
ZenossAPIClient Documentation

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Contents:

1	zenossapi	3
1.1	apiclient Class	3
2	zenossapi Routers	5
2.1	routers Base Class	5
2.2	Device Router	5
2.3	DeviceManagement Router	17
2.4	Events Router	22
2.5	Jobs Router	24
2.6	Monitor Router	26
2.7	Properties Router	27
2.8	Template Router	31
3	Indices and tables	39
	Python Module Index	41

`zenossapi` is a python module for interacting with the Zenoss API an an object-oriented way. The philosophy here is to use objects to work with everything in the Zenoss API, and to try to normalize the various calls to the different routers. Thus *get* methods will always return an object, *list* methods will return data. All methods to add or create start with *add*, all remove or delete start with *delete*. As much as possible the methods try to hide the idiosyncrasies of the JSON API, and to do the work for you, for example by letting you use a device name instead of having to provide the full device UID for every call.

1.1 apiclient Class

Zenoss API Client Class

class zenossapi.apiclient.**Client** (*host=None, user=None, password=None, ssl_verify=None*)

Bases: object

Client class to access the Zenoss JSON API

get_router (*router*)

Instantiates and returns a Zenoss router object

Parameters **router** (*str*) – The API router to use

get_router_methods (*router*)

List all available methods for an API router

Parameters **router** (*str*) – The router to get methods from

Returns

Return type list

get_routers ()

Gets the list of available Zenoss API routers

Returns

Return type list

exception zenossapi.apiclient.**ZenossAPIClientAuthenticationError**

Bases: exceptions.Exception

exception zenossapi.apiclient.**ZenossAPIClientError**

Bases: exceptions.Exception

2.1 routers Base Class

class zenossapi.routers.ZenossRouter (*url, headers, ssl_verify, endpoint, action*)

Bases: object

Base class for Zenoss router classes

2.2 Device Router

Zenoss device_router

class zenossapi.routers.device.DeviceRouter (*url, headers, ssl_verify*)

Bases: *zenossapi.routers.ZenossRouter*

Class for interacting with the Zenoss device router

get_device_class (*device_class*)

Get a device class

Parameters *device_class* (*str*) – The name of the device class

Returns

Return type *ZenossDeviceClass*

get_tree (*device_class*)

Get the tree structure of a device class.

Parameters *device_class* (*str*) – Device class to use as the top of the tree

Returns

Return type dict

list_collectors ()

Get the list of collectors.

Returns**Return type** list**list_device_classes()**

Get the list of all device classes.

Returns**Return type** list**list_groups()**

Get the list of all groups.

Returns**Return type** list**list_locations()**

Get the list of all locations.

Returns**Return type** list**list_systems()**

Get the list of all systems.

Returns**Return type** list**class** zenossapi.routers.device.**ZenossComponent** (*url, headers, ssl_verify, device_data*)Bases: *zenossapi.routers.device.DeviceRouter*

Class for Zenoss component objects

delete()

Delete the component.

Returns Response message**Return type** str**lock** (*updates=False, deletion=False, send_event=False*)

Lock the component for changes.

Parameters

- **updates** (*bool*) – Lock for updates
- **deletion** (*bool*) – Lock for deletion
- **send_event** (*bool*) – Send an event when an action is blocked by locking

Returns Response message**Return type** str**lock_for_deletion** (*send_event=False*)

Lock the component for updates.

Parameters **send_event** (*bool*) – Send an event when deletion is blocked by locking**Returns** Response message**Return type** str

lock_for_updates (*send_event=False*)

Lock the component for updates.

Parameters **send_event** (*bool*) – Send an event when updates are blocked by locking

Returns Response message

Return type str

set_monitored (*monitor=True*)

Sets the monitored state for the component.

Parameters **monitor** (*bool*) – True to monitor, False to stop monitoring

Returns Response message

Return type str

class zenossapi.routers.device.**ZenossDevice** (*url, headers, ssl_verify, device_data*)

Bases: *zenossapi.routers.device.DeviceRouter*

Class for Zenoss device objects

add_local_template (*template*)

Add a local template to the device.

Parameters **template** (*str*) – Name of the new local template

bind_or_unbind_template (*path, template*)

Binds a template to the device if it's unbound, or unbinds it if it's bound.

Parameters

- **path** (*str*) – Template's path, as given in the display label
- **template** (*str*) – Name of the template to bind/unbind

delete (*action, del_events=False, del_perf=True*)

Remove a device from its organizer, or delete it from Zenoss altogether.

Parameters

- **action** (*str*) – 'remove' to remove the devices from their organizer, 'delete' to delete them from Zenoss
- **del_events** (*bool*) – Remove all events for the devices
- **del_perf** (*bool*) – Remove all perf data for the devices

Returns

Return type bool

delete_local_template (*template*)

Remove a local template from the device.

Parameters **template** (*str*) – Name of the template to remove

delete_property (*zproperty*)

Delete the locally set value of a property for a device

Parameters **zproperty** (*str*) – ID of the property to delete.

Returns

Return type bool

get_active_templates()

Get ZenossTemplate objects for all active templates on a device.

Returns

Return type list(*ZenossTemplate*)

get_bound_templates()

Get ZenossTemplate objects templates that are bound to the device.

Returns

Return type list(*ZenosTemplate*)

get_component(component)

Get a component object.

Parameters **component** (*str*) – Name of the component, e.g. 'hw/cpus/0'

Returns

Return type *ZenossComponent*

get_components(meta_type=None, start=0, limit=50, sort='name', dir='ASC')

Get component objects for all components on the device. Supports Pagination.

Parameters

- **meta_type** (*str*) – Meta type of components to list
- **start** (*int*) – Offset to start device list from, default 0
- **limit** (*int*) – The number of results to return, default 50
- **sort** (*str*) – Sort key for the list, default is 'name'
- **dir** (*str*) – Sort order, either 'ASC' or 'DESC', default is 'ASC'

Returns

Return type list(*ZenossComponent*)

get_custom_properties(params=None)

Get the cProperties for the device

Parameters **params** (*dict*) – Search parameters for filter the properties on.

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of ZenossCustomProperty objects.
}
```

Return type dict(int, list(*ZenossCustomProperty*))

get_custom_property(cproperty)

Get a custom property for the device

Parameters **cproperty** (*str*) – ID of the property to get.

Returns

Return type *ZenossCustomProperty*

get_local_templates()

Get ZenossTemplate objects for all locally defined templates.

Returns**Return type** list(*ZenossTemplate*)**get_overridable_templates()**

Get ZenossTemplate objects for templates that can be overridden.

Returns**Return type** list(*ZenossTemplate*)**get_properties(params=None)**

Get the configuration properties for the device

Parameters **params** (*dict*) – Search parameters for filter the properties on.**Returns**

```
{
    'total': Total count of properties returned.
    'properties': List of ZenossProperty objects.
}
```

Return type dict(int, list(*ZenossProperty*))**get_property(zproperty)**

Get a configuration property

Parameters **zproperty** (*str*) – The id of the property to get**Returns****Return type** *ZenossProperty***get_unbound_templates()**

Get ZenossTemplate objects for available templates that are not bound to the device.

Returns**Return type** list(*ZenossTemplate*)**list_active_templates()**

Get the list of templates active on a device, both bound and local.

Returns

```
{
    'name': Template name,
    'label': Display label for the template,
}
```

Return type list(dict(*str*, *str*))**list_bound_templates()**

Get the list of templates bound to a device, does not include local templates.

Returns

```
{
    'name': Template name,
    'label': Display label for the template,
}
```

Return type list(dict(*str*, *str*))

list_components (*meta_type=None, start=0, limit=50, sort='name', dir='ASC', keys=None, name=None*)

Get a list of all the components on a device. Supports pagination.

Parameters

- **meta_type** (*str*) – Meta type of components to list
- **start** (*int*) – Offset to start device list from, default 0
- **limit** (*int*) – The number of results to return, default 50
- **sort** (*str*) – Sort key for the list, default is 'name'
- **dir** (*str*) – Sort order, either 'ASC' or 'DESC', default is 'ASC'
- **keys** (*list*) – Keys to include in the returned data
- **name** (*str*) – Regular expression pattern to filter on, requires the keys parameter

Returns

```
{
    'total': Total number of components found.
    'hash': Hash check to determine if components have changed
    'components': List of components found
}
```

Return type dict(int, str, list)

list_custom_properties ()

List the custom properties for the device

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of properties found.
}
```

Return type dict(int, list(dict))

list_local_properties ()

List the locally defined configuration properties for the device

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of properties found.
}
```

Return type dict(int, list(dict))

list_local_templates ()

Get the list of monitoring templates defined locally on a device.

Returns

Return type list

list_overridable_templates ()

Get the list of available templates on a device that can be overridden.

Returns

```
{
    'name': Template name,
    'label': Display label for the template,
}
```

Return type list(dict(str, str))

list_properties (*params=None, sort=None, sort_dir='ASC'*)

List the configuration properties for the device

Parameters

- **params** (*dict*) – Search parameters to filter the properties list on.
- **sort** (*str*) – Sort key for the properties list.
- **sort_dir** (*str*) – Sort direction, either ASC or DESC

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of properties found.
}
```

Return type dict(int, list(dict))

list_unbound_templates ()

Get the list of available templates that are not bound to the device.

Returns

```
{
    'name': Template name,
    'label': Display label for the template,
}
```

Return type list(dict(str, str))

list_user_commands ()

Get the list of user commands for a device.

Returns

```
{
    name: Name of the user command
    description: Command description
}
```

Return type dict(str, str)

lock (*updates=False, deletion=False, send_event=False*)

Lock the device for changes.

Parameters

- **updates** (*bool*) – Lock for updates
- **deletion** (*bool*) – Lock for deletion
- **send_event** (*bool*) – Send an event when an action is blocked by locking

Returns Response message

Return type str

lock_for_deletion (*send_event=False*)

Lock the device for updates.

Parameters **send_event** (*bool*) – Send an event when deletion is blocked by locking

Returns Response message

Return type str

lock_for_updates (*send_event=False*)

Lock the device for updates.

Parameters **send_event** (*bool*) – Send an event when updates are blocked by locking

Returns Response message

Return type str

move (*device_class*)

Move the device to a different device class

Parameters **device_class** (*str*) – Name of the device class to move the device into

Returns uuid of the Job Manager job for the move

Return type str

reidentify (*new_id*)

Change the device's id in Zenoss. Note that changing the device id will cause the loss of all graph data for the device.

Parameters **new_id** (*str*) – New ID for the device

remodel ()

Remodel the device.

Returns uuid of the Job Manager job for the remodel

Return type str

reset_bound_templates ()

Remove all bound templates from device.

reset_ip_address (*ip_address=""*)

Reset the IP address of the device to ip_address if specified or to the result of a DNS lookup if not.

Parameters **ip_address** (*str*) – IP address to set device to

Returns Response message

Return type str

set_bound_templates (*templates*)

Set a list of templates as bound to a device.

Parameters **templates** (*list*) – List of template names

set_collector (*collector*)

Set the collector for the device.

Parameters **collector** (*str*) – The collector to use for the device

Returns uuid of the Job Manager job for the change

Return type str

set_priority (*priority*)

Set the priority for the device.

Parameters **priority** (*int*) – Numeric value for the desired priority

Returns Reponse message

Return type str

set_production_state (*production_state*)

Set the production state for the device.

Parameters **production_state** (*int*) – Numeric value for the desired production state.

Returns Response message

Return type str

set_property (*zproperty*, *value=None*)

Set the value of a configuration property

Parameters

- **zproperty** (*str*) – The id of the property to set a value for
- **value** (*str*) – The value to set for the property

Returns

Return type bool

class zenossapi.routers.device.**ZenossDeviceClass** (*url*, *headers*, *ssl_verify*, *device_class_data*)

Bases: `zenossapi.routers.device.DeviceRouter`

Class for Zenoss device class objects

add_device (*device_name*, *title=""*, *ip_address=""*, *location=None*, *systems=None*, *groups=None*, *model=False*, *collector='localhost'*, *production_state=500*, *comments=""*, *priority=3*, *snmp_community=""*, *snmp_port=161*, *rack_slot=""*, *hw_manufacturer=""*, *hw_product_name=""*, *os_manufacturer=""*, *os_product_name=""*, *asset_tag=""*, *serial_number=""*, *windows_user=""*, *windows_password=""*, *zcommand_user=""*, *zcommand_password=""*, *configuration_properties=None*, *custom_properties=None*)

Add a new device to the device class.

Parameters

- **device_name** (*str*) – Name of the new device, will be the device id
- **title** (*str*) – Optional title for the device, default is to match the device_name
- **ip_address** (*str*) – Ip address for the device, default is to derive this from DNS based on device_name
- **location** (*str*) – Location for the device
- **systems** (*list* [*str*]) – List of systems for the device
- **groups** (*list* [*str*]) – List of groups for the device
- **model** (*bool*) – Set to True to model the device automatically after creation
- **collector** (*str*) – Collector to use for the device
- **production_state** (*int*) – Numerical production state for the device, default is 500 (Pre-Production)
- **comments** (*str*) – Comments for the device

- **priority** (*int*) – Numerical priority for the device, default is 3 (Normal)
- **snmp_community** (*str*) – SNMP community string for the device
- **snmp_port** (*int*) – SNMP port for the device
- **rack_slot** (*str*) – Rack slot description
- **hw_manufacturer** (*str*) – Hardware manufacturer name, default is to derive by modeling
- **hw_product_name** (*str*) – Hardware product name, default is to derive by modeling
- **os_manufacturer** (*str*) – Operating system developer, default is to derive by modeling
- **os_product_name** (*str*) – Operating system name, default is to derive by modeling
- **asset_tag** (*str*) – Device’s inventory asset tag
- **serial_number** (*str*) – Device’s serial number
- **windows_user** (*str*) – Username for Windows device monitoring
- **windows_password** (*str*) – Password for the windows_user
- **zcommand_user** (*str*) – Username for SSH-based monitoring user
- **zcommand_password** (*str*) – Password for the zcommand_user
- **configuration_properties** (*dict*) – Key/value pairs for setting Configuration Properties for the device
- **custom_properties** (*dict*) – Key/value pairs for setting Custom Properties for the device

Returns ID of the add device job

Return type str

add_subclass (*name*, *description*=”, *connection_info*=None)

Add a new subclass to the device class.

Parameters

- **name** (*str*) – Name of the new subclass
- **description** (*str*) – Description for the new subclass
- **connection_info** (*list*) – zProperties that represent the credentials for access in the subclass

delete_property (*zproperty*)

Delete the locally set value of a property for a device class

Parameters **zproperty** (*str*) – ID of the property to delete.

Returns

Return type bool

get_custom_properties (*params*=None)

Get the cProperties for the device class

Parameters **params** (*dict*) – Search parameters for filter the properties on.

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of ZenossCustomProperty objects.
}
```

Return type dict(int, list(*ZenossCustomProperty*))

get_custom_property (*cproperty*)

Get a custom property for the device class

Parameters *cproperty* (*str*) – ID of the property to get.

Returns

Return type *ZenossCustomProperty*

get_device (*device_name*)

Get a device from the device class

Parameters *device_name* (*str*) – The name of the device to get

Returns

Return type *ZenossDevice*

get_devices (*params=None, start=0, limit=50, sort='name', dir='ASC'*)

Get the devices contained in a device class. Supports pagination.

Parameters

- **params** (*dict*) – Key/value filters for the search, options are name, ipAddress, device-Class, or productionState
- **start** (*int*) – Offset to start device list from, default 0
- **limit** (*int*) – The number of results to return, default 50
- **sort** (*str*) – Sort key for the list, default is 'name'
- **dir** (*str*) – Sort order, either 'ASC' or 'DESC', default is 'ASC'

Returns

```
{
    'total': Total number of devices found
    'hash': Hashcheck to determine if any devices have changed,
    'devices': ZenossDevice objects,
}
```

Return type dict(int, str, list(*ZenossDevice*))

get_properties (*params=None*)

Get the configuration properties for the device class

Parameters *params* (*dict*) – Search parameters for filter the properties on.

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of ZenossProperty objects.
}
```

Return type dict(int, list(*ZenossProperty*))

get_property (*zproperty*)

Get a configuration property

Parameters **zproperty** (*str*) – The id of the property to get

Returns

Return type *ZenossProperty*

list_custom_properties ()

List the custom properties for the device class

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of properties found.
}
```

Return type dict(int, list(dict))

list_devices (*params=None, keys=None, start=0, limit=50, sort='name', dir='ASC'*)

List the devices contained in a device class. Supports pagination.

Parameters

- **params** (*dict*) – Key/value filters for the search, options are name, ipAddress, device-Class, or productionState
- **keys** (*list*) – List of keys to return for the devices found
- **start** (*int*) – Offset to start device list from, default 0
- **limit** (*int*) – The number of results to return, default 50
- **sort** (*str*) – Sort key for the list, default is 'name'
- **dir** (*str*) – Sort order, either 'ASC' or 'DESC', default is 'ASC'

Returns

Return type dict

list_local_properties ()

List the locally defined configuration properties for the device class

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of properties found.
}
```

Return type dict(int, list(dict))

list_properties (*params=None, sort=None, sort_dir='ASC'*)

List the configuration properties for the device class

Parameters

- **params** (*dict*) – Search parameters to filter the properties list on.
- **sort** (*str*) – Sort key for the properties list.
- **sort_dir** (*str*) – Sort direction, either ASC or DESC

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of properties found.
}
```

Return type dict(int, list(dict))**set_property** (*zproperty*, *value=None*)

Set the value of a configuration property

Parameters

- **zproperty** (*str*) – The id of the property to set a value for
- **value** (*str*) – The value to set for the property

Returns**Return type** bool

2.3 DeviceManagement Router

Zenoss devicemanagement_router

class zenossapi.routers.devicemanagement.**DeviceManagementRouter** (*url*, *headers*,
ssl_verify)

Bases: *zenossapi.routers.ZenossRouter*

Class for interacting with the Zenoss devicemanagement router

add_admin (*uid*, *name*, *role=None*)

Add an admin user to a device or device class.

Parameters

- **uid** (*str*) – The UID of the device or device class
- **name** (*str*) – The name of the user to add
- **role** (*str*) – The role to associate with the user for this device or device class

Returns**Return type** *ZenossDeviceManagementAdmin*

add_maintenance_window (*uid*, *name*, *start*, *duration*, *enabled=False*, *start_state=300*, *repeat='Never'*, *occurrence='1st'*, *days='Sunday'*)

Add a new maintenance window for device or device class.

Parameters

- **uid** (*str*) – The UID of the device or device class
- **start** (*str*) – Window start time in UNIX epoch timestamp format, e.g. “1511290393”
- **duration** (*str*) – Duration of the window in HH:MM:SS format
- **start_state** (*int*) – Production state for the maintenance window, default is 300 (Maintenance)

- **repeat** (*str*) – Maintenance window repeat interval, default is ‘Never’. Other valid choices are: ‘Daily’, ‘Every Weekday’, ‘Weekly’, ‘Monthly: day of month’, ‘Monthly: day of week’
- **occurrence** (*str*) – For ‘Monthly: day of week’ repeats, options are ‘1st’, ‘2nd’, ‘3rd’, ‘4th’, ‘5th’, ‘Last’
- **days** (*str*) – For ‘Monthly: day of week’ repeats, options are ‘Monday’, ‘Tuesday’, ‘Wednesday’, ‘Thursday’, ‘Friday’, ‘Saturday’, ‘Sunday’

Returns

Return type *ZenossMaintenanceWindow*

add_user_command (*uid, name, description, command, password*)

Add a new user command to a device or device class.

Parameters

- **uid** (*str*) – The UID of the device or device class
- **name** (*str*) – Name for the new command
- **description** (*str*) – Description of the new command
- **command** (*str*) – Command line of the new command, can include TALES expressions
- **password** (*str*) – Password of the user adding the command.

get_admin_by_id (*uid, admin_id*)

Get and admin user for a device or device class by id.

Parameters

- **uid** (*str*) – The UID of the device or device class
- **admin_id** (*str*) – The ID of the admin user

Returns

Return type *ZenossDeviceManagementAdmin*

get_admin_by_name (*uid, name*)

Get an admin user for a device or device class by name.

Parameters

- **uid** (*str*) – The UID of the device or device class
- **name** (*str*) – The name of the admin user

Returns

Return type *ZenossDeviceManagementAdmin*

get_admins (*uid*)

Get ZenossDeviceManagementAdmin objects for the configured admin users for a device or device class.

Parameters **uid** (*str*) – The UID of the device or device class

Returns

Return type *list(ZenossDeviceManagementAdmin)*

get_admins_by_role (*uid, role*)

Get ZenossDeviceManagementAdmin objects for the configured admin users of a device or device class by role.

Parameters

- **uid** (*str*) – The UID of the device or device class
- **role** (*str*) – The role to filter on

Returns

Return type `list(ZenossDeviceManagementAdmin)`

get_maintenance_window (*uid, name*)

Get a maintenance window object for the named window.

Parameters

- **uid** (*str*) – The UID of the device or device class
- **name** (*str*) – Name of the maintenance window

Returns

Return type `ZenossMaintenanceWindow`

get_maintenance_windows (*uid*)

Returns a list of ZenossMaintenanceWindow objects for the maintenance windows configured for a device or device class

Parameters **uid** (*str*) – The UID of the device or device class

Returns

Return type `list(ZenossMaintenanceWindow)`

get_user_command_by_id (*uid, command_id*)

Get a configured user command by its id

Parameters

- **uid** (*str*) – The UID of the device or device class
- **command_id** (*str*) – The ID of the user command

get_user_command_by_name (*uid, command_name*)

Get a configured user command by its id

Parameters

- **uid** (*str*) – The UID of the device or device class
- **command_name** (*str*) – The name of the user command

get_user_commands (*uid*)

Get a list of user commands objects configured for a device or device class.

Parameters **uid** (*str*) – The UID of the device or device class

Returns

Return type `list(ZenossUserCommand)`

list_admin_roles (*uid*)

List the admin roles associated with a device or device class.

Parameters **uid** (*str*) – The UID of the device or device class

Returns

Return type `list(dict)`

list_admins_by_role (*uid*, *role*)

List configured admin users for a device or device class by role.

Parameters

- **uid** (*str*) – The UID of the device or device class
- **role** (*str*) – The role to filter on

Returns

Return type list(dict)

list_available_roles (*uid*)

List the admin roles available to associate with a device or device class.

Parameters **uid** (*str*) – The UID of the device or device class

Returns

Return type list(str)

list_maintenance_windows (*uid*)

Returns the list of maintenance windows configured for a device or device class.

Parameters **uid** (*str*) – The UID of the device or device class

Returns

Return type list(dict)

list_user_commands (*uid*)

Get the list of user commands configured for a device or device class.

Parameters **uid** (*str*) – The UID of the device or device class

Returns

Return type list(dict)

list_users (*uid*)

List the users available to associate with a device or device class.

Parameters **uid** (*str*) – the UID of the device or device class

Returns

Return type list(str)

timezone ()

Returns the configured timezone.

Returns

Return type str

```
class zenossapi.routers.devicemanagement.ZenossDeviceManagementAdmin(url,  
                                                                    headers,  
                                                                    ssl_verify,  
                                                                    admin_data)
```

Bases: `zenossapi.routers.devicemanagement.DeviceManagementRouter`

Class for Zenoss user command objects

delete ()

Delete an admin user from a device or device class.

Returns**update** (*role*)

Update the admin user's role.

Parameters **role** (*str*) – New role for the user

Returns

Return type bool

```
class zenossapi.routers.devicemanagement.ZenossMaintenanceWindow(url, headers,
                                                                    ssl_verify,
                                                                    win-
                                                                    dow_data,
                                                                    par-
                                                                    ent=None)
```

Bases: `zenossapi.routers.devicemanagement.DeviceManagementRouter`

Class for Zenoss maintenance window objects

delete ()

Delete a maintenance window from a device or device class.

Returns

Return type dict

disable ()

Set maintenance window to disabled.

Returns

Return type bool

enable ()

Set maintenance window to enabled.

Returns

Return type bool

```
update (start_timestamp=None, start_datetime=None, start_date=None, start_hours=None,
        start_minutes=None, duration_days=None, duration_time=None, duration_hours=None,
        duration_minutes=None, production_state=None, enabled=None, repeat=None, occur-
        rence=None, days=None)
```

Update the settings for a maintenance window, with flexible options for specifying the start date/time and duration.

Parameters

- **start_timestamp** (*float*) – Start date and time in UNIX timestamp format
- **start_datetime** (*datetime*) – Start date and time as a datetime.datetime object
- **start_date** (*str*) – Start date as a string
- **start_hours** (*str*) – Start hours as a string
- **start_minutes** (*str*) – Start minutes as a string
- **duration_days** (*str*) – Duration days
- **duration_time** (*str*) – Duration time in “HH:MM” format
- **duration_hours** (*str*) – Duration hours

- **duration_minutes** (*str*) – Duration minutes
- **production_state** (*int*) – Production state for the window
- **enabled** (*bool*) – Enabled state of the window
- **occurrence** (*str*) – Repeat occurrence
- **days** (*str*) – Repeat days

Returns**Return type** bool

```
class zenossapi.routers.devicemanagement.ZenossUserCommand(url, headers,  
                                                         ssl_verify, command_data,  
                                                         parent=None)
```

Bases: `zenossapi.routers.devicemanagement.DeviceManagementRouter`

Class for Zenoss user command objects

delete ()

Delete a user command for a device or device class.

Returns**Return type** dict

update (*description=None, command=None, password=None*)

Update a user command.

Parameters

- **description** (*str*) – Description of the user command
- **command** (*str*) – Command line of the command
- **password** (*str*) – Password of the user updating the command.

2.4 Events Router

Zenoss evconsole_router

```
class zenossapi.routers.events.EventsRouter(url, headers, ssl_verify)
```

Bases: `zenossapi.routers.ZenossRouter`

Class for interacting with Zenoss events.

```
add_event (summary, device, severity, component=None, event_class_key=None,  
           event_class='/Status')
```

Create a new Zenoss event.

Parameters

- **summary** (*str*) – Summary for the new event
- **device** (*str*) – Device ID for the new event
- **component** (*str*) – Component UID for the new event
- **severity** (*str*) – Severity to assign the new event, must be one of Critical, Error, Warning, Info, Debug, or Clear
- **event_class_key** (*str*) – The Event Class Key to assign to the event

- **event_class** (*str*) – Event Class for the event

Returns

Return type *ZenossEvent*

clear_heartbeat (*collector, daemon*)

Clear a heartbeat event for a specific daemon.

Parameters

- **collector** (*str*) – Collector the daemon is running in, e.g. slvcollector
- **daemon** (*str*) – Monitoring daemon to clear the heartbeat event for, e.g. zencommand

clear_heartbeats ()

Clear all heartbeat events

Returns True on success

Return type bool

get_config ()

Get the event handling configuration.

Returns

Return type list(dict)

get_event_by_evid (*evid*)

Get an event by its event id

Parameters **evid** (*str*) – The event id

Returns

Return type *ZenossEvent*

get_open_events (*limit=10, start=0, sort='lastTime', sort_dir='DESC'*)

Get all open events (new or acknowledged state)

Parameters

- **limit** (*int*) – Maximum number of events to return
- **start** (*int*) – Minimum index of events to get
- **sort** (*str*) – Sort key for events list
- **sort_dir** (*str*) – Sort direction, ASC or DESC

Returns

Return type list(*ZenossEvent*)

get_open_production_events (*limit=10, start=0, sort='lastTime', sort_dir='DESC'*)

Get all open events (new or acknowledged state) for devices with a production state of Production

Parameters

- **limit** (*int*) – Maximum number of events to return
- **start** (*int*) – Minimum index of events to get
- **sort** (*str*) – Sort key for events list
- **sort_dir** (*str*) – Sort direction, ASC or DESC

Returns

Return type list(*ZenossEvent*)

list_open_events (*limit=10, start=0, sort='lastTime', sort_dir='DESC'*)

Get a list of all open events (new or acknowledged state)

Parameters

- **limit** (*int*) – Maximum number of events to return
- **start** (*int*) – Minimum index of events to get
- **sort** (*str*) – Sort key for events list
- **sort_dir** (*str*) – Sort direction, ASC or DESC

Returns

Return type dict

list_open_production_events (*limit=10, start=0, sort='lastTime', sort_dir='DESC'*)

Get a list of all open events (new or acknowledged state) for devices with a production state of Production

Parameters

- **limit** (*int*) – Maximum number of events to return
- **start** (*int*) – Minimum index of events to get
- **sort** (*str*) – Sort key for events list
- **sort_dir** (*str*) – Sort direction, ASC or DESC

Returns

Return type dict

update_config (*config_values*)

Update the Zenoss event handling configuration.

Parameters **config_values** (*dict*) – Key/value pairs of the config values to change.

class zenossapi.routers.events.**ZenossEvent** (*url, headers, ssl_verify, event_data*)

Bases: *zenossapi.routers.events.EventsRouter*

Class for Zenoss event objects

ack ()

Acknowledge the event.

close ()

Close the event.

reopen ()

Reopen (unacknowledge or unclosed) the event.

update_log (*message*)

Add an entry to the event's log

Parameters **message** (*str*) – Log entry to add

2.5 Jobs Router

Zenoss jobs_router

class zenossapi.routers.jobs.**JobsRouter** (*url, headers, ssl_verify*)

Bases: [zenossapi.routers.ZenossRouter](#)

Class for interacting with the Zenoss device router

get_job (*job*)

Get a ZenossJob object by the job's uuid

Parameters *job* (*str*) – uuid of the job

Returns

Return type [ZenossJob](#)

get_jobs (*start=0, limit=50, sort='scheduled', dir='ASC'*)

Get ZenossJob objects for Job Manager jobs. Supports pagination.

Parameters

- **start** (*int*) – Offset to start device list from, default 0
- **limit** (*int*) – The number of results to return, default 50
- **sort** (*str*) – Sort key for the list, default is 'scheduled'. Other sort keys are 'started', 'finished', 'status', 'type' and 'user'
- **dir** (*str*) – Sort order, either 'ASC' or 'DESC', default is 'ASC'

Returns

Return type list([ZenossJob](#))

list_jobs (*start=0, limit=50, sort='scheduled', dir='DESC'*)

List all Job Manager jobs, supports pagination.

Parameters

- **start** (*int*) – Offset to start device list from, default 0
- **limit** (*int*) – The number of results to return, default 50
- **sort** (*str*) – Sort key for the list, default is 'scheduled'. Other sort keys are 'started', 'finished', 'status', 'type' and 'user'
- **dir** (*str*) – Sort order, either 'ASC' or 'DESC', default is 'DESC'

Returns

```
{
    'total': (int) Total number of jobs,
    'jobs': {
        'description': (str) Job description,
        'finished': (int) Time the job finished in timestamp format,
        'scheduled': (int) Time the job was scheduled in timestamp_
↵format,
        'started': (int) Time the job started in timestamp format,
        'status': (str) Status of the job,
        'type': (str) Job type,
        'uid': (str) JobManager UID - /zport/dmd/JobManager,
        'user': (str) User who scheduled the job,
        'uuid': (str) UUID of the job,
    }
}
```

Return type dict(int, dict(str, int, int, int, str, str, str, str, str))

class zenossapi.routers.jobs.**ZenossJob** (*url, headers, ssl_verify, job_data*)

Bases: *zenossapi.routers.jobs.JobsRouter*

Class for Zenoss job objects

abort ()

Abort the job.

Returns

Return type bool

delete ()

Delete the job.

Returns Job ID

Return type list

get_log ()

Get the log for the job.

Returns

```
{
    'logfile': Filesystem path of the log file,
    'maxLimit': True or False,
    'content': Log file lines
}
```

Return type dict(str, bool, list)

2.6 Monitor Router

Zenoss monitor_router

class zenossapi.routers.monitor.**MonitorRouter** (*url, headers, ssl_verify*)

Bases: *zenossapi.routers.ZenossRouter*

Class for interacting with the Zenoss monitor router

get_hub (*name*)

Get a ZenossHub object

Parameters **name** (*str*) – Name of the hub to get

Returns

Return type *ZenossHub*

get_hubs ()

Get the configured hubs as objects

Returns

Return type list(*ZenossHub*)

list_collectors ()

Returns the list of configured collectors

Returns

Return type list(dict)

list_hubs()

Returns the list of configured zenhubs

Returns

Return type list(dict)

tree()

Returns the full tree of hubs and collectors

Returns

Return type list(dict)

class zenossapi.routers.monitor.**ZenossCollector** (*url, headers, ssl_verify, collector_data, collector_params=None*)

Bases: *zenossapi.routers.monitor.MonitorRouter*

Class for Zenoss collector objects

class zenossapi.routers.monitor.**ZenossHub** (*url, headers, ssl_verify, hub_data*)

Bases: *zenossapi.routers.monitor.MonitorRouter*

Class for Zenoss hub objects

add_collector (*name, source=None, pool=None*)

Add a new collector to the hub.

Parameters

- **name** (*str*) – Name of the new collector
- **source** (*str*) – Name of the existing collector to use as a template
- **pool** (*str*) – The resource pool to place the collector in

Returns

Return type *ZenossCollector*

get_collector (*name*)

Get a ZenossCollector object

Parameters **name** (*str*) – Name of the collector to get

Returns

Return type *ZenossCollector*

get_collectors ()

Get the hub's collectors as objects.

Returns

Return type list(*ZenossCollector*)

2.7 Properties Router

Zenoss properties_router

class zenossapi.routers.properties.**PropertiesRouter** (*url, headers, ssl_verify*)

Bases: *zenossapi.routers.ZenossRouter*

Class for interacting with Zenoss properties.

delete_property (*uid*, *zproperty*)

Delete a ZenProperty.

Parameters

- **uid** (*str*) – UID to delete the property from
- **zproperty** (*str*) – ID of the property to delete.

Returns

Return type bool

get_custom_properties (*uid*, *params=None*)

Get ZenossCustomProperties objects for the cProperties of a uid context.

Parameters

- **uid** (*str*) – UID of the object to get properties for.
- **params** (*dict*) – Search parameters for filter the properties on.

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of ZenossCustomProperty objects.
}
```

Return type dict(int, list(*ZenossCustomProperty*))

get_custom_property (*uid*, *cproperty*)

Get a single ZenossCustomProperty

Parameters

- **uid** (*str*) – UID to get the property of.
- **cproperty** (*str*) – ID of the property to get.

Returns

Return type *ZenossCustomProperty*

get_local_properties (*uid*)

Get ZenossProperty objects for the local properties of a specified uid.

Parameters **uid** (*str*) – UID to get local properties for.

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of ZenossProperty objects.
}
```

Return type dict(int, list(*ZenossProperty*))

get_properties (*uid*, *params=None*)

Get ZenossProperties objects for the properties of a uid context.

Parameters

- **uid** (*str*) – UID of the object to get properties for.
- **params** (*dict*) – Search parameters for filter the properties on.

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of ZenossProperty objects.
}
```

Return type dict(int, list(*ZenossProperty*))**get_property** (*uid*, *zproperty*)

Get a single ZenossProperty

Parameters

- **uid** (*str*) – UID to get the property of.
- **zproperty** (*str*) – ID of the property to get.

Returns**Return type** *ZenossProperty***list_custom_properties** (*uid*, *params=None*, *sort=None*, *sort_dir='ASC'*)

Get a list of cProperties for the uid context.

Parameters

- **uid** (*str*) – UID of the object to list properties for.
- **params** (*dict*) – Search parameters to filter the properties list on.
- **sort** (*str*) – Sort key for the properties list.
- **sort_dir** (*str*) – Sort direction, either ASC or DESC

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of properties found.
}
```

Return type dict(int, list(dict))**list_local_properties** (*uid*)

Get a list of properties set locally to the specified UID.

Parameters **uid** (*str*) – UID to get local properties for.**Returns**

```
{
    'total': Total count of properties returned.
    'properties': List of properties found.
}
```

Return type dict(int, list(dict))**list_properties** (*uid*, *params=None*, *sort=None*, *sort_dir='ASC'*)

Get a list of ZenProperties for the uid context.

Parameters

- **uid** (*str*) – UID of the object to list properties for.
- **params** (*dict*) – Search parameters to filter the properties list on.

- **sort** (*str*) – Sort key for the properties list.
- **sort_dir** (*str*) – Sort direction, either ASC or DESC

Returns

```
{
    'total': Total count of properties returned.
    'properties': List of properties found.
}
```

Return type dict(int, list(dict))

set_property_value (*uid*, *zproperty*, *value=None*)

Sets (or updates) the local value of a property

Parameters **value** – The new value for the property, type varies by property.

Returns

Return type bool

class zenossapi.routers.properties.**ZenossCustomProperty** (*url*, *headers*, *ssl_verify*, *property_data*)

Bases: *zenossapi.routers.properties.PropertiesRouter*

Class for Zenoss CustomProperties

delete ()

Delete the local instance of a property.

Returns

Return type bool

set_value (*path=None*, *value=None*)

Sets (or updates) the local value of a custom property

Parameters

- **path** (*str*) – UID of the node to set the property for.
- **value** (*str*) – The new value for the property, type varies by property.

Returns

Return type bool

class zenossapi.routers.properties.**ZenossProperty** (*url*, *headers*, *ssl_verify*, *property_data*)

Bases: *zenossapi.routers.properties.PropertiesRouter*

Class for ZenProperties

delete ()

Delete the local instance of a property.

Returns

Return type bool

set_value (*path=None*, *value=None*)

Sets (or updates) the local value of a property

Parameters

- **path** (*str*) – UID of the node to set the property for.

- **value** (*str*) – The new value for the property, type varies by property.

Returns

Return type bool

2.8 Template Router

Zenoss template_router

class zenossapi.routers.template.**TemplateRouter** (*url, headers, ssl_verify*)

Bases: *zenossapi.routers.ZenossRouter*

Class for interacting with the Zenoss template router

add_data_point_to_graph (*datapoint, graph, include_thresholds=False*)

Adds a data point to a graph.

Parameters

- **datapoint** (*str*) – Uid of the data point to add
- **graph** (*str*) – Uid of the graph to add the data point to
- **include_thresholds** (*bool*) – Set to True to include the related thresholds for the data point

Returns

Return type dict

add_local_template (*zenoss_object, name*)

Adds a local template to an object.

Parameters

- **zenoss_object** (*str*) – Uid of the object to add the local template to
- **name** – Unique name for the new local template

add_template (*target, name*)

Adds a template to a device class.

Parameters

- **target** (*str*) – The uid of the target device class
- **name** (*str*) – Unique name of the template to add

Returns

Return type *ZenossTemplate*

delete_local_template (*zenoss_object, name*)

Builds the request data for deleting a local template to an object.

Parameters

- **object** (*str*) – Uid of the object to remove the local template from
- **name** – Unique name of the new local template

delete_template (*device_class, template*)

Removes a template.

Parameters

- **device_class** (*str*) – Name of the device class where the template is defined
- **template** (*str*) – Name of the template to remove

Returns

Return type dict

get_all_templates ()

Returns all defined templates.

Returns

Return type list(*ZenossTemplate*)

get_data_source_types ()

Gets the list of available data source types.

Returns

Return type list

get_device_class_templates (*device_class*)

Gets the defined templates for a device class

Parameters **device_class** (*str*) – Device class to get templates for

Returns

Return type list(*ZenossTemplate*)

get_object_templates (*zenoss_object*)

Gets the templates bound to a specific object (monitored resource or component)

Parameters **zenoss_object** (*str*) – The uid of the object, e.g. Devices/Server/Zuora/Aspose/devices/10.aspose.prod.slv.zuora

Returns

Return type list(*ZenossTemplate*)

get_template (*device_class*, *template*)

Get a Zenoss template

Parameters

- **device_class** (*str*) – Name of the device class where the template is defined
- **template** (*str*) – Name of the template to get

Returns

Return type *ZenossTemplate*

get_threshold_types ()

Gets the list of available threshold types.

Returns

Return type list

list_all_templates ()

Returns all defined templates as a list of tuples containing the template UID and description.

Returns

Return type list(*ZenossTemplate*)

list_device_class_templates (*device_class*)

Returns the defined templates for a device class as a list of tuples containing the template UID and description.

Parameters **device_class** (*str*) – Device class to list templates for

Returns

Return type list(str)

set_properties (*properties*)

Sets properties of an object.

Parameters **properties** (*dict*) – Properties and values to set

class zenossapi.routers.template.**ZenossDataPoint** (*url, headers, ssl_verify, dp_data*)

Bases: *zenossapi.routers.template.TemplateRouter*

Class for Zenoss data points

add_to_graph (*graph, include_thresholds=False*)

Adds a data point to a graph.

Parameters

- **graph** (*str*) – Name of the graph to add the data point to
- **include_thresholds** (*bool*) – Set to True to include the related thresholds for the data point

Returns

Return type dict

delete ()

Deletes a data point from a template.

Returns

Return type dict

make_counter ()

Sets the RRD Type of the data point to COUNTER

Returns

Return type bool

make_gauge ()

Sets the RRD Type of the data point to GAUGE

Returns

Return type bool

set_threshold (*threshold, threshold_type*)

Adds a threshold for the data point

Parameters

- **threshold** (*str*) – Name of the threshold to add
- **threshold_type** (*str*) – Type of the new threshold, must be one of the types returned by `get_threshold_types()`

Returns

Return type *ZenossThreshold*

```
class zenossapi.routers.template.ZenossDataSource(url, headers, ssl_verify, ds_data)
```

Bases: *zenossapi.routers.template.TemplateRouter*

Class for Zenoss template data sources

```
add_data_point(datapoint)
```

Adds a data point to a data source.

Parameters **datapoint** (*str*) – Name of the new data point

Returns

Return type *ZenossDataPoint*

```
delete()
```

Deletes a data source from a template.

Returns

Return type dict

```
delete_data_point(datapoint)
```

Deletes a data point from a template.

Parameters **datapoint** (*str*) – Name of the data point to remove

Returns

Return type dict

```
get_data_point(datapoint)
```

Get a particular data point.

Parameters **datapoint** (*str*) – Name of the data point to get details for

Returns

Return type *ZenossDataPoint*

```
get_data_points()
```

Get all the data points for a datasource.

Returns

Return type list(*ZenossDataPoint*)

```
list_data_points()
```

Returns all the data points for a datasource as a list.

Returns

Return type list(str)

```
class zenossapi.routers.template.ZenossGraph(url, headers, ssl_verify, graph_data)
```

Bases: *zenossapi.routers.template.TemplateRouter*

Class for Zenoss graphs

```
add_graph_threshold(threshold)
```

Adds a threshold to a graph.

Parameters **threshold** (*str*) – Uid of the threshold to add

Returns

Return type dict

add_point (*datasource*, *datapoint*, *include_thresholds=False*)

Adds a data point to a graph.

Parameters

- **datasource** (*str*) – Name of the data source holding the data point
- **datapoint** (*str*) – Name of the data point to add
- **include_thresholds** (*bool*) – Set to True to include the related thresholds for the data point

Returns

Return type dict

delete ()

Delete the graph.

Returns

Return type dict

delete_point (*datapoint*)

Deletes a data point from a graph.

Parameters **datapoint** (*str*) – Name of the data point to remove

Returns

Return type dict

get_points ()

Gets the data points of a graph.

Returns

Return type list([ZenossDataPoint](#))

list_points ()

Returns the data points of a graph as a list.

Returns

Return type list(str)

set_graph_properties (*properties*)

Set the properties for a graph.

Parameters **properties** (*dict*) – Properties and values to set

Returns

Return type dict

set_point_sequence (*datapoints*)

Sets the order of data points in a graph.

Parameters **datapoints** (*list*) – List of data point names in the desired order

Returns

Return type dict

set_zero_baseline ()

Set the minimum value of a graph display to zero. By default Zenoss graph scale is dynamic, meaning the display can be skewed because the minimum value isn't fixed.

class zenossapi.routers.template.ZenossTemplate (*url*, *headers*, *ssl_verify*, *template_data*)

Bases: *zenossapi.routers.template.TemplateRouter*

Class for Zenoss Template objects

add_data_source (*datasource*, *type*)

Adds a data source to a template.

Parameters

- **datasource** (*str*) – Name of the new data source
- **type** (*str*) – Type of the new data source, must be one of the types returned by `get_data_source_types()`

Returns

Return type *ZenossDataSource*

add_graph (*graph*)

Add a new graph to a template.

Parameters **graph** (*str*) – Name for the new graph

Returns

Return type *ZenossGraph*

add_threshold (*threshold*, *threshold_type*, *datapoints*)

Adds a threshold to a template.

Parameters

- **threshold** (*str*) – Name of the new threshold
- **threshold_type** (*str*) – Type of the new threshold, must be one of the types returned by `get_threshold_types()`
- **datapoints** (*list*) – List of datapoints to select for the threshold

Returns

Return type *ZenossThreshold*

copy (*target*)

Copy a template to another device or device class.

Parameters **target** (*str*) – Uid of the device or device class to copy to

Returns

Return type *ZenossTemplate*

delete ()

Removes a template.

Returns

Return type dict

delete_data_source (*datasource*)

Deletes a data source from a template.

Parameters **datasource** (*str*) – Name the data source to remove

Returns

Return type dict

delete_graph (*graph*)

Delete a particular graph.

Parameters **graph** (*str*) – The name of the graph to delete.

Returns

Return type dict

delete_threshold (*threshold*)

Deletes a threshold.

Parameters **threshold** (*str*) – Name of the threshold to remove

Returns

Return type dict

get_data_points ()

Get all the data points in a template.

Returns

Return type list(*ZenossDataPoint*)

get_data_source (*datasource*)

Get a particular data source.

Parameters **datasource** (*str*) – Name of the data source to get

Returns

Return type *ZenossDataSource*

get_data_sources ()

Gets data sources configured for a template.

Returns

Return type list(*ZenossDataSource*)

get_graph (*graph*)

Get a particular graph.

Parameters **graph** (*str*) – Name of the graph to get the definition of

Returns

Return type *ZenossGraph*

get_graphs ()

Get the graphs defined for a template.

Returns

Return type list(*ZenossGraph*)

get_threshold (*threshold*)

Get a particular threshold.

Parameters **threshold** (*str*) – Name of the threshold to get details on

Returns

Return type *ZenossThreshold*

get_thresholds ()

Gets the thresholds of a template.

Returns**Return type** list(ZenossThresholds)**list_data_points()**

Returns all the data points in a template as a list.

Returns**Return type** list(str)**list_data_sources()**

Returns data sources configured for a template as a list.

Returns**Return type** list(str)**list_graphs()**

Returns the graphs defined for a template as a list.

Returns**Return type** list(str)**list_thresholds()**

Returns the thresholds of a template as a list.

Returns**Return type** list(str)**class** zenossapi.routers.template.ZenossThreshold(*url*, *headers*, *ssl_verify*, *threshold_data*)Bases: *zenossapi.routers.template.TemplateRouter*

Class for Zenoss thresholds

delete()

Deletes a threshold.

Returns**Return type** dict**set_max(maxval)**

Sets the threshold value for a MinMaxThreshold checking the max value of a data point.

Parameters **maxval** (*str*) – Maximum value for the data point before alerting**Returns****Return type** bool**set_min(minval)**

Sets the threshold value for a MinMaxThreshold checking the minimum value of a data point.

Parameters **minval** (*str*) – Minimum value for the data point before alerting**Returns****Return type** bool

CHAPTER 3

Indices and tables

- `genindex`
- `modindex`
- `search`

Z

- `zenossapi.apiclient`, 3
- `zenossapi.routers`, 5
 - `zenossapi.routers.device`, 5
 - `zenossapi.routers.devicemanagement`, 17
 - `zenossapi.routers.events`, 22
 - `zenossapi.routers.jobs`, 24
 - `zenossapi.routers.monitor`, 26
 - `zenossapi.routers.properties`, 27
 - `zenossapi.routers.template`, 31

A

- abort() (zenossapi.routers.jobs.ZenossJob method), 26
 - ack() (zenossapi.routers.events.ZenossEvent method), 24
 - add_admin() (zenossapi.routers.devicemanagement.DeviceManagementRouter method), 17
 - add_collector() (zenossapi.routers.monitor.ZenossHub method), 27
 - add_data_point() (zenossapi.routers.template.ZenossDataSource method), 34
 - add_data_point_to_graph() (zenossapi.routers.template.TemplateRouter method), 31
 - add_data_source() (zenossapi.routers.template.ZenossTemplate method), 36
 - add_device() (zenossapi.routers.device.ZenossDeviceClass method), 13
 - add_event() (zenossapi.routers.events.EventsRouter method), 22
 - add_graph() (zenossapi.routers.template.ZenossTemplate method), 36
 - add_graph_threshold() (zenossapi.routers.template.ZenossGraph method), 34
 - add_local_template() (zenossapi.routers.device.ZenossDevice method), 7
 - add_local_template() (zenossapi.routers.template.TemplateRouter method), 31
 - add_maintenance_window() (zenossapi.routers.devicemanagement.DeviceManagementRouter method), 17
 - add_point() (zenossapi.routers.template.ZenossGraph method), 34
 - add_subclass() (zenossapi.routers.device.ZenossDeviceClass method), 14
 - add_template() (zenossapi.routers.template.TemplateRouter method), 31
 - add_threshold() (zenossapi.routers.template.ZenossTemplate method), 36
 - add_to_graph() (zenossapi.routers.template.ZenossDataPoint method), 33
 - add_user_command() (zenossapi.routers.devicemanagement.DeviceManagementRouter method), 18
- ## B
- bind_or_unbind_template() (zenossapi.routers.device.ZenossDevice method), 7
- ## C
- clear_heartbeat() (zenossapi.routers.events.EventsRouter method), 23
 - clear_heartbeats() (zenossapi.routers.events.EventsRouter method), 23
 - Client (class in zenossapi.apiclient), 3
 - close() (zenossapi.routers.events.ZenossEvent method), 24
 - copy() (zenossapi.routers.template.ZenossTemplate method), 36
- ## D
- delete() (zenossapi.routers.device.ZenossComponent method), 6
 - delete() (zenossapi.routers.device.ZenossDevice method), 7
 - delete() (zenossapi.routers.devicemanagement.ZenossDeviceManagementRouter method), 20
 - delete() (zenossapi.routers.devicemanagement.ZenossMaintenanceWindow method), 21

[delete\(\)](#) (zenossapi.routers.devicemanagement.ZenossUserCommand method), 22
[delete\(\)](#) (zenossapi.routers.jobs.ZenossJob method), 26
[delete\(\)](#) (zenossapi.routers.properties.ZenossCustomProperty method), 30
[delete\(\)](#) (zenossapi.routers.properties.ZenossProperty method), 30
[delete\(\)](#) (zenossapi.routers.template.ZenossDataPoint method), 33
[delete\(\)](#) (zenossapi.routers.template.ZenossDataSource method), 34
[delete\(\)](#) (zenossapi.routers.template.ZenossGraph method), 35
[delete\(\)](#) (zenossapi.routers.template.ZenossTemplate method), 36
[delete\(\)](#) (zenossapi.routers.template.ZenossThreshold method), 38
[delete_data_point\(\)](#) (zenossapi.routers.template.ZenossDataSource method), 34
[delete_data_source\(\)](#) (zenossapi.routers.template.ZenossTemplate method), 36
[delete_graph\(\)](#) (zenossapi.routers.template.ZenossTemplate method), 37
[delete_local_template\(\)](#) (zenossapi.routers.device.ZenossDevice method), 7
[delete_local_template\(\)](#) (zenossapi.routers.template.TemplateRouter method), 31
[delete_point\(\)](#) (zenossapi.routers.template.ZenossGraph method), 35
[delete_property\(\)](#) (zenossapi.routers.device.ZenossDevice method), 7
[delete_property\(\)](#) (zenossapi.routers.device.ZenossDeviceClass method), 14
[delete_property\(\)](#) (zenossapi.routers.properties.PropertiesRouter method), 27
[delete_template\(\)](#) (zenossapi.routers.template.TemplateRouter method), 31
[delete_threshold\(\)](#) (zenossapi.routers.template.ZenossTemplate method), 37
[DeviceManagementRouter](#) (class in zenossapi.routers.devicemanagement), 17
[DeviceRouter](#) (class in zenossapi.routers.device), 5
[disable\(\)](#) (zenossapi.routers.devicemanagement.ZenossMaintenanceWindow method), 21
[enable\(\)](#) (zenossapi.routers.devicemanagement.ZenossMaintenanceWindow method), 21
[EventsRouter](#) (class in zenossapi.routers.events), 22

G

[get_active_templates\(\)](#) (zenossapi.routers.device.ZenossDevice method), 7
[get_admin_by_id\(\)](#) (zenossapi.routers.devicemanagement.DeviceManagementRouter method), 18
[get_admin_by_name\(\)](#) (zenossapi.routers.devicemanagement.DeviceManagementRouter method), 18
[get_admins\(\)](#) (zenossapi.routers.devicemanagement.DeviceManagementRouter method), 18
[get_admins_by_role\(\)](#) (zenossapi.routers.devicemanagement.DeviceManagementRouter method), 18
[get_all_templates\(\)](#) (zenossapi.routers.template.TemplateRouter method), 32
[get_bound_templates\(\)](#) (zenossapi.routers.device.ZenossDevice method), 8
[get_collector\(\)](#) (zenossapi.routers.monitor.ZenossHub method), 27
[get_collectors\(\)](#) (zenossapi.routers.monitor.ZenossHub method), 27
[get_component\(\)](#) (zenossapi.routers.device.ZenossDevice method), 8
[get_components\(\)](#) (zenossapi.routers.device.ZenossDevice method), 8
[get_config\(\)](#) (zenossapi.routers.events.EventsRouter method), 23
[get_custom_properties\(\)](#) (zenossapi.routers.device.ZenossDevice method), 8
[get_custom_properties\(\)](#) (zenossapi.routers.device.ZenossDeviceClass method), 14
[get_custom_properties\(\)](#) (zenossapi.routers.properties.PropertiesRouter method), 28
[get_custom_property\(\)](#) (zenossapi.routers.device.ZenossDevice method), 8
[get_custom_property\(\)](#) (zenossapi.routers.device.ZenossDeviceClass method), 15

get_custom_property()	(zenoss-api.routers.properties.PropertiesRouter method), 28	get_maintenance_windows()	(zenoss-api.routers.devicemanagement.DeviceManagementRouter method), 19
get_data_point()	(zenoss-api.routers.template.ZenossDataSource method), 34	get_object_templates()	(zenoss-api.routers.template.TemplateRouter method), 32
get_data_points()	(zenoss-api.routers.template.ZenossDataSource method), 34	get_open_events()	(zenoss-api.routers.events.EventsRouter method), 23
get_data_points()	(zenoss-api.routers.template.ZenossTemplate method), 37	get_open_production_events()	(zenoss-api.routers.events.EventsRouter method), 23
get_data_source()	(zenoss-api.routers.template.ZenossTemplate method), 37	get_overridable_templates()	(zenoss-api.routers.device.ZenossDevice method), 9
get_data_source_types()	(zenoss-api.routers.template.TemplateRouter method), 32	get_points()	(zenossapi.routers.template.ZenossGraph method), 35
get_data_sources()	(zenoss-api.routers.template.ZenossTemplate method), 37	get_properties()	(zenossapi.routers.device.ZenossDevice method), 9
get_device()	(zenossapi.routers.device.ZenossDeviceClass method), 15	get_properties()	(zenoss-api.routers.device.ZenossDeviceClass method), 15
get_device_class()	(zenoss-api.routers.device.DeviceRouter method), 5	get_properties()	(zenoss-api.routers.properties.PropertiesRouter method), 28
get_device_class_templates()	(zenoss-api.routers.template.TemplateRouter method), 32	get_property()	(zenossapi.routers.device.ZenossDevice method), 9
get_devices()	(zenossapi.routers.device.ZenossDeviceClass method), 15	get_property()	(zenoss-api.routers.device.ZenossDeviceClass method), 15
get_event_by_evid()	(zenoss-api.routers.events.EventsRouter method), 23	get_property()	(zenoss-api.routers.properties.PropertiesRouter method), 29
get_graph()	(zenossapi.routers.template.ZenossTemplate method), 37	get_router()	(zenossapi.apiclient.Client method), 3
get_graphs()	(zenossapi.routers.template.ZenossTemplate method), 37	get_router_methods()	(zenossapi.apiclient.Client method), 3
get_hub()	(zenossapi.routers.monitor.MonitorRouter method), 26	get_routers()	(zenossapi.apiclient.Client method), 3
get_hubs()	(zenossapi.routers.monitor.MonitorRouter method), 26	get_template()	(zenoss-api.routers.template.TemplateRouter method), 32
get_job()	(zenossapi.routers.jobs.JobsRouter method), 25	get_threshold()	(zenoss-api.routers.template.ZenossTemplate method), 37
get_jobs()	(zenossapi.routers.jobs.JobsRouter method), 25	get_threshold_types()	(zenoss-api.routers.template.TemplateRouter method), 32
get_local_properties()	(zenoss-api.routers.properties.PropertiesRouter method), 28	get_thresholds()	(zenoss-api.routers.template.ZenossTemplate method), 37
get_local_templates()	(zenoss-api.routers.device.ZenossDevice method), 8	get_tree()	(zenossapi.routers.device.DeviceRouter method), 5
get_log()	(zenossapi.routers.jobs.ZenossJob method), 26	get_unbound_templates()	(zenoss-api.routers.device.ZenossDevice method),
get_maintenance_window()	(zenoss-api.routers.devicemanagement.DeviceManagementRouter		

9
get_user_command_by_id() (zenoss-
api.routers.devicemanagement.DeviceManagementRouter 38
method), 19
get_user_command_by_name() (zenoss-
api.routers.devicemanagement.DeviceManagementRouter 38
method), 19
get_user_commands() (zenoss-
api.routers.devicemanagement.DeviceManagementRouter 32
method), 19

J
JobsRouter (class in zenossapi.routers.jobs), 24

L
list_active_templates() (zenoss-
api.routers.device.ZenossDevice 9
method), 9
list_admin_roles() (zenoss-
api.routers.devicemanagement.DeviceManagementRouter 19
method), 19
list_admins_by_role() (zenoss-
api.routers.devicemanagement.DeviceManagementRouter 19
method), 19
list_all_templates() (zenoss-
api.routers.template.TemplateRouter 32
method), 32
list_available_roles() (zenoss-
api.routers.devicemanagement.DeviceManagementRouter 20
method), 20
list_bound_templates() (zenoss-
api.routers.device.ZenossDevice 9
method), 9
list_collectors() (zenossapi.routers.device.DeviceRouter
method), 5
list_collectors() (zenoss-
api.routers.monitor.MonitorRouter 26
method), 26
list_components() (zenoss-
api.routers.device.ZenossDevice 9
method), 9
list_custom_properties() (zenoss-
api.routers.device.ZenossDevice 10
method), 10
list_custom_properties() (zenoss-
api.routers.device.ZenossDeviceClass 16
method), 16
list_custom_properties() (zenoss-
api.routers.properties.PropertiesRouter
method), 29
list_data_points() (zenoss-
api.routers.template.ZenossDataSource
method), 34
list_data_points() (zenoss-
api.routers.template.ZenossTemplate
method), 38
list_data_sources() (zenoss-
api.routers.template.ZenossTemplate
method), 38
list_device_class_templates() (zenoss-
api.routers.template.TemplateRouter
method), 32
list_device_classes() (zenoss-
api.routers.device.DeviceRouter
method), 6
list_devices() (zenossapi.routers.device.ZenossDeviceClass
method), 16
list_graphs() (zenossapi.routers.template.ZenossTemplate
method), 38
list_groups() (zenossapi.routers.device.DeviceRouter
method), 6
list_hubs() (zenossapi.routers.monitor.MonitorRouter
method), 26
list_jobs() (zenossapi.routers.jobs.JobsRouter
method), 25
list_local_properties() (zenoss-
api.routers.device.ZenossDevice 10
method), 10
list_local_properties() (zenoss-
api.routers.device.ZenossDeviceClass
method), 16
list_local_properties() (zenoss-
api.routers.properties.PropertiesRouter
method), 29
list_local_templates() (zenoss-
api.routers.device.ZenossDevice 10
method), 10
list_locations() (zenossapi.routers.device.DeviceRouter
method), 6
list_maintenance_windows() (zenoss-
api.routers.devicemanagement.DeviceManagementRouter
method), 20
list_open_events() (zenoss-
api.routers.events.EventsRouter
method), 24
list_open_production_events() (zenoss-
api.routers.events.EventsRouter
method), 24
list_overridable_templates() (zenoss-
api.routers.device.ZenossDevice 10
method), 10
list_points() (zenossapi.routers.template.ZenossGraph
method), 35
list_properties() (zenossapi.routers.device.ZenossDevice
method), 11
list_properties() (zenoss-
api.routers.device.ZenossDeviceClass
method), 11

list_properties() (zenoss-api.routers.properties.PropertiesRouter method), 29	remodel() (zenossapi.routers.device.ZenossDevice method), 12
list_systems() (zenossapi.routers.device.DeviceRouter method), 6	reopen() (zenossapi.routers.events.ZenossEvent method), 24
list_thresholds() (zenoss-api.routers.template.ZenossTemplate method), 38	reset_bound_templates() (zenoss-api.routers.device.ZenossDevice method), 12
list_unbound_templates() (zenoss-api.routers.device.ZenossDevice method), 11	reset_ip_address() (zenoss-api.routers.device.ZenossDevice method), 12
list_user_commands() (zenoss-api.routers.device.ZenossDevice method), 11	S
list_user_commands() (zenoss-api.routers.devicemanagement.DeviceManagementRouter method), 20	set_bound_templates() (zenoss-api.routers.device.ZenossDevice method), 12
list_users() (zenossapi.routers.devicemanagement.DeviceManagementRouter method), 20	set_collector() (zenossapi.routers.device.ZenossDevice method), 12
lock() (zenossapi.routers.device.ZenossComponent method), 6	set_graph_properties() (zenoss-api.routers.template.ZenossGraph method), 35
lock() (zenossapi.routers.device.ZenossDevice method), 11	set_max() (zenossapi.routers.template.ZenossThreshold method), 38
lock_for_deletion() (zenoss-api.routers.device.ZenossComponent method), 6	set_min() (zenossapi.routers.template.ZenossThreshold method), 38
lock_for_deletion() (zenoss-api.routers.device.ZenossDevice method), 12	set_monitored() (zenoss-api.routers.device.ZenossComponent method), 7
lock_for_updates() (zenoss-api.routers.device.ZenossComponent method), 6	set_point_sequence() (zenoss-api.routers.template.ZenossGraph method), 35
lock_for_updates() (zenoss-api.routers.device.ZenossDevice method), 12	set_priority() (zenossapi.routers.device.ZenossDevice method), 12
M	set_production_state() (zenoss-api.routers.device.ZenossDevice method), 13
make_counter() (zenoss-api.routers.template.ZenossDataPoint method), 33	set_properties() (zenoss-api.routers.template.TemplateRouter method), 33
make_gauge() (zenossapi.routers.template.ZenossDataPoint method), 33	set_property() (zenossapi.routers.device.ZenossDevice method), 13
MonitorRouter (class in zenossapi.routers.monitor), 26	set_property() (zenossapi.routers.device.ZenossDeviceClass method), 17
move() (zenossapi.routers.device.ZenossDevice method), 12	set_property_value() (zenoss-api.routers.properties.PropertiesRouter method), 30
P	set_threshold() (zenoss-api.routers.template.ZenossDataPoint method), 33
PropertiesRouter (class in zenossapi.routers.properties), 27	set_value() (zenossapi.routers.properties.ZenossCustomProperty method), 30
R	set_value() (zenossapi.routers.properties.ZenossProperty method), 30
reidentify() (zenossapi.routers.device.ZenossDevice method), 12	set_zero_baseline() (zenoss-api.routers.template.ZenossGraph method),

T

TemplateRouter (class in zenossapi.routers.template), 31
timezone() (zenossapi.routers.devicemanagement.DeviceManagementRouter
method), 20
tree() (zenossapi.routers.monitor.MonitorRouter
method), 27

U

update() (zenossapi.routers.devicemanagement.ZenossDeviceManagementAdmin
method), 21
update() (zenossapi.routers.devicemanagement.ZenossMaintenanceWindow
method), 21
update() (zenossapi.routers.devicemanagement.ZenossUserCommand
method), 22
update_config() (zenossapi.routers.events.EventsRouter
method), 24
update_log() (zenossapi.routers.events.ZenossEvent
method), 24

Z

zenossapi.apiclient (module), 3
zenossapi.routers (module), 5
zenossapi.routers.device (module), 5
zenossapi.routers.devicemanagement (module), 17
zenossapi.routers.events (module), 22
zenossapi.routers.jobs (module), 24
zenossapi.routers.monitor (module), 26
zenossapi.routers.properties (module), 27
zenossapi.routers.template (module), 31
ZenossAPIClientAuthenticationError, 3
ZenossAPIClientError, 3
ZenossCollector (class in zenossapi.routers.monitor), 27
ZenossComponent (class in zenossapi.routers.device), 6
ZenossCustomProperty (class in zenoss-
api.routers.properties), 30
ZenossDataPoint (class in zenossapi.routers.template), 33
ZenossDataSource (class in zenossapi.routers.template),
33
ZenossDevice (class in zenossapi.routers.device), 7
ZenossDeviceClass (class in zenossapi.routers.device), 13
ZenossDeviceManagementAdmin (class in zenoss-
api.routers.devicemanagement), 20
ZenossEvent (class in zenossapi.routers.events), 24
ZenossGraph (class in zenossapi.routers.template), 34
ZenossHub (class in zenossapi.routers.monitor), 27
ZenossJob (class in zenossapi.routers.jobs), 25
ZenossMaintenanceWindow (class in zenoss-
api.routers.devicemanagement), 21
ZenossProperty (class in zenossapi.routers.properties), 30
ZenossRouter (class in zenossapi.routers), 5
ZenossTemplate (class in zenossapi.routers.template), 35
ZenossThreshold (class in zenossapi.routers.template), 38