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5   # Media Redirection Profile

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195                                        Foreword

196     The *Media Redirection Profile* (DSP1086) was prepared by the Server Desktop Mobile Platforms Working
197     Group of the DMTF.

198     DMTF is a not-for-profit association of industry members dedicated to promoting enterprise and systems
199     management and interoperability.

200
201     **Acknowledgments**

202     The authors wish to acknowledge the following people.

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210

# Introduction

The information in this specification and referenced specifications is intended to be sufficient for a provider or consumer of this data to identify unambiguously the classes, properties, methods, and values that shall be instantiated and manipulated using the DMTF Common Information Model (CIM) core and common model definitions.

The target audience for this specification is implementers who are writing CIM-based providers or consumers of management interfaces that represent the components described in this document.

218 # Media Redirection Profile

219 ## 1   Scope

220 The *Media Redirection Profile* extends the management capabilities of referencing profiles and provides
221 the capability to manage Media redirections provided by the system.

222 ## 2   Normative References

223 The following referenced documents are indispensable for the application of this document. For dated or
224 versioned references, only the edition cited (including any corrigenda or DMTF update versions) applies.
225 For references without a date or version, the latest published edition of the referenced document
226 (including any corrigenda or DMTF update versions) applies.

227 ### 2.1   Approved References

228 DMTF DSP0004, *CIM Infrastructure Specification 2.3.0*,
229 http://www.dmtf.org/standards/published_documents/DSP0004V2.3_final.pdf

230 DMTF DSP0200, *CIM Operations over HTTP 1.2.0,*
231 http://www.dmtf.org/sites/default/files/standards/documents/DSP200.html

232 DMTF DSP1000, *Management Profile Specification Template*,
233 http://www.dmtf.org/standards/published_documents/DSP1000.pdf

234 DMTF DSP1001, *Management Profile Specification Usage Guide, 1.1*
235 http://www.dmtf.org/sites/default/files/standards/documents/DSP1001_1.1.1.pdf

236 DMTF DSP1004, *Base Server Profile 1.0.0,*
237 http://www.dmtf.org/sites/default/files/standards/documents/DSP1004_1.0.0_0.pdf

238 DMTF DSP1033, *Profile Registration Profile 1.0.0*,
239 http://www.dmtf.org/standards/published_documents/DSP1033_1.0.0.pdf

240 ### 2.2   Other References

241 ISO/IEC Directives, Part 2, *Rules for the structure and drafting of International Standards*,
242 http://isotc.iso.org/livelink/livelink.exe?func=ll&objId=4230456&objAction=browse&sort=subtype

243 ## 3   Terms and Definitions

244 For the purposes of this document, the following terms and definitions apply. For the purposes of this
245 document, the terms and definitions given in DSP1033 and DSP1001 also apply.

246 **3.1**
247 **can**
248 used for statements of possibility and capability, whether material, physical, or causal

249 **3.2**
250 **cannot**
251 used for statements of possibility and capability, whether material, physical, or causal

252 **3.3**

253 **conditional**

254 indicates requirements to be followed strictly to conform to the document when the specified conditions
255 are met

256 **3.4**

257 **mandatory**

258 indicates requirements to be followed strictly to conform to the document and from which no deviation is
259 permitted

260 **3.5**

261 **may**

262 indicates a course of action permissible within the limits of the document

263 **3.6**

264 **optional**

265 indicates a course of action permissible within the limits of the document

266 **3.7**

267 **referencing profile**

268 indicates a profile that owns the definition of this class and can include a reference to this profile in its
269 "Referenced Profiles" table

270 **3.8**

271 **shall**

272 indicates requirements to be followed strictly to conform to the document and from which no deviation is
273 permitted

274 **3.9**

275 **shall not**

276 indicates requirements to be followed strictly to conform to the document and from which no deviation is
277 permitted

278 **3.10**

279 **should**

280 indicates that among several possibilities, one is recommended as particularly suitable, without
281 mentioning or excluding others, or that a certain course of action is preferred but not necessarily required

282 **3.11**

283 **should not**

284 indicates that a certain possibility or course of action is deprecated but not prohibited

285 **3.12**

286 **unspecified**

287 indicates that this profile does not define any constraints for the referenced CIM element or operation

288 **3.13**

289 **Emulated Media Device**

290 the Media device locally emulated on the managed system which can be redirected to a remote system
291 that contains the physical Media device

292 **3.14**

293 **Remote System**

294 the system that contains the physical Media device, to which the managed system can establish a
295 network connection for a Emulated Media Device

296    **3.15**
297    **Media Redirection**
298    an arrangement that encompasses an instance of CIM_RedirectionService and an instance of
299    CIM_MediaRedirectionSAP that are joined by a CIM_ServiceAccessBySAP association

300    **3.16**
301    **Media Redirection SAP**
302    the Service Access Point for a Media Redirection Sesson as modeled by an instance of
303    CIM_MediaRedirectionSAP that is part of a Media Redirection

304    **3.17**
305    **Media Redirection Service**
306    the instance of CIM_RedirectionServiceRedirectionService that is part of a Media Redirection

307    **3.18**
308    **Media Redirection Session**
309    the context and elements of a particular Media Redirection SAP as modeled by an instance of
310    CIM_MediaRedirectionSAP

# 311    4   Symbols and Abbreviated Terms

312    The following abbreviations are used in this document.

313    **4.1**
314    **HID**
315    Human Interface Device

316    **4.2**
317    **MSD**
318    Media Storage Device

319    **4.3**
320    **SAP**
321    Service Access Point

# 322    5   Synopsis

323    **Profile Name:** Media Redirection

324    **Version:** 1.0.0

325    **Organization:** DMTF

326    **CIM Schema Version:** 2.22.0

327    **Central Class:** CIM_RedirectionService

328    **Scoping Class:** CIM_ComputerSystem

329    The *Media Redirection Profile* extends the management capability of the referencing profiles by adding
330    the capability to describe information about Media redirections. A Media redirection redirects I/O
331    transactions from a managed system's storage media subsystem to a remote storage media service. If
332    the storage media subsystem is USB based, the *USB Redirection Profile* should be used instead of the
333    *Media Redirection Profile*.

334    CIM_RedirectionService shall be the Central Class of this profile. The instance of
335    CIM_RedirectionService shall be the Central Instance of this profile.

336  CIM_ComputerSystem shall be the Scoping Class of this profile. The instance of CIM_ComputerSystem
337  with which the Central Instance is associated through an instance of CIM_HostedService shall be the
338  Scoping Instance of this profile.

339  Table 1 identifies profile on which this profile has a dependency.

340                                          **Table 1 – Referenced Profiles**

| Profile Name | Organization | Version | Relationship | Behavior |
|---|---|---|---|---|
| Profile Registration | DMTF | 1.0.0 | Mandatory | |

## 341  6   Description (Informative)

342  The *Media Redirection Profile* describes the necessary elements needed to provide the capability to
343  manage the redirection of Media devices. The profile could manage the following Media redirection
344  capabilities of typical computer systems:

345  •   Systems can redirect a locally emulated Media device to a physical Media device or non-Media
346      device present on a remote system through a network session

347  •   Each Media Redirection SAP can have multiple locally emulated Media devices.

348  •   Systems can support multiple Media Redirection SAPs concurrently

349  •   A Media Redirection SAP can initiate the connection to the remote system or listen for a
350      connection request from the remote system

351  A Media Redirection is represented by an instance of CIM_RedirectionService and an instance of
352  MediaRedirectionSAP that are joined by an instance of the CIM_ServiceAccessBySAP association.

353  A Media Redirection can be in an active, inactive, or available state. When the Media Redirection is
354  active, the Media devices are redirected. The state management of the Media Redirection can be
355  performed by managing the state of the Media Redirection SAP (as modeled by
356  CIM_MediaRedirectionSAP) and the state of the Media Redirection Service (as modeled by
357  CIM_RedirectionService).

358  The capabilities of a Media Redirection are represented by an instance of
359  CIM_MediaRedirectionCapabilities connected to an instance of CIM_RedirectionService by a
360  CIM_ElementCapabilities association. These capabilities include such things as the type and maximum of
361  number devices that can be redirected and support for the RequestStateChange method.

362  Each instance of CIM_RedirectionService is connected to an instance of CIM_ComputerSystem that
363  represents the system that hosts the service by a CIM_HostedService association. Each instance of
364  CIM_RedirectionService is connected to an instance of CIM_ComputerSystem that represents the
365  managed system with the storage media subsystem that is being redirected by a
366  CIM_ServiceAffectsElement association. These instance(s) of CIM_ComputerSystem may or may not be
367  the same instance. The instance of CIM_ComputerSystem associated to CIM_RedirectionService by an
368  instance of CIM_HostedService represents the Media Redirection Scoping Class.

369  Each instance of CIM_MediaRedirectionSAP is connected to an instance of CIM_ComputerSystem that
370  represents the system that hosts the Media Redirection Session by a CIM_SAPAvailableForElement
371  association. Each instance of CIM_MediaRedirectionSAP is connected to an instance of
372  CIM_ComputerSystem that represents the managed system with the storage media subsystem that is
373  being redirected by a CIM_HostedAccessPoint association. These instance(s) of CIM_ComputerSystem
374  may or may not be the same instance. The instance of CIM_ComputerSystem associated to
375  CIM_RedirectionService by an instance of CIM_HostedService represents the Media Redirection Scoping
376  Class.

377 Each CIM_MediaAccessDevice or subclass of CIM_MediaAccessDevice that is redirected to a Media
378 redirection SAP is connected to the instance of CIM_MediaRedirectionSAP that represents the session
379 by an instance of CIM_SAPAvailableForElement.

380 If an instance of CIM_ProtocolEndpoint exists and represents the endpoint where the Media Redirection
381 SAP can be accessed, then an instance of CIM_BindsTo is used to associate the instance of
382 CIM_MediaRedirectionSAP to the instance of CIM_ProtocolEndpoint.

383 If an instance of CIM_EnabledLogicalElementCapabilities exists and represents the capabilities of the
384 Media Redirection SAP, then an instance of CIM_ElementCapabilities is used to associate the instance of
385 CIM_MediaRedirectionSAP to the instance of CIM_EnabledLogicalElementCapabilities.

386 If an instance of CIM_RemoteServiceAccessPoint exists and represents the remote end of the Media
387 Redirection SAP, then an instance of CIM_RemoteAccessAvailableForElement is used to associate the
388 instance of CIM_MediaRedirectionSAP to the instance of CIM_RemoteServiceAccessPoint.

389 Figure 1 presents the class diagram for the *Media Redirection Profile.* For simplicity, the prefix *CIM_* has
390 been removed from the names of the classes.
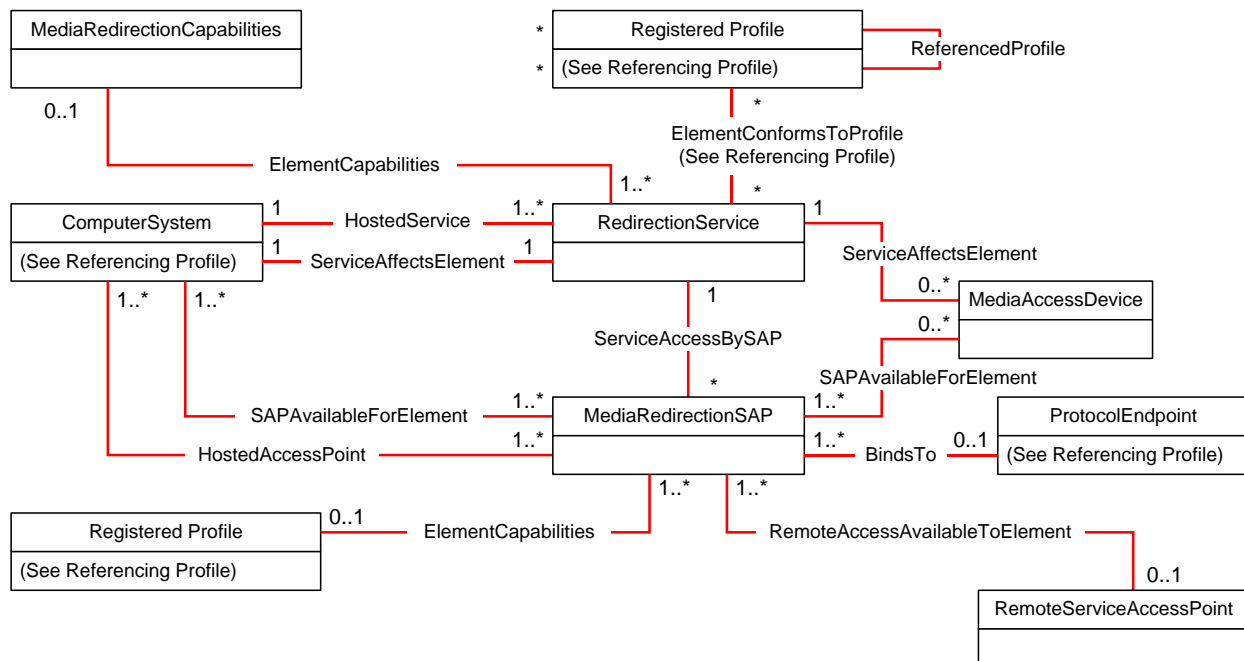
391

392 **Figure 1 – Media Redirection Profile: Class Diagram**

## 393   **7 Implementation**

394 This section details the requirements related to the arrangement of instances and their properties for
395 implementations of this profile. Section 7.10.2 describes the class methods required by the profile.

### 396   **7.1 Representing a Media Redirection**

397 A Media Redirection is represented by an instance of CIM_RedirectionService and an instance of
398 CIM_MediaRedirectionSAP connected by an instance of the CIM_ServiceAccessBySAP association.

399  The CIM_ServiceAccessBySAP association's Antecedent property shall reference the
400  CIM_RedirectionService instance, and its Dependent property shall reference the
401  CIM_MediaRedirectionSAP instance.

## 7.2     Representing a Media Redirection Service

403  A Media Redirection Service shall be represented by an instance of CIM_RedirectionService.

### 7.2.1     Relationship to the Computer System Hosting the Service

405  The relationship between the Media Redirection Service and the computer system that hosts the Service
406  shall be modeled with an instance of the CIM_HostedService association. When used in this way, the
407  CIM_HostedService association's Antecedent property shall reference the CIM_ComputerSystem
408  instance, and its Dependent property shall reference the CIM_RedirectionService instance.

### 7.2.2     Relationship to the Computer System with the Emulated Media Devices

410  The relationship between the Media Redirection Service and the computer system that contains one or
411  more emulated Media Devices shall be modeled with an instance of the CIM_ServiceAffectsElement
412  association. When used in this way, the CIM_ServiceAffectsElement association's AffectingElement
413  property shall reference the CIM_RedirectionService instance, and its AffectedElement property shall
414  reference the CIM_ComputerSystem instance.

### 7.2.3     Relationship to the Capabilities of the Service

416  The capabilities of a Media Redirection Service may be modeled by an instance of
417  CIM_MediaRedirectionCapabilities.

418  When an instance of CIM_MediaRedirectionCapabilities exists for this purpose, its relationship to the
419  Media Redirection Service shall be modeled with an instance of CIM_ElementCapabilities. When used in
420  this way, the CIM_ElementCapabilities association's ManagedElement property shall reference the
421  CIM_RedirectionService, and its Capabilities property shall reference CIM_MediaRedirectionCapabilities.

### 7.2.4     CIM_RedirectionService.RedirectionServiceType

423  The RedirectionServiceType property shall match the value 5 (Media).

### 7.2.5     Maximum Number of Concurrently Enabled Redirection SAPs

425  The Media Redirection Service may support multiple Media Redirection SAPs; however, there may be a
426  limitation to the number of concurrent redirections.

427  The CIM_RedirectionService.MaxCurrentEnabledSAPs property shall contain the maximum number of
428  instances of CIM_MediaRedirectionSAP instances that have an EnabledState property value of 2
429  (Enabled) that may be associated to the instance of CIM_RedirectionService.

### 7.2.6     CIM_RedirectionService.ElementName

431  The ElementName property shall be formatted as a free-form string of variable length (pattern ".*").

432  The ElementName property may support being modified by the ModifyInstance operation. (See 8.17.1.1.)
433  This behavior is conditional. The following sections describe the CIM elements and behavior required to
434  determine whether an implementation supports client modification of the ElementName property.

#### 7.2.6.1     Modifying ElementName Is Supported – Conditional

436  This section describes the CIM elements and behavior requirements when an implementation supports
437  client modification of the CIM_RedirectionService.ElementName property.

438 An instance of CIM_MediaRedirectionCapabilities shall be associated with the CIM_RedirectionService
439 instance through an instance of the CIM_ElementCapabilities association.

440 The CIM_MediaRedirectionCapabilities.ElementNameEditSupported property shall have a value of
441 TRUE.

442 The CIM_MediaRedirectionCapabilities.MaxElementNameLen property shall be implemented.

### 7.2.6.2 Modifying ElementName Is Not Supported

444 This section describes the CIM elements and behaviors that shall be implemented when the
445 CIM_RedirectionService.ElementName does not support being modified by the ModifyInstance operation.

446 An instance of CIM_MediaRedirectionCapabilities may be associated with the CIM_RedirectionService
447 instance through an instance of CIM_ElementCapabilities.

448 When an instance of CIM_MediaRedirectionCapabilities exists, its ElementNameEditSupported property
449 shall have a value of FALSE.

450 When an instance of CIM_MediaRedirectionCapabilities exists, its MaxElementNameLen property may be
451 implemented, but the value of the MaxElementNameLen property is irrelevant in this context.

## 7.3 Representing the Capabilities of a Media Redirection Service

453 When the Media Redirection Service does not support creating Media Redirection SAPs, there may be an
454 instance of CIM_MediaRedirectionCapabilities associated with the instance of CIM_RedirectionService
455 through an instance of the CIM_ElementCapabilities association.

456 When the Media Redirection Service does support creating Media Redirection SAPs, there shall be one
457 instance of CIM_MediaRedirectionCapabilities associated with the instance of CIM_RedirectionService
458 through an instance of the CIM_ElementCapabilities association.

459 At most one instance of CIM_MediaRedirectionCapabilities shall be associated with the instance of
460 CIM_RedirectionService.

461 The Media Redirection Service may constrain the number and type of Media Devices that can be
462 redirected. These constraints are represented by properties in the instance of
463 CIM_MediaRedirectionCapabilities that is associated with the instance of CIM_RedirectionService.

464 If an instance of CIM_MediaRedirectionCapabilities is associated with the instance of
465 CIM_RedirectionService and the Media Redirection Service does not support creating Media Redirection
466 SAPs, the properties of CIM_MediaRedirectionCapabilities shall reflect the pre-configured Media
467 Redirection SAPs for that service.

468 If an instance of CIM_MediaRedirectionCapabilities is associated with the instance of
469 CIM_RedirectionService and the Media Redirection Service does support creating Media Redirection
470 SAPs, the properties of CIM_MediaRedirectionCapabilities shall reflect the maximum values that can be
471 supported across all the Media Redirection SAPs that are associated with the Media Redirection Service.

### 7.3.1 Supported Devices

473 If an instance of CIM_MediaRedirectionCapabilities is associated with the instance of
474 CIM_RedirectionService, the CIM_MediaRedirectionCapabilities.DevicesSupported array property shall
475 contain an enumeration that identifies the devices supported. The devices that may be supported are the
476 devices that are modeled by the CIM_MediaAccessDevice or a subclass of the CIM_MediaAccessDevice
477 class.

478 ### 7.3.2 MaxDevicesSupported

479 If an instance of CIM_MediaRedirectionCapabilities is associated with the instance of
480 CIM_RedirectionService, the CIM_MediaRedirectionCapabilities.MaxDevicesSupport array property shall
481 contain the number of devices that are supported for the corresponding device that is specified in the
482 DevicesSupported array property.

483 ### 7.3.3 SAPCapabilitiesSupported

484 If an instance of CIM_MediaRedirectionCapabilities is associated with the instance of
485 CIM_RedirectionService, the CIM_MediaRedirectionCapabilities.SAPCapabilitiesSupported array
486 property shall contain values that specify the operations that are supported for the Media Redirection
487 SAPs that exist.

488 This property can be used by the remote client to determine whether the properties of the Media
489 Redirection SAPs can be modified.

490 When the SAPCapabilitiesSupported array property contains a value of 2 (Modify SAP), then the
491 properties of instances of CIM_MediaRedirectionSAP associated with the instance of
492 CIM_RedirectionService may be modified by "ModifyInstance".

493 ### 7.3.4 MaxDevicesPerSAP

494 If an instance of CIM_MediaRedirectionCapabilities is associated with the instance of
495 CIM_RedirectionService, , the CIM_MediaRedirectionCapabilities.MaxDevicesPerSAP property shall
496 contain the a value specifying the maximum number of devices that are support by the Media Redirection
497 Service for a single Media Redirection SAP. This value shall not exceed the value of
498 CIM_USBRedirectionCapabilities.MaxDevicesSupported

499 ### 7.3.5 ConnectionModesSupported

500 If an instance of CIM_MediaRedirectionCapabilities is associated with the instance of
501 CIM_RedirectionService, the CIM_MediaRedirectionCapabilities.ConnectionModesSupported array
502 property shall contain values that specify which connection modes the service supports

503 This property can be used by the remote client to determine whether Media Redirection Service supports
504 initiating connections to a remote application for Media Redirections or waits for a remote application to
505 initiate the connection for Media Redirections.

506 When the ConnectionModesSupported array property contains a value of 2 (Listen) the Media
507 Redirection Service supports waiting for remote applications to initiate network connections for Media
508 Redirections.

509 When the ConnectionModesSupported array property contains a value of 3 (Connect) the Media
510 Redirection Service supports initiating network connections to the remote applications for Media
511 Redirections.

512 ### 7.3.6 InfoFormatsSupported

513 The InfoFormatsSupported property may be supported. When the ConnectionModesSupported array
514 property contains a value of 3 (Connect) the InfoFormatsSupported shall be supported. When the
515 InfoFormatsSupported property is supported, it shall contain an enumeration of the AccessInfo formats
516 available for the Media Redirection SAP to connect to the remote service access point modeled by
517 CIM_RemoteServiceAccessPoint. (See 7.7.1.2.)

### 7.3.7   RequestedStatesSupported

If an instance of CIM_MediaRedirectionCapabilities is associated with the instance of
CIM_RedirectionService, the CIM_MediaRedirectionCapabilities.RequestedStatesSupported property
shall contain zero or more of the following values: 2 (Enabled) or 3 (Disabled). (See 7.10.1.1.)

## 7.4   Representing a Media Redirection SAP

A Media Redirection SAP shall be represented by an instance of CIM_MediaRedirectionSAP.

### 7.4.1   Relationship to the Service

The relationship between the Media Redirection SAP and a Media Redirection Service shall be modeled
for each instance of CIM_MediaRedirectionSAP that exists.

The relationship shall be modeled with an instance of CIM_ServiceAccessBySAP. When used in this way,
the CIM_ServiceAccessBySAP association's Antecedent property shall reference the
CIM_RedirectionService instance, and its Dependent property shall reference the
CIM_MediaRedirectionSAP instance.

### 7.4.2   Relationship to the Computer System with the Emulated Media Devices

The relationship between the Media Redirection SAP and the computer system that contains one or more
emulated Media Devices may be modeled.

The relationship shall be modeled with an instance of the CIM_SAPAvailableForElement association.
When used in this way, the CIM_SAPAvailableForElement association's ManagedElement property shall
reference the CIM_ComputerSystem instance, and its AvailableSAP property shall reference the
CIM_MediaRedirectionSAP instance.

### 7.4.3   Relationship to the Computer System with the SAP

The relationship between the Media Redirection SAP and the computer system that contains the endpoint
for the Media Redirection SAP shall be modeled with an instance of CIM_HostedAccessPoint. When
used in this way, the CIM_HostedAccessPoint association's Antecedent property shall reference the
CIM_ComputerSystem instance, and its Dependent property shall reference the
CIM_MediaRedirectionSAP instance.

### 7.4.4   Relationship to the Capabilities of the SAP

The state management capabilities of the Media Redirection SAP may be modeled.

The relationship shall be modeled with an instance of CIM_EnabledLogicalElementCapabilities.

When an instance of CIM_EnabledLogicalElementCapabilities exists, the relationship between the Media
Redirection SAP and the capabilities of that SAP shall be modeled with an instance of
CIM_ElementCapabilities. When used in this way, the CIM_EnabledLogicalElementCapabilities
association's ManagedElement property shall reference the CIM_MediaRedirectionSAP, and its
Capabilities property shall reference CIM_EnabledLogicalElementCapabilities.

### 7.4.5   CIM_MediaRedirectionSAP.ElementName

The CIM_MediaRedirectionSAP.ElementName property shall be formatted as a free-form string of
variable length (pattern ".*").

The ElementName property may support being modified by the ModifyInstance operation. (See 8.16.1.1.)
This behavior is conditional. The following sections describe the CIM elements and behavior required to
determine whether an implementation supports client modification of the ElementName property.

558 **7.4.5.1 Modifying ElementName Is Supported – Conditional**

559 This section describes the CIM elements and behavior requirements when an implementation supports
560 client modification of the CIM_MediaRedirectionSAP.ElementName property.

561 An instance of CIM_EnabledLogicalElementCapabilities shall be associated with the
562 CIM_MediaRedirectionSAP instance through an instance of the CIM_ElementCapabilities association.

563 The CIM_EnabledLogicalElementCapabilities.ElementNameEditSupported property shall have a value of
564 TRUE.

565 The CIM_EnabledLogicalElementCapabilities.MaxElementNameLen property shall be implemented.

566 **7.4.5.2 Modifying ElementName Is Not Supported**

567 This section describes the CIM elements and behaviors that shall be implemented when the
568 CIM_MediaRedirectionSAP.ElementName does not support being modified by the ModifyInstance
569 operation.

570 An instance of CIM_EnabledLogicalElementCapabilities may be associated with the
571 CIM_MediaRedirectionSAP instance through an instance of CIM_ElementCapabilities.

572 When an instance of CIM_EnabledLogicalElementCapabilities that is associated with
573 CIM_MediaRedirectionSAP through an instance of CIM_ElementCapabilities exists, its
574 ElementNameEditSupported property shall have a value of FALSE.

575 When an instance of CIM_EnabledLogicalElementCapabilities that is associated with
576 CIM_MediaRedirectionSAP through an instance of CIM_ElementCapabilities exists, its
577 MaxElementNameLen property may be implemented, but the MaxElementNameLen property is irrelevant
578 in this context.

579 **7.4.6 Session Connection Mode**

580 Two connection modes are defined for Media Redirection SAPs.
581 The Media Redirection SAP waits (listens) for an application on a Remote System to initiate a network connection for Media
582 Redirection

583 • The Media Redirection SAP initiates connecting to the applications on the Remote System for
584 Media Redirection.

585 • The connection mode of the Media Redirection SAP shall be represented by the
586 CIM_MediaRedirectionSAP.ConnectionMode property. The property shall have a value of 2
587 (Listen) or 3 (Connect). If CIM_MediaRedirectionCapabilities is supported, the value of the
588 CIM_MediaRedirectionSAP.ConnectionMode property shall be one of the values in the
589 CIM_MediaRedirectionCapabilities.ConnectionModesSupported property.

590 **7.4.7 Command Timeout**

591 The Command Timeout is the amount of time that the session shall wait for a response after sending a
592 Media command. If the Command Timeout is exceeded, the emulated Media device behaves as if the
593 media were ejected; a Reset message is sent to the Remote System to terminate the previous command.

594 The CIM_MediaRedirectionSAP CommandTimeout property shall have the value of the Command
595 Timeout.

596 **7.4.8 Reset Timeout**

597 The Reset Timeout is the amount of time that the session shall wait after sending a Reset to the Remote
598 System before concluding that the Remote System is not responding in a timely fashion because It may

599  be "hung" or busy. If the Reset Timeout is exceeded, the managed system closes the connection and
600  tries to establish a new connection with the Remote System.

601  The CIM_MediaRedirectionSAP.ResetTimeout shall have a value of the Reset Timeout.

### 7.4.9  Session Timeout

603  The Session Timeout is the amount of time the Media Redirection SAP will wait for a Remote System to
604  establish a new connection before the Media Device is disabled.

605  The CIM_MediaRedirectionSAP.SessionTimeout shall have a value of the Session Timeout.

## 7.5  Representing the Endpoint of a Media Redirection SAP

607  The instance of CIM_MediaRedirectionSAP may be associated through an instance of CIM_BindsTo to
608  one or more instances of CIM_ProtocolEndpoint that represents the endpoints where the redirected
609  Media Redirection SAP is accessed.

610  The CIM_BindsTo association's Antecedent property shall reference the CIM_ProtocolEndpoint instance,
611  and its Dependent property shall reference the CIM_MediaRedirectionSAP instance.

## 7.6  Representing the Locally Emulated Media Device

613  A locally emulated Media Device shall be represented by an instance of CIM_MediaAccessDevice or a
614  subclass of CIM_MediaAccessDevice.

### 7.6.1  Relationship to the Media Redirection Service

616  The relationship between a locally emulated Media Device and the Media Redirection Service shall be
617  modeled with an instance of the CIM_ServiceAffectsElement association. When used in this way, the
618  CIM_ServiceAffectsElement association's AffectingElement property shall reference the instance of
619  CIM_RedirectionService, and its AffectedElement property shall reference the instance of
620  CIM_MediaAccessDevice or subclass of CIM_MediaAccessDevice.

### 7.6.2  Relationship to the Media Redirection SAP

622  The relationship between a locally emulated Media Device and a Media Redirection SAP may be
623  modeled.

624  The relationship shall be modeled with an instance of the CIM_SAPAvailableForElement association.
625  When used in this way, the CIM_SAPAvailableForElement association's Antecedent property shall
626  reference an instance of CIM_MediaAccessDevice or subclass of CIM_MediaAccessDevice, and its
627  Dependent property shall reference the CIM_MediaRedirectionSAP instance.

## 7.7  Representing the Destination of the Media Redirection

629  The remote destination of Media Redirection may be modeled. When modeled, the requirements
630  specified in the following sections shall be met.

### 7.7.1  CIM_RemoteServiceAccessPoint Instance

632  The remote destination of the Media Redirection may be represented by an instance of
633  CIM_RemoteServiceAccessPoint.

634  Every instance CIM_MediaRedirectionSAP instance that has a ConnectionMode property value of 3
635  (Connect) shall be associated with exactly one instance of CIM_RemoteServiceAccessPoint through an
636  instance of the CIM_RemoteAccessAvailableToElement association.

637    If an instance of CIM_USBRedirectionCapabilities is associated with the CIM_RedirectionService
638    instance and CIM_USBRedirectionCapabilities.ConnectionModesSupported includes both 2 (Listen) and
639    3 (Connect) (see 7.3.5) and CIM_USBRedirectionCapabilities.SAPCapabilitiesSupported includes 4
640    (Modify SAP) (see 7.3.3), static pre-configured instances of CIM_USBRedirectionSAP shall have a
641    CIM_RemoteAccessAvailableToElement association to an instance of CIM_RemoteServiceAccessPoint
642    and a CIM_BindsTo association to an instance of CIM_ProtocolEndpoint.

#### 7.7.1.1    AccessInfo

644    The CIM_RemoteServiceAccessPoint.AccessInfo property shall have a value that corresponds to the
645    value of the CIM_RemoteServiceAccessPoint.InfoFormat property. The value shall contain the network
646    location for the destination of the Media Redirection.

#### 7.7.1.2    InfoFormat

648    The CIM_RemoteServiceAccessPoint.InfoFormat property shall contain the correct valuemap value for
649    the format of the CIM_RemoteServiceAccessPoint.AccessInfo information that designates the network
650    location for the destination of the Media Redirection. When an instance of
651    CIM_MediaRedirectionCapabilities is associated with the instance of CIM_RedirectionService and
652    CIM_MediaRedirectionCapabilities.InfoFormatsSupported is not empty, the value of the InfoFormat
653    property shall be one of the values of CIM_MediaRedirectionCapabilities.InfoFormatsSupported.

#### 7.7.1.3    OtherInfoFormatDescription

655    If the value of the CIM_RemoteServiceAccessPoint.InfoFormat property is 1 (Other), the
656    CIM_RemoteServiceAccessPoint.OtherInfoFormatDescription property describes the format.

#### 7.7.1.4    AccessContext

658    The CIM_RemoteServiceAccessPoint.AccessContext property shall have a value of 1 (Other).

#### 7.7.1.5    OtherAccessContext

660    The CIM_RemoteServiceAccessPoint.OtherAccessContext property shall have a value of "Media
661    Redirection Destination".

## 7.8    States of a Media Redirection

663    The state of a Media Redirection shall be determined by the states of the CIM_RedirectionService and
664    CIM_MediaRedirectionSAP instances that are associated though an instance of
665    CIM_ServiceAccessBySAP.

666    The Media Redirection shall have the state *inactive*, *available*, or *active*:

667    •    The Media Redirection is *active* when the Media Redirection SAP is connected to a Remote
668        SAP. The value of the EnabledState properties in CIM_RedirectionService and
669        CIM_MediaRedirectionSAP shall be 2 (Enabled) when the Media Redirection is in an active
670        state.

671    •    The Media Redirection is *available* when the Media Redirection SAP is available for connection
672        at the protocol endpoint. The Media Redirection SAP is either awaiting a connection request
673        (listen mode) or ready to initiate a connection (connect mode). When the Media Redirection
674        SAP is in an available state, the value of the EnabledState property of CIM_RedirectionService
675        shall be 2 (Enabled) and the value of the EnabledState property of CIM_MediaRedirectionSAP
676        shall be 6 (Enabled but Offline).

677    •    The Media Redirection is *inactive* when the Media Redirection is neither active nor available.

678 ## 7.9   State Management of a Media Redirection Service

679 The following sections describe the CIM elements and behaviors that allow the client to determine
680 whether state management of the Media Redirection Service is supported.

681 Support for managing the state of a Media Redirection Service is optional behavior. The following
682 sections describe the CIM elements and behaviors that allow the client to determine whether state
683 management of the Media Redirection Service is supported.

684 ### 7.9.1   Media Redirection Service State Management Is Supported

685 This section describes the CIM elements and behaviors that shall be implemented when state
686 management of the Media Redirection Service is supported.

687 #### 7.9.1.1   CIM_MediaRedirectionCapabilities

688 When state management of the Service is supported, exactly one instance of
689 CIM_MediaRedirectionCapabilities shall be associated with the instance of CIM_RedirectionService
690 through an instance of CIM_ElementCapabilities.

691 The CIM_ElementCapabilities association's ManagedElement property shall reference the
692 CIM_RedirectionService instance, and its Capabilities property shall reference the
693 CIM_MediaRedirectionCapabilities instance.

694 ##### 7.9.1.1.1   CIM_MediaRedirectionCapabilities.RequestedStatesSupported

695 The RequestedStatesSupported property shall contain one or more of the following values: 2 (Enabled) or
696 3 (Disabled).

697 #### 7.9.1.2   CIM_RedirectionService.RequestedState

698 When the CIM_RedirectionService.RequestStateChange( ) method is successfully invoked, the value of
699 the RequestedState property shall be the value of the RequestedState parameter. If the method is not
700 successfully invoked, the value of the RequestedState property is indeterminate.

701 The CIM_RedirectionService.RequestedState property shall have one of the values specified in the
702 CIM_MediaRedirectionCapabilities.RequestedStatesSupported property or a value of 0 (Unknown).

703 #### 7.9.1.3   CIM_RedirectionService.EnabledState

704 The EnabledState property shall have one of the following values: 2 (Enabled) or 3 (Disabled).

705 When the RequestedState parameter has a value of 2 (Enabled) or 3 (Disabled) and the
706 CIM_RedirectionService.RequestStateChange( ) method completes successfully, the value of the
707 EnabledState property shall equal the value of the CIM_RedirectionService.RequestedState property.

708 If the method does not complete successfully, the value of the EnabledState property is indeterminate.

709 ### 7.9.2   Media Redirection Service State Management Is Not Supported

710 This section describes the CIM elements and behaviors that shall be implemented when management of
711 the Media Redirection Service state is not supported.

712 #### 7.9.2.1   CIM_MediaRedirectionCapabilities

713 When state management is not supported, an instance of CIM_MediaRedirectionCapabilities may be
714 associated with the CIM_RedirectionService instance through an instance of CIM_ElementCapabilities.
715 The existence of the CIM_ElementCapabilities instance is conditional on the existence of the
716 CIM_MediaRedirectionCapabilities instance.

717 The CIM_ElementCapabilities association's ManagedElement property shall reference the
718 CIM_RedirectionService instance, and its Dependent property shall reference the
719 CIM_MediaRedirectionCapabilities instance.

720 **7.9.2.1.1 CIM_MediaRedirectionCapabilities.RequestedStatesSupported**

721 The CIM_MediaRedirectionCapabilities.RequestedStatesSupported property shall not contain any values.

722 **7.9.2.2 CIM_RedirectionService.RequestedState**

723 The RequestedState property shall have the value of 12 (Not Applicable).

724 **7.9.2.3 CIM_RedirectionService.EnabledState**

725 The EnabledState property shall have one of the following values: 2 (Enabled), 3 (Disabled), or 0
726 (Unknown). The EnabledState property may have a value of 5 (Not Applicable) when non-CIM
727 instrumentation has manipulated the instance of CIM_RedirectionService.

## 728 **7.10 State Management of a Media Redirection SAP**

729 The following sections describe the CIM elements and behaviors that allow the client to determine
730 whether state management of the Media Redirection SAP is supported.

731 Support for managing the state of a Media Redirection SAP is optional behavior. The following sections
732 describe the CIM elements and behaviors that allow the client to determine whether state management of
733 the Media Redirection SAP is supported.

### 734 **7.10.1 Media Redirection SAP State Management Is Supported – Conditional**

735 This section describes the CIM elements and behaviors that shall be implemented when state
736 management of the Media Redirection SAP is supported.

#### 737 **7.10.1.1 CIM_EnabledLogicalElementCapabilities**

738 When state management of the Media Redirection SAP is supported, exactly one instance of
739 CIM_EnabledLogicalElementCapabilities shall be associated with the instance of
740 CIM_MediaRedirectionSAP through an instance of CIM_ElementCapabilities.

741 The CIM_ElementCapabilities association's ManagedElement property shall reference the
742 CIM_MediaRedirectionSAP instance, and its Capabilities property shall reference the
743 CIM_EnabledLogicalElementCapabilities instance.

744 **7.10.1.1.1 CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported**

745 The RequestedStatesSupported property shall contain one or more of the following values: 2 (Enabled), 3
746 (Disabled), or 6 (Offline).

#### 747 **7.10.1.2 CIM_MediaRedirectionSAP.RequestedState**

748 When the CIM_MediaRedirectionSAP.RequestStateChange( ) method is successfully invoked, the value
749 of the RequestedState property shall be the value of the RequestedState parameter. If the method is not
750 successfully invoked, the value of the RequestedState property is indeterminate.

751 The CIM_MediaRedirectionSAP.RequestedState property shall have one of the values specified in the
752 CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported property or a value of 0 (Unknown).

753    **7.10.1.3  CIM_MediaRedirectionSAP.EnabledState**

754    The EnabledState property shall have one of the following values: 2 (Enabled), 3 (Disabled), or 6
755    (Enabled but Offline).

756    When the RequestedState parameter has a value of 2 (Enabled), 3 (Disabled), or 6 (Offline) and the
757    CIM_MediaRedirectionSAP.RequestStateChange( ) method completes successfully, the value of the
758    EnabledState property shall equal the value of the CIM_MediaRedirectionSAP.RequestedState property.

759    If the method does not complete successfully, the value of the EnabledState property is indeterminate.

760    **7.10.2  Media Redirection SAP State Management Is Not Supported**

761    This section describes the CIM elements and behaviors that shall be implemented when management of
762    the Session state is not supported.

763      **7.10.2.1  CIM_EnabledLogicalElementCapabilities**

764    When state management is not supported, an instance of CIM_EnabledLogicalElementCapabilities may
765    be associated with the CIM_MediaRedirectionSAP instance through an instance of
766    CIM_ElementCapabilities. The existence of the CIM_ElementCapabilities instance is conditional on the
767    existence of the CIM_EnabledLogicalElementCapabilities instance.

768    The CIM_ElementCapabilities association's ManagedElement property shall reference the
769    CIM_MediaRedirectionSAP instance, and its Dependent property shall reference the
770    CIM_EnabledLogicalElementCapabilities instance.

771    **7.10.2.1.1  CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported**

772    The CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported property shall not contain any
773    values.

774      **7.10.2.2  CIM_MediaRedirectionSAP.RequestedState**

775    The RequestedState property shall have the value of 12 (Not Applicable).

776      **7.10.2.3  CIM_MediaRedirectionSAP.EnabledState**

777    The EnabledState property shall have one of the following values: 2 (Enabled), 3 (Disabled), 0
778    (Unknown), or 6 (Enabled but Offline). The EnabledState property may have a value of 0 (Unknown)
779    when non-CIM instrumentation has manipulated the instance of CIM_MediaRedirectionSAP.

780    # 8   Methods

781    This section details the requirements for supporting intrinsic operations and extrinsic methods for the CIM
782    elements defined by this profile.

783    ## 8.1   CIM_RedirectionService.RequestStateChange( )

784    Invocation of the RequestStateChange( ) method changes the element's state to the value specified in the
785    RequestedState parameter. The 2 (Enabled) and 3 (Disabled) values of the RequestedState parameter
786    shall correspond to the enabled and disabled states of the Media Redirection Service, respectively.

787    Whether the method completes successfully if there are active sessions is specific to the implementation.

788    Detailed requirements of the RequestStateChange( ) method are specified in Table 2 and Table 3.

789    No standard messages are defined.

790 Invoking the RequestStateChange( ) method multiple times could result in earlier requests being
791 overwritten or lost.

792 **Table 2 – CIM_RedirectionService.RequestStateChange( ) Method: Return Code Values**

| Value | Description |
|---|---|
| 0 | Request was successfully executed. |
| 1 | Method is unsupported. |
| 2 | Error occurred. |
| 4096 | Job started: REF returned to started CIM_ConcreteJob. |

793 **Table 3 – CIM_RedirectionService.RequestStateChange( ) Method: Parameters**

| Qualifiers | Name | Type | Description/Values |
|---|---|---|---|
| IN | RequestedState | uint16 | Valid state values:<br>2 (Enabled)<br>3 (Disabled) |
| OUT | Job | CIM_ConcreteJob REF | Returned if job started |
| IN | TimeoutPeriod | datetime | Client-specified maximum amount of time the transition to a new state is supposed to take:<br>0 or NULL – No time requirements<br><interval> – Maximum time allowed |

794 ### 8.1.1 CIM_RedirectionService.RequestStateChange( ) – Conditional Support

795 When an instance of CIM_MediaRedirectionCapabilities is associated with the CIM_RedirectionService
796 instance and the CIM_MediaRedirectionCapabilities.RequestedStatesSupported property contains at
797 least one value, the CIM_RedirectionService.RequestStateChange( ) method shall be implemented and
798 supported. The CIM_RedirectionService.RequestStateChange( ) method shall not return a value of 1 (Not
799 Supported).

800 ## 8.2 CIM_MediaRedirectionSAP.RequestStateChange( )

801 Invocation of the RequestStateChange( ) method changes the element's state to the value specified in the
802 RequestedState parameter. The 2 (Enabled), 3 (Disabled), and 6 (Offline) values of the RequestedState
803 parameter shall correspond to enabled, disabled, and offline requested states for the SAP, respectively.

804 Detailed requirements of the RequestStateChange( ) method are specified in Table 4 and Table 5.

805 No standard messages are defined.

806 Invoking the RequestStateChange( ) method multiple times could result in earlier requests being
807 overwritten or lost.

808 **Table 4 – CIM_MediaRedirectionSAP.RequestStateChange( ) Method: Return Code Values**

| Value | Description |
|---|---|
| 0 | Request was successfully executed. |
| 1 | Method is unsupported. |

| Value | Description |
|-------|-------------|
| 2 | Error occurred. |
| 4096 | Job started: REF returned to started CIM_ConcreteJob. |

809         **Table 5 – CIM_MediaRedirectionSAP.RequestStateChange( ) Method: Parameters**

| Qualifiers | Name | Type | Description/Values |
|------------|------|------|--------------------|
| IN | RequestedState | uint16 | Valid state values: <br><br> 2 (Enabled) <br> 3 (Disabled) <br> 6 (Offline) |
| IN | TimeoutPeriod | datetime | Client-specified maximum amount of time the transition to a new state is supposed to take: <br><br> 0 or NULL – No time requirements <br><br> \<interval\> – Maximum time allowed |
| OUT | Job | CIM_ConcreteJob REF | Returned if job started |

### 810   8.2.1   CIM_MediaRedirectionSAP.RequestStateChange( ) – Conditional Support

811   When an instance of CIM_EnabledLogicalElementCapabilities is associated with the
812   CIM_MediaRedirectionSAP instance and the
813   CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported property contains at least one
814   value, the CIM_MediaRedirectionSAP.RequestStateChange( ) method shall be implemented and
815   supported. The CIM_MediaRedirectionSAP.RequestStateChange( ) method shall not return a value of
816   1 (Not Supported).

## 817   8.3   Profile Conventions for Operations

818   Support for operations for each profile class (including associations) is specified in the following
819   subclauses. Each subclause includes either the statement "All operations in the default list in 8.3 are
820   supported as described by DSP0200 version 1.2" or a table listing all of the operations that are not
821   supported by this profile or where the profile requires behavior other than that described by DSP0200
822   version 1.2.

823   The default list of operations is as follows:

824        &bull;   GetInstance

825        &bull;   Associators

826        &bull;   AssociatorNames

827        &bull;   References

828        &bull;   ReferenceNames

829        &bull;   EnumerateInstances

830        &bull;   EnumerateInstanceNames

831   A compliant implementation shall support all of the operations in the default list for each class, unless the
832   "Requirement" column states something other than *Mandatory*.

### 833 **8.4 CIM_BindsTo**

834 Table 6 lists operations that either have special requirements beyond those from DSP0200 version 1.2 or
835 shall not be supported.

836 **Table 6 – Operations: CIM_BindsTo**

| Operation | Requirement | Messages |
|---|---|---|
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

### 837 **8.5 CIM_ElementCapabilities**

838 Table 7 lists operations that either have special requirements beyond those from DSP0200 version 1.2 or
839 shall not be supported.

840 **Table 7 – Operations: CIM_ElementCapabilities**

| Operation | Requirement | Messages |
|---|---|---|
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

### 841 **8.6 CIM_EnabledLogicalElementCapabilities**

842 Table 8 lists operations that either have special requirements beyond those from DSP0200 version 1.2 or
843 shall not be supported.

844 **Table 8 – Operations: CIM_EnabledLogicalElementCapabilities**

| Operation | Requirement | Messages |
|---|---|---|
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

845  **8.7  CIM_HostedAccessPoint**

846  Table 9 lists operations that either have special requirements beyond those from DSP0200 version 1.2 or
847  shall not be supported.

848                           **Table 9 – Operations: CIM_HostedAccessPoint**

| Operation | Requirement | Messages |
|---|---|---|
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

849  **8.8  CIM_HostedService**

850  Table 10 lists operations that either have special requirements beyond those from DSP0200 version 1.2
851  or shall not be supported.

852                           **Table 10 – Operations: CIM_HostedService**

| Operation | Requirement | Messages |
|---|---|---|
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

853  **8.9  CIM_RemoteAccessAvailableToElement**

854  Table 11 lists operations that either have special requirements beyond those from DSP0200 version 1.2
855  or shall not be supported.

856              **Table 11 – Operations: CIM_RemoteAccessAvailableToElement**

| Operation | Requirement | Messages |
|---|---|---|
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

857  **8.10 CIM_RemoteServiceAccessPoint**

858  Table 12 lists operations that either have special requirements beyond those from DSP0200 version 1.2
859  or shall not be supported.

860 **Table 12 – Operations: CIM_RemoteServiceAccessPoint**

| Operation | Requirement | Messages |
|---|---|---|
| ModifyInstance | Optional | See 8.10.1. |
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

861 **8.10.1 CIM_RemoteServiceAccessPoint – ModifyInstance**

862 This section details the specific requirements for the ModifyInstance operation applied to an instance of
863 CIM_RemoteServiceAccessPoint.

864 **8.10.1.1 CIM_RemoteServiceAccessPoint.InfoFormat Property**

865 When an instance of CIM_MediaRedirectionCapabilities is associated with the CIM_RedirectionService
866 instance and the CIM_MediaRedirectionCapabilities.InfoFormatsSupported is not empty, the
867 implementation shall allow the ModifyInstance operation to change the value of the InfoFormat property of
868 the CIM_RemoteServiceAccessPoint instance. The new InfoFormat value shall be one of the values in
869 CIM_MediaRedirectionCapabilities.InfoFormatsSupported.

870 **8.10.1.2 CIM_RemoteServiceAccessPoint.AccessInfo Property**

871 When an instance of CIM_MediaRedirectionCapabilities is associated with the CIM_RedirectionService
872 instance and the CIM_MediaRedirectionCapabilities.InfoFormatsSupported is not empty, the
873 implementation shall allow the ModifyInstance operation to change the value of the AccessInfo property
874 of the CIM_RemoteServiceAccessPoint instance.

875 **8.10.1.3 CIM_RemoteServiceAccessPoint.OtherInfoFormatDescription Property**

876 When an instance of CIM_MediaRedirectionCapabilities is associated with the CIM_RedirectionService
877 instance and the CIM_MediaRedirectionCapabilities.InfoFormatsSupported property has a value of 1
878 (Other), the implementation shall allow the ModifyInstance operation to change the value of the
879 OtherInfoFormatDescription property of the CIM_RemoteServiceAccessPoint instance.

880 **8.11 CIM_SAPAvailableForElement**

881 Table 13 lists operations that either have special requirements beyond those from DSP0200 version 1.2
882 or shall not be supported.

883 **Table 13 – Operations: CIM_SAPAvailableForElement**

| Operation | Requirement | Messages |
|---|---|---|
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

884     ## 8.12 CIM_ServiceAccessBySAP

885     Table 14 lists operations that either have special requirements beyond those from DSP0200 version 1.2
886     or shall not be supported.

887                             **Table 14 – Operations: CIM_ServiceAccessBySAP**

| Operation | Requirement | Messages |
|---|---|---|
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

888     ## 8.13 CIM_ServiceAffectsElement

889     Table 15 lists operations that either have special requirements beyond those from DSP0200 version 1.2
890     or shall not be supported.

891                             **Table 15 – Operations: CIM_ServiceAffectsElement**

| Operation | Requirement | Messages |
|---|---|---|
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

892     ## 8.14 CIM_MediaAccessDevice

893     Table 16 lists operations that either have special requirements beyond those from DSP0200 version 1.2
894     or shall not be supported.

895                             **Table 16 – Operations: CIM_MediaAccessDevice**

| Operation | Requirement | Messages |
|---|---|---|
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

896     ## 8.15 CIM_MediaRedirectionCapabilities

897     Table 17 lists operations that either have special requirements beyond those from DSP0200 version 1.2
898     or shall not be supported.

899 **Table 17 – Operations: CIM_MediaRedirectionCapabilities**

| Operation | Requirement | Messages |
|---|---|---|
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

## 900   8.16 CIM_MediaRedirectionSAP

901   Table 18 lists operations that either have special requirements beyond those from DSP0200 version 1.2
902   or shall not be supported.

903 **Table 18 – Operations: CIM_MediaRedirectionSAP**

| Operation | Requirement | Messages |
|---|---|---|
| ModifyInstance | Optional | See 8.16.1. |
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

### 904   8.16.1 CIM_MediaRedirectionSAP – ModifyInstance

905   This section details the specific requirements for the ModifyInstance operation applied to an instance of
906   CIM_MediaRedirectionSAP.

#### 907   8.16.1.1 CIM_MediaRedirectionSAP.ElementName Property

908   When an instance of CIM_EnabledLogicalElementCapabilities is associated with the
909   CIM_MediaRedirectionSAP instance and the
910   CIM_EnabledLogicalElementCapabilities.ElementNameEditSupported property has a value of TRUE, the
911   implementation shall allow the ModifyInstance operation to change the value of the ElementName
912   property of the CIM_MediaRedirectionSAP instance. The ModifyInstance operation shall enforce the
913   length restriction specified in the MaxElementNameLen property of the
914   CIM_EnabledLogicalElementCapabilities instance.

915   When no instance of CIM_EnabledLogicalElementCapabilities is associated with the
916   CIM_MediaRedirectionSAP instance, or the ElementNameEditSupported property of the
917   CIM_EnabledLogicalElementCapabilities instance has a value of FALSE, the implementation shall not
918   allow the ModifyInstance operation to change the value of the ElementName property of the
919   CIM_MediaRedirectionSAP instance.

#### 920   8.16.1.2 Modifying CIM_MediaRedirectionSAP Properties

921   When an instance of CIM_MediaRedirection.Capabilities is associated with the CIM_RedirectionService
922   instance and the CIM_MediaRedirectionCapabilities.SAPCapabilitiesSupported property has a value of 2
923   (Modify SAP), the implementation shall allow the ModifyInstance operation to change the value of the
924   properties of the CIM_MediaRedirectionSAP instance.

925 When no instance of CIM_MediaRedirectionCapabilities is associated with the CIM_RedirectionService
926 instance, or the SAPCapabilitiesSupported property of the CIM_MediaRedirectionCapabilities instance
927 does not have a value of 2 (Modify SAP), the implementation shall not allow the ModifyInstance operation
928 to change the value of the properties of the CIM_MediaRedirectionSAP instance.

## 929   8.17 CIM_RedirectionService

930 Table 19 lists operations that either have special requirements beyond those from DSP0200 version 1.2
931 or shall not be supported.

932                           **Table 19 – Operations: CIM_RedirectionService**

| Operation | Requirement | Messages |
|---|---|---|
| ModifyInstance | Optional | See 8.17.1. |
| Associators | Unspecified | None |
| AssociatorNames | Unspecified | None |
| References | Unspecified | None |
| ReferenceNames | Unspecified | None |

### 933   8.17.1 CIM_RedirectionService – ModifyInstance

934 This section details the specific requirements for the ModifyInstance operation applied to an instance of
935 CIM_RedirectionService.

#### 936   8.17.1.1 CIM_RedirectionService.ElementName Property

937 When an instance of CIM_MediaRedirectionCapabilities is associated with the CIM_RedirectionService
938 instance and the CIM_MediaRedirectionCapabilities.ElementNameEditSupported property has a value of
939 TRUE, the implementation shall allow the ModifyInstance operation to change the value of the
940 ElementName property of the CIM_RedirectionService instance. The ModifyInstance operation shall
941 enforce the length restriction specified in the MaxElementNameLen property of the
942 CIM_MediaRedirectionCapabilities instance.

943 When no instance of CIM_MediaRedirectionCapabilities is associated with the CIM_RedirectionService
944 instance or the ElementNameEditSupported property of the CIM_MediaRedirectionCapabilities instance
945 has a value of FALSE, the implementation shall not allow the ModifyInstance operation to change the
946 value of the ElementName property of the CIM_RedirectionService instance.

## 947   9   Use Cases

948 This section contains object diagrams and use cases specific to the *Media Redirection Profile*. The use
949 cases are informative and are not intended to define the requirements for conformance.

### 950   9.1   Advertising the Profile Conformance

951 Figure 2 shows how instances of CIM_RegisteredProfile are used to identify the version of the *Media*
952 *Redirection Profile* with which an instance of CIM_RedirectionService and its associated instances
953 conform.

954 An instance of CIM_RegisteredProfile exists for each profile that is instrumented in the system. One
955 instance of CIM_RegisteredProfile identifies the DMTF *Base Server Profile*, version 1.0.0. The other
956 instance identifies the *Media Redirection Profile*, version 1.0.0. The Central Instance is the
957 CIM_RedirectionService. The Scoping Instance is the CIM_ComputerSystem instance.

958　This instance of CIM_ComputerSystem conforms to the _Base Server Profile_, version 1.0.0, as indicated
959　by the CIM_ElementConformsToProfile association with the CIM_RegisteredProfile instance.

960　This instance of CIM_RedirectionService conforms to the _Media Redirection Profile_, version 1.0.0, as
961　indicated by the CIM_ElementConformsToProfile association with the CIM_RegisteredProfile instance.
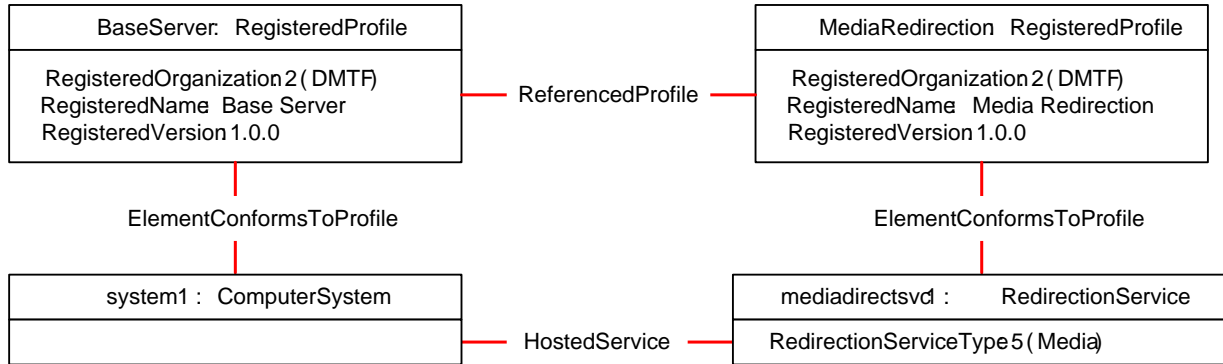
962



963　　　　　　　　　　　　　　　　　**Figure 2 – Registered Profile**

## 9.2　Object Diagram for a Monolithic Server – Connect

965　Figure 3 shows a monolithic server, system1, configured for the Media Redirection SAP to connect to the
966　Remote System for Redirection.
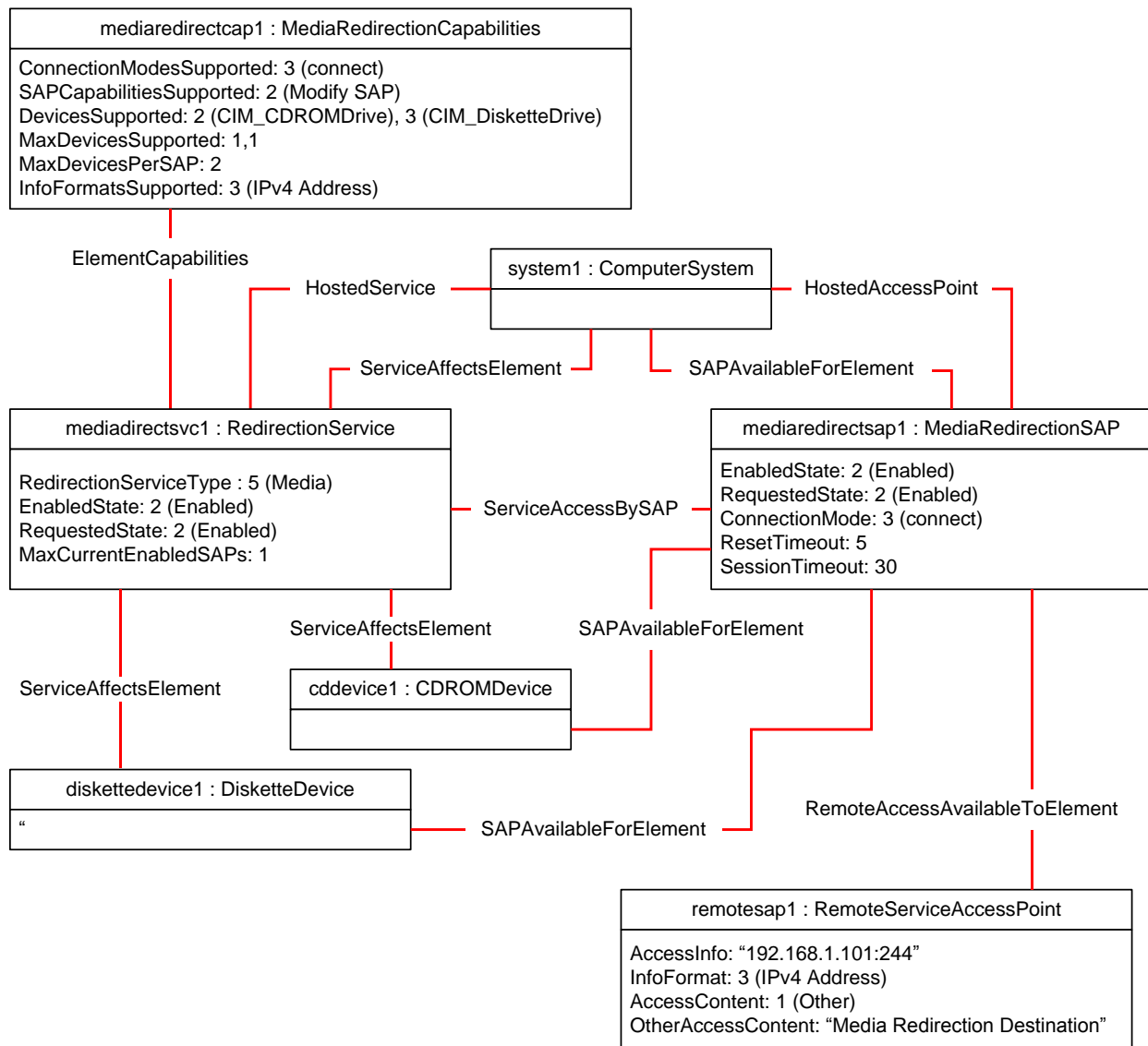
967

968                                  **Figure 3 – Monolithic System: Connect**

969     The Media Redirection Service is represented by mediaredirectsvc1. The Media Redirection SAP is
970     represented by mediaredirectsap1.

971     The instance of CIM_MediaRedirectionCapabilities, mediaredirectcap1, describes the capabilities of the
972     Media Redirection Service. The SAPCapabilitiesSupported property value of 2 (Modify SAP) models that
973     the SAP properties can be modified.

974     The ConnectionModesSupported property models that the SAP can only be configured for "connect"
975     mode. The DeviceSupported property models that the Emulated CDROM and Diskette devices may be
976     redirected.The InfoFormatsSupported property models that the SAP can support IPv4 Addresses to
977     initiate the redirected sesson connection to the remote SAP.

978     The CIM_ServiceAccessBySAP association between mediaredirectsvc1 and mediaredirectsap1 models
979     that mediaredirectsvc1 is available at mediaredirectsap1. The MediaRedirectionSAP.ConnectionMode
980     property is set to "connect" which models that the SAP will initiate a session to a remote SAP. The

981 instance of CIM_RemoteServiceAccessPoint, remotesap1, has been configured with access information
982 needed to initiate a session with the remote SAP.

983 The CIM_HostedService association between system1 and mediaredirectsvc1 models that the Media
984 Redirection Service is hosted on system1.

985 The CIM_ServiceAffectsElement association between mediaredirectsvc1 and cddevice1 and
986 diskettdevice1 models that the Media Redirection Service is configured to redirect both CD and Diskette
987 redirection data streams.

988 The CIM_HostedAccessPoint association between mediaredirectsap1 and system1 models that
989 mediaredirectsap1 is hosted on system1.

990 The CIM_SAPAvailableForElement association between system1 and mediaredirectsap1 models that
991 mediaredirectsap1 provides a SAP for at least one Media device residing on system1.

992 The Media Redirection is active because the state of the mediaredirectsvc1 is 2 (Enabled) and the state
993 of the mediaredirectsap1 is 2 (Enabled).

## 9.3 Object Diagram for a Monolithic Server – Listen

995 Figure 4 shows a monolithic server, system1, configured for the Media Redirection SAP to listen for a
996 connection request from the Remote System for Redirection.

997
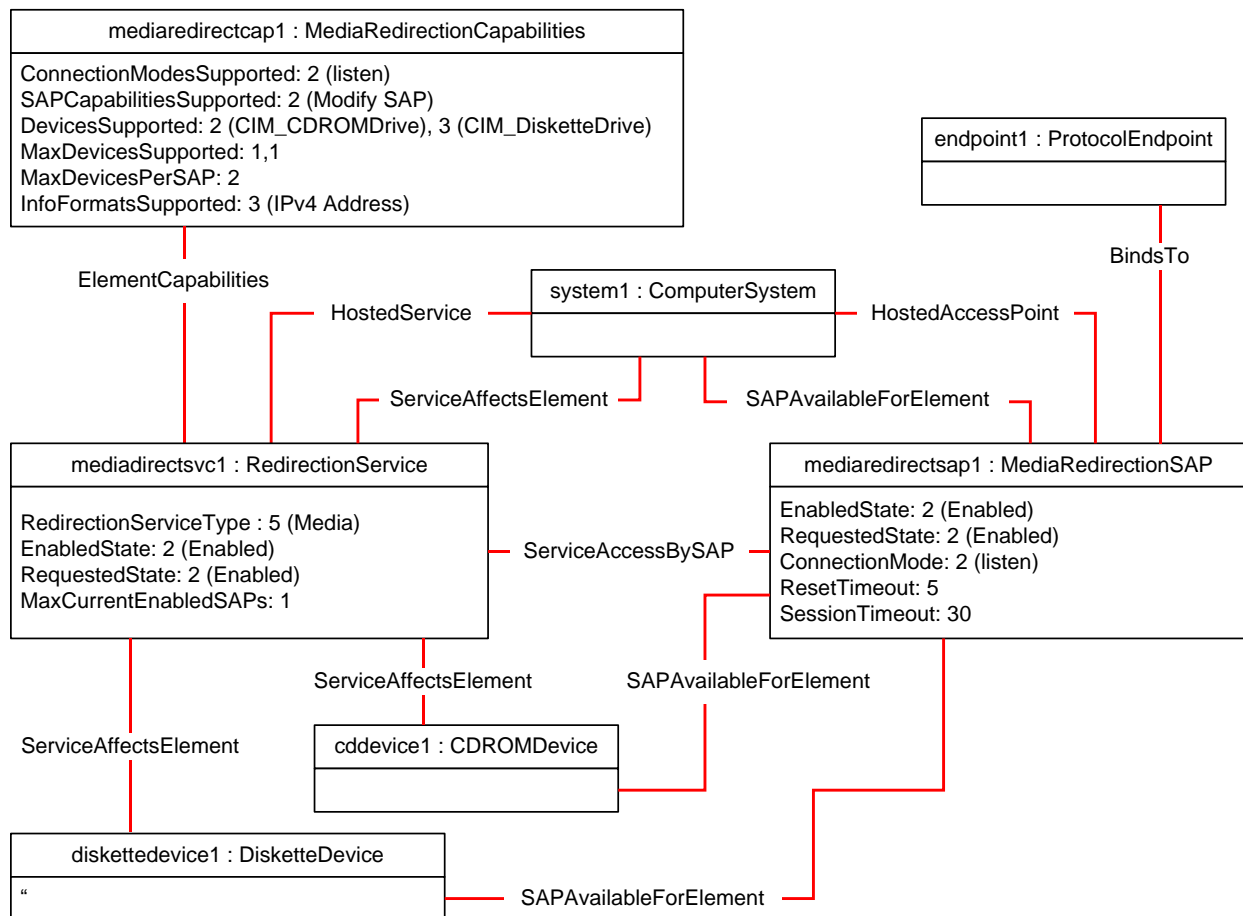
**Figure 4 – Monolithic System: Listen**

999 The model shown is similar to that in clause 9.2 with the exceptions noted in the next paragraph.

1000 The ConnectionModesSupported property of the instance of CIM_MediaRedirectionCapabilities shows
1001 that the Media Redirection Service only supports the 'listen' mode for its SAPs. The
1002 CIM_ServiceAccessBySAP association between mediaredirectsvc1 and mediaredirectsap1 models that
1003 the mediaredirectsvc1 is available at mediaredirectsap1. The ConnectionMode property of
1004 CIM_MediaRedirectionSAP is set to "listen," which models that the SAP will wait for the Remote System
1005 to initiate a session. The instance of CIM_ProtocolEndpoint, Endpoint1, contains the information the
1006 Remote System needs to initiate a session with the local Media Redirection SAP.

## 1007 9.4   Object Diagram for a Monolithic Server – Listen or Connect Mode

1008 Figure 5 shows a monolithic server, system1, with a Media Redirection SAP for a redirected media
1009 storage device.
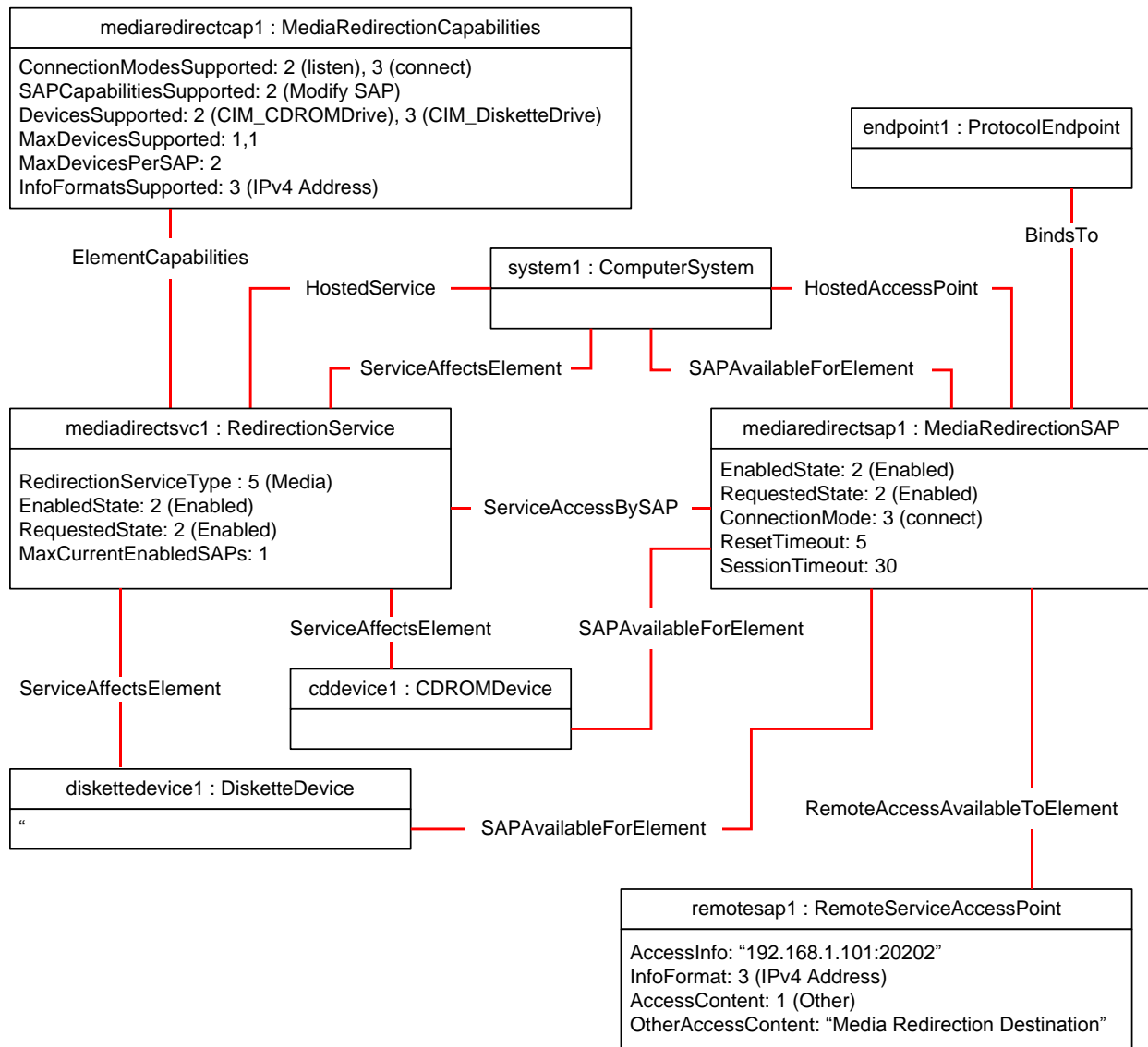
1010



1011 **Figure 5 – Monolithic System: Listen or Connect**

1012 The model shown is similar to the model description in 9.2 with the exceptions noted in the remainder of
1013 this section.

1014 The ConnectionModesSupported property of the instance of CIM_MediaRedirectionCapabilities shows
1015 that the Media Redirection Service supports both the 'listen" and "connect" mode for its SAPs. The
1016 SAPCapabilitiesSupported property of CIM_MediaRedirectionCapabilities shows that the properties of the
1017 SAP may be modified. Examples of modifications include a change in the timeout properties or a
1018 reconfiguration of the SAP from "listen" to "connect" mode.

1019 The CIM_ServiceAccessBySAP association between mediaredirectsvc1 and mediaredirectsap1 models
1020 that the mediaredirectsvc1 is available at mediaredirectsap1. Because the SAP may be configured to be
1021 in either "listen" or "connect" mode, it has both an instance of CIM_ProtocolEndpoint associated to it by
1022 CIM_BindsTo, and an instance of CIM_RemoteServiceAccessPoint associated to it by
1023 CIM_RemoteAccessAvailableToElement.

1024 The ConnectionMode property of CIM_MediaRedirectionSAP has been set to "connect", so the instance
1025 of CIM_RemoteServiceAccessPoint, remotesap1, has been configured with information about how to
1026 access the remote SAP.

## 1027 9.5 Object Diagram for a Monolithic Server with Service Processor

1028 Figure 6 shows a monolithic server with a service processor. The diagram is similar to Figure 4, but
1029 Figure 6 contains an instance of CIM_ComputerSystem, sp1, that represents the service processor.
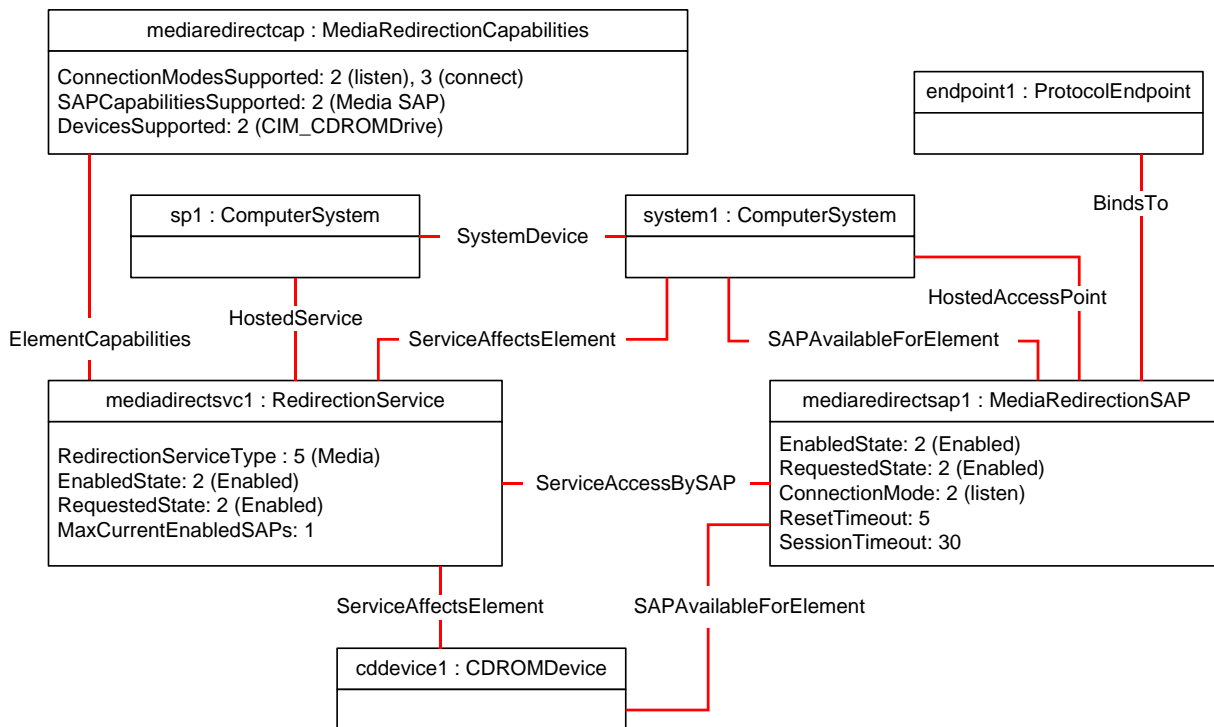
1030 

1031 **Figure 6 – Monolithic System with Service Processor**

## 9.6 Determine whether a System Supports Media Redirection

A client can determine whether a computer system of interest supports Media Redirection as follows:

1) Start at the instance of CIM_ComputerSystem that represents the computer system of interest

2) Enumerate the instances of CIM_RedirectionService that are associated to the instance of CIM_ComputerSystem through an instance of the CIM_ServiceAffectsElement association.

3) If such an instance of CIM_RedirectionService is not found, the computer system does not support Media Redirection. Otherwise, the computer system does support Media Redirection.

## 9.7 Identify Emulated Media Devices that Are Available through a Media Redirection SAP

A client can determine the Media Redirection Media devices managed by a Service as follows:

1) Start at the instance of CIM_RedirectionService of interest. (The instance can be found using the use case in 9.6.)

2) Enumerate the instances of CIM_MediaRedirectionSAP that are associated through an instance of CIM_ServiceAccessBySAP.

3) For each instance of CIM_MediaRedirectionSAP, enumerate the instances associated to the CIM_MediaRedirectionSAP through an instance of CIM_SAPAvailableForElement.

4) Each instance found by the enumeration represents a locally emulated Media device that is available through a SAP.

## 9.8 Determine How the Media Redirection State Is Managed

A client can determine whether a Media Redirection is managed through the state of the SAP only or through the states of both the Service and SAP, as follows:

1) Start at the instance of CIM_RedirectionService of interest using the use case describe in 9.6.

2) Select the CIM_MediaRedirectionSAP that represents the Media Redirection SAP of interest using the use case described in 9.7.

3) From the instance of CIM_RedirectionService, find the instance of CIM_MediaRedirectionCapabilities that is associated through an instance of CIM_ElementCapabilities.

   If an instance of CIM_MediaRedirectionCapabilities is not found, the Media Redirection cannot be managed through the state of the Media Redirection Service.

4) For the CIM_MediaRedirectionCapabilities instance so found, obtain the values of the RequestedStatesSupported property.

5) From the instance of CIM_MediaRedirectionSAP, find the CIM_EnabledLogicalElementCapabilities that is associated through an instance of CIM_ElementCapabilities.

   If an instance of CIM_EnabledLogicalElementCapabilities is not found, the Media Redirection cannot be managed through the state of the Media Redirection SAP.

6) For the CIM_EnabledLogicalElementCapabilities so found, obtain the values of the RequestedStatesSupported property.

7)   If the CIM_MediaRedirectionCapabilities.RequestedStatesSupported property contains no values and the CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported contains no values, then no state management of the Media Redirection is possible.

If the CIM_MediaRedirectionCapabilities.RequestedStatesSupported property contains no values and the CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported contains values, then state management of the Media Redirection is performed through state management of the SAP only.

If the CIM_MediaRedirectionCapabilities.RequestedStatesSupported property contains values and the CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported contains values, then state management of the Media Redirection is possible through state management of both the Service and the SAP.

## 9.9   Activate a Media Redirection – SAP State Management

When the Media Redirection is managed through the state of the Media Redirection SAP only, a client can start a Media Redirection as follows:

1)   Start at the instance of the CIM_MediaRedirectionSAP that is a component of the Media Redirection SAP of interest.

2)   Invoke the RequestStateChange( ) method with the RequestedState parameter set to 2 (Enabled).

3)   Verify that the CIM_MediaRedirectionSAP.EnabledState property has a value of 2 (Enabled).

The Media Redirection is now active.

## 9.10   Activate a Media Redirection – Service and SAP State Management

When the Media Redirection is managed through the states of both the Media Redirection Service and Media Redirection SAP, a client can start a Media Redirection as follows:

1)   Start at the CIM_RedirectionService instance of interest.

2)   Invoke the RequestStateChange( ) method with the RequestedState parameter has a value of 2 (Enabled).

3)   Verify that the CIM_RedirectionService.EnabledState property has a value of 2 (Enabled).

4)   Invoke the CIM_MediaRedirectionSAP.RequestStateChange( ) method with the RequestedState parameter has a value of 2 (Enabled).

5)   Verify that the CIM_MediaRedirectionSAP.EnabledState property has a value of 2 (Enabled).

The Media Redirection is now active.

## 9.11   Stop All Media Redirections Associated with the Service – SAP State Management

In the following use case, it is assumed that the client knows the instance of CIM_RedirectionService of interest.

When the Media Redirection is managed through the state of the Media Redirection SAP only, a client can stop all Media Redirections as follows:

1)   Start at the instance of the CIM_RedirectionService that represents the Media Redirection Service of interest.

2)   Enumerate the instances of CIM_MediaRedirectionSAP that are associated with the instance of CIM_RedirectionService through an instance of CIM_ServiceAccessBySAP.

1111     3)   For each instance of CIM_MediaRedirectionSAP found, query the value of the EnabledState
1112        property.

1113     4)   If the state of each CIM_MediaRedirectionSAP is 2 (Enabled), invoke the
1114        RequestStateChange( ) method with each RequestedState parameter set to 6 (Offline).

1115     5)   Verify that each CIM_MediaRedirectionSAP.EnabledState property has a value of 6 (Enabled
1116        but Offline).

1117        All Media Redirections associated with the CIM_RedirectionService instance are now inactive.

## 9.12 Stop All Media Redirections Associated with a Service – Service and SAP State Management

1120 When the Media Redirection is managed through the states of both the Media Redirection Service and
1121 Media Redirection SAP, a client can stop all Media Redirections associated with the Media Redirection
1122 Service as follows:

1123     1)   Start at the instance of the CIM_RedirectionService that represents the Media Redirection
1124        Service of interest.

1125     2)   Change the state of the CIM_RedirectionService instance by invoking the
1126        RequestStateChange( ) method with the RequestedState parameter set to 3 (Disabled).

1127        All Media Redirections associated with the CIM_RedirectionService instance are now inactive.

## 9.13 Find the Number of Active Media Redirection SAPs for a Service

1129 A client can find the number of active Media Redirection SAPs for a Media Redirection Service of interest
1130 as follows:

1131     1)   Start at the CIM_RedirectionService instance of interest.

1132     2)   Query the value of the EnabledState property.

1133        If the EnabledState property is 3 (Disabled), the number of active Redirection SAPs is zero.

1134     3)   If the EnabledState property is 2 (Enabled), find all instances of CIM_MediaRedirectionSAP that
1135        are associated with the CIM_RedirectionService through an instance of
1136        CIM_ServiceAccessBySAP.

1137     4)   For each found CIM_MediaRedirectionSAP instance, query the value of the EnabledState
1138        property.

1139     5)   Count all the CIM_MediaRedirectionSAP.EnabledState properties whose value is 2 (Enabled).

## 9.14 Determine whether CIM_RedirectionService.ElementName Can Be Modified

1141 A client can determine whether the ElementName property can be modified as follows:

1142     1)   Start at the instance of CIM_RedirectionService.

1143     2)   Find the CIM_MediaRedirectionCapabilities instance with which it is associated by traversing
1144        the CIM_ElementCapabilities association.

1145     3)   Query the value of the ElementNameEditSupported property of the
1146        CIM_MediaRedirectionCapabilities instance.

1147        If the value is TRUE, the CIM_RedirectionService.ElementName property can be modified by a
1148        client. If no instance of CIM_MediaRedirectionCapabilities is associated with the
1149        CIM_RedirectionService instance, modifying the CIM_RedirectionService.ElementName
1150        property is not supported.

## 1151 10 CIM Elements

1152 Table 20 shows the instances of CIM elements for this profile. Instances of the CIM elements shall be
1153 implemented as described in Table 20. Sections 7 ("Implementation") and 8 ("Methods") may impose
1154 additional requirements on these elements.

1155 **Table 20 – CIM Elements: Media Redirection Profile**

| Element Name | Requirement | Description |
|---|---|---|
| CIM_RegisteredProfile | Mandatory | See 10.1. |
| CIM_BindsTo | Conditional | See 10.2. |
| CIM_ElementCapabilities | Conditional | Referencing CIM_RedirectionService. See 10.3. |
| CIM_ElementCapabilities | Conditional | Referencing CIM_MediaRedirectionSAP. See 10.4. |
| CIM_EnabledLogicalElementCapabilities | Optional | See 10.5. |
| CIM_HostedAccessPoint | Mandatory | See 10.6. |
| CIM_HostedService | Mandatory | See 10.7. |
| CIM_RemoteAccessAvailableToElement | Conditional | See 10.8. |
| CIM_RemoteServiceAccessPoint | Conditional | Conditional on the session ConnectionMode. See 7.7.1 and 10.9. |
| CIM_SAPAvailableForElement | Mandatory | Referencing CIM_ComputerSystem. See 10.10. |
| CIM_SAPAvaiableForElement | Optional | Referencing CIM_MediaAccessDevice. See 10.11. |
| CIM_ServiceAccessBySAP | Mandatory | See 10.12. |
| CIM_ServiceAffectsElement | Mandatory | Referencing CIM_ComputerSystem. See 10.13. |
| CIM_ServiceAffectsElement | Optional | Referencing CIM_MediaAccessDevice. See 10.14. |
| CIM_MediaAccessDevice | Mandatory | See 10.15. |
| CIM_MediaRedirectionCapabilities | Optional | See 10.16. |
| CIM_MediaRedirectionSAP | Mandatory | See 10.17. |
| CIM_RedirectionService | Mandatory | See 10.18. |

## 1156 10.1 CIM_RegisteredProfile

1157 CIM_RegisteredProfile identifies the *Media Redirection Profile* in order for a client to determine whether
1158 an instance of CIM_ComputerSystem conforms to this profile. The CIM_RegisteredProfile class is defined
1159 by the *Profile Registration Profile*. With the exception of the mandatory values specified for the properties
1160 in Table 21, the behavior of the CIM_RegisteredProfile instance is in accordance with the *Profile*
1161 *Registration Profile*.

1162                      **Table 21 – Class: CIM_RegisteredProfile**

| Elements | Requirement | Notes |
|---|---|---|
| RegisteredName | Mandatory | This property shall have a value of "Media Redirection". |
| RegisteredVersion | Mandatory | This property shall have a value of "1.0.0". |
| RegisteredOrganization | Mandatory | This property shall have a value of 2 (DMTF). |

## 1163 10.2 CIM_BindsTo

1164 The CIM_BindsTo association is used to relate the CIM_MediaRedirectionSAP instance to the
1165 CIM_ProtocolEndpoint instance that represents the endpoint where the Media Redirection SAP is
1166 available. Table 22 contains the requirements for elements of this class.

1167                      **Table 22 – Class: CIM_BindsTo**

| Elements | Requirement | Notes |
|---|---|---|
| Antecedent | Mandatory | This property shall be a reference to an instance of the CIM_ProtocolEndpoint class. See 7.5.<br><br>Cardinality is "0..1". |
| Dependent | Mandatory | This property shall be a reference to an instance of the CIM_MediaRedirectionSAP class. See clause 7.5.<br><br>Cardinality is "1..*". |

## 1168 10.3 CIM_ElementCapabilities Relating CIM_RedirectionService to
## 1169 CIM_MediaRedirectionCapabilities

1170 The CIM_ElementCapabilities association is used to relate an instance of
1171 CIM_MediaRedirectionCapabilities to an instance of CIM_RedirectionService. Table 23 contains the
1172 requirements for elements of this class.

1173          **Table 23 – Class: CIM_ElementCapabilities Referencing CIM_RedirectionService**

| Elements | Requirement | Notes |
|---|---|---|
| ManagedElement | Mandatory | This property shall be a reference to an instance of CIM_RedirectionService class. See 7.2.3.<br><br>Cardinality is "1..*". |
| Capabilities | Mandatory | This property shall be a reference to an instance of CIM_MediaRedirectionCapabilities class. See 7.2.3.<br><br>Cardinality is "0..1". |

1174 ## 10.4 CIM_ElementCapabilities Relating CIM_MediaRedirectionSAP to
1175 ## CIM_EnabledLogicalElementCapabilities

1176 The CIM_ElementCapabilities association is used to relate an instance of
1177 CIM_EnabledLogicalElementCapabilities to an instance of CIM_MediaRedirectionSAP. Table 24 contains
1178 the requirements for elements of this class.

1179 **Table 24 – Class: CIM_ElementCapabilities Referencing CIM_MediaRedirectionSAP**

| Elements | Requirement | Notes |
|---|---|---|
| ManagedElement | Mandatory | This property shall be a reference to an instance of CIM_MediaRedirectionSAP class. See 7.4.4.<br><br>Cardinality is "1..*". |
| Capabilities | Mandatory | This property shall be a reference to an instance of CIM_EnabledLogicalElementCapabilities class. See 7.4.4.<br><br>Cardinality is "0..1". |

1180 ## 10.5 CIM_EnabledLogicalElementCapabilities

1181 CIM_EnabledLogicalElementCapabilities represents the capabilities of the Media Redirection SAP. Table
1182 25 contains the requirements for elements of this class.

1183 **Table 25 – Class: CIM_EnabledLogicalElementCapabilities**

| Elements | Requirement | Notes |
|---|---|---|
| InstanceID | Mandatory | **Key** |
| RequestedStatesSupported | Mandatory | See 7.10.1. |
| ElementNameEditSupported | Mandatory | See 7.4.5. |
| MaxElementNameLen | Conditional | See 7.4.5. Conditional on ElementNameEditSupported |

1184 ## 10.6 CIM_HostedAccessPoint

1185 The CIM_HostedAccessPoint association is used to relate the CIM_MediaRedirectionSAP instance to the
1186 CIM_ComputerSystem instance to which the Media is redirected. Table 26 contains the requirements for
1187 elements of this class.

1188 **Table 26 – Class: CIM_HostedAccessPoint**

| Elements | Requirement | Notes |
|---|---|---|
| Antecedent | Mandatory | This property shall be a reference to an instance of the CIM_ComputerSystem class. See 7.4.3.<br><br>Cardinality is "1". |
| Dependent | Mandatory | This property shall be a reference to an instance of the CIM_MediaRedirectionSAP class. See 7.4.3.<br><br>Cardinality is "*". |

1189 ## 10.7 CIM_HostedService

1190 The CIM_HostedService association is used to relate the CIM_RedirectionService instance to the
1191 CIM_ComputerSystem instance on which it is hosted. Table 27 contains the requirements for elements of
1192 this class.

1193 **Table 27 – Class: CIM_HostedService**

| Elements | Requirement | Notes |
|---|---|---|
| Antecedent | Mandatory | This property shall be a reference to an instance of the CIM_ComputerSystem class. See 7.2.1.<br>Cardinality is "1". |
| Dependent | Mandatory | This property shall be a reference to an instance of the CIM_RedirectionService class. See 7.2.1.<br>Cardinality is "*". |

1194 ## 10.8 CIM_RemoteAccessAvailableToElement

1195 The CIM_RemoteAccessAvailableToElement association is used to relate the instance of
1196 CIM_MediaRedirectionSAP to the instance of CIM_RemoteServiceAccessPoint. Table 28 contains the
1197 requirements for elements of this class.

1198 **Table 28 – Class: CIM_RemoteAccessAvailableToElement**

| Elements | Requirement | Notes |
|---|---|---|
| Antecedent | Mandatory | This property shall be a reference to an instance of the CIM_RemoteServiceAccessPoint class. See 7.7.1.<br>Cardinality is "*". |
| Dependent | Mandatory | This property shall be a reference to an instance of the CIM_MediaRedirectionSAP class. See 7.7.1.<br>Cardinality is "1". |

1199 ## 10.9 CIM_RemoteServiceAccessPoint

1200 The CIM_RemoteServiceAccessPoint class represents the SAP on the remote system. Table 29 contains
1201 the requirements for elements of this class.

1202 **Table 29 – Class: CIM_RemoteServiceAccessPoint**

| Elements | Requirement | Notes |
|---|---|---|
| SystemCreationClassName | Mandatory | **Key** |
| SystemName | Mandatory | **Key** |
| Name | Mandatory | **Key** |
| CreationClassName | Mandatory | **Key** |
| AccessContext | Mandatory | The property shall match the value 1 (Other). |
| AccessInfo | Mandatory | See 7.7.1.1. |

| Elements | Requirement | Notes |
|---|---|---|
| InfoFormat | Mandatory | See 7.7.1.2. |
| OtherAccessContext | Mandatory | The property shall match the value "Media Redirection Destination". |
| OtherInfoFormatDescription | Conditional | Conditional on InfoFormat value See 7.7.1.3. |

## 10.10 CIM_SAPAvailableForElement Relating CIM_MediaRedirectionSAP to CIM_ComputerSystem

The CIM_SAPAvailableForElement association is used to relate the instance of CIM_ComputerSystem on which the Emulated Media Devices reside to the instances of CIM_MediaRedirectionSAP that are available as access points for the redirected Media Devices. Table 30 contains the requirements for elements of this class.

**Table 30 – Class: CIM_SAPAvailableForElement Referencing CIM_ComputerSystem**

| Elements | Requirement | Notes |
|---|---|---|
| AvailableSAP | Mandatory | This property shall be a reference to an instance of the CIM_MediaRedirectionSAP class. See 7.4.2.<br><br>Cardinality is "*". |
| ManagedElement | Mandatory | This property shall be a reference to an instance of the CIM_ComputerSystem class. See 7.4.2.<br><br>Cardinality is "1". |

## 10.11 CIM_SAPAvailableForElement Relating CIM_MediaRedirectionSAP to CIM_MediaAccessDevice

The CIM_SAPAvailableForElement association is used to relate the instance of CIM_MediaRedirectionSAP to the instance of CIM_MediaAccessDevice or a subclass of CIM_MediaAccessDevice that represents the Emulated Media Device that is accessible through the Media Redirection SAP. Table 31 contains the requirements for elements of this class.

**Table 31 – Class: CIM_SAPAvailableForElement Referencing CIM_MediaAccessDevice**

| Elements | Requirement | Notes |
|---|---|---|
| AvailableSAP | Mandatory | This property shall be a reference to an instance of the CIM_MediaRedirectionSAP class. See 7.6.2.<br><br>Cardinality is "1". |
| ManagedElement | Mandatory | This property shall be a reference to an instance of the CIM_MediaAccessDevice or a subclass of CIM_MediaAccessDevice class. See 7.6.2.<br><br>Cardinality is "0..*". |

## 10.12 CIM_ServiceAccessBySAP

1217

1218  The CIM_ServiceAccessBySAP association is used to relate the instance of CIM_RedirectionService to
1219  the instances of CIM_MediaRedirectionSAP that are enabled by the service. Table 32 contains the
1220  requirements for elements of this class.

1221                            **Table 32 – Class: CIM_ServiceAccessBySAP**

| Elements | Requirement | Notes |
|----------|-------------|-------|
| Antecedent | Mandatory | This property shall be a reference to an instance of the CIM_RedirectionService class. See 7.4.1.<br><br>Cardinality is "1". |
| Dependent | Mandatory | This property shall be a reference to an instance of the CIM_MediaRedirectionSAP class. See 7.4.1.<br><br>Cardinality is "1..*". |

## 10.13 CIM_ServiceAffectsElement Relating CIM_RedirectionService to CIM_ComputerSystem

1222
1223

1224  The CIM_ServiceAffectsElement association is used to relate the instance of CIM_RedirectionService to
1225  the instance of CIM_ComputerSystem that represents the source of the Media Redirection Flow. Table 33
1226  contains the requirements for elements of this class.

1227            **Table 33 – Class: CIM_ServiceAffectsElement Referencing CIM_ComputerSystem**

| Elements | Requirement | Notes |
|----------|-------------|-------|
| AffectingElement | Mandatory | This property shall be a reference to an instance of the CIM_RedirectionService class. See 7.2.2.<br><br>Cardinality is " * ". |
| AffectedElement | Mandatory | This property shall be a reference to an instance of the CIM_ComputerSystem class. See 7.2.2.<br><br>Cardinality is "1". |

## 10.14 CIM_ServiceAffectsElement Relating CIM_RedirectionService to CIM_MediaDevice

1228
1229

1230  The CIM_ServiceAffectsElement association is used to relate the instance of CIM_RedirectionService to
1231  the local emulated Media Device that can be redirected. Table 34 contains the requirements for elements
1232  of this class.

1233            **Table 34 – Class: CIM_ServiceAffectsElement Referencing CIM_MediaAccessDevice**

| Elements | Requirement | Notes |
|----------|-------------|-------|
| AffectingElement | Mandatory | This property shall be a reference to an instance of the CIM_RedirectionService class. See 7.6.1.<br><br>Cardinality is "1". |
| AffectedElement | Mandatory | This property shall be a reference to an instance of CIM_MediaAccessDevice or a subclass of CIM_MediaAccessDevice class. See 7.6.1.<br><br>Cardinality is "0..1". |

1234 ## 10.15 CIM_MediaAccessDevice

1235 CIM_MediaDevice or a subclass of CIM_MediaAccessDevice represents the locally emulated Media
1236 device that can be redirected to a remote system. Table 35 contains the requirements for elements of this
1237 class.

1238 **Table 35 – Class: CIM_MediaAccessDevice**

| Elements | Requirement | Notes |
|---|---|---|
| CreationClassName | Mandatory | **Key** |
| DeviceID | Mandatory | **Key** |

1239 ## 10.16 CIM_MediaRedirectionCapabilities

1240 CIM_MediaRedirectionCapabilities represents the capabilities of Media Redirection Service. Table 36
1241 contains the requirements for elements of this class.

1242 **Table 36 – Class: CIM_MediaRedirectionCapabilities**

| Elements | Requirement | Notes |
|---|---|---|
| InstanceID | Mandatory | **Key** |
| RequestedStatesSupported | Mandatory | See 7.3.6, 7.9.1.1 and 7.9.2.1. |
| ElementNameEditSupported | Mandatory | See 7.2.6. |
| MaxElementNameLen | Conditional | See 7.2.6. This property is Conditional on ElementNameEditSupported. |
| DevicesSupported[] | Mandatory | See 7.3.1. |
| MaxDevicesSupported[] | Mandatory | See 7.3.2. |
| SAPCapabilitiesSupported[] | Mandatory | See 7.3.3. |
| InfoFormatsSupported | Conditional | See 7.3.6. This property is Conditional on the ConnectionModesSupported array property including the value 3 (Connect). |
| MaxDevicesPerSAP | Mandatory | See 7.3.4. |
| ConnectionModesSupported[] | Mandatory | See 7.3.5. |

1243 ## 10.17 CIM_MediaRedirectionSAP

1244 The CIM_MediaRedirectionSAP class represents a Media Redirection SAP. Table 37 contains the
1245 requirements for elements of this class.

1246 **Table 37 – Class: CIM_MediaRedirectionSAP**

| Elements | Requirement | Notes |
|---|---|---|
| SystemCreationClassName | Mandatory | **Key** |
| SystemName | Mandatory | **Key** |
| Name | Mandatory | **Key** |
| CreationClassName | Mandatory | **Key** |

| Elements | Requirement | Notes |
|---|---|---|
| ElementName | Mandatory | See 7.4.5. |
| EnabledState | Mandatory | See 7.10.1.3. |
| RequestedState | Mandatory | See 7.10.1.2. |
| ConnectionMode | Mandatory | See 7.4.6. |
| CommandTimeout | Mandatory | See 7.4.7 |
| ResetTimeout | Mandatory | See 7.4.8. |
| SessionTimeout | Mandatory | See 7.4.9. |
| RequestStateChange( ) | Mandatory | **See 8.2.** |

## 1247   10.18  CIM_RedirectionService

1248   The CIM_RedirectionService class represents the ability to manage the Media redirection capabilities of a
1249   computer system. Table 38 contains the requirements for elements of this class.

1250                        **Table 38 – Class: CIM_RedirectionService**

| Elements | Requirement | Notes |
|---|---|---|
| SystemCreationClassName | Mandatory | **Key** |
| SystemName | Mandatory | **Key** |
| CreationClassName | Mandatory | **Key** |
| Name | Mandatory | **Key** |
| ElementName | Mandatory | See 7.2.6. |
| MaxCurrentEnabledSAPs | Mandatory | See 7.2.5. |
| EnabledState | Mandatory | See 7.9.1.3. |
| RedirectionServiceType | Mandatory | The property shall match 5 (Media). |
| RequestedState | Mandatory | See 7.9.1.2. |
| RequestStateChange( ) | Mandatory | **Conditional on RequestedStatesSupported. See 8.1.** |

1251 # ANNEX A
1252 # (informative)
1253
1254 # Change Log

| Version | Date | Description |
|---------|------|-------------|
| 1.0.0 | 2009-06-19 | |
| 1.0.1 | 2014-05-22 | Fix wording erratum in clause 9.4 (1589) |

1255
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