

ISO/IEC 30115:2018-03 (E)

Information technology - Redfish scalable platforms management API specification

CONTENTS

- 1. Abstract 8
- 2. Normative references 8
- 3. Terms and definitions 9
- 4. Symbols and abbreviated terms..... 12
- 5. Overview 12
 - 5.1. Scope..... 13
 - 5.2. Goals 13
 - 5.3. Design tenets..... 14
 - 5.4. Limitations..... 14
 - 5.5. Additional design background and rationale..... 15
 - 5.5.1. REST-based..... 15
 - 5.5.2. Follow OData conventions 15
 - 5.5.3. Model-oriented 16
 - 5.5.4. Separation of protocol from data model..... 16
 - 5.5.5. Hypermedia API service endpoint..... 16
 - 5.6. Service elements 16
 - 5.6.1. Synchronous and asynchronous operation support..... 16
 - 5.6.2. Eventing mechanism..... 17
 - 5.6.3. Actions..... 17
 - 5.6.4. Service entry point discovery 17
 - 5.6.5. Remote access support 18
 - 5.7. Security 18
- 6. Protocol details..... 18
 - 6.1. Use of HTTP 19
 - 6.1.1. URIs 19
 - 6.1.2. HTTP methods 20
 - 6.1.3. HTTP redirect..... 21
 - 6.1.4. Media types 21
 - 6.1.5. ETags 21
 - 6.2. Protocol version 22
 - 6.3. Redfish-defined URIs and relative URI rules..... 23
 - 6.4. Requests..... 24
 - 6.4.1. Request headers 24
 - 6.4.2. Read requests (GET) 26
 - 6.4.3. HEAD 28
 - 6.4.4. Data modification requests..... 29
 - 6.5. Responses..... 32
 - 6.5.1. Response headers 33
 - 6.5.2. Status codes 35
 - 6.5.3. Metadata responses..... 38
 - 6.5.4. Resource responses 41

6.5.5. Resource Collection responses	49
6.5.6. Error responses.....	50
7. Data model and Schema.....	53
7.1. Schema repository.....	53
7.1.1. Programmatic access to schema files	53
7.2. Type identifiers.....	54
7.2.1. Type identifiers in JSON.....	54
7.3. Common naming conventions	54
7.4. Localization considerations	55
7.5. Schema definition	55
7.5.1. Common annotations	55
7.5.2. Schema documents	56
7.5.3. Resource type definitions.....	58
7.5.4. Resource properties.....	58
7.5.5. Reference properties.....	62
7.5.6. Resource actions	64
7.5.7. Resource extensibility	65
7.5.8. Oem property examples.....	67
7.6. Common Redfish resource properties.....	69
7.6.1. Id	69
7.6.2. Name.....	69
7.6.3. Description	55
7.6.4. Status	70
7.6.5. Links.....	70
7.6.6. Members	70
7.6.7. RelatedItem.....	70
7.6.8. Actions.....	17
7.6.9. OEM	70
7.7. Redfish resources.....	71
7.7.1. Current configuration.....	71
7.7.2. Settings	71
7.7.3. Services	71
7.7.4. Registry	72
7.8. Special resource situations.....	72
7.8.1. Absent resources	72
7.8.2. Schema variations.....	72
8. Service details.....	73
8.1. Eventing.....	73
8.1.1. Event message subscription	74
8.1.2. Event message objects	74
8.1.3. Subscription cleanup.....	75
8.2. Asynchronous operations	75
8.3. Resource tree stability	76

8.4. Discovery	77
8.4.1. UPnP compatibility	77
8.4.2. USN format.....	77
8.4.3. M-SEARCH response	77
8.4.4. Notify, alive, and shutdown messages	78
9. Security	18
9.1. Protocols.....	78
9.1.1. TLS.....	78
9.1.2. Cipher suites	78
9.1.3. Certificates	79
9.2. Authentication	79
9.2.1. HTTP header security	79
9.2.2. Extended error handling.....	80
9.2.3. HTTP header authentication	80
9.2.4. Session Management	80
9.2.5. AccountService	83
9.2.6. Async tasks	83
9.2.7. Event subscriptions	83
9.2.8. Privilege model/Authorization	83
9.2.9. Redfish Service Operation to Privilege Mapping	84
10. Redfish Host Interface.....	92
11. Redfish Composability.....	92
11.1. Composition Requests.....	92
11.1.1. Specific Composition	92
12. ANNEX A (informative)	93
12.1. Change log	93