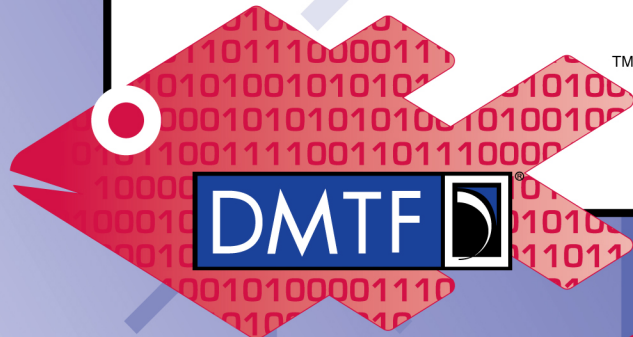# Redfish Architecture

Jeff Hilland

Hewlett Packard Enterprise

Redfish

Redfish Protocol

- ## CRUD Operations from REST
  - POST = Create (plus actions)
  - GET = Read
  - PUT & PATCH = Update
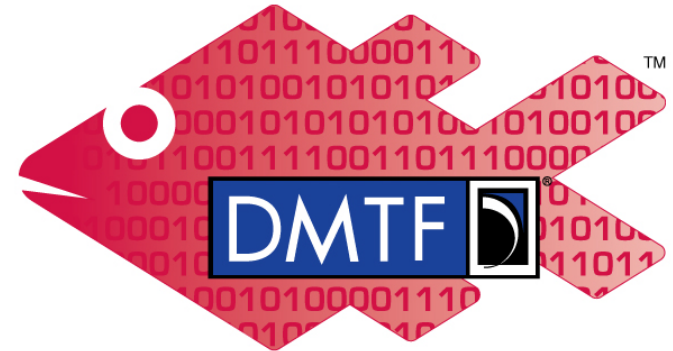 - DELETE = Delete
  - HEAD = Get lite
- ## Discovery
  - SSDP used for discovery of endpoint
- ## Security
  - Root can be read unauthenticated. Can POST to Sessions Collection unauthenticated (that's how a session is established).
- ## Schema
 - CSDL & JSON Schema can be located via the Redfish Service

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
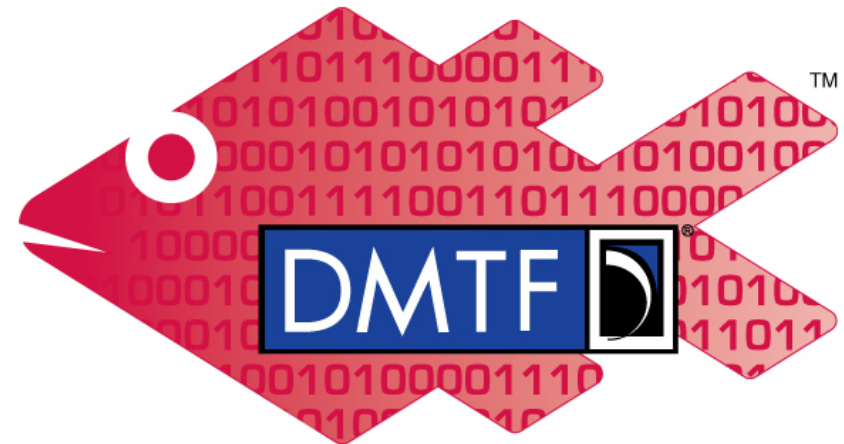 - aka: the systems management subsystem (BMC)

Resource map (highlights)
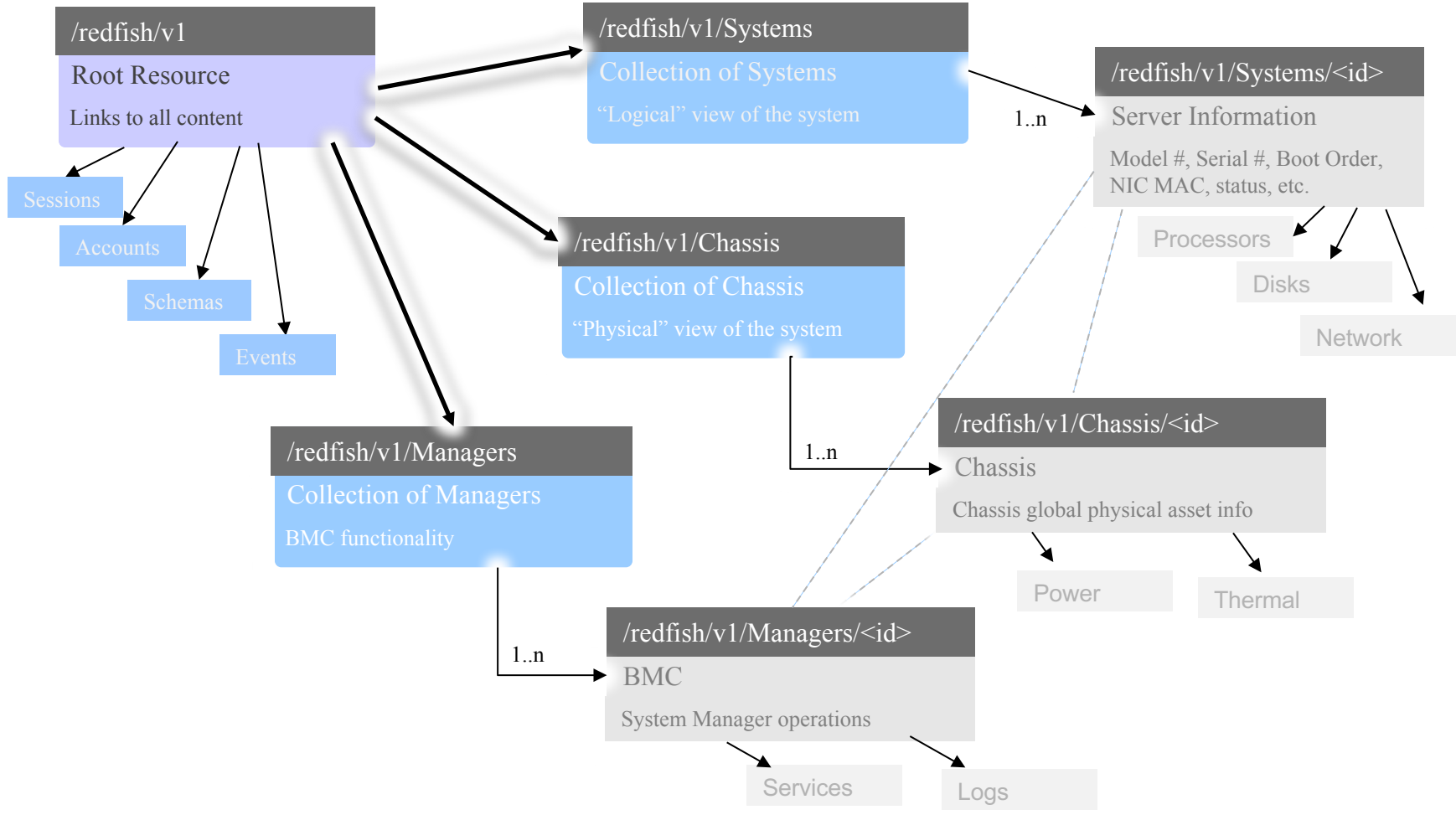
Thank you for watching!

- Redfish Developer Portal
  - Redfish Interactive Explorer, Hosted Schema at Namespace & other links
  - http://redfish.dmtf.org
- Redfish Standards
  - Schemas, Specs, Mockups, White Papers, FAQ, Educational Material & more
  - 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