

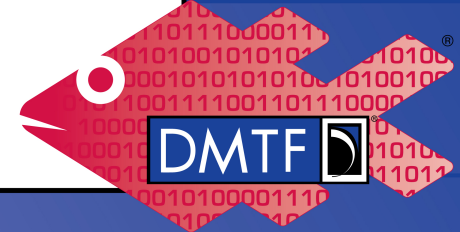


Redfish Tools

Or How to Use Redfish in the Real World

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Redfish

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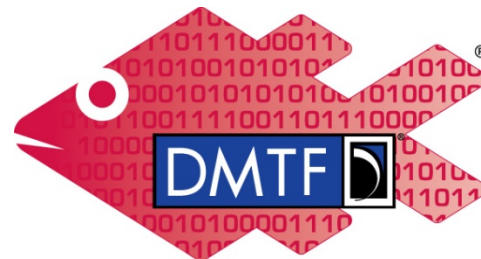
Agenda

- Why Redfish
- Redfish Tacklebox
- Redfish Trawler



Why Redfish?

To enable simple and secure management of modern hardware in data centers and large-scale enterprise environments.

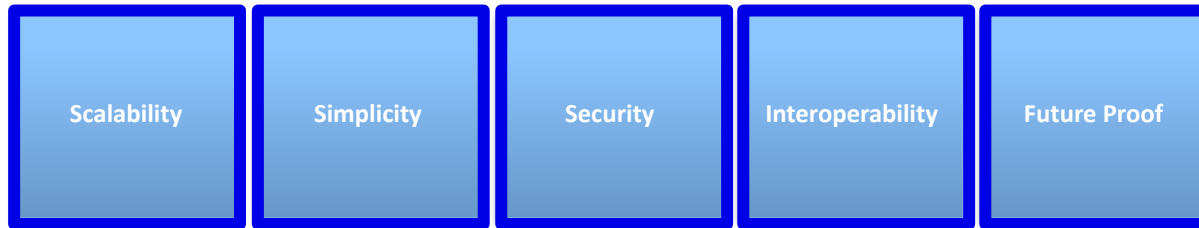


Redfish

Redfish is designed to replace older, less secure, and less efficient interfaces with a modern, RESTful API that uses JSON for data representation.

Enabling more advanced integrated management functions.

Benefits of Redfish



As the standard Redfish API is future-proof, it allows interoperability and standard use of different devices and components. Redfish is a RESTful API that is easy to use and understand, making it easy to integrate and manage across different devices and systems. Redfish is a standard that can be used to manage and control different types of hardware and software components, enabling more advanced integrated management functions.

Redfish Tacklebox

- Contains a set of Python3 command line utilities to perform common management operations with a Redfish service
- Published to PyPI (The Python Package Index)
 - <https://pypi.org/project/redfish-utilities/>

- How to install:

```
> pip install redfish_utilities -U
```

Scripts in Redfish Tacklebox

- **Discovery**
 - rf_discover.py
- **Firmware Update**
 - rf_update.py
- **Redfish Configuration**
 - rf_accounts.py
 - rf_manager_config.py
 - rf_event_service.py
 - rf_licenses.py
 - rf_certificates.py
- **System Management**
 - rf_sys_inventory.py
 - rf_sensor_list.py
 - rf_logs.py
 - rf_power_reset.py
 - rf_boot_override.py
 - rf_virtual_media.py
 - rf_bios_settings.py
- **Infrastructure Management**
 - rf_power_equipment.py
 - rf_thermal_equipment.py



rf_accounts.py Examples

```
> rf_accounts.py -u root -p root -r https://192.168.1.100
```

Name	Role	Locked	Enabled
root	Administrator	False	True

```
> rf_accounts.py -u root -p root -r https://192.168.1.100 \  
-add Bob BobsPassword ReadOnly
```

```
Adding new user 'Bob'
```

```
> rf_accounts.py -u root -p root -r https://192.168.1.100 \  
-setpassword root MyN3wP@ssword
```

```
Changing password of user 'root'
```



rf_boot_override.py Examples

```
> rf_boot_override.py -u root -p root -r https://192.168.1.100
```

Boot Override Settings:

Target: None; Allowable Values: None, Pxe, Cd, Usb, Hdd, BiosSetup,
Utilities, Diags, SDCard, UefiTarget

Enabled: Disabled

Mode: UEFI

UEFI Target:

```
> rf_boot_override.py -u root -p root -r https://192.168.1.100 \  
-t Pxe -reset
```

Setting a one time boot for Pxe...

Resetting the system...



Redfish Trawler

- Browser client (GUI) built on top of Flask to perform management operations with one or more Redfish services

- Requires Python3

- **How to install:**

```
> git clone https://github.com/DMTF/Redfish-Trawler.git
> cd Redfish-Trawler
> pip install -r requirements.txt
```

- **How to run:**

```
> flask --app redfish_trawler.py run
```

- Open a browser, go to <http://127.0.0.1:5000>



Main Menu

Service Settings

Management Pages

Test System - https://10.2.119.32

Add Service Delete Service Create Service

Select a Service

Test System - https://10.2.119.32

Select from the sidebar to continue



Chassis List

Chassis
Link

Quick Info

Name	ChassisType	PowerState	Health	Action
Computer System Chassis (1U)	RackMount	On	OK	Reset



Chassis Info

Chassis
Status

Fan Info

Temperature
Info

Test System 2 - https://127.0.0.1:8000

Add Service Delete Service Close Service

Service Name / ...

Chassis

Name: Computer System Chassis
Id: 1U
SerialNumber: 437XR1138R2
SKU: 8675309
Model: 3500RX
Health: OK
PowerState: On
LocationIndicator:

Fans

Name	Reading
0 (BaseBoard System Fan)	2100 RPM
1 (BaseBoard System Fan Backup)	2050 RPM

Temperatures

Name	Reading
0 (CPU1 Temp)	41 C*
1 (CPU2 Temp)	C*
2 (Chassis Intake Temp)	25 C*



User Management

User Accounts

Role Info

Service Settings

Test System 2 - https://127.0.0.1:8000

Service Name / ...

Accounts [Add New](#)

Name	Role	Locked	Enabled	Account Types
Administrator	Administrator	false	true	Redfish

Roles

Name	Assigned Privileges
Administrator	Login, ConfigureManager, ConfigureUsers, ConfigureSelf, ConfigureComponents
Operator	Login, ConfigureSelf, ConfigureComponents
ReadOnly	Login, ConfigureSelf

Properties [Edit](#)

ServiceEnabled: true
 AuthFailureLoggingThreshold: 3
 MinPasswordLength: 8
 AccountLockoutDuration: 30



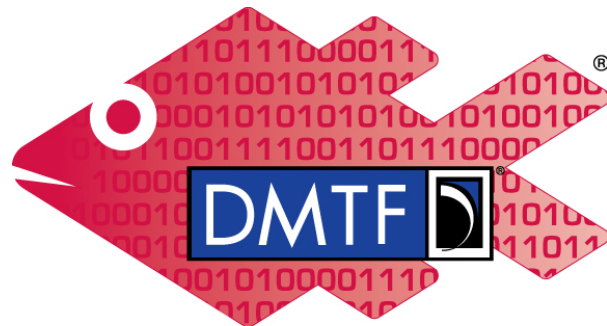
Call to Action

- Try our client tools!
- Bugs, questions, feature requests?
 - File an issue on GitHub, or make a pull request
 - The Redfish Forum reviews issues and pull requests during meetings
- GitHub links
 - <https://github.com/DMTF/Redfish-Tacklebox>
 - <https://github.com/DMTF/Redfish-Trawler>

Thank you!

**For more information,
visit us online at
dmtf.org**

**Visit the
Redfish Developers Hub at
redfish.dmtf.org**



Redfish