

3 Hosts

Overview

Hosts are [exported](#) with many related objects and object relations.

Host export contains:

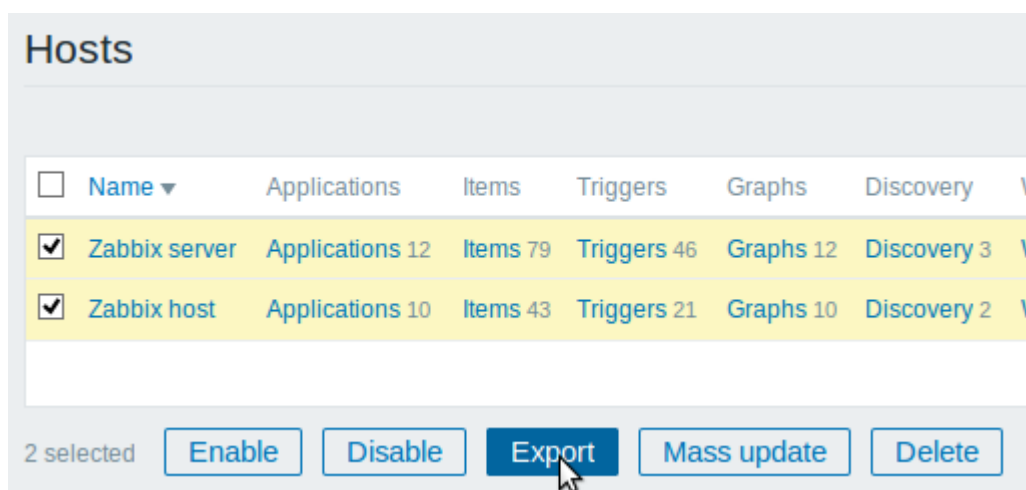
- linked host groups
- host data
- template linkage
- host group linkage
- host interfaces
- directly linked applications
- directly linked items
- directly linked triggers
- directly linked graphs
- directly linked discovery rules with all prototypes
- directly linked web scenarios
- host macros
- host inventory data
- value maps

When a host is imported and updated, it can only be linked to additional templates and never be unlinked from any.

Exporting

To export hosts, do the following:

- Go to: *Configuration* → *Hosts*
- Mark the checkboxes of the hosts to export
- Click on *Export* below the list



The screenshot shows the Zabbix 'Hosts' configuration page. At the top, there is a header 'Hosts'. Below it is a table with columns: Name, Applications, Items, Triggers, Graphs, Discovery, and a partial 'V' column. Two hosts are selected, highlighted in yellow: 'Zabbix server' and 'Zabbix host'. Below the table, there is a status bar showing '2 selected' and several action buttons: 'Enable', 'Disable', 'Export', 'Mass update', and 'Delete'. A mouse cursor is pointing at the 'Export' button.

<input type="checkbox"/>	Name ▼	Applications	Items	Triggers	Graphs	Discovery	V
<input checked="" type="checkbox"/>	Zabbix server	Applications 12	Items 79	Triggers 46	Graphs 12	Discovery 3	V
<input checked="" type="checkbox"/>	Zabbix host	Applications 10	Items 43	Triggers 21	Graphs 10	Discovery 2	V

2 selected

Selected hosts are exported to a local XML file with default name *zabbix_export_hosts.xml*.

Importing

To import hosts, do the following:

- Go to: *Configuration* → *Hosts*
- Click on *Import* to the right
- Select the import file
- Mark the required options in import rules
- Click on *Import*

The screenshot shows the 'Import file' section with a 'Browse...' button and the text 'No file selected.'. Below this is a table of rules with columns for 'Update existing', 'Create new', and 'Delete missing'. The 'Rules' column lists various Zabbix components. At the bottom are 'Import' and 'Cancel' buttons.

Rules	Update existing	Create new	Delete missing
Groups		<input checked="" type="checkbox"/>	
Hosts	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Templates	<input type="checkbox"/>	<input type="checkbox"/>	
Template screens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Template linkage		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Applications		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Items	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Discovery rules	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Triggers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Graphs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Web scenarios	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Screens	<input type="checkbox"/>	<input type="checkbox"/>	
Maps	<input type="checkbox"/>	<input type="checkbox"/>	
Images	<input type="checkbox"/>	<input type="checkbox"/>	
Media types	<input type="checkbox"/>	<input type="checkbox"/>	
Value mappings	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

All mandatory input fields are marked with a red asterisk.

A success or failure message of the import will be displayed in the frontend.

Import rules:

Rule	Description
<i>Update existing</i>	Existing elements will be updated with data taken from the import file. Otherwise they will not be updated.

Rule	Description
<i>Create new</i>	The import will add new elements using data from the import file. Otherwise it will not add them.
<i>Delete missing</i>	The import will remove existing elements not present in the import file. Otherwise it will not remove them.

Export format

```
<?xml version="1.0" encoding="UTF-8"?>
<zabbix_export>
  <version>4.0</version>
  <date>2018-04-03T08:11:42Z</date>
  <groups>
    <group>
      <name>Zabbix servers</name>
    </group>
  </groups>
  <hosts>
    <host>
      <host>Export host</host>
      <name>Export host</name>
      <description/>
      <proxy/>
      <status>0</status>
      <ipmi_authtype>-1</ipmi_authtype>
      <ipmi_privilege>2</ipmi_privilege>
      <ipmi_username/>
      <ipmi_password/>
      <tls_connect>1</tls_connect>
      <tls_accept>1</tls_accept>
      <tls_issuer/>
      <tls_subject/>
      <tls_psk_identity/>
      <tls_psk/>
      <templates/>
      <groups>
        <group>
          <name>Zabbix servers</name>
        </group>
      </groups>
      <interfaces>
        <interface>
          <default>1</default>
          <type>1</type>
          <useip>1</useip>
          <ip>127.0.0.1</ip>
          <dns/>
          <port>10050</port>
          <bulk>1</bulk>
        </interface>
      </interfaces>
    </host>
  </hosts>
</zabbix_export>
```

```
        <interface_ref>if1</interface_ref>
    </interface>
</interfaces>
<applications>
    <application>
        <name>Application</name>
    </application>
</applications>
<items>
    <item>
        <name>Item</name>
        <type>0</type>
        <snmp_community/>
        <snmp_oid/>
        <key>item.key</key>
        <delay>30s</delay>
        <history>90d</history>
        <trends>365d</trends>
        <status>0</status>
        <value_type>3</value_type>
        <allowed_hosts/>
        <units/>
        <snmpv3_contextname/>
        <snmpv3_securityname/>
        <snmpv3_securitylevel>0</snmpv3_securitylevel>
        <snmpv3_authprotocol>0</snmpv3_authprotocol>
        <snmpv3_authpassphrase/>
        <snmpv3_privprotocol>0</snmpv3_privprotocol>
        <snmpv3_privpassphrase/>
        <params/>
        <ipmi_sensor/>
        <authtype>0</authtype>
        <username/>
        <password/>
        <publickey/>
        <privatekey/>
        <port/>
        <description/>
        <inventory_link>0</inventory_link>
        <applications>
            <application>
                <name>Application</name>
            </application>
        </applications>
        <valuemap>
            <name>Host status</name>
        </valuemap>
        <logtimefmt/>
        <preprocessing/>
    </item>
</items>
</zabbix_export>
```

```
        <jmx_endpoint/>
        <timeout>3s</timeout>
        <url/>
        <query_fields/>
        <posts/>
        <status_codes>200</status_codes>
        <follow_redirects>1</follow_redirects>
        <post_type>0</post_type>
        <http_proxy/>
        <headers/>
        <retrieve_mode>0</retrieve_mode>
        <request_method>1</request_method>
        <output_format>0</output_format>
        <allow_traps>0</allow_traps>
        <ssl_cert_file/>
        <ssl_key_file/>
        <ssl_key_password/>
        <verify_peer>0</verify_peer>
        <verify_host>0</verify_host>
        <master_item/>
        <interface_ref>if1</interface_ref>
    </item>
</items>
<discovery_rules/>
<httptests/>
<macros/>
<inventory/>
</host>
</hosts>
<triggers>
    <trigger>
        <expression>{Export host:item.key.last()}&lt;&gt;0</expression>
        <recovery_mode>0</recovery_mode>
        <recovery_expression/>
        <name>Item value not 0</name>
        <correlation_mode>0</correlation_mode>
        <correlation_tag/>
        <url/>
        <status>0</status>
        <priority>2</priority>
        <description/>
        <type>0</type>
        <manual_close>0</manual_close>
        <dependencies/>
        <tags/>
    </trigger>
</triggers>
<graphs>
    <graph>
        <name>Example graph</name>
        <width>900</width>
```

```
<height>200</height>
<yaxismin>0.0000</yaxismin>
<yaxismax>100.0000</yaxismax>
<show_work_period>1</show_work_period>
<show_triggers>1</show_triggers>
<type>0</type>
<show_legend>1</show_legend>
<show_3d>0</show_3d>
<percent_left>0.0000</percent_left>
<percent_right>0.0000</percent_right>
<ymin_type_1>0</ymin_type_1>
<ymin_type_1>0</ymin_type_1>
<ymin_item_1>0</ymin_item_1>
<ymin_item_1>0</ymin_item_1>
<graph_items>
  <graph_item>
    <sortorder>0</sortorder>
    <drawtype>0</drawtype>
    <color>1A7C11</color>
    <yaxisside>0</yaxisside>
    <calc_fnc>2</calc_fnc>
    <type>0</type>
    <item>
      <host>Export host</host>
      <key>item.key</key>
    </item>
  </graph_item>
</graph_items>
</graph>
</graphs>
<value_maps>
  <value_map>
    <name>Host status</name>
    <mappings>
      <mapping>
        <value>0</value>
        <newvalue>Up</newvalue>
      </mapping>
      <mapping>
        <value>2</value>
        <newvalue>Unreachable</newvalue>
      </mapping>
    </mappings>
  </value_map>
</value_maps>
</zabbix_export>
```

Element tags

Element tag values are explained in the table below.

Host tags

Element	Element property	Type	Range	Description
groups				Root element for groups.
group				Individual group.
	name	string		Unique group name.
hosts				Root element for hosts.
host				Individual host.
	host	string		Unique host name.
	name	string		Visible host name.
	description	text		Host description.
	status	integer	0 - monitored 1 - not monitored	Host status.
	ipmi_authtype	integer	-1 - default 0 - none 1 - MD2 2 - MD5 4 - straight 5 - OEM 6 - RMCP+	IPMI session authentication type.
	ipmi_privilege	integer	1 - callback 2 - user 3 - operator 4 - admin 5 - OEM	IPMI session privilege level.
	ipmi_username	string		Username for IPMI checks.
	ipmi_password	string		Password for IPMI checks.
	tls_connect	integer	1 - unencrypted 2 - TLS with PSK 4 - TLS with certificate	Type of outgoing connection.
	tls_accept	integer	1 - unencrypted 2 - TLS with PSK 3 - unencrypted and TLS with PSK 4 - TLS with certificate 5 - unencrypted and TLS with certificate 6 - TLS with PSK or certificate 7 - unencrypted and TLS with PSK or certificate	Type of incoming connection.
	tls_issuer	string		Allowed agent/proxy certificate issuer.

Element	Element property	Type	Range	Description
	tls_subject	string		Allowed agent/proxy certificate subject.
	tls_psk_identity	string		PSK identity string.
	tls_psk	string		PSK value string.
proxy				Proxy.
	name	string		Name of the proxy (if any) that monitors the host.
templates				Root element for linked templates.
template				Individual template.
	name	string		Template name.
interfaces				Root element for host interfaces.
interface				Individual interface.
	default	integer	0 - secondary 1 - primary (default)	Interface status. Only one primary interface of one type can be on a host.
	type	integer	0 - unknown 1 - Zabbix agent 2 - SNMP 3 - IPMI 4 - JMX	Interface type.
	useip	integer	0 - use DNS name 1 - use IP address	Interface to use for connecting to the host.
	ip	string		IP address, can be either IPv4 or IPv6.
	dns	string		DNS name.
	port	string		Port number.
	bulk	integer	0 - disable 1 - enable	Use bulk requests for SNMP.
	interface_ref	string		Interface reference name to be used in items.
applications				Root element for applications.
application				Individual application.
	name			Application name.
macros				Root element for macros.
macro				Individual macro.
	name			User macro name.
	value			User macro value.

Host item tags

Element	Element property	Type	Range	Description
items				Root element for items.
item				Individual item.
	name	string		Item name.

Element	Element property	Type	Range	Description
	type	integer	0 - Zabbix agent 1 - SNMPv1 agent 2 - Zabbix trapper 3 - simple check 4 - SNMPv2 agent 5 - internal 6 - SNMPv3 agent 7 - Zabbix agent (active) 8 - aggregate 9 - HTTP test (web monitoring scenario step) 10 - external 11 - database monitor 12 - IPMI agent 13 - SSH agent 14 - Telnet agent 15 - calculated 16 - JMX agent 17 - SNMP trap 18 - Dependent item 19 - HTTP agent item	Item type.
	snmp_community	string		SNMP community name if 'type' is 1,4.
	snmp_oid	string		SNMP object ID.
	key	string		Item key.
	delay	string		Update interval of the item. Seconds, time unit with suffix, custom intervals or user macros.
	history	string		A time unit of how long the history data should be stored. Time unit with suffix or user macro.
	trends	string		A time unit of how long the trends data should be stored. Time unit with suffix or user macro.
	status	integer	0 - enabled 1 - disabled	Item status.
	value_type	integer	0 - float 1 - character 2 - log 3 - unsigned integer 4 - text	Received value type.

Element	Element property	Type	Range	Description
	allowed_hosts	string		List of IP addresses (comma delimited) of hosts allowed sending data for the item if 'type' is 2 or 19.
	units	string		Units of returned values (bps, B).
	snmpv3_contextname	string		SNMPv3 context name.
	snmpv3_securityname	string		SNMPv3 security name.
	snmpv3_securitylevel	integer	0 - noAuthNoPriv 1 - authNoPriv 2 - authPriv	SNMPv3 security level.
	snmpv3_authprotocol	integer	0 - MD5 1 - SHA	SNMPv3 authentication protocol.
	snmpv3_authpassphrase	string		SNMPv3 authentication passphrase.
	snmpv3_privprotocol	integer	0 - DES 1 - AES	SNMPv3 privacy protocol.
	snmpv3_privpassphrase	string		SNMPv3 privacy passphrase.
	params	text		Name of the "Executed script" if 'type' is 13,14 "SQL query" field if 'type' is 11 "Formula" field if 'type' is 15.
	ipmi_sensor	string		IPMI sensor ID if 'type' is 12.
	authtype	integer	Authentication type for SSH agent items: 0 - password 1 - key Authentication type for HTTP agent items: 0 - none 1 - basic 2 - NTLM	Authentication type if 'type' is 13 or 19.
	username	string		User name if 'type' is 11,13,14,19.
	password	string		Password if 'type' is 11,13,14,19.
	publickey	string		Name of the public key file if 'type' is 13.
	privatekey	string		Name of the private key file if 'type' is 13.
	port	string		Custom port for the item.
	description	text		Item description.

Element	Element property	Type	Range	Description
	inventory_link	integer	0 - no link number - number of field in the 'host_inventory' table	Use item value to populate this inventory field.
	logtimefmt	string		Format of the time in log entries. Used only by log items.
	interface_ref	string		Reference to host interface.
	jmx_endpoint	string		JMX endpoint if 'type' is 16.
	url	string		URL string if 'type' is 19.
	allow_traps	integer	0 - Do not allow trapping. 1 - Allow trapping.	Property to allow to send data to item if 'type' is 19.
	follow_redirects	integer	0 - Do not follow redirects. 1 - Follow redirects.	Follow HTTP redirects if 'type' is 19.
	headers	object		Object with HTTP(S) request headers if 'type' is 19.
	http_proxy	string		HTTP(S) proxy connection string if 'type' is 19.
	output_format	integer	0 - Store as is. 1 - Convert to JSON.	How to process response if 'type' is 19.
	post_type	integer	0 - Raw data. 2 - JSON data. 3 - XML data.	Type of request body if 'type' is 19.
	posts	text		Request body if 'type' is 19.
	query_fields	array		Array of objects for request query fields if 'type' is 19.
	request_method	integer	0 - GET 1 - POST 2 - PUT 3 - HEAD	Request method if 'type' is 19.
	retrieve_mode	integer	0 - Body. 1 - Headers. 2 - Both body and headers will be stored.	What part of response should be stored if 'type' is 19.
	ssl_cert_file	string		Public SSL Key file path if 'type' is 19.
	ssl_key_file	string		Private SSL Key file path if 'type' is 19.
	ssl_key_password	string		Password for SSL Key file if 'type' is 19.
	status_codes	string		Ranges of required HTTP status codes separated by commas if 'type' is 19.
	timeout	string		Item data polling request timeout if 'type' is 19.

Element	Element property	Type	Range	Description
	verify_host	integer	0 - Do not validate. 1 - Validate.	Validate host name in URL is in Common Name field or a Subject Alternate Name field of host certificate if 'type' is 19.
	verify_peer	integer	0 - Do not validate. 1 - Validate.	Validate is host certificate authentic if 'type' is 19.
value map				Value map.
	name	string		Name of the value map to use for the item.
applications				Root element for applications.
application				Individual application.
	name			Application name.
preprocessing				Item value preprocessing.
step				Individual item value preprocessing step.
	type	integer	1 - custom multiplier 2 - right trim 3 - left trim 4 - trim from both sides 5 - regular expression matching 6 - boolean to decimal 7 - octal to decimal 8 - hexadecimal to decimal 9 - simple change; calculated as (received value-previous value) 10 - change per second; calculated as (received value-previous value)/(time now-time of last check)	Type of the item value preprocessing step.
	params	string		Parameters of the item value preprocessing step.
master_item				Individual item master item data.
	key	string		Dependent item master item key value.

Host low-level discovery rule tags

Element	Element property	Type	Range	Description
discovery_rules				Root element for low-level discovery rules.
discovery_rule				Individual low-level discovery rule.
	<i>For most of the element tag values, see element tag values for a regular item. Only the tags that are specific to low-level discovery rules, are described below.</i>			
	lifetime	string		Time period after which items that are no longer discovered will be deleted. Seconds, time unit with suffix or user macro.
filter				Individual filter.
	evaltype	integer	0 - And/or logic 1 - And logic 2 - Or logic 3 - custom formula	Logic to use for checking low-level discovery rule filter conditions.
	formula	string		Custom calculation formula for filter conditions.
	conditions			Root element for filter conditions.
condition				Individual filter condition.
	macro	string		Low-level discovery macro name.
	value	string		Filter value: regular expression or global regular expression.
	operator	integer		
	formulaid	character		Filter condition ID. Used in the custom calculation formula.
item_prototypes				Root element for item_prototypes.
item_prototype				Individual item_prototype.
	<i>For most of the element tag values, see element tag values for a regular item. Only the tags that are specific to item_prototypes, are described below.</i>			
application_prototypes				Root element for application prototypes.

Element	Element property	Type	Range	Description
application_prototype				Individual application prototype.
	name			Application prototype name.
master_item				Individual item prototype master item/item prototype data.
	key	string		Dependent item prototype master item/item prototype key value.

Host trigger tags

Element	Element property	Type	Range	Description
triggers				Root element for triggers.
trigger				Individual trigger.
	expression	string		Trigger expression.
	recovery_mode	integer	0 - expression 1 - recovery expression 2 - none	Basis for generating OK events.
	recovery_expression	string		Trigger recovery expression.
	name	string		Trigger name.
	correlation_mode	integer	0 - no event correlation 1 - event correlation by tag	Correlation mode.
	correlation_tag	string		The tag name to be used for event correlation.
	url	string		Trigger URL.
	status	integer	0 - enabled 1 - disabled	Trigger status.
	priority	integer	0 - not classified 1 - information 2 - warning 3 - average 4 - high 5 - disaster	Trigger severity.
	description	text		Trigger description.
	type	integer	0 - single problem event 1 - multiple problem events	Event generation type.
	manual_close	integer	0 - not allowed 1 - allowed	Manual closing of problem events.
dependencies				Root element for dependencies.
dependency				Individual dependency.
	name	string		Dependency trigger name.

Element	Element property	Type	Range	Description
	expression	string		Dependency trigger expression.
	recovery_expression	string		Dependency trigger recovery expression.
tags				Root element for event tags.
tag				Individual event tag.
	tag	string		Tag name.
	value	string		Tag value.

Host graph tags

Element	Element property	Type	Range	Description
graphs				
graph				Individual graph.
	name	string		Graph name.
	width	integer		Graph width, in pixels. Used for preview and for pie/exploded graphs.
	height	integer		Graph height, in pixels. Used for preview and for pie/exploded graphs.
	yaxismin	double		Value of Y axis minimum if 'ymin_type_1' is 1.
	yaxismax	double		Value of Y axis maximum if 'ymax_type_1' is 1.
	show_work_period	integer	0 - no 1 - yes	Highlight non-working hours if 'type' is 0,1.
	show_triggers	integer	0 - no 1 - yes	Display simple trigger values as a line if 'type' is 0,1.
	type	integer	0 - normal 1 - stacked 2 - pie 3 - exploded 4 - 3D pie 5 - 3D exploded	Graph type.
	show_legend	integer	0 - no 1 - yes	Display graph legend.
	show_3d	integer	0 - 2D 1 - 3D	Enable 3D style if 'type' is 2,3.
	percent_left	double		Show the percentile line for left axis if 'type' is 0.
	percent_right	double		Show the percentile line for right axis if 'type' is 0.
	ymin_type_1	integer	0 - calculated 1 - fixed 2 - last value of the selected item	Minimum value of Y axis if 'type' is 0,1.
	ymax_type_1	integer	0 - calculated 1 - fixed 2 - last value of the selected item	Maximum value of Y axis if 'type' is 0,1.
	ymin_item_1	string	null or item details	Item details if 'ymin_type_1' is 2.

Element	Element property	Type	Range	Description
	ymax_item_1	string	null or item details	Item details if 'ymax_type_1' is 2.
graph_items				Root element for graph items.
graph_item				Individual graph item.
	sortorder	integer		Draw order. The smaller value is drawn first. Can be used to draw lines or regions behind (or in front of) another.
	drawtype	integer	0 - single line 1 - filled region 2 - bold line 3 - dotted line 4 - dashed line	Draw style if graph 'type' is 0.
	color	string		Element colour (6 symbols, hex).
	yaxisside	integer	0 - left axis 1 - right axis	Y axis position (left or right) the element belongs to if graph 'type' is 0,1.
	calc_fnc	integer	1 - minimum 2 - average 4 - maximum 7 - all (minimum, average and maximum, if graph 'type' is 0) 9 - last (if graph 'type' is not 0,1)	Data to draw if more than one value exists for an item.
	type	integer	1 - value of the item is represented proportionally on the pie 2 - value of the item represents the whole pie (graph sum)	Draw type for pie/exploded graphs.
item				Individual item.
	host	string		Item host.
	key	string		Item key.

Host web scenario tags

Element	Element property	Type	Range	Description
httptests				Root element for web scenarios.
httpstest				Individual web scenario.
	name	string		Web scenario name.
	delay	string		Frequency of executing the web scenario. Seconds, time unit with suffix or user macro.
	attempts	integer	1-10	The number of attempts for executing web scenario steps.
	agent	string		Client agent. Zabbix will pretend to be the selected browser. This is useful when a website returns different content for different browsers.

Element	Element property	Type	Range	Description
	http_proxy	string		Specify an HTTP proxy to use, using the format: http://[username[:password]@]proxy.mycompany.com[:port]
	variables	text		List of scenario-level variables (macros) that may be used in scenario steps.
	headers	text		HTTP headers that will be sent when performing a request.
	status	integer	0 - enabled 1 - disabled	Web scenario status.
	authentication	integer	0 - none 1 - basic 2 - NTLM	Authentication method.
	http_user	string		Authentication user name.
	http_password	string		Authentication password for specified user name.
	verify_peer	integer	0 - no 1 - yes	Verify the SSL certificate of the web server.
	verify_host	integer	0 - no 1 - yes	Verify that the Common Name field or the Subject Alternate Name field of the web server certificate matches.
	ssl_cert_file	string		Name of the SSL certificate file used for client authentication.
	ssl_key_file	string		Name of the SSL private key file used for client authentication.
	ssl_key_password	string		SSL private key file password.
steps				Root element for web scenario steps.
step				Individual web scenario step.
	name	string		Web scenario step name.
	url	string		URL for monitoring.
	posts	text		List of 'Post' variables.
	variables	text		List of step-level variables (macros) that should be applied after this step. If the variable value has a 'regex:' prefix, then its value is extracted from the data returned by this step according to the regular expression pattern following the 'regex:' prefix
	headers	text		HTTP headers that will be sent when performing a request.
	follow_redirects	integer	0 - no 1 - yes	Follow HTTP redirects.
	retrieve_mode	integer	0 - content 1 - headers only	HTTP response retrieve mode.
	timeout	string		Timeout of step execution. Seconds, time unit with suffix or user macro.
	required	string		Required string. Ignored if empty.
	status_codes	string		A comma delimited list of accepted status codes. Ignored if empty. For example: 200-201,210-299

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