

API Documentation

API Server

<https://ec2-18-118-111-93.us-east-2.compute.amazonaws.com/api/>

Add New Equipment

This endpoint adds a new piece of equipment to the database. It requires a valid and active device ID (`did`), a valid and active manufacturer ID (`mid`), and a unique serial number (`sn`). The endpoint validates that the provided `did` and `mid` exist in their respective tables and are marked as 'active'. It also ensures the serial number does not already exist in the database to prevent duplicates.

Endpoint URI: `/api/add_equipment`

Example: `/api/add_equipment?did=1&mid=1&sn=SN-XYZ12345`

Parameters

Parameter	Description
<code>did</code>	Required. Unsigned integer value. The id number for the device type. Must be a valid and active <code>did</code> that exist in the database.
<code>mid</code>	Required. Unsigned integer value. The id number for the manufacturer. Must be a valid and active <code>mid</code> that exist in the database.

Parameter	Description
sn	Required. The unique alpha-numeric serial number of the equipment. Must be in the format SN- followed by 1 to 64 alphanumeric characters.

Responses

SUCCESS: Equipment successfully added to database.

Condition	Response
Valid did, mid, sn	<pre>{"Status": "Success", "MSG": "Equipment successfully added to database", "Action": "None"}</pre>

ERROR: There was a problem with the request.

Condition	Response
Null did	<pre>{"Status": "ERROR", "MSG": "Missing device id", "Action": "query_device"}</pre>
Null mid	<pre>{"Status": "ERROR", "MSG": "Missing manufacturer id", "Action": "query_manufacturer"}</pre>
Null sn	<pre>{"Status": "ERROR", "MSG": "Missing serial</pre>

Condition	Response
	<code>number", "Action": "none"}</code>
Invalid did	<code>{"Status": "ERROR", "MSG": "Invalid device id", "Action": "none"}</code>
Invalid mid	<code>{"Status": "ERROR", "MSG": "Invalid manufacturer id", "Action": "none"}</code>
Invalid sn	<code>{"Status": "ERROR", "MSG": "Invalid serial number", "Action": "none"}</code>
No device match	<code>{"Status": "ERROR", "MSG": "Device does not exist in database", "Action": "add_device"}</code>
Inactive device	<code>{"Status": "ERROR", "MSG": "Device status inactive", "Action": "modify_device"}</code>
No manufacturer match	<code>{"Status": "ERROR", "MSG": "Manufacturer does not exist in database", "Action": "add_manufacturer"}</code>

Condition	Response
Inactive manufacturer	<pre>{"Status": "ERROR", "MSG": "Manufacturer status inactive", "Action": "modify_manufacturer"}</pre>
Duplicate serial number	<pre>{"Status": "ERROR", "MSG": "Serial number exists in database", "Action": "query_equipment"}</pre>
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

Add New Device

This endpoint creates a new device type in the database. It requires a unique device name (`dname`) as a parameter. The name must be between 1 and 64 alphanumeric characters and can include spaces. The endpoint will return an error if the device name is missing, invalid, or already exists in the database. Upon success, the new device is created with an 'active' status.

Endpoint URI: `/api/add_device`

Example: `/api/add_device?dname=Cisco%20Router%204300`

Parameters

Parameter	Description
dname	Required. The unique alpha-numeric name for the device type. Must be under 64 characters. Can include spaces (url encoded).

Responses

SUCCESS: Device successfully added to the database.

Condition	Response
Valid dname	<pre>{"Status": "Success", "MSG": "Device successfully added to database", "Action": "None"}</pre>

ERROR: There was a problem with the request.

Condition	Response
Null dname	<pre>{"Status": "ERROR", "MSG": "Missing device name", "Action": "None"}</pre>
Invalid dname	<pre>{"Status": "ERROR", "MSG": "Invalid device name", "Action": "None"}</pre>

Condition	Response
Duplicate dname	<pre>{"Status": "ERROR", "MSG": "Device already exists in database", "Action": "None"}</pre>
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

Add New Manufacturer

This endpoint creates a new manufacturer in the database. It requires a unique manufacturer name (`mname`) as a parameter. The name must be between 1 and 64 alphanumeric characters and can include spaces. The endpoint will return an error if the name is missing, invalid, or already exists in the database. Upon success, the new manufacturer is created with an 'active' status.

Endpoint URI: `:/api/add_manufacturer`

Example: `/api/add_manufacturer?mname=Hewlett%20Packard`

Parameters

Parameter	Description
<code>mname</code>	Required. The unique alpha-numeric name for the manufacturer. Must be under 64 characters. Can include spaces (url encoded).

Responses

SUCCESS: Manufacturer successfully added to the database.

Condition	Response
Valid dname	<code>{"Status": "Success", "MSG": "Manufacturer successfully added to database", "Action": "None"}</code>

ERROR: There was a problem with the request.

Condition	Response
Null mname	<code>{"Status": "ERROR", "MSG": "Missing manufacturer name", "Action": "None"}</code>
Invalid mname	<code>{"Status": "ERROR", "MSG": "Invalid manufacturer name", "Action": "None"}</code>
Duplicate mname	<code>{"Status": "ERROR", "MSG": "Manufacturer already exists in database", "Action": "None"}</code>

Condition	Response
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

Search Equipment

This endpoint searches for equipment based on various criteria. At least one of the following parameters must be provided: `dname` , `mname` , or `sn` . The search performs a "wildcard" match, so partial values are acceptable. By default, it returns only active equipment, but this can be overridden by setting the `inactive` parameter to 'y'.

Endpoint URI: `/api/search_equipment`

Example: `/api/search_equipment?dname=Router`

`/api/search_equipment?mname=Cisco&inactive=y`

`/api/search_equipment?dname=Switch&mname=HP&sn=A1B2`

Parameters

Parameter	Description
<code>dname</code>	Required/Optional. The unique alpha-numeric name for the device type. Must be under 64 characters. Can be partial or complete.
<code>mname</code>	Required/Optional. The unique alpha-numeric name for the

Parameter	Description
	manufacturer. Must be under 64 characters. Can be partial or complete.
sn	Required/Optional. The unique alpha-numeric serial number of the equipment. Must be under 128 characters. Can be partial or complete.
inactive	Optional. Should the search include equipment that are flagged as "Inactive"? Can either be "y" or "n". Default value is "n" if omitted.

Responses

SUCCESS: Returns a list of equipment objects matching the criteria.

Condition	Response
Valid dname	<pre>{"Status": "Success", "MSG": "{equipment objects}", "Action": "None"}</pre>

ERROR: There was a problem with the request.

Condition	Response
Null dname, mname, sn	<pre>{"Status": "ERROR", "MSG": "Missing search parameters", "Action": "None"}</pre>

Condition	Response
Invalid dname	<pre>{"Status": "ERROR", "MSG": "Invalid device name format", "Action": "None"}</pre>
Invalid mname	<pre>{"Status": "ERROR", "MSG": "Invalid manufacturer name format", "Action": "None"}</pre>
Invalid sn	<pre>{"Status": "ERROR", "MSG": "Invalid serial number format", "Action": "none"}</pre>
No match	<pre>{"Status": "ERROR", "MSG": "There are no equipment matching the search parameters", "Action": "none"}</pre>
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

View Equipment

This endpoint retrieves a single piece of equipment from the database by its unique equipment ID (`eid`). It requires the `eid` as a parameter and will return an

error if the ID is missing, not a number, or does not exist in the database.

Endpoint URI: `/api/view_equipment`

Example: `/api/view_equipment?eid=123`

Parameters

Parameter	Description
eid	Required. Unsigned integer value. The id number for the equipment. Must be a valid <code>eid</code> that exist in the database.

Responses

SUCCESS: Returns a single equipment object.

Condition	Response
Valid dname	<pre>{"Status": "Success", "MSG": "{equipment object}", "Action": "None"}</pre>

ERROR: There was a problem with the request.

Condition	Response
Null eid	<pre>{"Status": "ERROR", "MSG": "Missing equipment id", "Action": "None"}</pre>

Condition	Response
Invalid eid	<pre>{"Status": "ERROR", "MSG": "Invalid equipment id", "Action": "None"}</pre>
No match	<pre>{"Status": "ERROR", "MSG": "Equipment with this id does not exist in database", "Action": "None"}</pre>
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

Modify Equipment

This endpoint modifies an existing piece of equipment identified by a required equipment ID (`eid`). At least one optional parameter (`did` , `mid` , `sn` , `status`) must be provided to update. The endpoint validates all provided IDs to ensure they exist and checks that any new serial number (`sn`) is not a duplicate. The new status must be either 'active' or 'inactive'.

Endpoint URI: `/api/modify_equipment`

Example: `/api/modify_equipment?eid=123&status=inactive`

`/api/modify_equipment?eid=123&mid=5&sn=SN-NEWSERIAL123`

Parameters

Parameter	Description
eid	Required. Unsigned integer value. The id number for the equipment. Must be a valid <code>eid</code> that exist in the database.
did	Optional. Unsigned integer value. The <i>NEW</i> id number for the device type. Must be a valid <code>did</code> that exist in the database.
mid	Optional. Unsigned integer value. The <i>NEW</i> id number for the manufacturer. Must be a valid <code>mid</code> that exist in the database.
sn	Optional. The <i>NEW</i> unique alpha-numeric serial number of the equipment. Must be under 128 characters.
status	Optional. The <i>NEW</i> status of the equipment. Can be either "active" or "inactive".

Responses

SUCCESS: Equipment successfully modified in the database.

Condition	Response
Valid dname	<pre>{"Status": "Success", "MSG": "Equipment successfully modified in the database", "Action": "None"}</pre>

ERROR: There was a problem with the request.

Condition	Response
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Condition	Response
Null eid	<pre>{"Status": "ERROR", "MSG": "Missing equipment id", "Action": "query_equipment"}</pre>
Invalid eid	<pre>{"Status": "ERROR", "MSG": "Invalid equipment id", "Action": "None"}</pre>
No match	<pre>{"Status": "ERROR", "MSG": "Equipment with this id does not exist in database", "Action": "query_equipment"}</pre>
Null did, mid, sn, status	<pre>{"Status": "ERROR", "MSG": "Missing new equipment information", "Action": "None"}</pre>
Invalid did	<pre>{"Status": "ERROR", "MSG": "Invalid device id", "Action": "none"}</pre>
No match device	<pre>{"Status": "ERROR", "MSG": "Device with this id does not exist in database", "Action": "query_device"}</pre>
Invalid mid	<pre>{"Status": "ERROR", "MSG": "Invalid manufacturer</pre>

Condition	Response
	<code>id", "Action": "none"}</code>
No match manufacturer	<code>{"Status": "ERROR", "MSG": "Manufacturer with this id does not exist in database", "Action": "query_manufacturer"}</code>
Invalid sn	<code>{"Status": "ERROR", "MSG": "Invalid serial number", "Action": "none"}</code>
Duplicate sn	<code>{"Status": "ERROR", "MSG": "Serial number exists in database", "Action": "query_equipment"}</code>
Invalid status	<code>{"Status": "ERROR", "MSG": "Invalid status", "Action": "None"}</code>
Default	<code>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</code>

Modify Device

This endpoint modifies an existing device type identified by a required device ID (`did`). You must provide at least one optional parameter to update: a new device name (`dname`) or a new status (`status`). The endpoint validates that the provided `did` exists and ensures the new `dname` , if provided, is not already in use by another device. The new status must be either 'active' or 'inactive'.

Endpoint URI: `/api/modify_device`

Example: `/api/modify_device?did=45&dname=Cisco%20ISR%204321`

`/api/modify_device?did=45&status=inactive`

Parameters

Parameter	Description
<code>did</code>	Required. Unsigned integer value. The id number for the device type. Must be a valid <code>did</code> that exist in the database.
<code>dname</code>	Optional. The <i>NEW</i> unique alpha-numeric name for the device type. Must be under 64 characters.
<code>status</code>	Optional. The <i>NEW</i> status of the equipment. Can be either "active" or "inactive".

Responses

SUCCESS: Device successfully modified.

Condition	Response
Valid <code>dname</code>	<code>{"Status": "Success", "MSG": "Device successfully modified", "Action": "None"}</code>

ERROR: There was a problem with the request.

Condition	Response
Null did	<pre>{"Status": "ERROR", "MSG": "Missing device id", "Action": "query_device"}</pre>
Invalid did	<pre>{"Status": "ERROR", "MSG": "Invalid device id", "Action": "none"}</pre>
Null dname, status	<pre>{"Status": "ERROR", "MSG": "Missing new device information", "Action": "none"}</pre>
Invalid dname	<pre>{"Status": "ERROR", "MSG": "Invalid device name", "Action": "none"}</pre>
Invalid status	<pre>{"Status": "ERROR", "MSG": "Invalid status", "Action": "none"}</pre>
Duplicate dname	<pre>{"Status": "ERROR", "MSG": "Device with this name already exist in database", "Action": "query_device"}</pre>

Condition	Response
No match device	<pre>{"Status": "ERROR", "MSG": "Device with this id does not exist in database", "Action": "query_device"}</pre>
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

Modify Manufacturer

This endpoint modifies an existing manufacturer identified by a required manufacturer ID (`mid`). Provide at least one of the two optional parameter to update: a new manufacturer name (`mname`) or a new status (`status`). The endpoint validates that the provided `mid` exists and ensures the new `mname` , if provided, is not already in use by another manufacturer. The new status must be either 'active' or 'inactive'.

Endpoint URI: `/api/modify_manufacturer`

Example: `/api/modify_manufacturer?mid=12&mname=Cisco%20Systems%20Inc`

`/api/modify_manufacturer?mid=12&status=inactive`

Parameters

Parameter	Description
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Parameter	Description
mid	Required. Unsigned integer value. The id number for the manufacturer. Must be a valid mid that exist in the database.
mname	Optional. The <i>NEW</i> unique alpha-numeric name for the manufacturer. Must be under 64 characters.
status	Optional. The <i>NEW</i> status of the manufacturer. Can be either "active" or "inactive".

Responses

SUCCESS: Manufacturer successfully modified.

Condition	Response
Valid dname	<pre>{"Status": "Success", "MSG": "Manufacturer successfully modified", "Action": "None"}</pre>

ERROR: There was a problem with the request.

Condition	Response
Null mid	<pre>{"Status": "ERROR", "MSG": "Missing manufacturer id", "Action": "query_manufacturer"}</pre>
Invalid mid	<pre>{"Status": "ERROR", "MSG": "Invalid manufacturer</pre>

Condition	Response
	<code>id", "Action": "none"}</code>
Invalid mname	<code>{"Status": "ERROR", "MSG": "Invalid manufacturer name", "Action": "none"}</code>
Invalid status	<code>{"Status": "ERROR", "MSG": "Invalid status", "Action": "none"}</code>
Duplicate mname	<code>{"Status": "ERROR", "MSG": "Manufacturer with this name already exist in database", "Action": "query_manufacturer"}</code>
No match manufacturer	<code>{"Status": "ERROR", "MSG": "Manufacturer with this id does not exist in database", "Action": "query_manufacturer"}</code>
Default	<code>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</code>

View Device

This endpoint retrieves a single device type from the database using its unique device ID (`did`). It requires the `did` as a parameter and will return an error if the ID is missing, not a number, or does not exist in the database.

Endpoint URI: `/api/view_device`

Example: `/api/view_device?did=45`

Parameters

Parameter	Description
<code>did</code>	Required. Unsigned integer value. The id number for the device type. Must be a valid <code>did</code> that exist in the database.

Responses

SUCCESS: Returns a single device object.

Condition	Response
Valid dname	<code>{"Status": "Success", "MSG": "{Device Object}", "Action": "None"}</code>

ERROR: There was a problem with the request.

Condition	Response
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Condition	Response
Null did	<pre>{"Status": "ERROR", "MSG": "Missing device id", "Action": "query_device"}</pre>
Invalid did	<pre>{"Status": "ERROR", "MSG": "Invalid device id", "Action": "none"}</pre>
No match device	<pre>{"Status": "ERROR", "MSG": "Device with this id does not exist in database", "Action": "query_device"}</pre>
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

View Manufacturer

This endpoint retrieves a single manufacturer from the database using its unique manufacturer ID (`mid`). It requires the `mid` as a parameter and will return an error if the ID is missing, not a number, or does not exist in the database.

Endpoint URI: `/api/view_manufacturer`

Example: `/api/view_manufacturer?mid=12`

Parameters

Parameter	Description
mid	Required. Unsigned integer value. The id number for the manufacturer. Must be a valid mid that exist in the database.

Responses

SUCCESS: Returns a single manufacturer object.

Condition	Response
Valid dname	<pre>{"Status": "Success", "MSG": "{Manufacturer Object}", "Action": "None"}</pre>

ERROR: There was a problem with the request.

Condition	Response
Null mid	<pre>{"Status": "ERROR", "MSG": "Missing manufacturer id", "Action": "query_manufacturer"}</pre>
Invalid mid	<pre>{"Status": "ERROR", "MSG": "Invalid manufacturer id", "Action": "none"}</pre>

Condition	Response
No match manufacturer	<pre>{"Status": "ERROR", "MSG": "Manufacturer with this id does not exist in database", "Action": "query_manufacturer"}</pre>
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

Query Device

This endpoint retrieves a single device type from the database by performing an exact match on its name (`dname`). It requires the `dname` as a parameter and will return an error if the name is missing or does not exist in the database. Upon success, a single device object is returned.

Endpoint URI: `/api/query_device`

Example: `/api/query_device?dname=Cisco%20Router%204300`

Parameters

Parameter	Description
<code>dname</code>	Required. The unique alpha-numeric name for the device type. Must be under 64 characters. Can have spaces (url encoded). Must be an exact match.

Responses

SUCCESS: Returns a device object matching the name.

Condition	Response
Valid dname	<pre>{"Status": "Success", "MSG": "{Device Object}", "Action": "None"}</pre>

ERROR: There was a problem with the request.

Condition	Response
Null dname	<pre>{"Status": "ERROR", "MSG": "Missing device name", "Action": "None"}</pre>
Invalid dname	<pre>{"Status": "ERROR", "MSG": "Invalid device name", "Action": "none"}</pre>
No match device	<pre>{"Status": "ERROR", "MSG": "There are no device with this name", "Action": "add_device"}</pre>

Condition	Response
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

Query Manufacturer

This endpoint retrieves a single manufacturer from the database by performing an exact match on its name (`mname`). It requires the `mname` as a parameter and will return an error if the name is missing or does not exist in the database. Upon success, a single manufacturer object is returned.

Endpoint URI: `/api/query_manufacturer`

Example: `/api/query_manufacturer?mname=Hewlett%20Packard`

Parameters

Parameter	Description
<code>mname</code>	Required/Optional. The unique alpha-numeric name for the manufacturer. Must be under 64 characters. Can contain spaces (url encoded). Must be an exact match.

Responses

SUCCESS: Returns a manufacturer object matching the name.

Condition	Response
Valid dname	<pre>{"Status": "Success", "MSG": "{Manufacturer Object}", "Action": "None"}</pre>

ERROR: There was a problem with the request.

Condition	Response
Null mname	<pre>{"Status": "ERROR", "MSG": "Missing manufacturer name", "Action": "None"}</pre>
Invalid mname	<pre>{"Status": "ERROR", "MSG": "Invalid manufacturer name", "Action": "none"}</pre>
No match manufacturer	<pre>{"Status": "ERROR", "MSG": "There are no manufacturer with this name", "Action": "add_manufacturer"}</pre>
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

Query Equipment

This endpoint retrieves a single piece of equipment from the database by performing an exact match on its serial number (`sn`). It requires the `sn` as a parameter and will return an error if the serial number is missing, improperly formatted, or does not exist in the database. The serial number must be in the format SN- followed by 1 to 64 alphanumeric characters. Upon success, returns a single equipment object is returned.

Endpoint URI: `/api/query_equipment`

Example: `/api/query_equipment?sn=SN-A1B2C3D4`

Parameters

Parameter	Description
<code>sn</code>	Required. The unique alpha-numeric serial number of the equipment. Must start with SN- followed by 1 to 64 alphanumeric characters. Must be an exact match.

Responses

SUCCESS: Returns an equipment object matching the serial number.

Condition	Response
Valid dname	<pre>{"Status": "Success", "MSG": "{Equipment Object}", "Action": "None"}</pre>

ERROR: There was a problem with the request.

Condition	Response
Null sn	<pre>{"Status": "ERROR", "MSG": "Missing serial number", "Action": "None"}</pre>
Invalid sn	<pre>{"Status": "ERROR", "MSG": "Invalid serial number", "Action": "none"}</pre>
No match equipment	<pre>{"Status": "ERROR", "MSG": "There are no equipment with this serial number", "Action": "add_equipment"}</pre>
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

List Devices

This endpoint retrieves a list of all device types from the database. By default, it returns only devices with an 'active' status. An optional inactive parameter can be set to 'y' to include inactive devices in the result.

Endpoint URI: /api/list_devices

Example: /api/list_devices?inactive=y

Parameters

Parameter	Description
inactive	Optional. Should the search include device type that are flagged as "Inactive"? Can either be "y" or "n". Default value is "n" if omitted.

Responses

SUCCESS: Returns a list of all device objects.

Condition	Response
Valid dname	<pre>{"Status": "Success", "MSG": "{Device Objects}", "Action": "None"}</pre>

ERROR: There was a problem with the request.

Condition	Response
SQL search error	<pre>{"Status": "ERROR", "MSG": "There was a problem retrieving the data. Try again later.", "Action": "None"}</pre>

Condition	Response
Default	<pre>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</pre>

List Manufacturers

This endpoint retrieves a list of all manufacturers from the database. By default, it returns only manufacturers with an 'active' status. An optional inactive parameter can be set to 'y' to include inactive manufacturers in the result.

Endpoint URI: `/api/list_manufacturers`

Example: `/api/list_manufacturers?inactive=y`

Parameters

Parameter	Description
<code>inactive</code>	Optional. Should the search include manufacturer that are flagged as "Inactive"? Can either be "y" or "n". Default value is "n" if omitted.

Responses

SUCCESS: Returns a list of all manufacturer objects.

Condition	Response
Valid dname	<code>{"Status": "Success", "MSG": "{Manufacturer Objects}", "Action": "None"}</code>

ERROR: There was a problem with the request.

Condition	Response
SQL search error	<code>{"Status": "ERROR", "MSG": "There was a problem retrieving the data. Try again later.", "Action": "None"}</code>
Default	<code>{"Status": "ERROR", "MSG": "{error message}", "Action": "None"}</code>