

Redfish

Reference Guide

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Version 1.0

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Redfish is a software solution developed to be fully compliant with DMTF Redfish specification. It allows users to browse physical resources at the chassis and system level through an intuitive web-based user interface. Redfish is web based management protocol. It is built upon Representational State Transfer (REST) which is itself based on HTTP 1.1 protocol. Redfish improves the scalability and help customers to integrate with existing tools.

Redfish is a hypermedia API with a small set of defined URI's. This document provides the API list supported by the Redfish Server and the HTTP methods for each URL in addition to a detailed explanation of the request and JSON response properties. As Redfish is built on OData specification, it discusses the OData properties and the OData identifier for the resources.

Redfish provides information categorized under specific resource end point. The redfish clients allows to utilize the end points using following HTTP methods:

- GET
- POST
- PATCH
- PUT
- DELETE

Not all end-points support all these operations. When not supported it must send back 405 HTTP Status. Such details on the operations are provided by the Redfish JSON Schema.

Redfish Server follows DSP0266 1.11 Specification and Redfish Schema 2019.2.

The following HTTP methods are used to implement different actions: HTTP Request Methods

Method	Action	Description
GET	Read Requests	The method requests a representation of a specified resource. The representation can be either a single resource or a collection.
DELETE	Delete	The method removes a resource.
PATCH	Update	The method applies partial modifications to a resource.
POST	Create	The method creates a new resource. This request is submitted to the resource collection in which the new resource is meant to belong.
POST	Actions	The method initiates operations on the object (Actions). The POST operation may not be idempotent.
PUT	Replace	The method completely replaces a resource. Any properties omittedfrom the body of the request are reset to their default value.

2.1 Responses

There are four types of responses:

Responses

Response	Description
Metadata	Resources and types are exposed by the service to genericclients.
Resource Responses	An individual resource is displayed in JSON format.
Resource Collection	JSON representation of a collection of resources.
Error	Top-level JSON response providing additional information in thecase of an HTTP
	error.

2.2 HTTP Status Code

HTTP Status Code

Status Code	Description
200	OK
201	Created
202	Accepted
204	No Content
301	Moved Permanently
302	Found
304	Not Modified
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
409	Conflict
410	Gone
411	Length Required
412	Precondition Failed
415	Unsupported Media Type
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

To receive API responses through programming, install Postman or any other Rest API client application(s).

3.1 Authentication

You are required to have authentication to access certain resources. Redfish offers two methods for users access Redfish URLs: "basic authentication" and "Redfish session login authentication." The Service does not require you to create a session when Basic Authentication is used.

3.1.1 Basic Authentication

HTTP basic authentication uses compliant TLS connections to transport the data between any third-party authentication service and clients. Use local BMC credentials or remote protocols like LDAP, Active Directory, or RADIUS to log in with basic authentication.

3.1.2 Session Management

You can use session management to implement authentication. This includes orphaned session timeoutsand several simultaneous open sessions. You can create up to 16 sessions. Step 1: You can post the following username/password information in the payload field, which will create anew session.

"UserName": "<username>", "Password": "<password>" }

The user will receive the "201" message code with the X-AUTH token created.

Session lifetime: For Redfish sessions, as long as you send requests for the session within the session timeout period, the session will remain open and the session authentication token will remain valid. If the session times out, the session will be automatically terminated. According to Redfish specification, a user can define session time from 30 to 86400 seconds. If you are not active in the defined time frame, the token will be rendered invalid. You can always patch the "SessionTimeout" value if needed

Session termination or logout: A Redfish session is terminated when you log out. This is accomplished by performing the DELETE method on the session resource identified by the link returned in the location header either when the session is created or if the Session ID is returned in the response data. Using theDELETE method on a session by specifying the session resource ID allows an administrator with sufficient privilege to terminate other users' sessions from a different session.

4.1 Firmware Inventory

This resource shall be used to represent a collection of firmware inventory.

URI: /redfish/v1/UpdateService/FirmwareInventory

Method: GET

Example:

GET	https://{{bmc}}/redfish/v1/UpdateService/FirmwareInventory
Params	Auth Headers (7) Body Pre-req. Tests Settings Cookies
Body 💙	🚯 200 OK 74 ms 1.1 KB 🖺 Save as example 👓
Pretty	Raw Preview Visualize JSON ~ =
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	<pre>"@odata.context": "/redfish/v1/\$metadata#SoftwareInventoryCollection.Software "@odata.etag": "\"1686483272\"", "@odata.id": "/redfish/v1/UpdateService/FirmwareInventoryCollection", "Description": "Collection of Firmware Inventory resources available to the "Members": [</pre>
20	

4.2 Updating BIOS Firmware

Perform BIOS image update.

URI: /redfish/v1/UpdateService/upload Method: POST Example: Prepare files UpdateParameters.json DMTF defined standard parameters in json format.

"Targets" :["/redfish/v1/UpdateService/FirmwareInventory/BIOS"]

OemParameters.json OEM parameters in json format.

"ImageType" : "BIOS"

Update BIOS image.

The request body should be in the format of multipart/form-data and contain UpdateFile, UpdateParameters and OemParameters.

The value of UpdateFile is the path of the binary image for update.

The value of UpdateParameters is the path of UpdateParameters.json

The value of OemParameters is the path of OemParameters.json.

POST	√ https://{{bn	nc}}/redfish/v1/Up	odateService/upload			Send ~
Params	Params Authorization Headers (9) Body Pre-request Script Tests Settings				Cookies	
none	🦲 form-data 🛛 🔵 x-	www-form-urlend	coded 🔵 raw 🔵 binary 🔵 Gra;	phQL		
	Кеу		Value		Description	••• Bulk Edit
	UpdateFile		BIOS8056310114.rom \times	◬		
	UpdateParameters		UpdateParameters.json \times	⊿		
	OemParameters	File 🗸	OemParameters.json \times	≙		
		Text			Description	
Response	3	File				

After the request is sent to the target, such as S8056, the response status is 202 with response body in JSON format if the request is successful. The POST creates TaskService with Task ID. You can check the progress of the update task.

POST	https://{{bmc}}/redfish/v1/UpdateService/upload	Send	~
Params	Authorization Headers (9) Body • Pre-request Script Tests Settings	Cookie	es
none	form-data x-www-form-urlencoded raw binary GraphQL		
к	ey Value Description ***	Bulk Edit	
Body Coo	xies Headers (14) Test Results 🚯 202 Accepted 2.62 s 1.12 KB 🖺 Save	as example	
Pretty	Raw Preview Visualize JSON 🗸 📅	ъс	λ
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	<pre>"@odata.type": "#UpdateService.v1_6_0.UpdateService", "Messages": [</pre>	ipartPush.'	•
24 25			

Find the progress of BIOS image update. After the BIOS request is sent, the progress of update can be checked by accessing /redfish/ v1/TaskService/Tasks/1.

GET	https://{{bmc}}/redfish/v1/TaskService/Tasks/1	Send	~
Params	Authorization Headers (7) Body Pre-request Script Tests Settings	Cod	okies
none	e 🖲 form-data 🔵 x-www-form-urlencoded 🔵 raw 🔵 binary 🔵 GraphQL		
	Key Value Description •	•• Bulk Ed	it
Body Co	ookies Headers (14) Test Results 🚯 200 OK 22 ms 1.41 KB 🖺 Sav	e as exampl	le 👓
Pretty	Raw Preview Visualize JSON ~ 👾	G	Q
	<pre>"@odata.context": "/redfish/v1/\$metadata#Task.Task",</pre>		
	"@odata.etag": "\"1686484420\"", "@odata.id": "/radfich/w4/TackSarvice/Tacks/4"		
5	"@odata.type": "#Task.v1 4 2.Task",		
	"Description": "Task for Update Service Task",		
	"EndTime": "2023-06-11T19:53:50+08:00",		
8	"Id": "1", "Moccadeo": [
10			
11	"@odata.type": "#Message.v1_0_8.Message",		
12	"Message": "Task /redfish/v1/UpdateService/upload has completed.",		
13	"MessageArgs": [
14 15	/redfish/vi/updateService/upload		
16	"MessageId": "Task.1.0.Completed",		
17	"Resolution": "None",		
18	"Severity": "OK"		
19	3,		
20	i "Modata type": "#Messade v1 0 8 Messade"		
22	"Message": "Action /redfish/v1/UpdateService/upload firmware update is comp	leted.",	
23	"MessageArgs": [
24	"/redfish/v1/UpdateService/upload"		
25			
26	"Pesolution": "None"		
28	"Severity": "OK"		
29	3		
30],		
31	"Name": "Update Service Task",		
32	"Startlime": "2023-06-11T19:53:40+08:00", "TackState": "Completed"		
33 34	"TaskStatus": "OK"		
25			

4.3 Updating BMC Firmware

Perform BMC firmware update.

URI: /redfish/v1/UpdateService/upload Method: POST Example: Prepare files UpdateParameters.json DMTF defined standard parameters in json format.

"Targets": ["/redfish/v1/UpdateService/FirmwareInventory/BMC"]

OemParameters.json AMI OEM parameters in json format.

"ImageType": "BMC"

Update BMC image. Please reference the second step in the example of "5.2 Updating BIOS". Find the progress of BMC firmware update. Please reference the third step in the example of "5.2 Updating BIOS". BMC will reboot after image update, so you can only query the update progress by accessing /redfish/v1/TaskService/Tasks/2 before BMC reboots.

GET	https://{{bmc}}/redfish/v1/TaskService/Tasks/2	Send	
Params	Authorization Headers (7) Body Pre-request Script Tests Settings	Cook	les
none	e 🔵 form-data 🔵 x-www-form-urlencoded 🔵 raw 🔘 binary 🔵 GraphQL		
	Key Value Description ***	Bulk Edit	
Body Co	okies Headers (15) Test Results 🏟 200 OK 34 ms 1.38 KB 🖺 Save	as example	
Pretty	Raw Preview Visualize JSON V 😓	G (Q
25 26 27	-Messageld: -UpdateService.1.0.PrepareFlashArea", "Resolution": "None", "Severity": "OK"		
28	3		
29], Theorem Burdets Consider Table		
30 31 32	Name : Update Service Task", "StartTime": "2023-06-11T20:08:28+08:00", "TaskState": "Running",		
33 34	"TaskStatus": "OK"		I

You can perform the following operations under /redfish/v1/AccountService. **Available Methods:** GET, POST, PATCH, and DELETE.

5.1 Creating a User

URI: /redfish/v1/AccountService/Accounts Method: POST Example: Edit the request content in JSON format from Body.



POST	https://{{bmc}}/redfish/v1/AccountService/Accounts	Send ~
Params	Authorization Headers (9) Body • Pre-request Script Tests Settings	Cookies
none	form-data x-www-form-urlencoded raw binary GraphQL JSON	Beautify
1		
Body Co	okies Headers (15) Test Results 🚱 201 Created 2.38 s 1.18 KB 🛱 Save	e as example 🛛 👓
Pretty	Raw Preview Visualize JSON 🗸 📅	G Q
1 5		П
2	"Andata context": "/redfish/v//\$metadata#ManagerAccount ManagerAccount"	
	"Rodata.etag": "\"1687054266\"".	
	"@odata.id": "/redfish/v1/AccountService/Accounts/8",	
	"@odata.type": "#ManagerAccount.v1_5_0.ManagerAccount",	
	"AccountTypes": [
	"Redfish"	
],	
	"Certificates": {	
	"@odata.id": "/redfish/v1/AccountService/Accounts/8/Certificates"	
11	3,	
12	"Description": "Test User Account",	i i
13	"Enabled": true,	i i
14	"Id": "8",	
	"Links": {	i i
	"Role": {	
17	"@odata.id": "/redfish/v1/AccountService/Roles/Operator"	
	}	
	},	
20	"Locked": false,	
21	"Name": "Test User Account",	
22	"Password": null,	
	"PasswordChangeRequired": true,	
24	"RoleId": "Operator",	
25	"UserName": "user_account1"	
26		

5.2 Configuring User Lockout

URI: /redfish/v1/AccountService

Method: PATCH

Example:

Edit the request content in JSON format from Body.

Account Lockout Threshold:

The number of failed login attempts before a user account is locked for a specified duration. (0=never locked). Minimum Value: 0 Maximum Value: 100 Default Value: 5

Account Lockout Duration:

This property shall reference the period of time in seconds that an account is locked after the number of failed login attempts reaches the threshold referenced by Account Lockout Threshold, within the window of time referenced by Account Lockout Counter Reset After. The value shall be greater than or equal to the value of Account Lockout Reset After. If set to 0, no lockout shall occur.

Minimum Value: 0 Maximum Value: 10000 Default Value: 30

Account Lockout Counter Reset After:

This property shall reference the threshold of time in seconds from the last failed login attempt at which point the Account Lockout Threshold counter (that counts number of failed login attempts) is reset back to zero (at which point Account Lockout Threshold failures would be required before the account is locked). This value shall be less than or equal to Account Lockout Duration. The threshold counter also resets to zero after each successful login.

Minimum Value: 0 Maximum Value: 10000 Default Value: 30

РАТСН	https://{{bmc}}/redfish/v1/AccountService							Ser	nd ~
Params	Authorization	Headers (10)	Body •	Pre-requ	est Script	Tests Se	ttings		Cookies
none	form-data	x-www-form-	urlencoded	🖲 raw	binary	GraphQL	JSON 🗸	E	Beautify
1 5 B	AccountLoc Control Control Control	ckoutThreshold" ckoutDuration" ckoutCounterRes	': 2, : 300, setAfter":	300					
Body Cool	kies Headers ((10) Test Results			20	04 No Content	251 ms 363 B	🖺 Save as exa	ample •••
Pretty	Raw Prev	view Visualize	e Text	~ =				 ر	5 Q

5.3 Active Directory

URI: /redfish/v1/AccountService METHOD: PATCH Example: Edit the request content in JSON format from Body.

PATCH	https://{{bmc}}/redfish/v1/AccountService	Send ~
Params	Authorization Headers (10) Body • Pre-request Script Tests Settings	Cookies
none	form-data x-www-form-urlencoded raw binary GraphQL JSON	Beautify
1 {		
	····"ActiveDirectory"·:-{	
	·····*Authentication*·:·{	
	······································	
	······································	
	···· "Oem" : {	
	······································	
	······································	
	······································	
10 ·	······································	
11 ·	······································	
12 ·	•••••••••••••••••••••••••••••••••••••••	
13 ·	•••••••••••••••••••••••••••••••••••••••	
14 ·	·····},	
15 ·	······································	
16 ·	••••}	
17 }		

After the request is sent to the target, such as S8056, the response status is 202 with response body in JSON format if the request is successful.

PATCH	https://{{bmc}}/redfish/v1/AccountService
Params	Authorization Headers (10) Body • Pre-request Script Tests Settings
none	e 🔵 form-data 🔵 x-www-form-urlencoded 🥌 raw 🔵 binary 🔵 GraphQL 🛛 JSON 🗸
1	ĩ
Body Co	ookies Headers (15) Test Results 🛞 202 Accepted 242 ms 833 B 🖺 Sav
Pretty	Raw Preview Visualize JSON V 📅
1	8
2	"@odata.context": " <u>/redfish/v1/\$metadata#Task.Task</u> ",
3	"@odata.id": "/redfish/v1/TaskService/Tasks/2",
	"@odata.type": "#Task.v1_4_2.Task",
5	"Description": "Task for AccountService ActiveDirectory",
6	"Id": "2",
7	"Name": "AccountService ActiveDirectory",

15 http://www.tyan.com

5.4 LDAP

URI: /redfish/v1/AccountService Method: PATCH Example: Edit the request content in JSON format from Body.

PATCH	CH V https://{{bmc}}/redfish/v1/AccountService							
Params	Authorization Headers (10) Body • Pre-request Script Tests Settings	Cookies						
none	🔵 form-data 🔵 x-www-form-urlencoded 🕘 raw 🔵 binary 🔵 GraphQL JSON 🗸	Beautify						
1 { 2 3 4 5 6 7 8 9 10 1 11 1 12 1 13 1 14 1 15 16 17 1 8 19 20 2 21 2 22 2	<pre>"LDAP" :: { "Authentication" :: { "Username" :: "cn=admin,dc=coretesting,dc=com" ·, "Password" :: "ubuntu" ·, "Oem" :: { "Ami" :: {</pre>							
24 25 26 }	·····"ServiceEnabled" ·:·true ···}	_						

РАТСН	· ~	https:	//{{bmc}}/redfish/v1	/AccountSet	rvice						Send	~
Params	Author	rization	Headers (10)	Body • F	Pre-request	Script	Tests	Settings			Coo	kies
none	e 🔵 for	m-data	x-www-form-ur	lencoded	🖲 raw 🛛	binary	Graph	QL JSOI			Beau	tify
	3											
Body Co	ookies H	Headers (15) Test Results			(20	02 Accepted	266 ms	1.29 KB	🖹 Save a	s exampl	e
Deather	Davis	Dress	Manalia									~
Pretty	Raw	Prev	iew visualize	JSON	~ -9						'n	α
1	£											
2	"@oo	data.com	text": "/redfis	h/v1/\$meta	idata#Task	c.Task"						
	"@od	data.id"	: "/redfish/v1/	TaskServic	e/Tasks/1	L",						
4	"@od	data.typ	e": "#Task.v1_4	_2.Task",								
5	"Des	scriptio	n": "Task for A	ccountServ	vice LDAP							
6	"Id"	": "1",										
7	"Mes	ssages":	[
8		£										
9		"@o	data.type": "#M	essage.v1_	0_8.Messa	age",						
10		"Me	ssage": "The pr	operty LDA	P/LDAPSe	rvice/S	earchSett	ings/Use	rnameAttı	ibute is	s not in	the
11		"Me	ssageArgs": [
12			"LDAP/LDAPServ	ice/Search	Settings	/Userna	meAttribu	te"				
13		1,										
14		"Me	ssageId": "Base	.1.12.Prop	ertvUnkno	own",						
15		"Re	latedProperties	": [
16			"#/LDAP/LDAPSe	rvice/Sear	chSetting	s/User	nameAttri	bute"				
17		1.										
18		"Re	solution": "Rem	ove the un	known pro	perty	from the	request	body and	resubmit	the re	auest
19		"Se	verity": "Warni	ng"		-p,						
20		3	volicy i me									
21	1.											
22	"Nan	me": "Ac	countService LD	4P".								
23	"Tas	skState"	: "New"									
24	2											
	7											

The properties of BIOS can be configured by using the BIOS redfish APIs.

Note: All the changes in BIOS attributes need a system reboot to take effect.

6.1 Changing a Password

URI: /redfish/v1/Systems/Self/Bios/Actions/Bios.ChangePassword Method: POST Example: Edit the request content in JSON format from Body.



After the request is sent to the target, such as S8056, the response status is 204 with on body if the reques is successful.

After rebooting the machine, you need to give the new password to enter the BIOS setup menu.



6.2 Configuring BIOS over Redfish

/redfish/v1/Registries/BiosAttributeRegistry8056_.en-US.0.1.0.json is the Bios Attribute Registry containing the list of supported attributes and its dependencies.

URI: /redfish/v1/Systems/Self/Bios

Method: GET

Example:

After the request is sent to the target, such as S8056, the response status is 200 with body in JSON format if the request is.



6.2.1 Modifying BIOS Attributes

URI: /redfish/v1/Systems/Self/Bios/SD Method: PATCH Example: Edit the request content in JSON format from Body.



After the request is sent to the target, such as S8056, the response status is 204 without response body if the request is successful.

Then, you can check the result by querying the BIOS attributes.

GET	https://{{bmc}}/redfish/v1/Systems/Self/Bios		Send ~
Params	Authorization Headers (7) Body Pre-request Script	Tests Settings	Cookies
Body Co	okies Headers (14) Test Results	😭 200 OK 67 ms 33.19 KB	🖺 Save as example 🛛 🗠
Pretty	Raw Preview Visualize JSON V 开		ΓQ
	<u>۲</u> ,		
21	"AttributeRegistry": "BiosAttributeRegistry80560	.1.0",	
22	"Attributes": {		
23	"ACPI004": false,		
24	"Above_4G_Decoding": "Enabled",		
25	"AcsRasValue": "Auto",		
26	"BMC_Alert_Beep": "On",		
27	"COM1_Bits_per_second": "9600",		
28	"COM1_Change_Set": "Auto",		
29	"COM1_Console_Redirection": false,		
30	"COM1_Data_Bits": "8",		
31	"COM1_Flow_Control": "None",		
32	"COM1 Parity": "None",		

6.2.2 Viewing Pending Settings

You can find all the pending settings after PATCH.

URI: /redfish/v1/Systems/Self/Bios/SD

Method: GET

Example:

After the request is sent to the target, such as S8056, the response status is 200 with body in JSON format if the request is successful.

GET	https://{{bmc}}/redfish/v1/Systems/Self/Bios/SD	Send	~
Params A	Authorization Headers (7) Body Pre-request Script Tests Settings	Coo	kies
Body Cookie	es Headers (13) Test Results 🛞 Status: 200 OK Time: 104 ms Size: 32.02 KB 🖺 Save	e as exampl	e 000
Pretty	Raw Preview Visualize JSON V =	Ū	Q
1 5 3 4 5 6 7 8 9 10 11 12 13	<pre>"@odata.context": "/redfish/v1/\$metadata#Bios.Bios", "@odata.etag": "\"1686598812\"", "@odata.id": "/redfish/v1/Systems/Self/Bios/SD", "@odata.type": "#Bios.v1_1_0.Bios", "AttributeRegistry": "BiosAttributeRegistry80560.1.0", "Attributes": { "ACPI004": false, "Above_4G_Decoding": "Enabled", "AcsRasValue": "Auto", "BMC_Alert_Beep": "On", "COM1_Bits_per_second": "115200", "COM1_Change_Set": "Auto",</pre>		

20 http://www.tyan.com

6.3 Reset BIOS

{

POST a reset of the BIOS attributes to default values. After POST, you need to reset the system to apply values to BIOS. URI: /redfish/v1/Systems/Self/Bios/Actions/Bios.ResetBios Method: POST Example: Example for POST request body (JSON format):

Edit the request content in JSON format from Body.

POST	POST v https://{{bmc}}/redfish/v1/Systems/Self/Bios/Actions/Bios.ResetBios								Send	~					
Params	Authori	zation	Headers	(9)	Body •	Pre-r	eques	st Script	Tests	Setti	ings			Co	okies
none	forn	n-data	🔵 x-www	-form-u	rlencoded	, e	aw	binary	Grap	hQL	JSON			Bea	utify
1 打															
Body Coo	kies H	eaders	(2) Test F	lesults				() 2	04 No Con	ntent	100 ms	101 B	🖺 Save	e as examp	e
Pretty	Raw	Prev	view V	isualize	Text		-							G	Q

6.4 Boot Options

6.4.1 Configuring the Boot Order in System BIOS

6.4.1.1 Changing the Boot Order Getting the Current Boot Order

URI: /redfish/v1/Systems/Self/SD Method: GET

Example:

After the request is sent to the target, such as S8056, the response status is 200 without response body if the request is successful.

GET	https://{{bmc}}/redfish/v1/Systems/Self/SD							
Params	Authorization Headers (7) Body Pre-request Script Tests Settings	Cookies						
Body Cod	okies Headers (13) Test Results 🚯 200 OK 96 ms 1.42 KB 🖺 Sav	e as example 🔹						
Pretty	Raw Preview Visualize JSON \checkmark $\overline{\neg \varphi}$	ΓO						
1 { 2 3 4 5 6 7	<pre>"@odata.context": "/redfish/v1/\$metadata#ComputerSystem.ComputerSystem", "@odata.etag": "\"1701863218\"", "@odata.id": "/redfish/v1/Systems/Self/SD", "@odata.type": "#ComputerSystem.v1_15_0.ComputerSystem", "AssetTag": "CouldProduct", "Boot": {</pre>							
	"AliasBootOrder": [],							
10	BootOrder": [
11	"Boot0002",							
12	"Boot0003"							
14	"BootOrderPropertySelection": "BootOrder",							

6.4.1.2 Changing the Current Boot Order

URI: /redfish/v1/Systems/Self/SD Method: PATCH Example: Edit the request content in JSON format from Body.

PATCH	https://{{bmc}}/redfish/v1/Systems/Self/SD								
Params	Authorization Headers (10) Body • Pre-request Script Tests Settings								
none	🔵 form-data 🔵 x-www-form-urlencoded 🕘 raw 🔵 binary 🔵 GraphQL 🛛 JSON 🗸								
1 {									
2	"Boot": -{								
	···· "BootOrder": [
	···· Boot0003",								
	···· Boot0002"								
6 ·	····]								

After the request is sent to the target, such as S8056, the response status is 204 without response body if the request is successful.

6.4.2 Configuring Uefi Boot Next

URI: /redfish/v1/Systems/Self/SD Method: PATCH Example: Edit the request content in JSON format from Body.

РАТСН	https://{{bmc}}/redfish/v1/Systems/Self/SD							
Params	Authorization Headers (10) Body • Pre-request Script Tests Settings	Cookies						
none	🔵 form-data 🔵 x-www-form-urlencoded 🜘 raw 🔵 binary 🔵 GraphQL JSON 🗸	Beautify						
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	<pre>"Boot": {</pre>							

РАТСН	https://{{bmc}}/redfish/v1/Systems/Self/SD	Send	
Params A	uthorization Headers (10) Body • Pre-request Script Tests Settings	Co	okie
Body Cookie	es Headers (14) Test Results 🚯 200 OK 306 ms 1.92 KB 🖺 Sa	ve as examp	le (
Pretty	Raw Preview Visualize JSON V 🗔	G	Q
31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	<pre>"BootSourceOverrideEnabled": "Disabled", "BootSourceOverrideEnabled@Redfish.AllowableValues": ["Disabled", "Once", "Continuous"], "BootSourceOverrideMode": "Legacy", "BootSourceOverrideMode@Redfish.AllowableValues": ["Legacy", "UEFI"], "BootSourceOverrideTarget": "UefiBootNext", "BootSourceOverrideTarget@Redfish.AllowableValues": ["None", "Pxe", "Floppy", "Cd", "Usb",</pre>		

6.5 Secure Boot

UEFI Secure Boot was created to enhance security in the pre-boot environment. Secure Boot helps firmware, operating system and hardware providers cooperate to thwart the efforts of malware developers.

Note: Please use the supported BIOS to use this function.

6.5.1 Enabling Redfish Secure Boot by GET

URI: /redfish/v1/Systems/Self/SecureBoot

Method: GET

Example:

After the request is sent to the target, such as S8056, the response status is 200 with response body in JSON format if the request is successful.



6.5.2 Enabling Redfish Secure Boot by PATCH

URI: /redfish/v2/Systems/Self/SecureBoot Method: PATCH Example: Edit the request content in JSON format from Body.

РАТСН	~ https	://{{bmc}}/redfish/	v1/Systems	/Self/Secu	reBoot			Send	~
Params	Authorization	Headers (10)	Body •	Pre-requ	lest Script	Tests	Settings	Coo	kies
none	form-data	x-www-form-	urlencoded	🖲 raw	binary	Graph	NQL JSON	Beaut	tify
1 된									
2 ·	"SecureBoo"	tEnable" : fals	se						
3 }									

After the request is sent to the target, such as S8056, the response status is 204 without response body if the request is successful.

6.5.3 Confirming in Pending Settings

URI: /redfish/v1/Systems/Self/Bios/SD Method: GET

Example:

After the request is sent to the target, such as S8056, the response status is 200 with response body in JSON format if the request is successful.

GET	https://{{bmc}}/redfish/v1/Systems/Self/Bios/SD	Send ~
Params	Authorization Headers (7) Body Pre-request Script Tests Settings	Cookies
Body Co	okies Headers (13) Test Results 🚯 200 OK 73 ms 32.02 KB 🖺 Savi	e as example 🛛 👓
Pretty	Raw Preview Visualize JSON ~ 🙀	ΓC
1 {		-
2	"@odata.context": "/redfish/v1/\$metadata#Bios.Bios",	
	"@odata.etag": "\"1686598812\"",	
	"@odata.id": " <u>/redfish/v1/Systems/Self/Bios/SD</u> ",	
	"@odata.type": "#Bios.v1_1_0.Bios",	
	"AttributeRegistry": "BiosAttributeRegistry80560.1.0",	
	"Attributes": {{	
	"ACPI004": false,	
	"Above_4G_Decoding": "Enabled",	
10	"AcsRasValue": "Auto",	

6.5.4 Enabling Secure Boot in BIOS

URI: /redfish/v1/Systems/Self/SecureBoot Method: PATCH

Example: Edit the request content in JSON format from Body.



The CertificateService describes a Certificate Service that represents the actions available to managecertificates and links to the certificates.

URI: /redfish/v1/CertificateService Method: GET

Example:

GET		https://{{bmc}}/redfish/v1/CertificateService	Send	~
Param	s Autho	orization Headers (7) Body Pre-request Script Tests Settings	Cod	okies
Body	Cookies	Headers (14) Test Results 🚯 Status: 200 OK Time: 118 ms Size: 1.47 KB 🖺 Save	e as exampl	e
Prett	y Raw	v Preview Visualize JSON V =	G	Q
	{ "@c "@c	odata.context": " <u>/redfish/v1/\$metadata#CertificateService.CertificateService</u> ", odata.etag": "\"1686680208\"",		ľ
	"@c	odata.id": " <u>/redfish/v1/CertificateService</u> ",		
	"@c	data.type": "#CertificateService.v1_0_2.CertificateService",		
	"Ac	tions": {		
		*#CertificateService.GenerateCSR": {		
		<pre>@Realise.Actioning : /realise/vi/certificateservice/certificateservice.generatecskactionin "the service is a service of the service of t</pre>	<u>io</u> ",	
9		Target : /redfish/v1/Certificateservice/Actions/Certificateservice.GenerateCsk		
10		Sr #BCartificateServica DeplessCertificate", 5		
12		"ADPadfich AntionTofa": "/radfich/w//cartificateService/CartificateService DeplaceCartificateS	ctionInf	
13		"target": "/redfish/y1/certificateService/Actions/CertificateService.ReplaceCertificate"	<u>e cronini</u>	= '
14		· · · · · · · · · · · · · · · · · · ·		
15	3,			
16	"Ce	ertificateLocations": {		
17		"@odata.id": "/redfish/v1/CertificateService/CertificateLocations"		
18	3,			
19	"De	escription": "Get the available to manage certificates and link to certificates",		
	"Ic	": "CertificateService",		
21	"Na	ame": "Certificate Service"		
22	3			

7.1 Generating CSR

Generate a certificate signing request (CSR) for the SSL certificate.

7.1.1 Generating CSR Action Info

List the supported and required parameters to generate CSR.

URI: /redfish/v1/CertificateService/CertificateService.GenerateCSRActionInfo

Method: GET

Example:

GET	https://{{bmc}}/redfish/v1/CertificateService/CertificateService.GenerateCSRActionInfo	Send 🗸
Params	Auth Headers (7) Body Pre-req. Tests Settings	Cookies
Body Co	okies Headers (13) Test Results 🚯 200 OK 78 ms 2.2 KB 🖺 Save	e as example 🛛 👓
Pretty	Raw Preview Visualize JSON ~ $\overline{\neg \varphi}$	ΓO
1		
	"@odata.context": "/redfish/v1/\$metadata#ActionInfo.ActionInfo",	
	"@odata.etag": "\"1686680208\"",	
	"@odata.id": "/redfish/v1/CertificateService/CertificateService.GenerateCSRAc	tionInfo",
	"@odata.type": "#ActionInfo.v1_1_2.ActionInfo",	
	"Description": "This action shall make a certificate signing request.",	
	"Id": "CertificateService.GenerateCSR",	
	"Name": "CertificateService.GenerateCSR",	
	"Parameters": [
10	Ę	
11	"DataType": "String",	
12	"Name": "AlternativeNames",	
13	"Required": false	
14	},	

7.1.2 Generating a CSR Request

This action is used to perform a certificate signing request.

URI: /redfish/v1/CertificateService/Actions/CertificateService.GenerateCSR Method: POST

Example:

Edit the request content in JSON format from Body.

POST	https://{{bmc}}/redfish/v1/CertificateService/Actions/CertificateService.GenerateCSR	Send	~
Params	Authorization Headers (9) Body • Pre-request Script Tests Settings	Cool	cies
none	🔵 form-data 🔵 x-www-form-urlencoded 🛑 raw 🔵 binary 🔵 GraphQL JSON 🗸	Beaut	ify
$\begin{array}{cccc} 1 & & & \\ 2 & \cdot \\ 3 & + \\ 5 & + \\ 6 & \cdot \\ 7 & \cdot \\ 8 & + \\ 9 & + \\ 10 & + \end{array}$	<pre>"Country": "US", "State": "California", "City": "San Jose", "Organization": "Tyan", "OrganizationalUnit": "PM", "OrganizationalUnit": "PM", "CommonName": "mitac.com", "CertificateCollection": {</pre>		I
11	2		I

POST	https://{{bmc}}/redfish/v1/CertificateService/Actions/CertificateService.GenerateCSR	Send	~
Params	Auth Headers (9) Body • Pre-req. Tests Settings	Coo	kies
Body Co	ookies Headers (12) Test Results 🏟 200 OK 2.36 s 1.6 KB 🖺 Save a	as example	9 000
Pretty	Raw Preview Visualize JSON V 😓	G	Q
1	CSPString": "BEGIN CEPTIEICATE REQUEST\nMIICgiCCAZICAQAwZIELMAkGA1UER	hMCVVMxF	7 ARRø
	"CertificateCollection": {	III OF TIXE	ZANDE
	"@odata.id": "/redfish/v1/Managers/Self/NetworkProtocol/HTTPS/Certificates"		
5	3		_
6			

7.1.3 Viewing Certificate Details

URI: /redfish/v1/Managers/Self/NetworkProtocol/HTTPS/Certificates/1 Method: GET

Example:

GET	https://{{bmc}}/redfish/v1/Managers/Self/NetworkP	rotocol/HTTPS/Certificates/1	Send ~
Params	Auth Headers (7) Body Pre-req. Tests Settings		Cookies
Query Pa	arams		
queryre			
	Key Value	Description	••• Bulk Edit
Body 🗸	¢,	200 OK 79 ms 3.28 KB 🖺 S	ave as example •••
		<u> </u>	
Pretty	Raw Preview Visualize JSON ~ 🛱		ΓQ
1	G		[∎]
2	 "@odata.context": "/redfish/v1/\$metadata#Certii	ficate.Certificate".	
3	"@odata.etag": "\"1686680208\"",	,	
	"@odata.id": "/redfish/v1/Managers/Self/Network	Protocol/HTTPS/Certifica	tes/1",
	"@odata.type": "#Certificate.v1_4_0.Certificate	;	·
	"Actions": {		
	"#Certificate.Rekey": {		
	"@Redfish.ActionInfo": "/redfish/v1/Mar	agers/Self/NetworkProtoc	ol/HTTPS/Certific
	"target": "/redfish/v1/Managers/Self/Ne	tworkProtocol/HTTPS/Cert	ificates/1/Action
10	3,		
11	"#Certificate.Renew": {		
12	"@Redfish.ActionInfo": "/redfish/v1/Mar	agers/Self/NetworkProtoco	ol/HTTPS/Certific
13	"target": "/redfish/v1/Managers/Self/Ne	tworkProtocol/HTTPS/Cert:	ificates/1/Action
14	3		
15	ł,		
16	"CertificateString": "BEGIN CERTIFICATE	\nMIIEEzCCAvugAwIBAgIU	VQB3k4+AH2j73jbFx
17	"CertificateType": "PEM",		

7.2 Replacing a Certificate

You can replace an existing certificate. Note that the new file must be a signed certificate.

7.2.1 Replacing Certificate Action Info

View the list of supported and required parameters to generate CSR.

URI: /redfish/v1/CertificateService/CertificateService.ReplaceCertificateActionInfo

Method: GET

Example:



7.3 Replacing the Key Certificate

This action shall generate a new key pair for an existing certificate using the existing certificate data. The response shall contain a signing request that is to be signed by a certificate authority (CA). The service should retain the private key used for the generation of this request when the certificate is installed.

The private key should not be part of the response.

URI: /redfish/v1/Managers/Self/NetworkProtocol/HTTPS/Certificates/1/Actions/Certificate. Rekey

Method: POST

Example:

Edit the request content in JSON format from Body.



POST		https://	{{bmc}}/redfish/	v1/Manage	rs/Self/N	letworkProto	col/HTTPS/Certi	ificates/1/A	ctions/Certifi	Send	~
Params	Authoriz	ation	Headers (9)	Body •	Pre-rec	quest Script	Tests Set	tings		Co	okies
none	form-	data 🤇	x-www-form-	urlencoded	🔵 ra	w 🔵 binary	🖉 🔵 GraphQL	JSON		Веаι	utify
1 ឆ្ន											
Body Cool	kies He	aders (11) Test Results				🚯 200 ОК	286 ms 1	1.08 КВ 🖺 Sav	e as examp	le
Pretty	Raw	Previe	w Visualize	JSON	4 ~					G	Q
1 8 2 3	"CSRS "Cert:	tring": ificate	"BEGIN ": " <u>/redfish/</u>	CERTIFIC/ v1/Manage	ATE REQ ers/Sel	UEST\ f/NetworkP	nMIIBfjCCASgC rotocol/HTTPS	AQAwgYIx()/Certific	CzAJBgNVBAYTA] cates/1"	LVTMRAwDgY	YDVQQII
4											T

The event service is an alert mechanism for Redfish. This alert will be sent out through HTTP or HTTPS to a web service that is subscribed to the service.

8.1 Adding a Subscription

URI: /redfish/v1/EventService/Subscriptions/ Method: PATCH Example: Edit the request content in JSON format from Body.



PATCH	https://{{bmc}}/redfish/v1/EventService/Subscriptions/	Send	~
Params	Authorization Headers (9) Body • Pre-request Script Tests Settings	Coo	kies
Body Cod	ikies Headers (13) Test Results 🚯 200 OK 27 ms 894 B 🖺 Save	as example	3 00
Pretty	Raw Preview Visualize JSON ~ 🛱	G	Q
1 F2 2 3 4 5 6 7 8	<pre>"@odata.context": "/redfish/v1/\$metadata#EventDestinationCollection.EventDestination" "@odata.etag": "\"1700922802\"", "@odata.id": "/redfish/v1/EventService/Subscriptions", "@odata.type": "#EventDestinationCollection.EventDestinationCollection", "Description": "Collection for Event Subscriptions", "Members": [], "Members": [],</pre>	Collection	<u>p</u> ",
9 10 B	"Name": "Event Subscriptions Collection"		

8.2 Viewing All Subscriptions

URI: /redfish/v1/EventService/Subscriptions

Method: GET

Example:

Params	Auth Headers (7) Body Pre-req. Tests Settings
Body 🗸	🚯 200 OK 76 ms 894 B 🖺 Save as example 👓
Pretty	Raw Preview Visualize JSON ~ 🚍 🗋 Q
1	£
2	"@odata.context": "/redfish/v1/\$metadata#EventDestinationCollection.
3	"@odata.etag": "\"1686680208\"",
4	"@odata.id": "/redfish/v1/EventService/Subscriptions",
5	"@odata.type": "#EventDestinationCollection.EventDestinationCollecti
6	"Description": "Collection for Event Subscriptions",
7	"Members": [],
8	"Members@odata.count": 0,
9	"Name": "Event Subscriptions Collection"
10	

8.3 Deleting a Subscription

You can delete a subscription.

URI: /redfish/v1/EventService/Subscriptions/

Method: DELETE

Example:

DELE	TE v https://{{bmc}}/redfish/v1/EventService/Subscriptions/	Send	~
Params	Authorization Headers (7) Body Pre-request Script Tests Settings	Co	okies
Body C	Cookies Headers (13) Test Results 👘 Savi	e as examp	le
Pretty	Raw Preview Visualize JSON V 🛱	G	Q
	E Contraction of the second		
	<pre>"@odata.context": "/redfish/v1/\$metadata#EventDestinationCollection.EventDestinationCo</pre>	llection"	
	"@odata.etag": "\"1686680208\"",		
	"@odata.id": "/redfish/v1/EventService/Subscriptions",		
	"@odata.type": "#EventDestinationCollection.EventDestinationCollection",		
	"Description": "Collection for Event Subscriptions",		
	"Members": [],		
	"Members@odata.count": 0,		
	"Name": "Event Subscriptions Collection"		
10			I

8.4 Testing an Event Subscription

You can send a test event with "SendTestEvent" or generate an event in the BMC, Redfish will thenautomatically send event alerts to the subscriber(s).

URI: /redfish/v1/EventService/Actions/EventService.SubmitTestEvent

Method: POST

Example:

Edit the request content in JSON format from Body.



POST	https://{{bmc}}/redfish/v1/EventService/Actions/EventService.SubmitTestEvent	Send ~
Params	Auth Headers (9) Body • Pre-req. Tests Settings	Cookies
Body 🗸	🏟 202 Accepted 130 ms 856 B 🖺 Sav	e as example 👓
Pretty	Raw Preview Visualize JSON ~ 🚍	r Q
1 2 3 4 5 6 7 8	<pre>"@odata.context": "/redfish/v1/\$metadata#Task.Task", "@odata.id": "/redfish/v1/TaskService/Tasks/5", "@odata.type": "#Task.v1_4_2.Task", "Description": "Task for EventService SubmitTestEvent Action", "Id": "5", "Name": "EventService SubmitTestEvent Action", "TaskState": "New"</pre>	
9		T

You can find details about all available network devices under /redfish/v1/Chassis/1/ PCIeDevices

9.1 NIC Device

Method: GET

Example:

Assume the bus, device and function for NIC are 00, 09 and 00, respectively. Then, the redfish API for NIC is /redfish/v1/Chassis/Self/PCIeDevices/00_09_00.

After the request is sent to the target, such as S8056, the response status is 200 with response body in JSON format if the request is successful.

GET	https://{{bmc}}/redfish/v1/Chassis/Self/PCIeDevices/00_09_00	Send	
Params	Auth Headers (7) Body Pre-req. Tests Settings	Cook	kies
Body 🗸	🚯 200 OK 38 ms 1.08 KB 🖺 Save	e as example	
Pretty	Raw Preview Visualize JSON 🗸 🚍	Ġ	Q
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	<pre>"@odata.context": "/redfish/v1/\$metadata#PCIeDevice.PCIeDevice", "@odata.etag": "\"1700846595\"", "@odata.id": "/redfish/v1/Chassis/Self/PCIeDevices/00_09_00", "@odata.type": "#PCIeDevice.v1_4_0.PCIeDevice", "DeviceType": "MultiFunction", "FirmwareVersion": "1.3256.0", "Id": "00_09_00", "Name": "00_09_00", "Name": "00_09_00", "PCIeFunctions": { "@odata.id": "/redfish/v1/Chassis/Self/PCIeDevices/00_09_00/PCIeFu }, "PCIeInterface": { "LanesInUse": 2, "MaxLanes": 4, "MaxPCIeType": "Gen3", "PCIeType": "Gen3" }, "Status": {</pre>	unctions"	
20	"Health": "OK", "State": "Epobled"		
21 22 23			

9.2 GPU

Method: GET Example: Assume the bus, device and function for NIC are 00, C1 and 00, respectively. Then, the redfish API for NIC is /redfish/v1/Chassis/Self/PCIeDevices/00_C1_00.

GET	<pre> white the second second</pre>	Send ~
Params	Auth Headers (7) Body Pre-req. Tests Settings	Cookies
Body 🗸	🚯 200 OK 147 ms 1.05 KB 🖺 Save	e as example 🛛 🗠
Pretty	Raw Preview Visualize JSON \checkmark $\overline{-\varphi}$	ΓO
1		
2	"@odata.context": "/redfish/v1/\$metadata#PCIeDevice.PCIeDevice",	
3	"@odata.etag": "\"1701281350\"",	
	"@odata.id": "/redfish/v1/Chassis/Self/PCIeDevices/00_C1_00",	
5	"@odata.type": "#PCIeDevice.v1_4_0.PCIeDevice",	
6	"DeviceType": "SingleFunction",	
7	"Id": "00_C1_00",	
8	"Name": "00_C1_00",	
9	"PCIeFunctions": {	
10	"@odata.id": "/redfish/v1/Chassis/Self/PCIeDevices/00_C1_00/PCIeF	unctions"
11	},	
12	"PCIeInterface": {	
13	"LanesInUse": 16,	
14	"MaxLanes": 16,	
15	"MaxPCIeType": "Gen3",	
16	"PCIeType": "Gen3"	
17	},	
18	"Status": {	
19	"Health": "OK",	
20	"State": "Enabled"	
21	}	
22		

9.3 NVMe SSD

Method: GET

Example:

Assume the bus, device and function for NIC are 00, 83 and 00, respectively. Then, the redfish API for NIC is /redfish/v1/Chassis/Self/PCIeDevices/00_83_00.

GET	https://{{bmc}}/redfish/v1/Chassis/Self/PCIeDevices/00_83_00	Send ~
Params	Auth Headers (7) Body Pre-req. Tests Settings	Cookies
Body 🗸	🎨 200 OK 24 ms 1.05 KB 🖺 Save	e as example 🌼
Pretty	Raw Preview Visualize JSON 🗸 🛱	ΓO
1		
2	"@odata.context": "/redfish/v1/\$metadata#PCIeDevice.PCIeDevice".	
3	"@odata.etag": "\"1700846595\"",	
	"@odata.id": "/redfish/v1/Chassis/Self/PCIeDevices/00_83_00",	
	"@odata.type": "#PCIeDevice.v1_4_0.PCIeDevice",	
6	"DeviceType": "SingleFunction",	
7	"Id": "00_83_00",	
8	"Name": "00_83_00",	
9	"PCIeFunctions": {	
10	"@odata.id": "/redfish/v1/Chassis/Self/PCIeDevices/00_83_00/PCIeFu	unctions"
11	3,	
12	"PCIeInterface": {	
13	"LanesInUse": 4,	
14	"MaxLanes": 4,	
15	"MaxPCIeType": "Gen3",	
16	"PCIeType": "Gen3"	
17	<u>ځ</u> ,	
18	"Status": {	
19	"Health": "OK",	
20	"State": "Enabled"	
21		
22		

9.4 PCIe Functions

Method: GET

Example:

Assume the bus, device and function for this PCIe deviced are 00, 05 and 00, respectively. Then, the redfish API for NIC is /redfish/v1/Chassis/Self/PCIeDevices/00_05_00/PCIeFunctions/ DevType3_LAN1_DevIndexF.



Ethernet Interfaces resources are used to manage BMC network configuration.

10.1 Viewing Network Settings

URI: /redfish/v1/Managers/Self/EthernetInterfaces/eth0

Method: GET

Example:

		·	
GET	https://{{bmc}}/redfish/v1/Managers/Self/EthernetInterfaces/eth0	Send	~
Params	Auth Headers (7) Body Pre-req. Tests Settings	Coo	kies
Body 🗸	🏀 200 OK 80 ms 1.62 KB 🖺 Save	e as exampl	e
Pretty	Raw Preview Visualize JSON ~ =	G	Q
1			, ∎
2	"@odata.context": "/redfish/v1/\$metadata#EthernetInterface.EthernetInte	rface".	
3	"@odata.etag": "\"1686680049\"",		
	"@odata.id": "/redfish/v1/Managers/Self/EthernetInterfaces/eth0",		
	"@odata.type": "#EthernetInterface.v1_6_2.EthernetInterface",		
	"AutoNeg": true,		
	"DHCPv4": {		
8	"DHCPEnabled": true		
	3,		
10	"DHCPv6": {		
11	"OperatingMode": "Stateless"		
12	3,		

10.2 IPv6 Configuration

URI: /redfish/v1/Managers/Self/HostInterfaces/Self Method: PATCH

Example:

Edit the request content in JSON format from Body.

PATCH ~ https://{{bmc}}/redfish/v1/Managers/Self/EthernetInterfaces/eth0									
Params	Authorization Headers (10) Body Pre-request Script Tests Settings	Cool	kies						
non	e 🔵 form-data 🔵 x-www-form-urlencoded 🤎 raw 🔵 binary 🔵 GraphQL JSON 🗸	Beaut	ify						
1									
2	"IPv6StaticAddresses": [
3	····£								
4	"Address": "2001:db8:3333:4444:5555:6666:7777:8888",								
5	···· "PrefixLength": 64,								
6	···· "Oem": - {								
7	"Ami": {								
8	······································								
9	····}···}								
10	· · · · · · · · · · · · · · · · · · ·								
11	···· 3								
12	····]								
13	}								
4.4									

After the request will be sent to the target, such as S8056, the response status is 202 with response body in JSON format if the request is successful.

РАТСН	https://{{bmc}}/redfish/v1/Managers/Self/EthernetInterfaces/eth0	Send	
Params	Authorization Headers (10) Body • Pre-request Script Tests Settings	Cook	ies
Body Co	ookies Headers (17) Test Results 🚯 202 Accepted 259 ms 931 B 🖺 Save	e as example	000
Pretty	Raw Preview Visualize JSON $\sim \frac{1}{-2}$	ſ <u></u> (Q
	E Contraction of the second		
	"@odata.id": "/redfish/v1/TaskService/Tasks/1",		
	"@odata.type": "#Task.v1_4_2.Task",		
	"Description": "Task for EthernetInterface Action",		
	"Id": "1",		
	"Name": "EthernetInterface Action",		
	"TaskState": "New"		
9			

Then, you can access /redfish/v1/TaskService/Tasks/1 to check the progress of setting the IPv6 address.

GET	https://{{bmc}}/redfish/v1/TaskService/Tasks/1	Send ~
Params	Authorization Headers (7) Body Pre-request Script Tests Settings	Cookies
Body Cod	kies Headers (14) Test Results 🏟 🦓 200 OK 59 ms 1.12 KB 🖺 Sa	ave as example 🛛 👓
Pretty	Raw Preview Visualize JSON ~ 🛱	ΓQ
1 5 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 24	<pre>"@odata.context": "/redfish/v1/\$metadata#Task.Task", "@odata.etag": "\"1701261066\"", "@odata.id": "/redfish/v1/TaskService/Tasks/1", "@odata.type": "#Task.v1_4_2.Task", "Description": "Task for EthernetInterface Action", "EndTime": "2023-11-29T12:31:32+00:00", "Id": "1", "Messages": [</pre>	

10.3 Host Interface 10.3.1 Enabling Host Interface

URI: /redfish/v1/Managers/Self/HostInterfaces/Self Method: PATCH Example:

Edit the request content in JSON format from Body.



This resource represents system health event logs and maintenance event logs.

11.1 System Health Event Log

URI: /redfish/v1/Systems/Self/LogServices/BIOS

Method: GET

Example:

GET	https://{{bmc}}/redfish/v1/Systems/Self/LogServices/BIOS	Send ~
Params	Auth Headers (7) Body Pre-req. Tests Settings	Cookies
Body C	ookies Headers (14) Test Results 🚯 200 OK 66 ms 1.25 KB 🖺 Save	e as example 🜼
Pretty	Raw Preview Visualize JSON V =	rd Q
1 2 3	<pre> 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9</pre>	
	"@odata.id": "/redfish/v1/Systems/Self/LogServices/BIOS", "@odata.type": "#LogService.v1_1_3.LogService",	
	<pre>"Actions": { "#LogService.ClearLog": { " #LogServices/BIOS/Actions/LogService. " target": "/redfish/v1/Systems/Self/LogServices/BIOS/Actions/LogService. 2</pre>	ClearLog"
10 11	}, }, "DateTime": "2023-06-13T20:56:57-00:00",	
12 13	"DateTimeLocalOffset": "-00:00", "Description": "TPMT SEL events for this manager".	
14	"Entries": {	
15 16 17	<pre>iddata.id : /redfish/vi/systems/self/Logservices/Blos/Entries }, "Id": "BIOS",</pre>	
18 19	"LogEntryType": "SEL", "MaxNumberOfRecords": 150,	
20 21	"Name": "System BIOS Log Service", "OverWritePolicy": "WrapsWhenFull",	
22 23	"ServiceEnabled": true, "Status": {	
24 25	"Health": "OK", "State": "Enabled"	
26 27	3 B	

11.1.1 Supported Actions

11.1.1.1 Clearing Logs

Use this API to delete all system health event log entries.

URI: /redfish/v1/Systems/Self/LogServices/BIOS/Actions/LogService.ClearLog Method: POST

Example:

Edit the request content in JSON format from Body.



POS	т		https	://{{br	nc}}/redf	ish/v1/S	ystems/	Self/L	ogSer	vices	/BIOS/Acti	ons/	LogSer	vice.Cle	arLog		Send	~
Param	ıs	Auth	Headers	(9)	Body •	Pre-re	q. Tes	sts	Setting	js							Co	okies
Body	Coo	kies	Headers (15)	Test Res	sults				¢	202 Accep	oted	113 ms	809 E	3 🖺 Sav	/e as	examp	le «
Pret	ty	Rav	v Prev	view	Visua	alize	JSON		-P								G	Q
1 2	ş	"@(odata.com	text	": " <u>/re</u>	dfish/	v1/\$met	tadat	ta#Tas	sk.Ta	<u>ask</u> ",							
4		"@« "De	odata.typ	• <u>/</u>)e": 	"#Task. "Task f	v1_4_2	.Task"	, ,	ndoo"	<u>, ,</u>								
6		"I(d": "6",			orvica"		ogoei	IVICE									
8	3	"Ta	askState"	: "N	ew"	TATCE												

11.1.1.2 Log Entry Collection

Navigate to view a collection of Log Entry resource instances. /redfish/v1/Systems/1/LogServices

URI: /redfish/v1/Systems/Self/LogServices/BIOS/Entries

Method: GET

Example:



11.2 Maintenance Event Log

URI: /redfish/v1/Managers/1/LogServices/[logservice id]

Method: GET

Example:

GET	https://{{bmc}}/redfish/v1/Managers/Self/LogServices/SEL/Entries/1	Send	~
Params	Auth Headers (7) Body Pre-req. Tests Settings	Cookie	s
Body 🗸	🥵 200 OK 48 ms 1.4 KB 🖺 Save	e as example	00
Pretty	Raw Preview Visualize JSON ~ 😓	ς	ł
1	त त		
2	"@odata.context": "/redfish/v1/\$metadata#LogEntry.LogEntry".		
3	"@odata.etag": "\"1686690151\"",		
4	"@odata.id": "/redfish/v1/Managers/Self/LogServices/SEL/Entries/1",		
	"@odata.type": "#LogEntry.v1_4_3.LogEntry",		
	"Created": "2000-01-01T00:00:17+00:00",		
7	"Description": "SEL 3",		
8	"EntryCode": "Assert",		
9	"EntryType": "SEL",		
10	"EventTimestamp": "2023-08-17T00:18:13+00:00",		
11	"Id": "1",		
12	"Links": {		
13	"OriginOfCondition": {		
14	"@odata.id": "/redfish/v1/Systems/Self"		
15	}		
16	3,		
17	"Message": "Event_Data_1 : 0, Record_Type : system event record, Sense	or_Number : :	13
18	"MessageId": "0x00FFFF",		
19	"Name": "SEL 3",		
20	"SensorNumber": 131,		
21	"SensorType": "System ACPI PowerState",		
22	"Severity": "Ok"		
23			

11.2.1 Supported Actions

11.2.1.1 Clearing Logs

Use this API to delete all maintenance event log entries.

URI: /redfish/v1/Managers/Self/LogServices/SEL/Actions/LogService.ClearLog Method: GET

Example:

GET	r		https://{{	bmc}}/redfish/v	/Managers	/Self/Log	gServices/SEL/A	Actions/Lo	ogService.Cl	earLog	Send	~
Paran	าร	Auth	Headers (7)	Body Pre-r	eq. Tests	Settin	gs				Co	okies
Body	Coc	kies	Headers (6)	Test Results		¢	405 Method Not	Allowed	24 ms 795	в 🖺 Sa	ive as examp	ole 👓
Pret	ty	Rav	v Preview	Visualize	JSON						Ū	Q
1	5											П
		"e:	rror": {									
			"@Message.	ExtendedInfo	":[
			-{									
			""	odata.type":	"#Messag	e.v1_0	_8.Message",					
				lessage": "Th	e method	GET is	not allowed	for the	URI /redi	Eish/v1/M	lanagers/S	elf/Lo
				lessageArgs":	[
				"GET",								
				"/redfish/	v1/Manage	rs/Seli	f/LogServices	SEL/Ac	tions/Logs	Service.C	learLog"	
10			j,	,								
11			"1	lessageId": "	HttpStatu	s.1.0.M	MethodNotAllo	wed",				
12			"F	Resolution":	"Use a me	thod li	isted in the	Allow h	eader",			
13			" 5	Severity": "C	ritical"							
14			3									
15],									
16			"code": "H	HttpStatus.1.	0.MethodN	otAllow	wed",					
17			"message":	: "The method	GET is n	ot allo	owed for the	URI /re	dfish/v1/M	lanagers/	Self/LogS	ervice
18		}										
19	3											

11.2.2 Log Entry Collection

Navigate to view the collection of Log Entry resource instances.

URI: /redfish/v1/Managers/Self/LogServices/SEL/Entries

Method: GET

Example:

GET			https://{{bmc}}/redfish/v1/Managers/Self/LogServices/SEL/Entries	Send ~
Params	Aut	h He	aders (7) Body Pre-req. Tests Settings	Cookies
Body C	ookies	s He	aders (14) Test Results 🚯 200 OK 104 ms 12.29 KB 🖺 S	ave as example 🛛 🗠
Pretty	F	ław	Preview Visualize JSON ~ 🛱	ΓQ
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20		"@oda1 "@oda1 "@oda1 "@oda1 "Desco "Membe	<pre>the restance book to _p ta.context": "/redfish/v1/\$metadata#LogEntryCollection.LogEntryCollection ta.etag": "\"1686679950\"", ta.id": "/redfish/v1/Managers/Self/LogServices/SEL/Entries", ta.type": "#LogEntryCollection.LogEntryCollection", ription": "Collection of entries for this log service", ers": ["@odata.id": "/redfish/v1/Managers/Self/LogServices/SEL/Entries/1", "@odata.type": "#LogEntry.v1_4_3.LogEntry", "Created": "2000-01-01T00:00:17+00:00", "Description": "SEL 3", "EntryCode": "Assert", "EntryType": "SEL", "EventTimestamp": "2023-08-17T00:18:13+00:00", "Id": "1", Links": { "OriginOfCondition": { "@odata.id": "/redfish/v1/Systems/Self" } } } } </pre>	ب •
21			}, "Message": "Event_Data_1 : 0, Record_Type : system event record, Senso	r_Number : 131,
23			"MessageId": "0x00FFFF",	
24			"Name": "SEL 3",	
25			"SensorNumber": 131,	
26			"SensorType": "System ACPI PowerState",	
27			"Severity": "Ok"	
28				

You can integrate current APIs into their software and applications in order to receive all services providedby Redfish APIs.

12.1 System Reset

URI: /redfish/v1/Systems/Self/Actions/ComputerSystem.Reset Method: POST Example:

Edit the request content in JSON format from Body.



POST	https://{{bmc}}/redfish/v1/Systems/Self/Actions/ComputerSystem.Reset	Send
Params	Auth Headers (9) Body • Pre-req. Tests Settings	Cookie
Body 🗸	🚯 202 Accepted 108 ms 857 B	as example
Pretty	Raw Preview Visualize JSON V 😓	ΓO
1	E	
2	"@odata.context": "/redfish/v1/\$metadata#Task.Task",	
3	"@odata.id": "/redfish/v1/TaskService/Tasks/1",	
	"@odata.type": "#Task.v1_4_2.Task",	
	"Description": "Task for Systems Self Reset Maintenance Window Task",	
6	"Id": "1",	
7	"Name": "Systems Self Reset Maintenance Window Task",	
8	"TaskState": "New"	
9		

12.2 Notifications 12.2.1 SNMP

URI: /redfish/v1/Managers/Self/NetworkProtocol Method: PATCH Example:

Edit the request content in JSON format from Body.



PATCH V https://{{bmc}}/redfish/v1/Managers/Self/NetworkProtocol						
Params	Authorization Headers (10) Body • Pre-request Script Tests Settings	Coo	kies			
Body Co	okies Headers (16) Test Results 🚯 202 Accepted 306 ms 1.59 KB 🖺 Save	e as example	e ••			
Pretty	Raw Preview Visualize JSON ~ =	G	Q			
1 2 3 4 5 6 7 8 9 10 11 12 13	<pre>"@odata.context": "/redfish/v1/\$metadata#Task.Task", "@odata.id": "/redfish/v1/TaskService/Tasks/8", "@odata.type": "#Task.v1_4_2.Task", "Description": "Network Protocol Details", "FQDN": "AMIA0021768A178.mitacad.com", "HTTPS": {</pre>					

12.3 Getting MAC Addresses from System NICs

URI: /redfish/v1/Systems/Self/EthernetInterfaces/EthernetInterface0

Method: GET

Example:

GET	 https://{{bmc}}/redfish/v1/Systems/Self/EthernetInterfaces/EthernetInterface0 Send 						
Params	Auth Headers (7) Body Pre-req. Tests Settings Cookies						
Body Co	ookies Headers (16) Test Results 🌼 🚯 200 OK 76 ms 1.87 KB 🖺 Save as example ∘						
Pretty	Raw Preview Visualize JSON ~ =						
	AUUICSS . 0.0.0.0 /						
13	"AddressOrigin": "Static",						
14	"SubnetMask": "0.0.0.0"						
15	3						
16],						
17	"IPv6Addresses": [
18							
19	"Address": "FE80::A242:3FFF:FE50:830",						
20	"AddressOrigin": "Static",						
21	"PrefixLength": 64						
22	3						
23],						
24	"IPv6DefaultGateway": "::",						
25	"Id": "EthernetInterface0",						
26	"InterfaceEnabled": false,						
27	"LinkStatus": "LinkDown".						
28	"Links": {						
29	"Chassis": {						
30	"@odata.id": "/redfish/v1/Chassis/Self"						
31							
32	"NetworkDeviceFunction": {						
33	"@odata.id": "/redfish/v1/Chassis/Self/NetworkAdapters/DevType7 NICO/NetworkDevi						
34	<u>}</u>						
35	ł.						
36	"MACAddress": "A0:42:3F:50:08:30",						
37	"MTUSize": 1500,						
38	"Name": "EthernetInterface0",						
39	"PermanentMACAddress": "A0:42:3F:50:08:30",						
40	"Status": {						
41	"Health": "OK",						
42	"State": "Disabled"						
43	ξ,						

12.4 Chassis Intrusion

URI: /redfish/v1/Chassis/Self Method: GET/PATCH Response: 200 Example:

GET		https://{	{bmc}}/redfish/v1/C	hassis/Self					Send	~
Derem	. Auth	lloodere (7)	Dedu Dro roz	Taata O	attin era				0	akiaa
Param	s Auth	Headers (7)	Body Pre-req.	Tests Se	ettings				Co	okies
Body	Cookies	Headers (22)	Test Results		¢2	200 OK	88 ms 3.4	2 KB 🖺 Sav	e as examp	ole •
Prett	y Ra	aw Preview	/ Visualize	JSON 🗸					G	Q
	F									
2	ца 	@odata.conte	xt": "/redfish/v	v1/\$metadat	ta#Chassi	ls.Chassi	s",			
		- @odata.etag"	: "\"1686701329	\"" ,						
		@odata.id":	/redfish/v1/Cha	assis/Self						
		@odata.type"	: "#Chassis.v1_:	14_0.Chass:	is",					
		Actions": {								
		"#Chassis	.Reset": {							
		"@Red	fish.ActionInfo	": " <u>/redfi</u>	sh/v1/Cha	ssis/Sel	f/ResetAd	tionInfo",		
		"@Red	fish.OperationAp	pplyTimeSup	oport": {					
10			@odata.type": "	#Settings.v	/ 1_2_2. 0p	erationA	pplyTimeS	Support",		
11			MaintenanceWindo	owDuration]	InSeconds	;": 600,				
12			MaintenanceWindo	owResource'	': {					
13			"@odata.id":	"/redfish	/v1/Chass	is/Self"				
14		3								
15			SupportedValues	":[
16			"Immediate",							
17			"AtMaintenand	ceWindowSta	art"					
18]								
19		3,								
20		"targ	et": " <u>/redfish/</u>	v1/Chassis,	/Self/Act	ions/Cha	ssis.Rese	<u>t</u> "		
21		3								
22	3	,								

12.5 Network DNS

URI: /redfish/v1/Managers/Self/EthernetInterfaces/eth0 Method: GET/PATCH

Example:

GET	https://{{bmc}}/redfish/v1/Managers/Self/EthernetInterfaces/eth0						
Params	Auth Headers (7) Body Pre-req. Tests Settings	Cookies					
Body C	ookies Headers (13) Test Results 🚯 200 OK 101 ms 1.62 KB 🖺 Save	e as example 🛛 👓					
Pretty	Raw Preview Visualize JSON \checkmark $\overrightarrow{=}$	ΓQ					
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	<pre>"@odata.context": "/redfish/v1/\$metadata#EthernetInterface.EthernetInterface "@odata.etag": "\"1686701336\"", "@odata.id": "/redfish/v1/Managers/Self/EthernetInterfaces/eth0", "@odata.type": "#EthernetInterface.v1_6_2.EthernetInterface", "AutoNeg": true, "DHCPv4": { "DHCPv6": { "OperatingMode": "Stateless" }, "Description": "Ethernet Interface eth0", "FQDN": "AMIA0021768A178.mitacad.com", "FullDuplex": true, "HostName": "AMIA0021768A178", "IPv4Addresses": [{</pre>						
23 24	3						

DMTF Redfish: <u>http://www.dmtf.org/standards/redfishhttp://redfish.dmtf.org/</u> Mockups: <u>http://redfish.dmtf.org/redfish/</u> If a problem arises with your system, you should first turn to your dealer for direct support. Your system has most likely been configured or designed by them and they should have the best idea of what hardware and software your system contains. Hence, they should be of the most assistance for you. Furthermore, if you purchased your system from a dealer near you, take the system to them directly to have it serviced instead of attempting to do so yourself (which can have expensive consequence).

If these options are not available for you then MITAC COMPUTING TECHNOLOGY CORPORATION can help. Besides designing innovative and quality products for over a decade, MITAC has continuously offered customers service beyond their expectations. TYAN's website (http:// www.tyan.com) provides easy-to-access resources such as in-depth Linux Online Support sections with downloadable Linux drivers and comprehensive compatibility reports for chassis, memory and much more. With all these convenient resources just a few keystrokes away, users can easily find their latest software and operating system components to keep their systems running as powerful and productive as possible. MITAC also ranks high for its commitment to fast and friendly customer support through email. By offering plenty of options for users, MITAC serves multiple market segments with the industry's most competitive services to support them.

Please feel free to contact us directly for this service at tech-support@tyan.com

Help Resources:

- 1. See the TYAN's website for FAQ's, bulletins, driver updates, and other information: <u>http://www.tyan.com</u>
- 2. Contact your dealer for help before calling TYAN.

Returning Merchandise for Service

During the warranty period, contact your distributor or system vendor FIRST for any product problems. This warranty only covers normal customer use and does not cover damages incurred during shipping or failure due to the alteration, misuse, abuse, or improper maintenance of products.

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