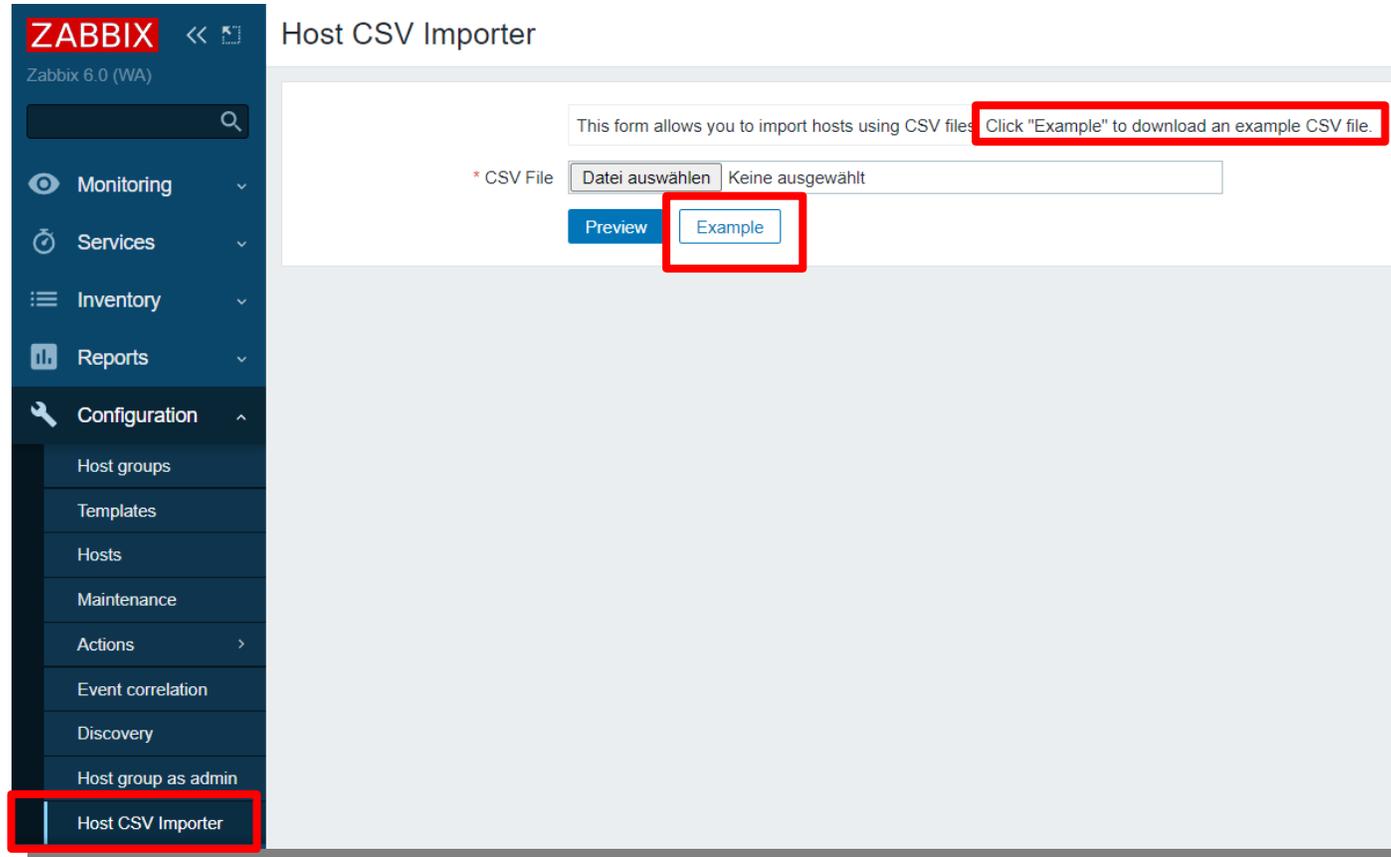
<input type="checkbox"/> Name ▲	Version	Author	Description	Status
<input type="checkbox"/> Create Host Groups as Zabbix Admin	6.0.1	IntelliTrend GmbH	Allows non-superadmin users to create hostgroups within their write-accessible hostgroups.	<a href="#">Enabled</a>
<input type="checkbox"/> CSV Host Importer	6.0.1	IntelliTrend GmbH	Import hosts via CSV files.	<a href="#">Enabled</a>

Displaying 2 of 2 found

0 selected Enable Disable

# ZABBIX CSV HOST IMPORTER

Neuer Menüpunkt „Host CSV Importer“ unter „Configuration“

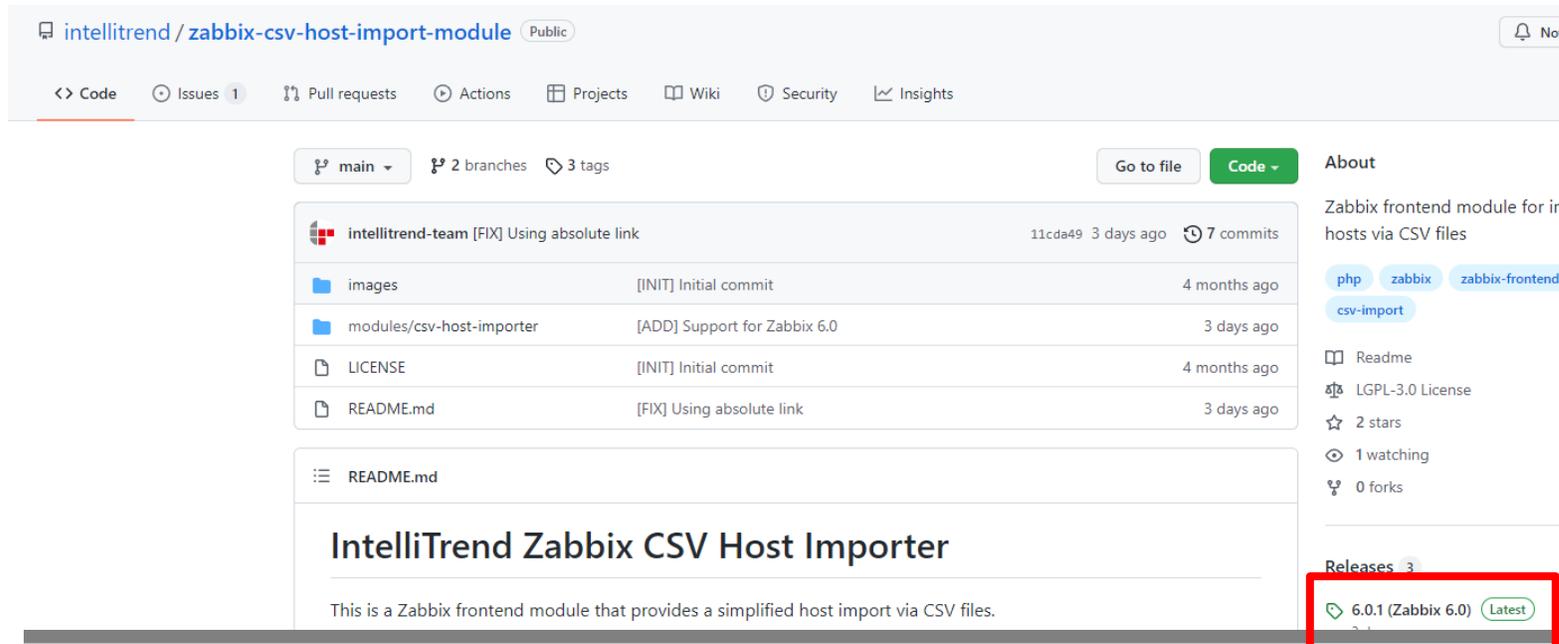


Beispiel CSV Datei direkt  
als Download verfügbar

# ZABBIX CSV HOST IMPORTER

## „Zabbix CSV Host Importer“ by IntelliTrend auf Github

- IntelliTrend pflegt das freie Zabbix Frontend Modul auf Github
- Einfache Nutzung – Verwendet Frontend Module API, keine Änderungen am Zabbix Source Code
- Regelmässige Updates – Releases für Zabbix 5.x und 6.0 verfügbar



Releases für Zabbix  
5.x und Zabbix 6.0

<https://github.com/intellitrend/zabbix-csv-host-import-module>

## Changelog und Dokumentation

☰ README.md

### IntelliTrend Zabbix CSV Host Importer

This is a Zabbix frontend module that provides a simplified host import via CSV files.

#### Host CSV Importer

This form allows you to import hosts using CSV files. Click "Example" to download an example CSV file.

\* CSV File  Keine Datei ausgewählt

#### License

This software is licensed under the GNU Lesser General Public License v3.0.

#### Download

You can find the latest versions for the respective Zabbix releases on the [Github releases page](#).

#### Changelog

##### Version 6.0.1

- Support for Zabbix 6.0

##### Version 5.4.2

- Support for Zabbix 5.0, 5.2 and 5.4
- Non-functional menu entry for non-superadmins is now hidden

## Installation

For Debian and Ubuntu server, the Zabbix Frontend modules are usually placed in `/usr/share/zabbix/modules/`.

Copy the folder `modules/csv-host-importer` to `/usr/share/zabbix/modules/csv-host-importer` on the Zabbix frontend web server.

Then go to `Administration`, `General`, `Modules`, click `Scan directory` and enable the new module in the list.

## Usage

Once the frontend module is activated, a new menu entry `Host CSV Importer` should appear under `Configuration`.

Here's an example of two hosts: the first one with Zabbix agent and another with an SNMPv2 agent:

```
NAME;VISIBLE_NAME;HOST_GROUPS;TEMPLATES;AGENT_IP;AGENT_DNS;SNMP_IP;SNMP_DNS;SNMP_VERSION;DESCRIPTION
example1;Example Host Agent;First host group, second host group;Linux by Zabbix agent;127.0.0.1;localhost;;;
example2;Example Host SNMP;Third host group;Generic SNMP;;;127.0.0.1;localhost;2;Example SNMPv2 host
```

The following CSV columns are supported:

Name	Purpose	Optional
NAME	Host name.	✗
VISIBLE_NAME	Host visible name.	✓
HOST_GROUPS	List of host group names, separated by a comma. Missing host groups are created automatically.	✗

# 03

ZABBIX

6.0

Zabbix Frontend Module  
„Host group as admin“



# ZABBIX HOST GROUP AS ADMIN

## Erstellen von Hostgruppen als Zabbix Admin

- Anwender mit Zabbix Admin Rechten möchten Unter-Hostgruppen für Hosts oder Templates für Ihren Fachbereich erstellen
- Dies ist nicht möglich und erfordert Zabbix Super-Admin Privilegien

The screenshot shows the Zabbix 6.0 Admin interface. On the left is a dark blue sidebar with the ZABBIX logo and navigation menu items: Monitoring, Services, Inventory, Reports, Configuration, and Host groups. The main content area is titled 'Host groups' and features a search bar, a 'Filter' button, and a 'Create host group (Only super admins can create groups)' button highlighted with a red box. Below this is a form with a 'Name' input field and 'Apply' and 'Reset' buttons. A table lists existing host groups with columns for Name, Hosts, Templates, Members, and Info.

<input type="checkbox"/>	Name ▲	Hosts	Templates	Members	Info
<input type="checkbox"/>	Netzwerk	Hosts	Templates		
<input type="checkbox"/>	Netzwerk/Access Points	Hosts	Templates		
<input type="checkbox"/>	Netzwerk/Router	Hosts	Templates		
<input type="checkbox"/>	Netzwerk/Switches	Hosts	Templates		

# ZABBIX HOST GROUP AS ADMIN

- Neues Frontend Modul erlaubt die Erstellung von Unterhostgruppen
- Erfordert Benutzer Typ: Zabbix-Admin
- Erfordert „read/write“ Zugriff auf die übergeordnete Hostgruppe

## Admin Sektion

ZABBIX 6.0 (WA)

Modules

Scan directory

Filter

Name  Status **Any** Enabled Disabled

Apply Reset

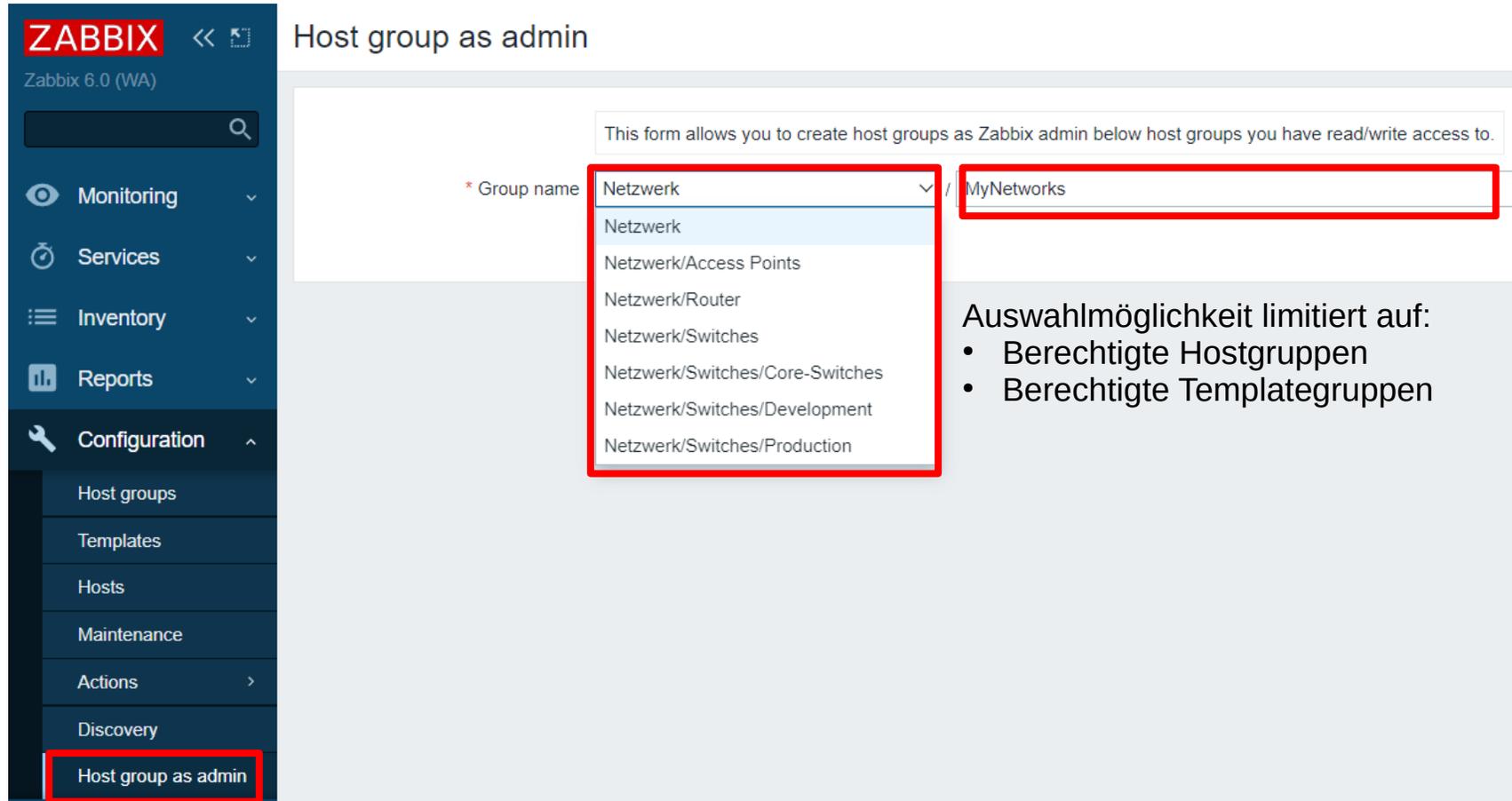
<input type="checkbox"/>	Name ▲	Version	Author	Description	Status
<input type="checkbox"/>	Create Host Groups as Zabbix Admin	6.0.1	IntelliTrend GmbH	Allows non-superadmin users to create hostgroups within their write-accessible hostgroups.	Enabled
<input type="checkbox"/>	CSV Host Importer	6.0.1	IntelliTrend GmbH	Import hosts via CSV files.	Enabled

Displaying 2 of 2 found

0 selected Enable Disable

# ZABBIX HOST GROUP AS ADMIN

Neuer Menüpunkt „Host group as admin“ unter „Configuration“



Name der neuen Unter-Hostgruppe

- Auswahlmöglichkeit limitiert auf:
- Berechtigte Hostgruppen
  - Berechtigte Templategruppen

<https://github.com/intellitrend/zabbix-admin-hostgroups-module>

# ZABBIX HOST GROUP AS ADMIN

ZABBIX  
6.0

„Zabbix Host group as admin“ by IntelliTrend auf Github

- IntelliTrend pflegt das freie Zabbix Frontend Modul auf Github
- Einfache Nutzung – Verwendet Frontend Module API, keine Änderungen am Zabbix Source Code
- Regelmässige Updates – Releases für Zabbix 5.x und 6.0 verfügbar

The screenshot shows the GitHub repository page for 'intellitrend / zabbix-admin-hostgroups-module'. The repository is public and has 1 branch and 1 tag. The main branch is selected. The repository contains the following files and folders:

File/Folder	Commit	Time
intellitrend-team [INIT] Initial commit	66d0138	2 days ago
images	[INIT] Initial commit	2 days ago
modules/admin-hostgroups	[INIT] Initial commit	2 days ago
LICENSE	[INIT] Initial commit	2 days ago
README.md	[INIT] Initial commit	2 days ago

The README.md file is open, showing the title 'IntelliTrend Zabbix Admin Hostgroups' and the description: 'This is a Zabbix frontend module that allows Zabbix admins without superadmin permissions to create hostgroups within their write-accessible hostgroups.' The 'Releases' section shows one release: '6.0.1 (Latest)' from 3 days ago, which is highlighted with a red box.

Releases für Zabbix  
5.x und Zabbix 6.0

<https://github.com/intellitrend/zabbix-admin-hostgroups-module>

# ZABBIX HOST GROUP AS ADMIN

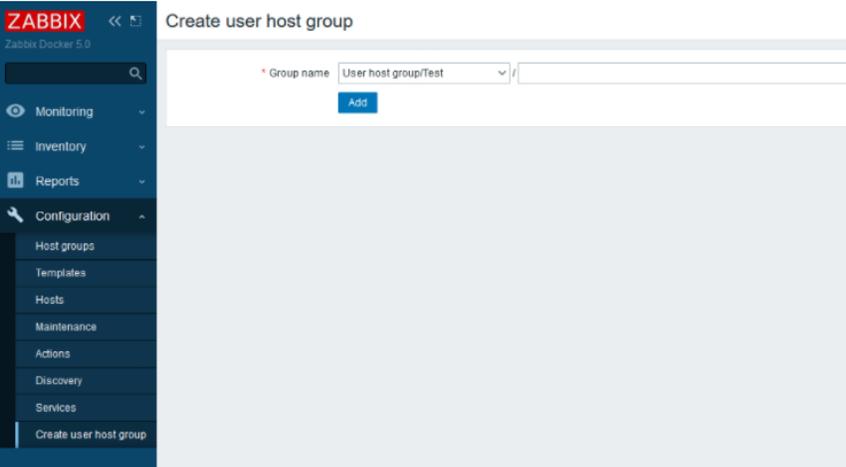
ZABBIX  
6.0

## Changelog und Dokumentation

☰ README.md

### IntelliTrend Zabbix Admin Hostgroups

This is a Zabbix frontend module that allows Zabbix admins without superadmin permissions to create hosts within their write-accessible hostgroups.



### License

This software is licensed under the GNU Lesser General Public License v3.0.

### Download

You can find the latest versions for the respective Zabbix releases on the [Github releases page](#).

## Changelog

### Version 6.0.1

- Initial release for Zabbix 5.0, 5.2, 5.4 and 6.0

### Requirements

- Zabbix 5.0 to 6.0
- File write access to the Zabbix frontend server

### Installation

For Debian and Ubuntu server, the Zabbix Frontend modules are usually placed in `/usr/share/zabbix/modules/`.

Copy the folder `modules/admin-hostgroups` to `/usr/share/zabbix/modules/admin-hostgroups` on the Zabbix frontend web server.

Then go to `Administration`, `General`, `Modules`, click `Scan directory` and enable the new module in the list.

### Usage

Once the frontend module is activated, a new menu entry `Create admin host group` should appear for Zabbix admins under `Configuration`.

The host group form is similar to the one for super admins, except it is limited to sub-groups to groups where the admin user has write permissions.

## ÜBERSICHT

<https://github.com/intellitrend>

<https://github.com/intellitrend/zabbixapi-php>

<https://github.com/intellitrend/zabbix-csv-host-import-module>

<https://github.com/intellitrend/zabbix-admin-hostgroups-module>



# Fragen?

# Danke!



Wolfgang Alper

wolfgang.alper@intellitrend.de

[www.intellitrend.de](http://www.intellitrend.de)

