Redfish Architecture

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Redfish Protocol

- **CRUD Operations from REST**
  - POST = Create (plus actions)
  - GET = Read
  - PUT & PATCH = Update
  - DELETE = Delete
  - HEAD = Get lite

- **Discovery**
  - SSDP used for discovery of endpoint

- **Security**
  - Root can be read unauthenticated. Can POST to Sessions Collection unauthenticated (that’s how a session is established).

- **Schema**
  - CSDL & JSON Schema can be located via the Redfish Service
Introduction to the Redfish data model

- All resources linked from a Service Entry point (root) – Hypermedia API
  - Always located at URL: /redfish/v1
  - Can do a GET on /redfish to find versions (only v1 right now)
  - Each Resource has it’s schema version as a property.
- Major resource types structured in “collections” to allow for standalone, multi-node, or aggregated rack-level systems
  - Additional related resources fan out from members within these collections
- **ComputerSystem**: properties expected from an OS console
  - Items needed to run the “computer”
  - Roughly a logical view of a computer system as seen from the OS
- **Chassis**: properties needed to locate the unit with your hands
  - Items needed to identify, install or service the “computer”
  - Roughly a physical view of a computer system as seen by a human
- **Managers**: properties needed to perform administrative functions
  - aka: the systems management subsystem (BMC)
Resource map (highlights)

/redfish/v1
Root Resource
Links to all content

/redfish/v1/Managers
Collection of Managers
BMC functionality

/redfish/v1/Managers/<id>
BMC
System Manager operations

/redfish/v1/Systems
Collection of Systems
“Logical” view of the system

/redfish/v1/Systems/<id>
Server Information
Model #, Serial #, Boot Order, NIC MAC, status, etc.

/redfish/v1/Chassis
Collection of Chassis
“Physical” view of the system

/redfish/v1/Chassis/<id>
Chassis global physical asset info

/redfish/v1/Chassis/<id>
Chassis

/redfish/v1/Managers/<id>
BMC

/redfish/v1/Managers/<id>

/Sessions

/Accounts

/Schemas

/Events

/Power

/Thermal

/Network

/Disks

/Processors

/Services

/Logs

www.dmtf.org
Thank you for watching!

- **Redfish Developer Portal**
  - Redfish Interactive Explorer, Hosted Schema at Namespace & other links
  - [http://redfish.dmtf.org](http://redfish.dmtf.org)

- **Redfish Standards**
  - Schemas, Specs, Mockups, White Papers, FAQ, Educational Material & more
  - [http://www.dmtf.org/standards/redfish](http://www.dmtf.org/standards/redfish)

- **SPMF (WG that defines Redfish)**
  - Companies involved, Upcoming Schedules & Future work, Charter, Information on joining.
  - [http://www.dmtf.org/standards/spmf](http://www.dmtf.org/standards/spmf)