
**Information technology — Redfish
scalable platforms management API
specification —**

**Part 2:
Redfish Schema Supplement v2021.1**



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2022

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents) or the IEC list of patent declarations received (see <https://patents.iec.ch>).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html. In the IEC, see www.iec.ch/understanding-standards.

This document was prepared by DMTF (as DMTF Redfish Schema Supplement, DSP0268, Version 2021.1) and drafted in accordance with its editorial rules. It was adopted, under the JTC 1 PAS procedure, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

A list of all parts in the ISO/IEC 30115 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

Copyright Notice

Copyright © 2019-2021 DMTF. All rights reserved.

DMTF is a not-for-profit association of industry members dedicated to promoting enterprise and systems management and interoperability. Members and non-members may reproduce DMTF specifications and documents, provided that correct attribution is given. As DMTF specifications may be revised from time to time, the particular version and release date should always be noted.

Implementation of certain elements of this standard or proposed standard may be subject to third party patent rights, including provisional patent rights (herein "patent rights"). DMTF makes no representations to users of the standard as to the existence of such rights, and is not responsible to recognize, disclose, or identify any or all such third party patent right, owners or claimants, nor for any incomplete or inaccurate identification or disclosure of such rights, owners or claimants. DMTF shall have no liability to any party, in any manner or circumstance, under any legal theory whatsoever, for failure to recognize, disclose, or identify any such third party patent rights, or for such party's reliance on the standard or incorporation thereof in its product, protocols or testing procedures. DMTF shall have no liability to any party implementing such standard, whether such implementation is foreseeable or not, nor to any patent owner or claimant, and shall have no liability or responsibility for costs or losses incurred if a standard is withdrawn or modified after publication, and shall be indemnified and held harmless by any party implementing the standard from any and all claims of infringement by a patent owner for such implementations.

For information about patents held by third-parties which have notified the DMTF that, in their opinion, such patent may relate to or impact implementations of DMTF standards, visit <http://www.dmtf.org/about/policies/disclosures.php>.

This document's normative language is English. Translation into other languages is permitted.

CONTENTS

1 Overview	32
1.1 Who should read this document?	32
1.2 How can I provide feedback?	32
1.3 Where can I find more information?	32
2 Using this guide	34
2.1 URI listings	34
3 Common properties	36
3.1 Properties that all Redfish Schemas define	36
3.1.1 Properties	36
3.2 Frequently used properties	36
3.2.1 Properties	37
3.3 Payload annotations	37
3.3.1 Property-level annotations	37
3.3.2 Properties	37
3.3.3 Resource- or object-level annotations	38
3.3.4 Properties	38
3.3.5 Property details	39
3.3.5.1 @Redfish.OperationApplyTime:	39
4 Common objects	40
4.1 Actions	40
4.1.1 Properties	40
4.2 Capacity	40
4.2.1 Description	40
4.2.2 Properties	40
4.3 Identifier	41
4.3.1 Description	41
4.3.2 Properties	42
4.3.3 Property details	42
4.3.3.1 DurableNameFormat:	42
4.4 IOStatistics	43
4.4.1 Description	43
4.4.2 Properties	43
4.5 IPv4Address	43
4.5.1 Description	43
4.5.2 Properties	44
4.5.3 Property details	44
4.5.3.1 AddressOrigin:	44
4.6 IPv6Address	44
4.6.1 Description	44
4.6.2 Properties	45
4.6.3 Property details	45

4.6.3.1 AddressOrigin:	45
4.6.3.2 AddressState:	45
4.7 IPv6GatewayStaticAddress	46
4.7.1 Description	46
4.7.2 Properties	46
4.8 IPv6StaticAddress	46
4.8.1 Description	46
4.8.2 Properties	46
4.9 Location	47
4.9.1 Description	47
4.9.2 Properties	47
4.9.3 Property details	51
4.9.3.1 LocationType:	51
4.9.3.2 Orientation:	51
4.9.3.3 RackOffsetUnits:	51
4.9.3.4 Reference:	52
4.10 Message	52
4.10.1 Description	52
4.10.2 Properties	52
4.10.3 Property details	53
4.10.3.1 MessageSeverity:	53
4.11 Redundancy	53
4.11.1 Description	53
4.11.2 Properties	53
4.11.3 Property details	54
4.11.3.1 Mode:	54
4.12 RedundantGroup	55
4.12.1 Description	55
4.12.2 Properties	55
4.12.3 Property details	55
4.12.3.1 RedundancyType:	55
4.13 ReplicaInfo	56
4.13.1 Description	56
4.13.2 Properties	56
4.13.3 Property details	58
4.13.3.1 ConsistencyState:	58
4.13.3.2 ConsistencyStatus:	59
4.13.3.3 ConsistencyType:	59
4.13.3.4 ReplicaFaultDomain:	59
4.13.3.5 ReplicaPriority:	59
4.13.3.6 ReplicaProgressStatus:	60
4.13.3.7 ReplicaReadOnlyAccess:	61
4.13.3.8 ReplicaRecoveryMode:	61

4.13.3.9 ReplicaRole:	61
4.13.3.10 ReplicaState:	62
4.13.3.11 ReplicaType:	63
4.13.3.12 ReplicaUpdateMode:	63
4.13.3.13 RequestedReplicaState:	63
4.13.3.14 UndiscoveredElement:	64
4.14 Schedule	65
4.14.1 Description	65
4.14.2 Properties	65
4.14.3 Property details	65
4.14.3.1 EnabledDaysOfWeek:	65
4.14.3.2 EnabledMonthsOfYear:	66
4.15 Status	67
4.15.1 Description	67
4.15.2 Properties	67
4.15.3 Property details	68
4.15.3.1 Health:	68
4.15.3.2 HealthRollup:	68
4.15.3.3 Severity:	69
4.15.3.4 State:	69
5 Resource Collections	71
5.0.1 Properties	71
5.1 Resource collection URIs in Redfish v1.6 and later	72
6 Schema Reference Guide	84
6.1 AccelerationFunction 1.0.3	84
6.1.1 Description	84
6.1.2 URIs	84
6.1.3 Properties	84
6.1.4 Property details	85
6.1.4.1 AccelerationFunctionType:	85
6.1.5 Example response	86
6.2 AccountService 1.9.0	86
6.2.1 Description	87
6.2.2 URIs	87
6.2.3 Properties	87
6.2.4 Property details	90
6.2.4.1 AccountProviderType:	90
6.2.4.2 Authentication:	90
6.2.4.3 AuthenticationType:	91
6.2.4.4 ExternalAccountProvider:	91
6.2.4.5 LDAPService:	92
6.2.4.6 LocalAccountAuth:	93
6.2.4.7 PasswordExchangeProtocols:	93

6.2.4.8 RestrictedPrivileges:	94
6.2.4.9 SupportedAccountTypes:	94
6.2.4.10 TACACSplusService:	95
6.2.5 Example response	95
6.3 ActionInfo 1.1.2	97
6.3.1 Description	97
6.3.2 Properties	97
6.3.3 Property details	98
6.3.3.1 DataType:	98
6.3.4 Example response	98
6.4 AddressPool 1.1.1	99
6.4.1 Description	99
6.4.2 URIs	99
6.4.3 Properties	99
6.4.4 Property details	116
6.4.4.1 IPv4AddressRange:	116
6.4.5 Example response	116
6.5 Aggregate 1.0.1	117
6.5.1 Description	117
6.5.2 URIs	117
6.5.3 Properties	117
6.5.4 Actions	118
6.5.4.1 AddElements	118
6.5.4.2 RemoveElements	118
6.5.4.3 Reset	119
6.5.4.4 SetDefaultBootOrder	119
6.5.5 Property details	119
6.5.5.1 ResetType:	119
6.5.6 Example response	120
6.6 AggregationService 1.0.1	121
6.6.1 Description	121
6.6.2 URIs	121
6.6.3 Properties	121
6.6.4 Actions	122
6.6.4.1 Reset	122
6.6.4.2 SetDefaultBootOrder	123
6.6.5 Property details	123
6.6.5.1 ResetType:	123
6.6.6 Example response	124
6.7 AggregationSource 1.1.0	125
6.7.1 Description	125
6.7.2 URIs	125
6.7.3 Properties	125

6.7.4 Property details	127
6.7.4.1 AuthenticationProtocol:	127
6.7.4.2 EncryptionProtocol:	127
6.7.5 Example response	127
6.8 Assembly 1.3.0	128
6.8.1 Description	128
6.8.2 URIs	128
6.8.3 Properties	130
6.8.4 Property details	131
6.8.4.1 PhysicalContext:	131
6.8.5 Example response	133
6.9 AttributeRegistry 1.3.6	134
6.9.1 Description	134
6.9.2 Properties	134
6.9.3 Property details	139
6.9.3.1 MapFromCondition:	139
6.9.3.2 MapFromProperty:	139
6.9.3.3 MapTerms:	140
6.9.3.4 MapToProperty:	140
6.9.3.5 Type:	141
6.9.3.5.1 In RegistryEntries: Attributes:	141
6.9.3.5.2 In RegistryEntries: Dependencies:	141
6.9.4 Example response	142
6.10 Bios 1.2.0	144
6.10.1 Description	144
6.10.2 URIs	144
6.10.3 Properties	144
6.10.4 Actions	145
6.10.4.1 ChangePassword	145
6.10.4.2 ResetBios	146
6.10.5 Example response	146
6.11 BootOption 1.0.4	147
6.11.1 Description	147
6.11.2 URIs	147
6.11.3 Properties	148
6.11.4 Property details	148
6.11.4.1 Alias:	148
6.11.5 Example response	149
6.12 Certificate 1.3.0	149
6.12.1 Description	150
6.12.2 URIs	150
6.12.3 Properties	152
6.12.4 Actions	154

6.12.4.1 Rekey (v1.1+)	154
6.12.4.2 Renew (v1.1+)	155
6.12.5 Property details	155
6.12.5.1 CertificateType:	155
6.12.5.2 KeyUsage:	156
6.12.6 Example response	156
6.13 CertificateLocations 1.0.2	157
6.13.1 Description	157
6.13.2 URIs	157
6.13.3 Properties	158
6.13.4 Example response	158
6.14 CertificateService 1.0.4	158
6.14.1 Description	158
6.14.2 URIs	159
6.14.3 Properties	159
6.14.4 Actions	159
6.14.4.1 GenerateCSR	159
6.14.4.2 ReplaceCertificate	162
6.14.5 Property details	163
6.14.5.1 CertificateType:	163
6.14.5.2 KeyUsage:	163
6.14.6 Example response	164
6.15 Chassis 1.16.0	164
6.15.1 Description	164
6.15.2 URIs	164
6.15.3 Properties	165
6.15.4 Actions	171
6.15.4.1 Reset	171
6.15.5 Property details	172
6.15.5.1 ChassisType:	172
6.15.5.2 EnvironmentalClass:	173
6.15.5.3 IndicatorLED:	173
6.15.5.4 IntrusionSensor:	173
6.15.5.5 IntrusionSensorReArm:	174
6.15.5.6 PowerState:	174
6.15.5.7 ResetType:	174
6.15.6 Example response	175
6.16 Circuit 1.2.0	177
6.16.1 Description	177
6.16.2 URIs	177
6.16.3 Properties	177
6.16.4 Actions	182
6.16.4.1 BreakerControl	182

6.16.4.2 PowerControl	183
6.16.4.3 ResetMetrics	183
6.16.5 Property details	183
6.16.5.1 BreakerState:	183
6.16.5.2 CircuitType:	184
6.16.5.3 ElectricalContext:	184
6.16.5.4 IndicatorLED:	185
6.16.5.5 NominalVoltage:	185
6.16.5.6 PhaseWiringType:	186
6.16.5.7 PlugType:	187
6.16.5.8 PowerRestorePolicy:	189
6.16.5.9 PowerState:	189
6.16.5.9.1 In Actions: BreakerControl:	189
6.16.5.9.2 In Actions: PowerControl, :	189
6.16.5.10 SensorCurrentExcerpt:	189
6.16.5.11 SensorEnergykWhExcerpt:	190
6.16.5.12 SensorPowerExcerpt:	190
6.16.5.13 SensorVoltageExcerpt:	191
6.16.5.14 VoltageType:	191
6.16.6 Example response	191
6.17 CompositionReservation 1.0.0	193
6.17.1 Description	193
6.17.2 URIs	193
6.17.3 Properties	194
6.17.4 Property details	195
6.17.4.1 Expand:	195
6.17.4.2 StanzaType:	195
6.18 CompositionService 1.2.0	196
6.18.1 Description	196
6.18.2 URIs	196
6.18.3 Properties	196
6.18.4 Actions	197
6.18.4.1 Compose (v1.2+)	197
6.18.5 Property details	202
6.18.5.1 Expand:	202
6.18.5.2 RequestFormat:	202
6.18.5.3 RequestType:	202
6.18.5.4 StanzaType:	203
6.18.6 Example response	203
6.19 ComputerSystem 1.15.0	204
6.19.1 Description	204
6.19.2 URIs	204
6.19.3 Properties	204

6.19.4 Actions	216
6.19.4.1 AddResourceBlock (v1.6+)	216
6.19.4.2 RemoveResourceBlock (v1.6+)	216
6.19.4.3 Reset	217
6.19.4.4 SetDefaultBootOrder (v1.5+)	217
6.19.5 Property details	218
6.19.5.1 AliasBootOrder:	218
6.19.5.2 AutomaticRetryConfig:	218
6.19.5.3 BootOrderPropertySelection:	219
6.19.5.4 BootSourceOverrideEnabled:	219
6.19.5.5 BootSourceOverrideMode:	219
6.19.5.6 BootSourceOverrideTarget:	220
6.19.5.7 ConnectTypesSupported:	220
6.19.5.8 HostingRoles:	221
6.19.5.9 IndicatorLED:	221
6.19.5.10 InterfaceType:	221
6.19.5.11 InterfaceTypeSelection:	222
6.19.5.12 LastState:	222
6.19.5.13 MemoryMirroring:	223
6.19.5.14 PowerMode:	223
6.19.5.15 PowerRestorePolicy:	223
6.19.5.16 PowerState:	224
6.19.5.17 ResetType:	224
6.19.5.18 SerialConsoleProtocol:	225
6.19.5.19 StopBootOnFault:	225
6.19.5.20 SystemType:	226
6.19.5.21 TimeoutAction:	226
6.19.5.22 TrustedModuleRequiredToBoot:	226
6.19.5.23 UUID:	227
6.19.5.23.1 Case sensitivity	227
6.19.5.23.2 Conversion of UUID format	227
6.19.5.24 WarningAction:	229
6.19.6 Example response	230
6.20 Connection 1.1.0	232
6.20.1 Description	233
6.20.2 URIs	233
6.20.3 Properties	233
6.20.4 Property details	235
6.20.4.1 AccessCapabilities:	235
6.20.4.2 AccessState:	236
6.20.4.3 ConnectionType:	236
6.20.5 Example response	236
6.21 ConnectionMethod 1.0.0	237

6.21.1 Description	237
6.21.2 URIs	237
6.21.3 Properties	237
6.21.4 Property details	238
6.21.4.1 ConnectionMethodType:	238
6.21.5 Example response	238
6.22 Drive 1.12.1	239
6.22.1 Description	239
6.22.2 URIs	239
6.22.3 Properties	239
6.22.4 Actions	243
6.22.4.1 Reset (v1.7+)	243
6.22.4.2 SecureErase	244
6.22.5 Property details	244
6.22.5.1 EncryptionAbility:	244
6.22.5.2 EncryptionStatus:	244
6.22.5.3 HotspareReplacementMode:	245
6.22.5.4 HotspareType:	245
6.22.5.5 IndicatorLED:	245
6.22.5.6 MediaType:	246
6.22.5.7 Protocol:	246
6.22.5.8 ResetType:	248
6.22.5.9 StatusIndicator:	249
6.22.6 Example response	249
6.23 Endpoint 1.6.0	250
6.23.1 Description	250
6.23.2 URIs	250
6.23.3 Properties	251
6.23.4 Property details	254
6.23.4.1 EndpointProtocol:	254
6.23.4.2 EntityRole:	256
6.23.4.3 EntityType:	256
6.23.4.4 TransportProtocol:	257
6.23.5 Example response	259
6.24 EndpointGroup 1.3.2	260
6.24.1 Description	260
6.24.2 URIs	260
6.24.3 Properties	261
6.24.4 Property details	262
6.24.4.1 AccessState:	262
6.24.4.2 GroupType:	262
6.24.5 Example response	263
6.25 EnvironmentMetrics 1.0.0	263

6.25.1 Description	263
6.25.2 URIs	263
6.25.3 Properties	266
6.25.4 Actions	267
6.25.4.1 ResetMetrics	267
6.25.5 Property details	268
6.25.5.1 PhysicalContext	268
6.25.5.2 PhysicalSubContext	270
6.25.6 Example response	270
6.26 EthernetInterface 1.6.4	270
6.26.1 Description	271
6.26.2 URIs	271
6.26.3 Properties	271
6.26.4 Property details	275
6.26.4.1 EthernetInterfaceType	275
6.26.4.2 FallbackAddress	275
6.26.4.3 LinkStatus	276
6.26.4.4 OperatingMode	276
6.26.5 Example response	276
6.27 Event 1.6.1	279
6.27.1 Description	279
6.27.2 Properties	279
6.27.3 Property details	281
6.27.3.1 EventType	281
6.27.3.2 MessageSeverity	281
6.28 EventDestination 1.10.1	282
6.28.1 Description	282
6.28.2 URIs	282
6.28.3 Properties	282
6.28.4 Actions	286
6.28.4.1 ResumeSubscription	286
6.28.5 Property details	286
6.28.5.1 AuthenticationProtocol	286
6.28.5.2 DeliveryRetryPolicy	286
6.28.5.3 EncryptionProtocol	287
6.28.5.4 EventFormatType	287
6.28.5.5 EventTypes	287
6.28.5.6 LogFacilities	288
6.28.5.7 LowestSeverity	289
6.28.5.8 Protocol	289
6.28.5.9 SubscriptionType	290
6.28.6 Example response	291
6.29 EventService 1.7.1	291

6.29.1 Description	291
6.29.2 URIs	291
6.29.3 Properties	292
6.29.4 Actions	294
6.29.4.1 SubmitTestEvent	294
6.29.5 Property details	295
6.29.5.1 Authentication:	295
6.29.5.2 ConnectionProtocol:	295
6.29.5.3 EventFormatTypes:	296
6.29.5.4 EventType:	296
6.29.5.5 EventTypesForSubscription:	296
6.29.6 Example response	297
6.30 ExternalAccountProvider 1.2.0	298
6.30.1 Description	298
6.30.2 URIs	298
6.30.3 Properties	298
6.30.4 Property details	301
6.30.4.1 AccountProviderType:	301
6.30.4.2 AuthenticationType:	301
6.30.4.3 PasswordExchangeProtocols:	302
6.30.5 Example response	302
6.31 Fabric 1.2.2	303
6.31.1 Description	303
6.31.2 URIs	303
6.31.3 Properties	303
6.31.4 Property details	304
6.31.4.1 FabricType:	304
6.31.5 Example response	306
6.32 FabricAdapter 1.0.0	307
6.32.1 Description	307
6.32.2 URIs	307
6.32.3 Properties	307
6.32.4 Property details	310
6.32.4.1 MaxPCleType:	310
6.32.4.2 PCleType:	310
6.32.5 Example response	310
6.33 Facility 1.1.0	313
6.33.1 Description	313
6.33.2 URIs	313
6.33.3 Properties	313
6.33.4 Property details	315
6.33.4.1 FacilityType:	315
6.33.5 Example response	315

6.34 Fan 1.1.0	316
6.34.1 Description	316
6.34.2 URIs	317
6.34.3 Properties	317
6.34.4 Property details	318
6.34.4.1 PhysicalContext:	318
6.34.5 Example response	320
6.35 GraphicsController 1.0.0	321
6.35.1 Description	321
6.35.2 URIs	321
6.35.3 Properties	321
6.35.4 Example response	323
6.36 HostInterface 1.3.0	324
6.36.1 Description	324
6.36.2 URIs	324
6.36.3 Properties	324
6.36.4 Property details	327
6.36.4.1 AuthenticationModes:	327
6.36.4.2 HostInterfaceType:	327
6.36.5 Example response	327
6.37 Job 1.0.7	328
6.37.1 Description	328
6.37.2 URIs	329
6.37.3 Properties	329
6.37.4 Property details	330
6.37.4.1 JobState:	330
6.37.4.2 JobStatus:	331
6.37.5 Example response	331
6.38 JobService 1.0.4	332
6.38.1 Description	332
6.38.2 URIs	332
6.38.3 Properties	332
6.38.4 Example response	333
6.39 JsonSchemaFile 1.1.4	334
6.39.1 Description	334
6.39.2 URIs	334
6.39.3 Properties	334
6.39.4 Example response	335
6.40 LogEntry 1.9.0	336
6.40.1 Description	336
6.40.2 URIs	336
6.40.3 Properties	336
6.40.4 Property details	338

6.40.4.1 DiagnosticDataType:	338
6.40.4.2 EntryCode:	339
6.40.4.3 EntryType:	341
6.40.4.4 EventType:	341
6.40.4.5 SensorType:	342
6.40.4.6 Severity:	344
6.40.5 Example response	344
6.41 LogService 1.2.0	345
6.41.1 Description	345
6.41.2 URIs	345
6.41.3 Properties	345
6.41.4 Actions	346
6.41.4.1 ClearLog	346
6.41.4.2 CollectDiagnosticData (v1.2+)	346
6.41.5 Property details	347
6.41.5.1 DiagnosticDataType:	347
6.41.5.2 LogEntryType:	347
6.41.5.3 LogFacilities:	347
6.41.5.4 LowestSeverity:	348
6.41.5.5 OverWritePolicy:	349
6.41.6 Example response	349
6.42 Manager 1.12.0	350
6.42.1 Description	350
6.42.2 URIs	350
6.42.3 Properties	350
6.42.4 Actions	355
6.42.4.1 ForceFailover	355
6.42.4.2 ModifyRedundancySet	356
6.42.4.3 Reset	356
6.42.4.4 ResetToDefaults (v1.8+)	357
6.42.5 Property details	357
6.42.5.1 ConnectTypesSupported:	357
6.42.5.1.1 In CommandShell:	357
6.42.5.1.2 In GraphicalConsole:	358
6.42.5.1.3 In SerialConsole:	358
6.42.5.2 ManagerType:	358
6.42.5.3 PowerState:	359
6.42.5.4 ResetType:	359
6.42.5.4.1 In Actions: Reset:	359
6.42.5.4.2 In Actions: ResetToDefaults:	360
6.42.6 Example response	360
6.43 ManagerAccount 1.8.0	362
6.43.1 Description	362

6.43.2 URIs	362
6.43.3 Properties	362
6.43.4 Property details	365
6.43.4.1 AccountTypes:	365
6.43.4.2 AuthenticationProtocol:	366
6.43.4.3 EncryptionProtocol:	366
6.43.5 Example response	366
6.44 ManagerNetworkProtocol 1.7.0	367
6.44.1 Description	367
6.44.2 URIs	367
6.44.3 Properties	367
6.44.4 Property details	371
6.44.4.1 AccessMode:	371
6.44.4.2 AuthenticationProtocol:	371
6.44.4.3 CommunityAccessMode:	372
6.44.4.4 EncryptionProtocol:	372
6.44.4.5 NotifyIPv6Scope:	372
6.44.4.6 Protocol:	373
6.44.5 Example response	373
6.45 MediaController 1.2.0	374
6.45.1 Description	374
6.45.2 URIs	374
6.45.3 Properties	374
6.45.4 Actions	376
6.45.4.1 Reset	376
6.45.5 Property details	376
6.45.5.1 MediaControllerType:	376
6.45.5.2 ResetType:	376
6.45.6 Example response	377
6.46 Memory 1.12.0	378
6.46.1 Description	378
6.46.2 URIs	378
6.46.3 Properties	379
6.46.4 Actions	385
6.46.4.1 DisablePassphrase	385
6.46.4.2 OverwriteUnit (v1.6+)	386
6.46.4.3 Reset (v1.8+)	386
6.46.4.4 SecureEraseUnit	386
6.46.4.5 SetPassphrase	387
6.46.4.6 UnlockUnit	387
6.46.5 Property details	388
6.46.5.1 BaseModuleType:	388
6.46.5.2 ErrorCorrection:	388

6.46.5.3 MemoryClassification:	388
6.46.5.4 MemoryDeviceType:	389
6.46.5.5 MemoryMedia:	390
6.46.5.6 MemoryType:	390
6.46.5.7 OperatingMemoryModes:	391
6.46.5.8 ResetType:	391
6.46.5.9 SecurityState:	392
6.46.5.10 SecurityStates:	392
6.46.6 Example response	393
6.47 MemoryChunks 1.4.1	394
6.47.1 Description	394
6.47.2 URIs	394
6.47.3 Properties	394
6.47.4 Property details	395
6.47.4.1 AddressRangeType:	395
6.47.5 Example response	396
6.48 MemoryDomain 1.3.0	397
6.48.1 Description	397
6.48.2 URIs	397
6.48.3 Properties	397
6.48.4 Example response	398
6.49 MemoryMetrics 1.4.1	399
6.49.1 Description	399
6.49.2 URIs	399
6.49.3 Properties	400
6.49.4 Actions	402
6.49.4.1 ClearCurrentPeriod:	402
6.49.5 Example response	402
6.50 MessageRegistry 1.4.2	403
6.50.1 Description	403
6.50.2 Properties	403
6.50.3 Property details	405
6.50.3.1 ClearSelf:	405
6.50.3.2 MessageSeverity:	405
6.50.3.3 ParamTypes:	406
6.50.4 Example response	406
6.51 MessageRegistryFile 1.1.3	407
6.51.1 Description	407
6.51.2 URIs	407
6.51.3 Properties	407
6.51.4 Example response	408
6.52 MetricDefinition 1.2.0	408
6.52.1 Description	409

6.52.2 URIs	409
6.52.3 Properties	409
6.52.4 Property details	411
6.52.4.1 Calculable:	411
6.52.4.2 CalculationAlgorithm:	411
6.52.4.3 Implementation:	412
6.52.4.4 MetricDataType:	412
6.52.4.5 MetricType:	412
6.52.4.6 PhysicalContext:	413
6.52.5 Example response	415
6.53 MetricReport 1.4.2	415
6.53.1 Description	415
6.53.2 URIs	416
6.53.3 Properties	416
6.53.4 Example response	417
6.54 MetricReportDefinition 1.4.1	417
6.54.1 Description	418
6.54.2 URIs	418
6.54.3 Properties	418
6.54.4 Property details	420
6.54.4.1 CollectionFunction:	420
6.54.4.2 CollectionTimeScope:	421
6.54.4.3 MetricReportDefinitionType:	421
6.54.4.4 ReportActions:	422
6.54.4.5 ReportUpdates:	422
6.54.5 Example response	422
6.55 NetworkAdapter 1.7.0	423
6.55.1 Description	423
6.55.2 URIs	424
6.55.3 Properties	424
6.55.4 Actions	428
6.55.4.1 ResetSettingsToDefault	428
6.55.5 Property details	429
6.55.5.1 MaxPCleType:	429
6.55.5.2 PCleType:	429
6.55.6 Example response	430
6.56 NetworkAdapterMetrics 1.0.0	431
6.56.1 Description	432
6.56.2 URIs	432
6.56.3 Properties	432
6.56.4 Example response	433
6.57 NetworkDeviceFunction 1.6.0	433
6.57.1 Description	433

6.57.2 URIs	433
6.57.3 Properties	434
6.57.4 Property details	441
6.57.4.1 AuthenticationMethod:	441
6.57.4.2 BootMode:	441
6.57.4.3 IPAddressType:	442
6.57.4.4 NetDevFuncCapabilities:	442
6.57.4.5 NetDevFuncType:	442
6.57.4.6 WWNSource:	443
6.57.5 Example response	443
6.58 NetworkDeviceFunctionMetrics 1.0.0	445
6.58.1 Description	445
6.58.2 URIs	445
6.58.3 Properties	445
6.59 NetworkInterface 1.2.1	446
6.59.1 Description	446
6.59.2 URIs	446
6.59.3 Properties	447
6.59.4 Example response	448
6.60 NetworkPort 1.4.1 (deprecated)	448
6.60.1 Description	448
6.60.2 URIs	448
6.60.3 Properties	449
6.60.4 Property details	451
6.60.4.1 ActiveLinkTechnology:	451
6.60.4.2 FCPortConnectionType:	451
6.60.4.3 FlowControlConfiguration:	452
6.60.4.4 FlowControlStatus:	452
6.60.4.5 LinkNetworkTechnology:	452
6.60.4.6 LinkStatus:	453
6.60.4.7 SupportedEthernetCapabilities:	453
6.60.5 Example response	453
6.61 OperatingConfig 1.0.2	454
6.61.1 Description	454
6.61.2 URIs	454
6.61.3 Properties	455
6.61.4 Example response	456
6.62 Outlet 1.1.1	457
6.62.1 Description	457
6.62.2 URIs	457
6.62.3 Properties	457
6.62.4 Actions	461
6.62.4.1 PowerControl	461

6.62.4.2 ResetMetrics	462
6.62.5 Property details	462
6.62.5.1 ElectricalContext	462
6.62.5.2 IndicatorLED	463
6.62.5.3 NominalVoltage	463
6.62.5.4 OutletType	464
6.62.5.5 PhaseWiringType	465
6.62.5.6 PowerRestorePolicy	465
6.62.5.7 PowerState	466
6.62.5.7.1 In	466
6.62.5.7.2 In Actions: PowerControl	466
6.62.5.8 SensorCurrentExcerpt	466
6.62.5.9 SensorVoltageExcerpt	467
6.62.5.10 VoltageType	467
6.62.6 Example response	467
6.63 OutletGroup 1.0.1	469
6.63.1 Description	469
6.63.2 URIs	469
6.63.3 Properties	469
6.63.4 Actions	471
6.63.4.1 PowerControl	471
6.63.4.2 ResetMetrics	472
6.63.5 Property details	472
6.63.5.1 PowerRestorePolicy	472
6.63.5.2 PowerState	472
6.63.5.2.1 In	472
6.63.5.2.2 In Actions: PowerControl	473
6.63.6 Example response	473
6.64 PCIeDevice 1.7.0	474
6.64.1 Description	474
6.64.2 URIs	474
6.64.3 Properties	474
6.64.4 Property details	476
6.64.4.1 DeviceType	476
6.64.4.2 MaxPCleType	477
6.64.4.3 PCleType	477
6.64.5 Example response	477
6.65 PCIeFunction 1.3.0	478
6.65.1 Description	478
6.65.2 URIs	479
6.65.3 Properties	479
6.65.4 Property details	481
6.65.4.1 DeviceClass	481

6.65.4.2 FunctionType:	482
6.65.5 Example response	482
6.66 PCIeSlots 1.4.1	483
6.66.1 Description	483
6.66.2 URIs	483
6.66.3 Properties	483
6.66.4 Property details	484
6.66.4.1 PCIeType:	484
6.66.4.2 SlotType:	484
6.66.5 Example response	485
6.67 Port 1.4.0	486
6.67.1 Description	486
6.67.2 URIs	487
6.67.3 Properties	487
6.67.4 Actions	495
6.67.4.1 Reset	495
6.67.5 Property details	495
6.67.5.1 ChassisIdSubtype:	495
6.67.5.2 FiberConnectionType:	496
6.67.5.3 FlowControlConfiguration:	496
6.67.5.4 FlowControlStatus:	496
6.67.5.5 LinkNetworkTechnology:	497
6.67.5.6 LinkState:	497
6.67.5.7 LinkStatus:	497
6.67.5.8 MediumType:	497
6.67.5.9 PortConnectionType:	498
6.67.5.10 PortIdSubtype:	498
6.67.5.11 PortMedium:	499
6.67.5.12 PortProtocol:	499
6.67.5.13 PortType:	501
6.67.5.14 ResetType:	501
6.67.5.15 SupportedEthernetCapabilities:	502
6.67.5.16 SupportedSFPTypes:	502
6.67.5.17 Type:	502
6.67.6 Example response	503
6.68 PortMetrics 1.1.0	504
6.68.1 Description	504
6.68.2 URIs	504
6.68.3 Properties	504
6.68.4 Example response	508
6.69 Power 1.7.1 (deprecated)	509
6.69.1 Description	509
6.69.2 URIs	509

6.69.3 Properties	509
6.69.4 Actions	515
6.69.4.1 PowerSupplyReset (v1.6+)	515
6.69.5 Property details	516
6.69.5.1 IndicatorLED:	516
6.69.5.2 InputType:	516
6.69.5.3 LimitException:	516
6.69.5.4 LineInputVoltageType:	517
6.69.5.5 PhysicalContext:	517
6.69.5.6 PowerSupplyType:	519
6.69.5.7 ResetType:	519
6.69.6 Example response	520
6.70 PowerDistribution 1.0.3	523
6.70.1 Description	523
6.70.2 URIs	523
6.70.3 Properties	524
6.70.4 Actions	528
6.70.4.1 TransferControl	528
6.70.5 Property details	528
6.70.5.1 EquipmentType:	528
6.70.5.2 TransferSensitivity:	528
6.70.6 Example response	529
6.71 PowerDistributionMetrics 1.1.0	530
6.71.1 Description	530
6.71.2 URIs	530
6.71.3 Properties	530
6.71.4 Actions	531
6.71.4.1 ResetMetrics	531
6.71.5 Example response	532
6.72 PowerDomain 1.0.1	532
6.72.1 Description	533
6.72.2 URIs	533
6.72.3 Properties	533
6.72.4 Example response	534
6.73 PowerEquipment 1.0.0	534
6.73.1 Description	534
6.73.2 URIs	535
6.73.3 Properties	535
6.73.4 Example response	536
6.74 PowerSubsystem 1.0.0	536
6.74.1 Description	536
6.74.2 URIs	536
6.74.3 Properties	537

6.74.4 Example response	537
6.75 PowerSupply 1.1.0	538
6.75.1 Description	538
6.75.2 URIs	538
6.75.3 Properties	538
6.75.4 Actions	541
6.75.4.1 Reset	541
6.75.5 Property details	541
6.75.5.1 InputNominalVoltageType:	541
6.75.5.2 NominalVoltageType:	542
6.75.5.3 PhaseWiringType:	543
6.75.5.4 PhysicalContext:	543
6.75.5.5 PlugType:	545
6.75.5.6 PowerSupplyType:	547
6.75.5.7 ResetType:	548
6.75.6 Example response	548
6.76 PowerSupplyMetrics 1.0.0	550
6.76.1 Description	550
6.76.2 URIs	550
6.76.3 Properties	551
6.76.4 Actions	555
6.76.4.1 ResetMetrics	555
6.76.5 Example response	555
6.77 PrivilegeRegistry 1.1.4	557
6.77.1 Description	557
6.77.2 Properties	557
6.77.3 Property details	562
6.77.3.1 PrivilegesUsed:	562
6.77.4 Example response	563
6.78 Processor 1.12.0	564
6.78.1 Description	564
6.78.2 URIs	564
6.78.3 Properties	565
6.78.4 Actions	575
6.78.4.1 Reset (v1.6+)	575
6.78.5 Property details	575
6.78.5.1 BaseSpeedPriorityState:	575
6.78.5.2 EffectiveFamily:	575
6.78.5.3 EffectiveModel:	576
6.78.5.4 FpgaType:	576
6.78.5.5 IdentificationRegisters:	576
6.78.5.6 InstructionSet:	576
6.78.5.7 InterfaceType:	577

6.78.5.8 MaxPCleType:	577
6.78.5.9 MemoryType:	578
6.78.5.10 MicrocodeInfo:	579
6.78.5.11 Model:	579
6.78.5.12 PCleType:	580
6.78.5.13 ProcessorArchitecture:	580
6.78.5.14 ProcessorId:	580
6.78.5.15 ProcessorType:	581
6.78.5.16 ResetType:	581
6.78.5.17 Step:	582
6.78.5.18 TurboState:	582
6.78.5.19 VendorId:	582
6.78.6 Example response	583
6.79 ProcessorMetrics 1.2.1	584
6.79.1 Description	584
6.79.2 URIs	584
6.79.3 Properties	585
6.79.4 Actions	588
6.79.4.1 ClearCurrentPeriod (v1.2+):	588
6.79.5 Example response	588
6.80 ResourceBlock 1.4.0	590
6.80.1 Description	590
6.80.2 URIs	590
6.80.3 Properties	590
6.80.4 Property details	593
6.80.4.1 CompositionState:	593
6.80.4.2 Pool:	594
6.80.4.3 ResourceBlockType:	594
6.80.5 Example response	595
6.81 Role 1.3.1	596
6.81.1 Description	596
6.81.2 URIs	596
6.81.3 Properties	596
6.81.4 Property details	597
6.81.4.1 AssignedPrivileges:	597
6.81.5 Example response	598
6.82 RouteEntry 1.0.1	598
6.82.1 Description	598
6.82.2 URIs	598
6.82.3 Properties	599
6.82.4 Example response	599
6.83 RouteSetEntry 1.0.1	599
6.83.1 Description	599

6.83.2 URIs	600
6.83.3 Properties	600
6.83.4 Example response	600
6.84 SecureBoot 1.1.0	600
6.84.1 Description	601
6.84.2 URIs	601
6.84.3 Properties	601
6.84.4 Actions	601
6.84.4.1 ResetKeys	601
6.84.5 Property details	602
6.84.5.1 ResetKeyType:	602
6.84.5.2 SecureBootCurrentBoot:	602
6.84.5.3 SecureBootMode:	602
6.84.6 Example response	603
6.85 SecureBootDatabase 1.0.1	603
6.85.1 Description	603
6.85.2 URIs	603
6.85.3 Properties	604
6.85.4 Actions	604
6.85.4.1 ResetKeys	604
6.85.5 Property details	605
6.85.5.1 ResetKeyType:	605
6.85.6 Example response	605
6.86 Sensor 1.3.0	605
6.86.1 Description	606
6.86.2 URIs	606
6.86.3 Properties	606
6.86.4 Actions	610
6.86.4.1 ResetMetrics	610
6.86.5 Property details	610
6.86.5.1 Activation:	610
6.86.5.2 ElectricalContext:	611
6.86.5.3 Implementation:	612
6.86.5.4 PhysicalContext:	612
6.86.5.5 PhysicalSubContext:	614
6.86.5.6 ReadingType:	614
6.86.5.7 Threshold:	615
6.86.5.8 VoltageType:	616
6.86.6 Example response	616
6.87 SerialInterface 1.1.8	617
6.87.1 Description	617
6.87.2 URIs	617
6.87.3 Properties	617

6.87.4 Property details	618
6.87.4.1 BitRate:	618
6.87.4.2 ConnectorType:	618
6.87.4.3 DataBits:	619
6.87.4.4 FlowControl:	619
6.87.4.5 Parity:	619
6.87.4.6 PinOut:	619
6.87.4.7 SignalType:	620
6.87.4.8 StopBits:	620
6.87.5 Example response	620
6.88 ServiceRoot 1.10.0	621
6.88.1 Description	621
6.88.2 URIs	621
6.88.3 Properties	621
6.88.4 Property details	626
6.88.4.1 idRef:	626
6.88.5 Example response	626
6.89 Session 1.3.0	627
6.89.1 Description	627
6.89.2 URIs	627
6.89.3 Properties	628
6.89.4 Property details	628
6.89.4.1 SessionType:	628
6.89.5 Example response	629
6.90 SessionService 1.1.8	629
6.90.1 Description	629
6.90.2 URIs	629
6.90.3 Properties	629
6.90.4 Example response	630
6.91 Signature 1.0.2	630
6.91.1 Description	630
6.91.2 URIs	630
6.91.3 Properties	631
6.91.4 Property details	631
6.91.4.1 SignatureTypeRegistry:	631
6.91.5 Example response	631
6.92 SimpleStorage 1.3.1	632
6.92.1 Description	632
6.92.2 URIs	632
6.92.3 Properties	632
6.92.4 Example response	633
6.93 SoftwareInventory 1.4.0	634
6.93.1 Description	635

6.93.2 URIs	635
6.93.3 Properties	635
6.93.4 Example response	636
6.94 Storage 1.10.1	637
6.94.1 Description	637
6.94.2 URIs	637
6.94.3 Properties	637
6.94.4 Actions	642
6.94.4.1 SetEncryptionKey	642
6.94.5 Property details	643
6.94.5.1 idRef:	643
6.94.5.2 MaxPCleType:	643
6.94.5.3 PCleType:	643
6.94.5.4 SupportedControllerProtocols:	644
6.94.5.5 SupportedDeviceProtocols:	645
6.94.5.6 SupportedRAIDTypes:	647
6.94.6 Example response	649
6.95 StorageController 1.2.0	650
6.95.1 Description	650
6.95.2 URIs	650
6.95.3 Properties	651
6.95.4 Property details	657
6.95.4.1 AccessState:	657
6.95.4.2 ControllerType:	657
6.95.4.3 MaxPCleType:	657
6.95.4.4 PCleType:	658
6.95.4.5 SupportedControllerProtocols:	658
6.95.4.6 SupportedDeviceProtocols:	660
6.95.4.7 SupportedRAIDTypes:	662
6.95.5 Example response	663
6.96 Switch 1.6.0	664
6.96.1 Description	664
6.96.2 URIs	664
6.96.3 Properties	665
6.96.4 Actions	667
6.96.4.1 Reset	667
6.96.5 Property details	668
6.96.5.1 IndicatorLED:	668
6.96.5.2 PowerState:	668
6.96.5.3 ResetType:	669
6.96.5.4 SupportedProtocols:	669
6.96.5.5 SwitchType:	671
6.96.6 Example response	673

6.97 Task 1.5.1	674
6.97.1 Description	674
6.97.2 URIs	675
6.97.3 Properties	675
6.97.4 Property details	676
6.97.4.1 TaskState:	676
6.97.4.2 TaskStatus:	677
6.97.5 Example response	677
6.98 TaskService 1.2.0	678
6.98.1 Description	678
6.98.2 URIs	678
6.98.3 Properties	678
6.98.4 Property details	679
6.98.4.1 CompletedTaskOverWritePolicy:	679
6.98.5 Example response	679
6.99 TelemetryService 1.3.1	679
6.99.1 Description	680
6.99.2 URIs	680
6.99.3 Properties	680
6.99.4 Actions	681
6.99.4.1 ClearMetricReports (v1.3+)	681
6.99.4.2 ResetMetricReportDefinitionsToDefaults (v1.3+)	681
6.99.4.3 ResetTriggersToDefaults (v1.3+)	681
6.99.4.4 SubmitTestMetricReport	682
6.99.5 Property details	683
6.99.5.1 SupportedCollectionFunctions:	683
6.99.6 Example response	683
6.100 Thermal 1.7.1 (deprecated)	684
6.100.1 Description	684
6.100.2 URIs	684
6.100.3 Properties	684
6.100.4 Property details	689
6.100.4.1 DeltaPhysicalContext:	689
6.100.4.2 IndicatorLED:	691
6.100.4.3 PhysicalContext:	691
6.100.4.4 ReadingUnits:	693
6.100.5 Example response	693
6.101 ThermalMetrics 1.0.0	697
6.101.1 Description	697
6.101.2 URIs	697
6.101.3 Properties	697
6.101.4 Actions	698
6.101.4.1 ResetMetrics	698

6.101.5 Property details	698
6.101.5.1 PhysicalContext:	698
6.101.5.2 PhysicalSubContext:	700
6.101.5.3 SensorExcerpt:	701
6.101.6 Example response	701
6.102 ThermalSubsystem 1.0.0	702
6.102.1 Description	702
6.102.2 URIs	702
6.102.3 Properties	703
6.102.4 Example response	703
6.103 Triggers 1.1.4.	704
6.103.1 Description	704
6.103.2 URIs	704
6.103.3 Properties	705
6.103.4 Property details	707
6.103.4.1 Activation:	707
6.103.4.2 DiscreteTriggerCondition:	707
6.103.4.3 MetricType:	707
6.103.4.4 Severity:	707
6.103.4.5 Threshold:	708
6.103.4.6 TriggerActions:	708
6.103.5 Example response	708
6.104 UpdateService 1.9.0	709
6.104.1 Description	709
6.104.2 URIs	709
6.104.3 Properties	710
6.104.4 Actions	712
6.104.4.1 SimpleUpdate	712
6.104.4.2 StartUpdate (v1.7+)	713
6.104.5 Property details	713
6.104.5.1 ApplyTime:	713
6.104.5.2 TransferProtocol:	714
6.104.6 Example response	714
6.105 USBController 1.0.0	715
6.105.1 Description	715
6.105.2 URIs	715
6.105.3 Properties	716
6.105.4 Example response	717
6.106 VCATEntry 1.0.1	717
6.106.1 Description	718
6.106.2 URIs	718
6.106.3 Properties	718
6.106.4 Example response	718

6.107 VirtualMedia 1.4.0	719
6.107.1 Description	719
6.107.2 URIs	719
6.107.3 Properties	720
6.107.4 Actions	721
6.107.4.1 EjectMedia (v1.2+)	721
6.107.4.2 InsertMedia (v1.2+)	721
6.107.5 Property details	722
6.107.5.1 ConnectedVia:	722
6.107.5.2 MediaTypes:	722
6.107.5.3 TransferMethod:	722
6.107.5.4 TransferProtocolType:	723
6.107.6 Example response	723
6.108 VlanNetworkInterface 1.2.0	723
6.108.1 Description	724
6.108.2 URIs	724
6.108.3 Properties	724
6.108.4 Example response	724
6.109 Volume 1.6.2	725
6.109.1 Description	725
6.109.2 URIs	725
6.109.3 Properties	726
6.109.4 Actions	732
6.109.4.1 AssignReplicaTarget (v1.4+)	732
6.109.4.2 ChangeRAIDLayout (v1.5+)	733
6.109.4.3 CheckConsistency	733
6.109.4.4 CreateReplicaTarget (v1.4+)	734
6.109.4.5 ForceEnable (v1.5+)	734
6.109.4.6 Initialize (v1.5+)	734
6.109.4.7 RemoveReplicaRelationship (v1.4+)	735
6.109.4.8 ResumeReplication (v1.4+)	735
6.109.4.9 ReverseReplicationRelationship (v1.4+)	736
6.109.4.10 SplitReplication (v1.4+)	736
6.109.4.11 SuspendReplication (v1.4+)	736
6.109.5 Property details	737
6.109.5.1 AccessCapabilities:	737
6.109.5.2 EncryptionTypes:	737
6.109.5.3 idRef:	737
6.109.5.4 InitializeMethod:	737
6.109.5.5 InitializeType:	738
6.109.5.6 ProvisioningPolicy:	738
6.109.5.7 RAIDType:	738
6.109.5.8 ReadCachePolicy:	740

6.109.5.9 ReplicaType:	740
6.109.5.10 ReplicaUpdateMode:	740
6.109.5.11 VolumeType:	740
6.109.5.12 VolumeUsage:	741
6.109.5.13 WriteCachePolicy:	741
6.109.5.14 WriteCacheState:	742
6.109.5.15 WriteHoleProtectionPolicy:	742
6.109.6 Example response	742
6.110 Zone 1.6.1	743
6.110.1 Description:	743
6.110.2 URIs:	743
6.110.3 Properties	744
6.110.4 Actions:	745
6.110.4.1 AddEndpoint (v1.5+)	745
6.110.4.2 RemoveEndpoint (v1.5+)	746
6.110.5 Property details	746
6.110.5.1 ExternalAccessibility:	746
6.110.5.2 ZoneType:	747
6.110.6 Example response:	747
7 Redfish documentation generator	749
8 ANNEX A	750

1 Overview

The Redfish standard comprises a set of specifications maintained by the Redfish Forum, a working group within the DMTF. The standard defines a protocol that uses RESTful interfaces to provide access to data and operations associated with the management of systems and networks. One of the strengths of the Redfish protocol is that it works with a wide range of servers: from stand-alone servers to rack-mount and bladed environments to large-scale data centers and cloud environments.

The Redfish standard addresses several key issues for infrastructures that require scalability. Large infrastructures often consist of many simple servers of different makes and types. This hyper-scale usage model requires a new approach to systems management. The Redfish protocol addresses these needs by providing a standard protocol based on out-of-band systems management.

With the previous goals in mind, the Redfish protocol was designed as an open-industry standard to meet scalability requirements in multi-vendor deployments. It easily integrates with commonly used tools, using RESTful interfaces to perform operations and using JSON and OData formats for data payloads.

1.1 Who should read this document?

This document is for Redfish Service developers or application software developers. This document includes the normative language copied from the `LongDescription` text in the Redfish Schema (DSP8010) bundle, and adds supplemental normative text to further explain the usage of particular properties or resources.

This document differs from the *Redfish Resource and Schema Guide* (DSP2046) by incorporating the normative description text rather than the end user-focused, informative (non-normative) `Description` text from the schema.

1.2 How can I provide feedback?

Feedback on all Redfish specifications and documents is encouraged. Feedback can be directed to the DMTF and the Redfish Forum by the following means:

- **Redfish User Forum:** <http://www.redfishforum.com> User forum monitored by DMTF Redfish Forum personnel to answer questions about any Redfish-related topics.
- **DMTF Feedback Portal:** <https://www.dmtf.org/standards/feedback> Formal submission portal for enhancements or proposals to the DMTF and Redfish Forum.

1.3 Where can I find more information?

The following web sites provide more information about the Redfish standard:

- [Redfish Developer Hub](#)

Resources for developers who use Redfish to build applications. Contains an interactive schema explorer, hosted schema, and other links.

- **[Redfish Specification Forum](#)**

DMTF Redfish-monitored user forum. Answers questions about Redfish-related topics.

- **[DMTF GitHub repositories](#)**

Open source tools and libraries for working with Redfish.

- **[Redfish standards](#)**

Schemas, specifications, mockups, white papers, FAQ, educational material, and more.

- **[DMTF Redfish Forum](#)**

Working group that maintains the Redfish standard. Site lists member companies, future work and schedules, charter, and information about joining.