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157



159

## Foreword

160 The *Media Redirection Profile* (DSP1086) was prepared by the Physical Platform Profiles Working Group  
161 and the Server Management Working Group of the DMTF.

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164

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174

175

## Introduction

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

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



182 Media Redirection Profile

## 183 1 Scope

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

## 186 2 Normative References

187 The following referenced documents are indispensable for the application of this document. For dated  
188 references, only the edition cited applies. For undated references, the latest edition of the referenced  
189 document (including any amendments) applies.

### 190 2.1 Approved References

191 DMTF DSP0004, *CIM Infrastructure Specification 2.3*,  
192 [http://www.dmtf.org/standards/published\\_documents/DSP0004\\_2.3.pdf](http://www.dmtf.org/standards/published_documents/DSP0004_2.3.pdf)

193 DMTF DSP0200, *CIM Operations over HTTP 1.2*,  
194 [http://www.dmtf.org/standards/published\\_documents/DSP0200\\_1.2.pdf](http://www.dmtf.org/standards/published_documents/DSP0200_1.2.pdf)

195 DMTF DSP1001, *Management Profile Specification Usage Guide 1.0*,  
196 [http://www.dmtf.org/standards/published\\_documents/DSP1001\\_1.0.pdf](http://www.dmtf.org/standards/published_documents/DSP1001_1.0.pdf)

197 DMTF DSP1004, *Base Server Profile 1.0*,  
198 [http://www.dmtf.org/standards/published\\_documents/DSP1004\\_1.0.pdf](http://www.dmtf.org/standards/published_documents/DSP1004_1.0.pdf)

199 DMTF DSP1033, *Profile Registration Profile 1.0*,  
200 [http://www.dmtf.org/standards/published\\_documents/DSP1033\\_1.0.pdf](http://www.dmtf.org/standards/published_documents/DSP1033_1.0.pdf)

### 201 2.2 Other References

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

## 204 3 Terms and Definitions

205 For the purposes of this document, the following terms and definitions apply. For the purposes of this  
206 document, the terms and definitions given in [DSP1033](#) and [DSP1001](#) also apply.

### 207 3.1

#### 208 **can**

209 used for statements of possibility and capability, whether material, physical, or causal

### 210 3.2

#### 211 **cannot**

212 used for statements of possibility and capability, whether material, physical, or causal

### 213 3.3

#### 214 **conditional**

215 indicates requirements to be followed strictly to conform to the document when the specified conditions  
216 are met

- 217 **3.4**  
218 **mandatory**  
219 indicates requirements to be followed strictly to conform to the document and from which no deviation is  
220 permitted
- 221 **3.5**  
222 **may**  
223 indicates a course of action permissible within the limits of the document
- 224 **3.6**  
225 **optional**  
226 indicates a course of action permissible within the limits of the document
- 227 **3.7**  
228 **referencing profile**  
229 indicates a profile that owns the definition of this class and can include a reference to this profile in its  
230 "Referenced Profiles" table
- 231 **3.8**  
232 **shall**  
233 indicates requirements to be followed strictly to conform to the document and from which no deviation is  
234 permitted
- 235 **3.9**  
236 **shall not**  
237 indicates requirements to be followed strictly to conform to the document and from which no deviation is  
238 permitted
- 239 **3.10**  
240 **should**  
241 indicates that among several possibilities, one is recommended as particularly suitable, without  
242 mentioning or excluding others, or that a certain course of action is preferred but not necessarily required
- 243 **3.11**  
244 **should not**  
245 indicates that a certain possibility or course of action is deprecated but not prohibited
- 246 **3.12**  
247 **unspecified**  
248 indicates that this profile does not define any constraints for the referenced CIM element or operation
- 249 **3.13**  
250 **Emulated Media Device**  
251 the Media device locally emulated on the managed system which can be redirected to a remote system  
252 that contains the physical Media device
- 253 **3.14**  
254 **Remote System**  
255 the system that contains the physical Media device, to which the managed system can establish a  
256 network connection for a Emulated Media Device
- 257 **3.15**  
258 **Media Redirection**  
259 an arrangement that encompasses an instance of CIM\_RedirectionService and an instance of  
260 CIM\_MediaRedirectionSAP that are joined by a CIM\_ServiceAccessBySAP association

261 **3.16**

262 **Media Redirection SAP**

263 the Service Access Point for a Media Redirection Session as modeled by an instance of  
264 CIM\_MediaRedirectionSAP that is part of a Media Redirection

265 **3.17**

266 **Media Redirection Service**

267 the instance of CIM\_RedirectionServiceRedirectionService that is part of a Media Redirection

268 **3.18**

269 **Media Redirection Session**

270 the context and elements of a particular Media Redirection SAP as modeled by an instance of  
271 CIM\_MediaRedirectionSAP

272 **4 Symbols and Abbreviated Terms**

273 The following abbreviations are used in this document.

274 **4.1**

275 **HID**

276 Human Interface Device

277 **4.2**

278 **MSD**

279 Media Storage Device

280 **4.3**

281 **SAP**

282 Service Access Point

283 **5 Synopsis**

284 **Profile Name:** Media Redirection

285 **Version:** 1.0.0

286 **Organization:** DMTF

287 **CIM Schema Version:** 2.22

288 **Central Class:** CIM\_RedirectionService

289 **Scoping Class:** CIM\_ComputerSystem

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

295 CIM\_RedirectionService shall be the Central Class of this profile. The instance of  
296 CIM\_cRedirectionService shall be the Central Instance of this profile.

297 CIM\_ComputerSystem shall be the Scoping Class of this profile. The instance of CIM\_ComputerSystem  
298 with which the Central Instance is associated through an instance of CIM\_HostedService shall be the  
299 Scoping Instance of this profile.

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

301

Table 1 – Referenced Profiles

Profile Name	Organization	Version	Relationship	Behavior
Profile Registration	DMTF	1.0	Mandatory	

## 302 6 Description (Informative)

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

- 306 • Systems can redirect a locally emulated Media device to a physical Media device or non-Media  
 307 device present on a remote system through a network session
- 308 • Each Media Redirection SAP can have multiple locally emulated Media devices.
- 309 • Systems can support multiple Media Redirection SAPs concurrently
- 310 • A Media Redirection SAP can initiate the connection to the remote system or listen for a  
 311 connection request from the remote system

312 A Media Redirection is represented by an instance of `CIM_RedirectionService` and an instance of  
 313 `MediaRedirectionSAP` that are joined by an instance of the `CIM_ServiceAccessBySAP` association.

314 A Media Redirection can be in an active, inactive, or available state. When the Media Redirection is  
 315 active, the Media devices are redirected. The state management of the Media Redirection can be  
 316 performed by managing the state of the Media Redirection SAP (as modeled by  
 317 `CIM_MediaRedirectionSAP`) and the state of the Media Redirection Service (as modeled by  
 318 `CIM_RedirectionService`).

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

323 Each instance of `CIM_RedirectionService` is connected to an instance of `CIM_ComputerSystem` that  
 324 represents the system that hosts the service by a `CIM_HostedService` association. Each instance of  
 325 `CIM_RedirectionService` is connected to an instance of `CIM_ComputerSystem` that represents the  
 326 managed system with the storage media subsystem that is being redirected by a  
 327 `CIM_ServiceAffectsElement` association. These instance(s) of `CIM_ComputerSystem` may or may not be  
 328 the same instance. The instance of `CIM_ComputerSystem` associated to `CIM_RedirectionService` by an  
 329 instance of `CIM_HostedService` represents the Media Redirection Scoping Class.

330 Each instance of `CIM_MediaRedirectionSAP` is connected to an instance of `CIM_ComputerSystem` that  
 331 represents the system that hosts the Media Redirection Session by a `CIM_SAPAvailableForElement`  
 332 association. Each instance of `CIM_MediaRedirectionSAP` is connected to an instance of  
 333 `CIM_ComputerSystem` that represents the managed system with the storage media subsystem that is  
 334 being redirected by a `CIM_HostedAccessPoint` association. These instance(s) of `CIM_ComputerSystem`  
 335 may or may not be the same instance. The instance of `CIM_ComputerSystem` associated to  
 336 `CIM_RedirectionService` by an instance of `CIM_HostedService` represents the Media Redirection Scoping  
 337 Class.

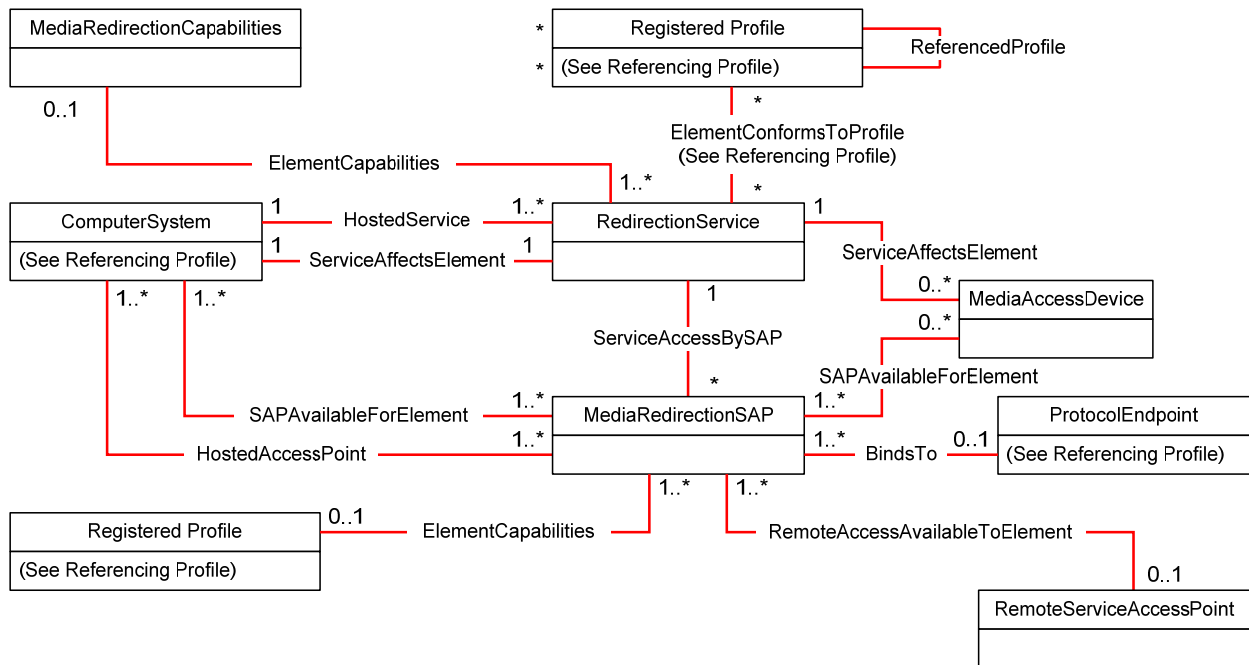
338 Each `CIM_MediaAccessDevice` or subclass of `CIM_MediaAccessDevice` that is redirected to a Media  
 339 redirection SAP is connected to the instance of `CIM_MediaRedirectionSAP` that represents the session  
 340 by an instance of `CIM_SAPAvailableForElement`.

341 If an instance of CIM\_ProtocolEndpoint exists and represents the endpoint where the Media Redirection  
 342 SAP can be accessed, then an instance of CIM\_BindsTo is used to associate the instance of  
 343 CIM\_MediaRedirectionSAP to the instance of CIM\_ProtocolEndpoint.

344 If an instance of CIM\_EnabledLogicalElementCapabilities exists and represents the capabilities of the  
 345 Media Redirection SAP, then an instance of CIM\_ElementCapabilities is used to associate the instance of  
 346 CIM\_MediaRedirectionSAP to the instance of CIM\_EnabledLogicalElementCapabilities.

347 If an instance of CIM\_RemoteServiceAccessPoint exists and represents the remote end of the Media  
 348 Redirection SAP, then an instance of CIM\_RemoteAccessAvailableForElement is used to associate the  
 349 instance of CIM\_MediaRedirectionSAP to the instance of CIM\_RemoteServiceAccessPoint.

350 Figure 1 presents the class diagram for the *Media Redirection Profile*. For simplicity, the prefix *CIM\_* has  
 351 been removed from the names of the classes.



352

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

## 354 7 Implementation

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

### 357 7.1 Representing a Media Redirection

358 A Media Redirection is represented by an instance of CIM\_RedirectionService and an instance of  
 359 CIM\_MediaRedirectionSAP connected by an instance of the CIM\_ServiceAccessBySAP association.

360 The CIM\_ServiceAccessBySAP association's Antecedent property shall reference the  
 361 CIM\_RedirectionService instance, and its Dependent property shall reference the  
 362 CIM\_MediaRedirectionSAP instance.

## 363 7.2 Representing a Media Redirection Service

364 A Media Redirection Service shall be represented by an instance of CIM\_RedirectionService.

### 365 7.2.1 Relationship to the Computer System Hosting the Service

366 The relationship between the Media Redirection Service and the computer system that hosts the Service  
367 shall be modeled with an instance of the CIM\_HostedService association. When used in this way, the  
368 CIM\_HostedService association's Antecedent property shall reference the CIM\_ComputerSystem  
369 instance, and its Dependent property shall reference the CIM\_RedirectionService instance.

### 370 7.2.2 Relationship to the Computer System with the Emulated Media Devices

371 The relationship between the Media Redirection Service and the computer system that contains one or  
372 more emulated Media Devices shall be modeled with an instance of the CIM\_ServiceAffectsElement  
373 association. When used in this way, the CIM\_ServiceAffectsElement association's AffectingElement  
374 property shall reference the CIM\_RedirectionService instance, and its AffectedElement property shall  
375 reference the CIM\_ComputerSystem instance.

### 376 7.2.3 Relationship to the Capabilities of the Service

377 The capabilities of a Media Redirection Service may be modeled by an instance of  
378 CIM\_MediaRedirectionCapabilities.

379 When an instance of CIM\_MediaRedirectionCapabilities exists for this purpose, its relationship to the  
380 Media Redirection Service shall be modeled with an instance of CIM\_ElementCapabilities. When used in  
381 this way, the CIM\_ElementCapabilities association's ManagedElement property shall reference the  
382 CIM\_RedirectionService, and its Capabilities property shall reference CIM\_MediaRedirectionCapabilities.

### 383 7.2.4 CIM\_RedirectionService.RedirectionServiceType

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

### 385 7.2.5 Maximum Number of Concurrently Enabled Redirection SAPs

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

388 The CIM\_RedirectionService.MaxCurrentEnabledSAPs property shall contain the maximum number of  
389 instances of CIM\_MediaRedirectionSAP instances that have an EnabledState property value of 2  
390 (Enabled) that may be associated to the instance of CIM\_RedirectionService.

### 391 7.2.6 CIM\_RedirectionService.ElementName

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

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

#### 396 7.2.6.1 Modifying ElementName Is Supported — Conditional

397 This section describes the CIM elements and behavior requirements when an implementation supports  
398 client modification of the CIM\_RedirectionService.ElementName property.

399 An instance of CIM\_MediaRedirectionCapabilities shall be associated with the CIM\_RedirectionService  
400 instance through an instance of the CIM\_ElementCapabilities association.

401 The CIM\_MediaRedirectionCapabilities.ElementNameEditSupported property shall have a value of  
402 TRUE.

403 The CIM\_MediaRedirectionCapabilities.MaxElementNameLen property shall be implemented.

#### 404 **7.2.6.2 Modifying ElementName Is Not Supported**

405 This section describes the CIM elements and behaviors that shall be implemented when the  
406 CIM\_RedirectionService.ElementName does not support being modified by the ModifyInstance operation.

407 An instance of CIM\_MediaRedirectionCapabilities may be associated with the CIM\_RedirectionService  
408 instance through an instance of CIM\_ElementCapabilities.

409 When an instance of CIM\_MediaRedirectionCapabilities exists, its ElementNameEditSupported property  
410 shall have a value of FALSE.

411 When an instance of CIM\_MediaRedirectionCapabilities exists, its MaxElementNameLen property may be  
412 implemented, but the value of the MaxElementNameLen property is irrelevant in this context.

### 413 **7.3 Representing the Capabilities of a Media Redirection Service**

414 When the Media Redirection Service does not support creating Media Redirection SAPs, there may be an  
415 instance of CIM\_MediaRedirectionCapabilities associated with the instance of CIM\_RedirectionService  
416 through an instance of the CIM\_ElementCapabilities association.

417 When the Media Redirection Service does support creating Media Redirection SAPs, there shall be one  
418 instance of CIM\_MediaRedirectionCapabilities associated with the instance of CIM\_RedirectionService  
419 through an instance of the CIM\_ElementCapabilities association.

420 At most one instance of CIM\_MediaRedirectionCapabilities shall be associated with the instance of  
421 CIM\_RedirectionService.

422 The Media Redirection Service may constrain the number and type of Media Devices that can be  
423 redirected. These constraints are represented by properties in the instance of  
424 CIM\_MediaRedirectionCapabilities that is associated with the instance of CIM\_RedirectionService.

425 If an instance of CIM\_MediaRedirectionCapabilities is associated with the instance of  
426 CIM\_RedirectionService and the Media Redirection Service does not support creating Media Redirection  
427 SAPs, the properties of CIM\_MediaRedirectionCapabilities shall reflect the pre-configured Media  
428 Redirection SAPs for that service.

429 If an instance of CIM\_MediaRedirectionCapabilities is associated with the instance of  
430 CIM\_RedirectionService and the Media Redirection Service does support creating Media Redirection  
431 SAPs, the properties of CIM\_MediaRedirectionCapabilities shall reflect the maximum values that can be  
432 supported across all the Media Redirection SAPs that are associated with the Media Redirection Service.

#### 433 **7.3.1 Supported Devices**

434 If an instance of CIM\_MediaRedirectionCapabilities is associated with the instance of  
435 CIM\_RedirectionService, the CIM\_MediaRedirectionCapabilities.DevicesSupported array property shall  
436 contain an enumeration that identifies the devices supported. The devices that may be supported are the  
437 devices that are modeled by the CIM\_MediaAccessDevice or a subclass of the CIM\_MediaAccessDevice  
438 class.

#### 439 **7.3.2 MaxDevicesSupported**

440 If an instance of CIM\_MediaRedirectionCapabilities is associated with the instance of  
441 CIM\_RedirectionService, the CIM\_MediaRedirectionCapabilities.MaxDevicesSupport array property shall

442 contain the number of devices that are supported for the corresponding device that is specified in the  
443 DevicesSupported array property.

### 444 **7.3.3 SAPCapabilitiesSupported**

445 If an instance of CIM\_MediaRedirectionCapabilities is associated with the instance of  
446 CIM\_RedirectionService, the CIM\_MediaRedirectionCapabilities.SAPCapabilitiesSupported array  
447 property shall contain values that specify the operations that are supported for the Media Redirection  
448 SAPs that exist.

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

451 When the SAPCapabilitiesSupported array property contains a value of 2 (Modify SAP), then the  
452 properties of instances of CIM\_MediaRedirectionSAP associated with the instance of  
453 CIM\_RedirectionService may be modified by "ModifyInstance".

### 454 **7.3.4 MaxDevicesPerSAP**

455 If an instance of CIM\_MediaRedirectionCapabilities is associated with the instance of  
456 CIM\_RedirectionService, the CIM\_MediaRedirectionCapabilities.MaxDevicesPerSAP property shall  
457 contain the a value specifying the maximum number of devices that are support by the Media Redirection  
458 Service for a single Media Redirection SAP. This value shall not exceed the value of  
459 CIM\_USBRedirectionCapabilities.MaxDevicesSupported

### 460 **7.3.5 ConnectionModesSupported**

461 If an instance of CIM\_MediaRedirectionCapabilities is associated with the instance of  
462 CIM\_RedirectionService, the CIM\_MediaRedirectionCapabilities.ConnectionModesSupported array  
463 property shall contain values that specify which connection modes the service supports

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

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

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

### 473 **7.3.6 InfoFormatsSupported**

474 The InfoFormatsSupported property may be supported. When the ConnectionModesSupported array  
475 property contains a value of 3 (Connect) the InfoFormatsSupported shall be supported. When the  
476 InfoFormatsSupported property is supported, it shall contain an enumeration of the AccessInfo formats  
477 available for the Media Redirection SAP to connect to the remote service access point modeled by  
478 CIM\_RemoteServiceAccessPoint. (See 7.7.1.2.)

### 479 **7.3.7 RequestedStatesSupported**

480 If an instance of CIM\_MediaRedirectionCapabilities is associated with the instance of  
481 CIM\_RedirectionService, the CIM\_MediaRedirectionCapabilities.RequestedStatesSupported property  
482 shall contain zero or more of the following values: 2 (Enabled) or 3 (Disabled). (See 7.10.1.1.)



## 483 7.4 Representing a Media Redirection SAP

484 A Media Redirection SAP shall be represented by an instance of CIM\_MediaRedirectionSAP.

### 485 7.4.1 Relationship to the Service

486 The relationship between the Media Redirection SAP and a Media Redirection Service shall be modeled  
487 for each instance of CIM\_MediaRedirectionSAP that exists.

488 The relationship shall be modeled with an instance of CIM\_ServiceAccessBySAP. When used in this way,  
489 the CIM\_ServiceAccessBySAP association's Antecedent property shall reference the  
490 CIM\_RedirectionService instance, and its Dependent property shall reference the  
491 CIM\_MediaRedirectionSAP instance.

### 492 7.4.2 Relationship to the Computer System with the Emulated Media Devices

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

495 The relationship shall be modeled with an instance of the CIM\_SAPAvailableForElement association.  
496 When used in this way, the CIM\_SAPAvailableForElement association's ManagedElement property shall  
497 reference the CIM\_ComputerSystem instance, and its AvailableSAP property shall reference the  
498 CIM\_MediaRedirectionSAP instance.

### 499 7.4.3 Relationship to the Computer System with the SAP

500 The relationship between the Media Redirection SAP and the computer system that contains the endpoint  
501 for the Media Redirection SAP shall be modeled with an instance of CIM\_HostedAccessPoint. When  
502 used in this way, the CIM\_HostedAccessPoint association's Antecedent property shall reference the  
503 CIM\_ComputerSystem instance, and its Dependent property shall reference the  
504 CIM\_MediaRedirectionSAP instance.

### 505 7.4.4 Relationship to the Capabilities of the SAP

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

507 The relationship shall be modeled with an instance of CIM\_EnabledLogicalElementCapabilities.

508 When an instance of CIM\_EnabledLogicalElementCapabilities exists, the relationship between the Media  
509 Redirection SAP and the capabilities of that SAP shall be modeled with an instance of  
510 CIM\_ElementCapabilities. When used in this way, the CIM\_EnabledLogicalElementCapabilities  
511 association's ManagedElement property shall reference the CIM\_MediaRedirectionSAP, and its  
512 Capabilities property shall reference CIM\_EnabledLogicalElementCapabilities.

### 513 7.4.5 CIM\_MediaRedirectionSAP.ElementName

514 The CIM\_MediaRedirectionSAP.ElementName property shall be formatted as a free-form string of  
515 variable length (pattern ".\*").

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

#### 519 7.4.5.1 Modifying ElementName Is Supported — Conditional

520 This section describes the CIM elements and behavior requirements when an implementation supports  
521 client modification of the CIM\_MediaRedirectionSAP.ElementName property.

522 An instance of CIM\_EnabledLogicalElementCapabilities shall be associated with the  
523 CIM\_MediaRedirectionSAP instance through an instance of the CIM\_ElementCapabilities association.

524 The CIM\_EnabledLogicalElementCapabilities.ElementNameEditSupported property shall have a value of  
525 TRUE.

526 The CIM\_EnabledLogicalElementCapabilities.MaxElementNameLen property shall be implemented.

#### 527 **7.4.5.2 Modifying ElementName Is Not Supported**

528 This section describes the CIM elements and behaviors that shall be implemented when the  
529 CIM\_MediaRedirectionSAP.ElementName does not support being modified by the ModifyInstance  
530 operation.

531 An instance of CIM\_EnabledLogicalElementCapabilities may be associated with the  
532 CIM\_MediaRedirectionSAP instance through an instance of CIM\_ElementCapabilities.

533 When an instance of CIM\_EnabledLogicalElementCapabilities that is associated with  
534 CIM\_MediaRedirectionSAP through an instance of CIM\_ElementCapabilities exists, its  
535 ElementNameEditSupported property shall have a value of FALSE.

536 When an instance of CIM\_EnabledLogicalElementCapabilities that is associated with  
537 CIM\_MediaRedirectionSAP through an instance of CIM\_ElementCapabilities exists, its  
538 MaxElementNameLen property may be implemented, but the MaxElementNameLen property is irrelevant  
539 in this context.

#### 540 **7.4.6 Session Connection Mode**

541 Two connection modes are defined for Media Redirection SAPs:

- 542 • The Media Redirection SAP waits (listens) for an application on a Remote System to initiate a  
543 network connection for Media Redirection.
- 544 • The connection mode of the Media Redirection SAP shall be represented by the  
545 CIM\_MediaRedirectionSAP.ConnectionMode property. The property shall have a value of 2  
546 (Listen) or 3 (Connect). If CIM\_MediaRedirectionCapabilities is supported, the value of the  
547 CIM\_MediaRedirectionSAP.ConnectionMode property shall be one of the values in the  
548 CIM\_MediaRedirectionCapabilities.ConnectionModesSupported property.

#### 549 **7.4.7 Command Timeout**

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

553 The CIM\_MediaRedirectionSAP.CommandTimeout property shall have the value of the Command  
554 Timeout.

#### 555 **7.4.8 Reset Timeout**

556 The Reset Timeout is the amount of time that the session shall wait after sending a Reset to the Remote  
557 System before concluding that the Remote System is not responding in a timely fashion because It may  
558 be “hung” or busy. If the Reset Timeout is exceeded, the managed system closes the connection and  
559 tries to establish a new connection with the Remote System.

560 The CIM\_MediaRedirectionSAP.ResetTimeout shall have a value of the Reset Timeout.

#### 561 **7.4.9 Session Timeout**

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

564 The CIM\_MediaRedirectionSAP.SessionTimeout shall have a value of the Session Timeout.

### 565 **7.5 Representing the Endpoint of a Media Redirection SAP**

566 The instance of CIM\_MediaRedirectionSAP may be associated through an instance of CIM\_BindsTo to  
567 one or more instances of CIM\_ProtocolEndpoint that represents the endpoints where the redirected  
568 Media Redirection SAP is accessed.

569 The CIM\_BindsTo association's Antecedent property shall reference the CIM\_ProtocolEndpoint instance,  
570 and its Dependent property shall reference the CIM\_MediaRedirectionSAP instance.

### 571 **7.6 Representing the Locally Emulated Media Device**

572 A locally emulated Media Device shall be represented by an instance of CIM\_MediaAccessDevice or a  
573 subclass of CIM\_MediaAccessDevice.

#### 574 **7.6.1 Relationship to the Media Redirection Service**

575 The relationship between a locally emulated Media Device and the Media Redirection Service shall be  
576 modeled with an instance of the CIM\_ServiceAffectsElement association. When used in this way, the  
577 CIM\_ServiceAffectsElement association's AffectingElement property shall reference the instance of  
578 CIM\_RedirectionService, and its AffectedElement property shall reference the instance of  
579 CIM\_MediaAccessDevice or subclass of CIM\_MediaAccessDevice.

#### 580 **7.6.2 Relationship to the Media Redirection SAP**

581 The relationship between a locally emulated Media Device and a Media Redirection SAP may be  
582 modeled.

583 The relationship shall be modeled with an instance of the CIM\_SAPAvailableForElement association.  
584 When used in this way, the CIM\_SAPAvailableForElement association's Antecedent property shall  
585 reference an instance of CIM\_MediaAccessDevice or subclass of CIM\_MediaAccessDevice, and its  
586 Dependent property shall reference the CIM\_MediaRedirectionSAP instance.

### 587 **7.7 Representing the Destination of the Media Redirection**

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

#### 590 **7.7.1 CIM\_RemoteServiceAccessPoint Instance**

591 The remote destination of the Media Redirection may be represented by an instance of  
592 CIM\_RemoteServiceAccessPoint.

593 Every instance CIM\_MediaRedirectionSAP instance that has a ConnectionMode property value of 3  
594 (Connect) shall be associated with exactly one instance of CIM\_RemoteServiceAccessPoint through an  
595 instance of the CIM\_RemoteAccessAvailableToElement association.

596 If an instance of CIM\_USBRedirectionCapabilities is associated with the CIM\_RedirectionService  
597 instance and CIM\_USBRedirectionCapabilities.ConnectionModesSupported includes both 2 (Listen) and  
598 3 (Connect) (see 7.3.5) and CIM\_USBRedirectionCapabilities.SAPCapabilitiesSupported includes 4  
599 (Modify SAP) (see 7.3.3), static pre-configured instances of CIM\_USBRedirectionSAP shall have a

600 CIM\_RemoteAccessAvailableToElement association to an instance of CIM\_RemoteServiceAccessPoint  
601 and a CIM\_BindsTo association to an instance of CIM\_ProtocolEndpoint.

#### 602 7.7.1.1 AccessInfo

603 The CIM\_RemoteServiceAccessPoint.AccessInfo property shall have a value that corresponds to the  
604 value of the CIM\_RemoteServiceAccessPoint.InfoFormat property. The value shall contain the network  
605 location for the destination of the Media Redirection.

#### 606 7.7.1.2 InfoFormat

607 The CIM\_RemoteServiceAccessPoint.InfoFormat property shall contain the correct valuemap value for  
608 the format of the CIM\_RemoteServiceAccessPoint.AccessInfo information that designates the network  
609 location for the destination of the Media Redirection. When an instance of  
610 CIM\_MediaRedirectionCapabilities is associated with the instance of CIM\_RedirectionService and  
611 CIM\_MediaRedirectionCapabilities.InfoFormatsSupported is not empty, the value of the InfoFormat  
612 property shall be one of the values of CIM\_MediaRedirectionCapabilities.InfoFormatsSupported.

#### 613 7.7.1.3 OtherInfoFormatDescription

614 If the value of the CIM\_RemoteServiceAccessPoint.InfoFormat property is 1 (Other), the  
615 CIM\_RemoteServiceAccessPoint.OtherInfoFormatDescription property describes the format.

#### 616 7.7.1.4 AccessContext

617 The CIM\_RemoteServiceAccessPoint.AccessContext property shall have a value of 1 (Other).

#### 618 7.7.1.5 OtherAccessContext

619 The CIM\_RemoteServiceAccessPoint.OtherAccessContext property shall have a value of "Media  
620 Redirection Destination".

### 621 7.8 States of a Media Redirection

622 The state of a Media Redirection shall be determined by the states of the CIM\_RedirectionService and  
623 CIM\_MediaRedirectionSAP instances that are associated through an instance of  
624 CIM\_ServiceAccessBySAP.

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

- 626 • The Media Redirection is *active* when the Media Redirection SAP is connected to a Remote  
627 SAP. The value of the EnabledState properties in CIM\_RedirectionService and  
628 CIM\_MediaRedirectionSAP shall be 2 (Enabled) when the Media Redirection is in an active  
629 state.
- 630 • The Media Redirection is *available* when the Media Redirection SAP is available for connection  
631 at the protocol endpoint. The Media Redirection SAP is either awaiting a connection request  
632 (listen mode) or ready to initiate a connection (connect mode). When the Media Redirection  
633 SAP is in an available state, the value of the EnabledState property of CIM\_RedirectionService  
634 shall be 2 (Enabled) and the value of the EnabledState property of CIM\_MediaRedirectionSAP  
635 shall be 6 (Enabled but Offline).
- 636 • The Media Redirection is *inactive* when the Media Redirection is neither active nor available.

### 637 7.9 State Management of a Media Redirection Service

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

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

### 643 **7.9.1 Media Redirection Service State Management Is Supported**

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

#### 646 **7.9.1.1 CIM\_MediaRedirectionCapabilities**

647 When state management of the Service is supported, exactly one instance of  
648 CIM\_MediaRedirectionCapabilities shall be associated with the instance of CIM\_RedirectionService  
649 through an instance of CIM\_ElementCapabilities.

650 The CIM\_ElementCapabilities association's ManagedElement property shall reference the  
651 CIM\_RedirectionService instance, and its Capabilities property shall reference the  
652 CIM\_MediaRedirectionCapabilities instance.

##### 653 **7.9.1.1.1 CIM\_MediaRedirectionCapabilities.RequestedStatesSupported**

654 The RequestedStatesSupported property shall contain one or more of the following values: 2 (Enabled) or  
655 3 (Disabled).

#### 656 **7.9.1.2 CIM\_RedirectionService.RequestedState**

657 When the CIM\_RedirectionService.RequestStateChange() method is successfully invoked, the value of  
658 the RequestedState property shall be the value of the RequestedState parameter. If the method is not  
659 successfully invoked, the value of the RequestedState property is indeterminate.

660 The CIM\_RedirectionService.RequestedState property shall have one of the values specified in the  
661 CIM\_MediaRedirectionCapabilities.RequestedStatesSupported property or a value of 0 (Unknown).

#### 662 **7.9.1.3 CIM\_RedirectionService.EnabledState**

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

664 When the RequestedState parameter has a value of 2 (Enabled) or 3 (Disabled) and the  
665 CIM\_RedirectionService.RequestStateChange() method completes successfully, the value of the  
666 EnabledState property shall equal the value of the CIM\_RedirectionService.RequestedState property.

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

### 668 **7.9.2 Media Redirection Service State Management Is Not Supported**

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

#### 671 **7.9.2.1 CIM\_MediaRedirectionCapabilities**

672 When state management is not supported, an instance of CIM\_MediaRedirectionCapabilities may be  
673 associated with the CIM\_RedirectionService instance through an instance of CIM\_ElementCapabilities.  
674 The existence of the CIM\_ElementCapabilities instance is conditional on the existence of the  
675 CIM\_MediaRedirectionCapabilities instance.

676 The CIM\_ElementCapabilities association's ManagedElement property shall reference the  
677 CIM\_RedirectionService instance, and its Dependent property shall reference the  
678 CIM\_MediaRedirectionCapabilities instance.

**679 7.9.2.1.1 CIM\_MediaRedirectionCapabilities.RequestedStatesSupported**

680 The CIM\_MediaRedirectionCapabilities.RequestedStatesSupported property shall not contain any values.

**681 7.9.2.2 CIM\_RedirectionService.RequestedState**

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

**683 7.9.2.3 CIM\_RedirectionService.EnabledState**

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

**687 7.10 State Management of a Media Redirection SAP**

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

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

**693 7.10.1 Media Redirection SAP State Management Is Supported — Conditional**

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

**696 7.10.1.1 CIM\_EnabledLogicalElementCapabilities**

697 When state management of the Media Redirection SAP is supported, exactly one instance of  
698 CIM\_EnabledLogicalElementCapabilities shall be associated with the instance of  
699 CIM\_MediaRedirectionSAP through an instance of CIM\_ElementCapabilities.

700 The CIM\_ElementCapabilities association's ManagedElement property shall reference the  
701 CIM\_MediaRedirectionSAP instance, and its Capabilities property shall reference the  
702 CIM\_EnabledLogicalElementCapabilities instance.

**703 7.10.1.1.1 CIM\_EnabledLogicalElementCapabilities.RequestedStatesSupported**

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

**706 7.10.1.2 CIM\_MediaRedirectionSAP.RequestedState**

707 When the CIM\_MediaRedirectionSAP.RequestStateChange() method is successfully invoked, the value  
708 of the RequestedState property shall be the value of the RequestedState parameter. If the method is not  
709 successfully invoked, the value of the RequestedState property is indeterminate.

710 The CIM\_MediaRedirectionSAP.RequestedState property shall have one of the values specified in the  
711 CIM\_EnabledLogicalElementCapabilities.RequestedStatesSupported property or a value of 0 (Unknown).

**712 7.10.1.3 CIM\_MediaRedirectionSAP.EnabledState**

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

715 When the RequestedState parameter has a value of 2 (Enabled), 3 (Disabled), or 6 (Offline) and the  
716 CIM\_MediaRedirectionSAP.RequestStateChange() method completes successfully, the value of the  
717 EnabledState property shall equal the value of the CIM\_MediaRedirectionSAP.RequestedState property.

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

## 719 **7.10.2 Media Redirection SAP State Management Is Not Supported**

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

### 722 **7.10.2.1 CIM\_EnabledLogicalElementCapabilities**

723 When state management is not supported, an instance of CIM\_EnabledLogicalElementCapabilities may  
724 be associated with the CIM\_MediaRedirectionSAP instance through an instance of  
725 CIM\_ElementCapabilities. The existence of the CIM\_ElementCapabilities instance is conditional on the  
726 existence of the CIM\_EnabledLogicalElementCapabilities instance.

727 The CIM\_ElementCapabilities association's ManagedElement property shall reference the  
728 CIM\_MediaRedirectionSAP instance, and its Dependent property shall reference the  
729 CIM\_EnabledLogicalElementCapabilities instance.

#### 730 **7.10.2.1.1 CIM\_EnabledLogicalElementCapabilities.RequestedStatesSupported**

731 The CIM\_EnabledLogicalElementCapabilities.RequestedStatesSupported property shall not contain any  
732 values.

#### 733 **7.10.2.2 CIM\_MediaRedirectionSAP.RequestedState**

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

#### 735 **7.10.2.3 CIM\_MediaRedirectionSAP.EnabledState**

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

## 739 **8 Methods**

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

### 742 **8.1 CIM\_RedirectionService.RequestStateChange()**

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

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

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

748 No standard messages are defined.

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

751 **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.

752 **Table 3 – CIM\_RedirectionService.RequestStateChange() Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN	RequestedState	uint16	Valid state values: 2 (Enabled) 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: 0 or NULL – No time requirements <interval> – Maximum time allowed

753 **8.1.1 CIM\_RedirectionService.RequestStateChange() — Conditional Support**

754 When an instance of CIM\_MediaRedirectionCapabilities is associated with the CIM\_RedirectionService  
755 instance and the CIM\_MediaRedirectionCapabilities.RequestedStatesSupported property contains at  
756 least one value, the CIM\_RedirectionService.RequestStateChange() method shall be implemented and  
757 supported. The CIM\_RedirectionService.RequestStateChange() method shall not return a value of 1 (Not  
758 Supported).

759 **8.2 CIM\_MediaRedirectionSAP.RequestStateChange()**

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

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

764 No standard messages are defined.

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

767 **Table 4 – CIM\_MediaRedirectionSAP.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.



768

**Table 5 – CIM\_MediaRedirectionSAP.RequestStateChange() Method: Parameters**

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

769 **8.2.1 CIM\_MediaRedirectionSAP.RequestStateChange() — Conditional Support**

770 When an instance of CIM\_EnabledLogicalElementCapabilities is associated with the  
 771 CIM\_MediaRedirectionSAP instance and the  
 772 CIM\_EnabledLogicalElementCapabilities.RequestedStatesSupported property contains at least one  
 773 value, the CIM\_MediaRedirectionSAP.RequestStateChange() method shall be implemented and  
 774 supported. The CIM\_MediaRedirectionSAP.RequestStateChange() method shall not return a value of  
 775 1 (Not Supported).

776 **8.3 Profile Conventions for Operations**

777 For each profile class (including associations), the implementation requirements for operations, including  
 778 those in the following default list, are specified in class-specific subclauses of this clause.

779 The default list of operations is as follows:

- 780 • GetInstance
- 781 • Associators
- 782 • AssociatorNames
- 783 • References
- 784 • ReferenceNames
- 785 • EnumerateInstances
- 786 • EnumerateInstanceNames

787 **8.4 CIM\_BindsTo**

788 Table 6 lists implementation requirements for operations. If implemented, these operations shall be  
 789 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 6, all operations in  
 790 the default list in 8.3 shall be implemented as defined in [DSP0200](#).

791 NOTE: Related profiles may define additional requirements on operations for the profile class.

792

Table 6 – Operations: CIM\_BindsTo

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

## 793 8.5 CIM\_ElementCapabilities

794 Table 7 lists implementation requirements for operations. If implemented, these operations shall be  
 795 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 7, all operations in  
 796 the default list in 8.3 shall be implemented as defined in [DSP0200](#).

797 NOTE: Related profiles may define additional requirements on operations for the profile class.

798

Table 7 – Operations: CIM\_ElementCapabilities

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

## 799 8.6 CIM\_EnabledLogicalElementCapabilities

800 Table 8 lists implementation requirements for operations. If implemented, these operations shall be  
 801 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 8, all operations in  
 802 the default list in 8.3 shall be implemented as defined in [DSP0200](#).

803 NOTE: Related profiles may define additional requirements on operations for the profile class.

804

Table 8 – Operations: CIM\_EnabledLogicalElementCapabilities

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

## 805 8.7 CIM\_HostedAccessPoint

806 Table 9 lists implementation requirements for operations. If implemented, these operations shall be  
 807 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 9, all operations in  
 808 the default list in 8.3 shall be implemented as defined in [DSP0200](#).

809 NOTE: Related profiles may define additional requirements on operations for the profile class.

810

**Table 9 – Operations: CIM\_HostedAccessPoint**

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

811 **8.8 CIM\_HostedService**

812 Table 10 lists implementation requirements for operations. If implemented, these operations shall be  
 813 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 10, all operations  
 814 in the default list in 8.3 shall be implemented as defined in [DSP0200](#).

815 NOTE: Related profiles may define additional requirements on operations for the profile class.

816

**Table 10 – Operations: CIM\_HostedService**

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

817 **8.9 CIM\_RemoteAccessAvailableToElement**

818 Table 11 lists implementation requirements for operations. If implemented, these operations shall be  
 819 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 11, all operations  
 820 in the default list in 8.3 shall be implemented as defined in [DSP0200](#).

821 NOTE: Related profiles may define additional requirements on operations for the profile class.

822

**Table 11 – Operations: CIM\_RemoteAccessAvailableToElement**

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

823 **8.10 CIM\_RemoteServiceAccessPoint**

824 Table 12 lists implementation requirements for operations. If implemented, these operations shall be  
 825 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 12, all operations  
 826 in the default list in 8.3 shall be implemented as defined in [DSP0200](#).

827 NOTE: Related profiles may define additional requirements on operations for the profile class.

828

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

### 829 8.10.1 CIM\_RemoteServiceAccessPoint — ModifyInstance

830 This section details the specific requirements for the ModifyInstance operation applied to an instance of  
831 CIM\_RemoteServiceAccessPoint.

#### 832 8.10.1.1 CIM\_RemoteServiceAccessPoint.InfoFormat Property

833 When an instance of CIM\_MediaRedirectionCapabilities is associated with the CIM\_RedirectionService  
834 instance and the CIM\_MediaRedirectionCapabilities.InfoFormatsSupported is not empty, the  
835 implementation shall allow the ModifyInstance operation to change the value of the InfoFormat property of  
836 the CIM\_RemoteServiceAccessPoint instance. The new InfoFormat value shall be one of the values in  
837 CIM\_MediaRedirectionCapabilities.InfoFormatsSupported.

#### 838 8.10.1.2 CIM\_RemoteServiceAccessPoint.AccessInfo Property

839 When an instance of CIM\_MediaRedirectionCapabilities is associated with the CIM\_RedirectionService  
840 instance and the CIM\_MediaRedirectionCapabilities.InfoFormatsSupported is not empty, the  
841 implementation shall allow the ModifyInstance operation to change the value of the AccessInfo property  
842 of the CIM\_RemoteServiceAccessPoint instance.

#### 843 8.10.1.3 CIM\_RemoteServiceAccessPoint.OtherInfoFormatDescription Property

844 When an instance of CIM\_MediaRedirectionCapabilities is associated with the CIM\_RedirectionService  
845 instance and the CIM\_MediaRedirectionCapabilities.InfoFormatsSupported property has a value of 1  
846 (Other), the implementation shall allow the ModifyInstance operation to change the value of the  
847 OtherInfoFormatDescription property of the CIM\_RemoteServiceAccessPoint instance.

## 848 8.11 CIM\_SAPAvailableForElement

849 Table 13 lists implementation requirements for operations. If implemented, these operations shall be  
850 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 13, all operations  
851 in the default list in 8.3 shall be implemented as defined in [DSP0200](#).

852 NOTE: Related profiles may define additional requirements on operations for the profile class.

853

Table 13 – Operations: CIM\_SAPAvailableForElement

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

854 **8.12 CIM\_ServiceAccessBySAP**

855 Table 14 lists implementation requirements for operations. If implemented, these operations shall be  
 856 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 14, all operations  
 857 in the default list in 8.3 shall be implemented as defined in [DSP0200](#).

858 NOTE: Related profiles may define additional requirements on operations for the profile class.

859 **Table 14 – Operations: CIM\_ServiceAccessBySAP**

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

860 **8.13 CIM\_ServiceAffectsElement**

861 Table 15 lists implementation requirements for operations. If implemented, these operations shall be  
 862 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 15, all operations  
 863 in the default list in 8.3 shall be implemented as defined in [DSP0200](#).

864 NOTE: Related profiles may define additional requirements on operations for the profile class.

865 **Table 15 – Operations: CIM\_ServiceAffectsElement**

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

866 **8.14 CIM\_MediaAccessDevice**

867 Table 16 lists implementation requirements for operations. If implemented, these operations shall be  
 868 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 16, all operations  
 869 in the default list in 8.3 shall be implemented as defined in [DSP0200](#).

870 NOTE: Related profiles may define additional requirements on operations for the profile class.

871 **Table 16 – Operations: CIM\_MediaAccessDevice**

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

## 872 8.15 CIM\_MediaRedirectionCapabilities

873 Table 17 lists implementation requirements for operations. If implemented, these operations shall be  
 874 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 17, all operations  
 875 in the default list in 8.3 shall be implemented as defined in [DSP0200](#).

876 NOTE: Related profiles may define additional requirements on operations for the profile class.

877 **Table 17 – Operations: CIM\_MediaRedirectionCapabilities**

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

## 878 8.16 CIM\_MediaRedirectionSAP

879 Table 18 lists implementation requirements for operations. If implemented, these operations shall be  
 880 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 18, all operations  
 881 in the default list in 8.3 shall be implemented as defined in [DSP0200](#).

882 NOTE: Related profiles may define additional requirements on operations for the profile class.

883 **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

### 884 8.16.1 CIM\_MediaRedirectionSAP — ModifyInstance

885 This section details the specific requirements for the ModifyInstance operation applied to an instance of  
 886 CIM\_MediaRedirectionSAP.

#### 887 8.16.1.1 CIM\_MediaRedirectionSAP.ElementName Property

888 When an instance of CIM\_EnabledLogicalElementCapabilities is associated with the  
 889 CIM\_MediaRedirectionSAP instance and the  
 890 CIM\_EnabledLogicalElementCapabilities.ElementNameEditSupported property has a value of TRUE, the  
 891 implementation shall allow the ModifyInstance operation to change the value of the ElementName  
 892 property of the CIM\_MediaRedirectionSAP instance. The ModifyInstance operation shall enforce the  
 893 length restriction specified in the MaxElementNameLen property of the  
 894 CIM\_EnabledLogicalElementCapabilities instance.

895 When no instance of CIM\_EnabledLogicalElementCapabilities is associated with the  
 896 CIM\_MediaRedirectionSAP instance, or the ElementNameEditSupported property of the  
 897 CIM\_EnabledLogicalElementCapabilities instance has a value of FALSE, the implementation shall not

898 allow the ModifyInstance operation to change the value of the ElementName property of the  
 899 CIM\_MediaRedirectionSAP instance.

900 **8.16.1.2 Modifying CIM\_MediaRedirectionSAP Properties**

901 When an instance of CIM\_MediaRedirection.Capabilities is associated with the CIM\_RedirectionService  
 902 instance and the CIM\_MediaRedirectionCapabilities.SAPCapabilitiesSupported property has a value of 2  
 903 (Modify SAP), the implementation shall allow the ModifyInstance operation to change the value of the  
 904 properties of the CIM\_MediaRedirectionSAP instance.

905 When no instance of CIM\_MediaRedirectionCapabilities is associated with the CIM\_RedirectionService  
 906 instance, or the SAPCapabilitiesSupported property of the CIM\_MediaRedirectionCapabilities instance  
 907 does not have a value of 2 (Modify SAP), the implementation shall not allow the ModifyInstance operation  
 908 to change the value of the properties of the CIM\_MediaRedirectionSAP instance.

909 **8.17 CIM\_RedirectionService**

910 Table 19 lists implementation requirements for operations. If implemented, these operations shall be  
 911 implemented as defined in [DSP0200](#). In addition, and unless otherwise stated in Table 19, all operations  
 912 in the default list in 8.3 shall be implemented as defined in [DSP0200](#).

913 NOTE: Related profiles may define additional requirements on operations for the profile class.

914 **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

915 **8.17.1 CIM\_RedirectionService — ModifyInstance**

916 This section details the specific requirements for the ModifyInstance operation applied to an instance of  
 917 CIM\_RedirectionService.

918 **8.17.1.1 CIM\_RedirectionService.ElementName Property**

919 When an instance of CIM\_MediaRedirectionCapabilities is associated with the CIM\_RedirectionService  
 920 instance and the CIM\_MediaRedirectionCapabilities.ElementNameEditSupported property has a value of  
 921 TRUE, the implementation shall allow the ModifyInstance operation to change the value of the  
 922 ElementName property of the CIM\_RedirectionService instance. The ModifyInstance operation shall  
 923 enforce the length restriction specified in the MaxElementNameLen property of the  
 924 CIM\_MediaRedirectionCapabilities instance.

925 When no instance of CIM\_MediaRedirectionCapabilities is associated with the CIM\_RedirectionService  
 926 instance or the ElementNameEditSupported property of the CIM\_MediaRedirectionCapabilities instance  
 927 has a value of FALSE, the implementation shall not allow the ModifyInstance operation to change the  
 928 value of the ElementName property of the CIM\_RedirectionService instance.

## 9 Use Cases

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

### 9.1 Advertising the Profile Conformance

Figure 2 shows how instances of CIM\_RegisteredProfile are used to identify the version of the *Media Redirection Profile* with which an instance of CIM\_RedirectionService and its associated instances conform.

An instance of CIM\_RegisteredProfile exists for each profile that is instrumented in the system. One instance of CIM\_RegisteredProfile identifies the DMTF [Base Server Profile](#), version 1.0.0. The other instance identifies the *Media Redirection Profile*, version 1.0.0. The Central Instance is the CIM\_RedirectionService. The Scoping Instance is the CIM\_ComputerSystem instance.

This instance of CIM\_ComputerSystem conforms to the [Base Server Profile](#), version 1.0.0, as indicated by the CIM\_ElementConformsToProfile association with the CIM\_RegisteredProfile instance.

This instance of CIM\_RedirectionService conforms to the *Media Redirection Profile*, version 1.0.0, as indicated by the CIM\_ElementConformsToProfile association with the CIM\_RegisteredProfile instance.

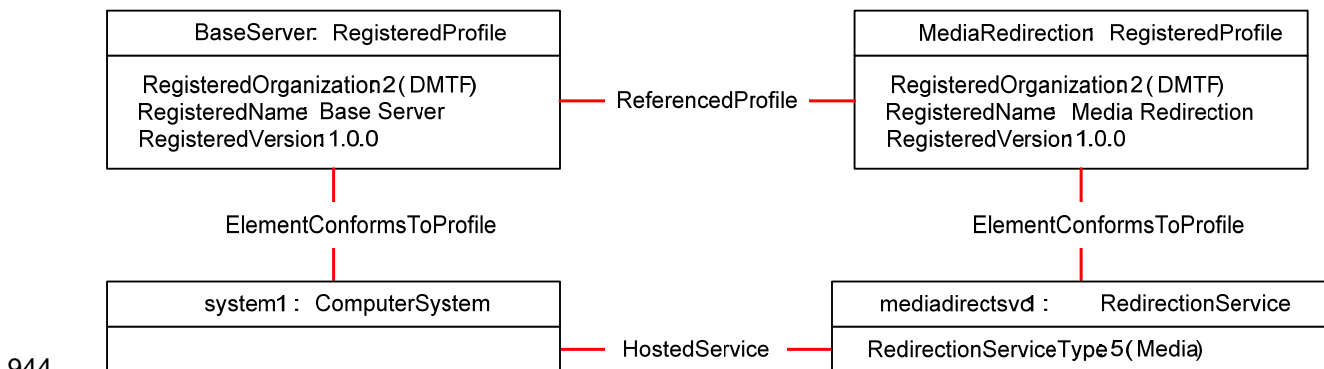
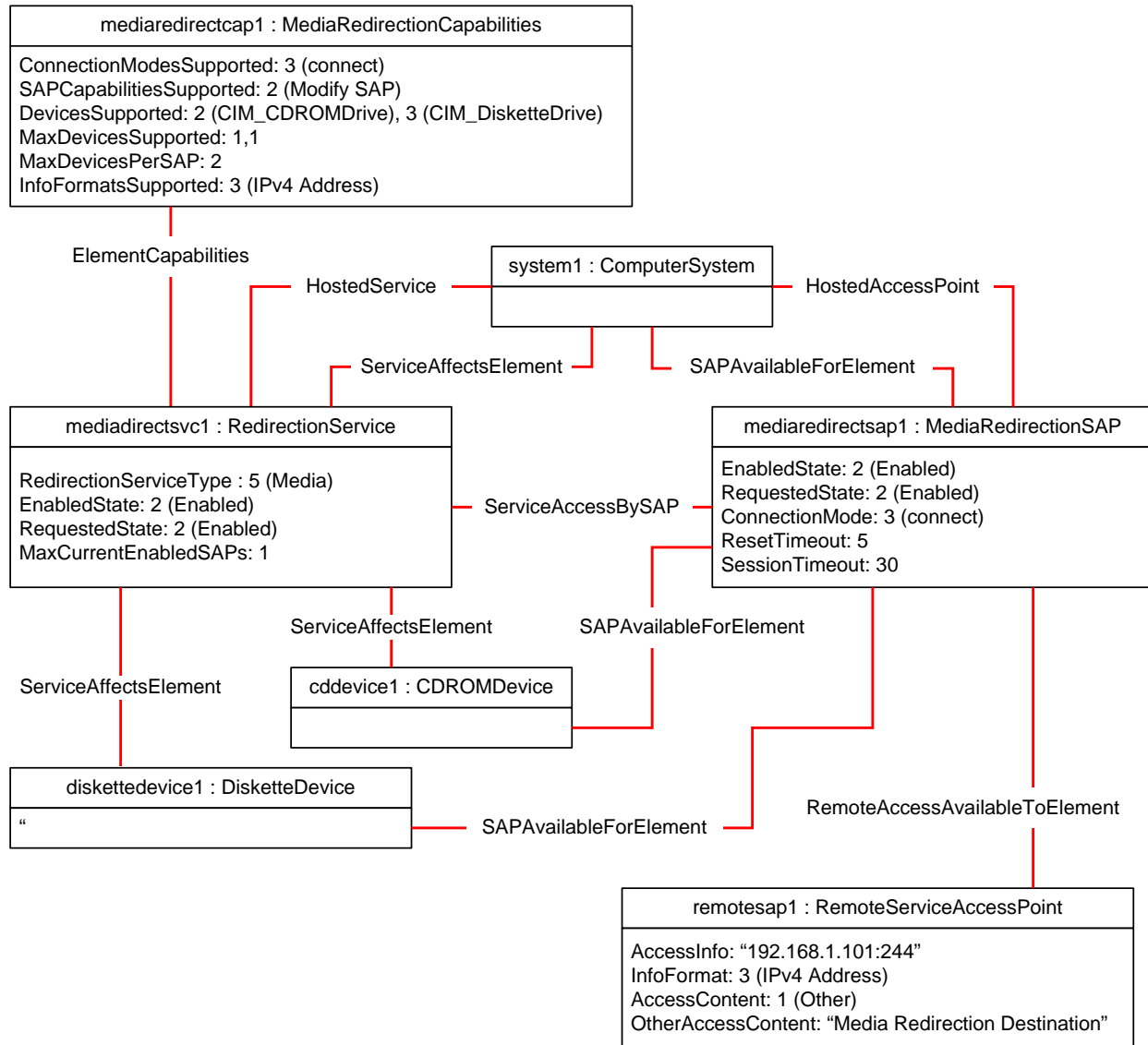


Figure 2 – Registered Profile

### 9.2 Object Diagram for a Monolithic Server — Connect

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





949

950

**Figure 3 – Monolithic System: Connect**

951 The Media Redirection Service is represented by mediaredirectsvc1. The Media Redirection SAP is  
 952 represented by mediaredirectsap1.

953 The instance of CIM\_MediaRedirectionCapabilities, mediaredirectcap1, describes the capabilities of the  
 954 Media Redirection Service. The SAPCapabilitiesSupported property value of 2 (Modify SAP) models that  
 955 the SAP properties can be modified.

956 The ConnectionModesSupported property models that the SAP can only be configured for “connect”  
 957 mode. The DeviceSupported property models that the Emulated CDROM and Diskette devices may be  
 958 redirected. The InfoFormatsSupported property models that the SAP can support IPv4 Addresses to  
 959 initiate the redirected session connection to the remote SAP.

960 The CIM\_ServiceAccessBySAP association between mediaredirectsvc1 and mediaredirectsap1 models  
 961 that mediaredirectsvc1 is available at mediaredirectsap1. The MediaRedirectionSAP.ConnectionMode  
 962 property is set to "connect" which models that the SAP will initiate a session to a remote SAP. The

963 instance of CIM\_RemoteServiceAccessPoint, remotesap1, has been configured with access information  
 964 needed to initiate a session with the remote SAP.

965 The CIM\_HostedService association between system1 and mediaredirectsvc1 models that the Media  
 966 Redirection Service is hosted on system1.

967 The CIM\_ServiceAffectsElement association between mediaredirectsvc1 and cddevice1 and  
 968 diskettedevice1 models that the Media Redirection Service is configured to redirect both CD and Diskette  
 969 redirection data streams.

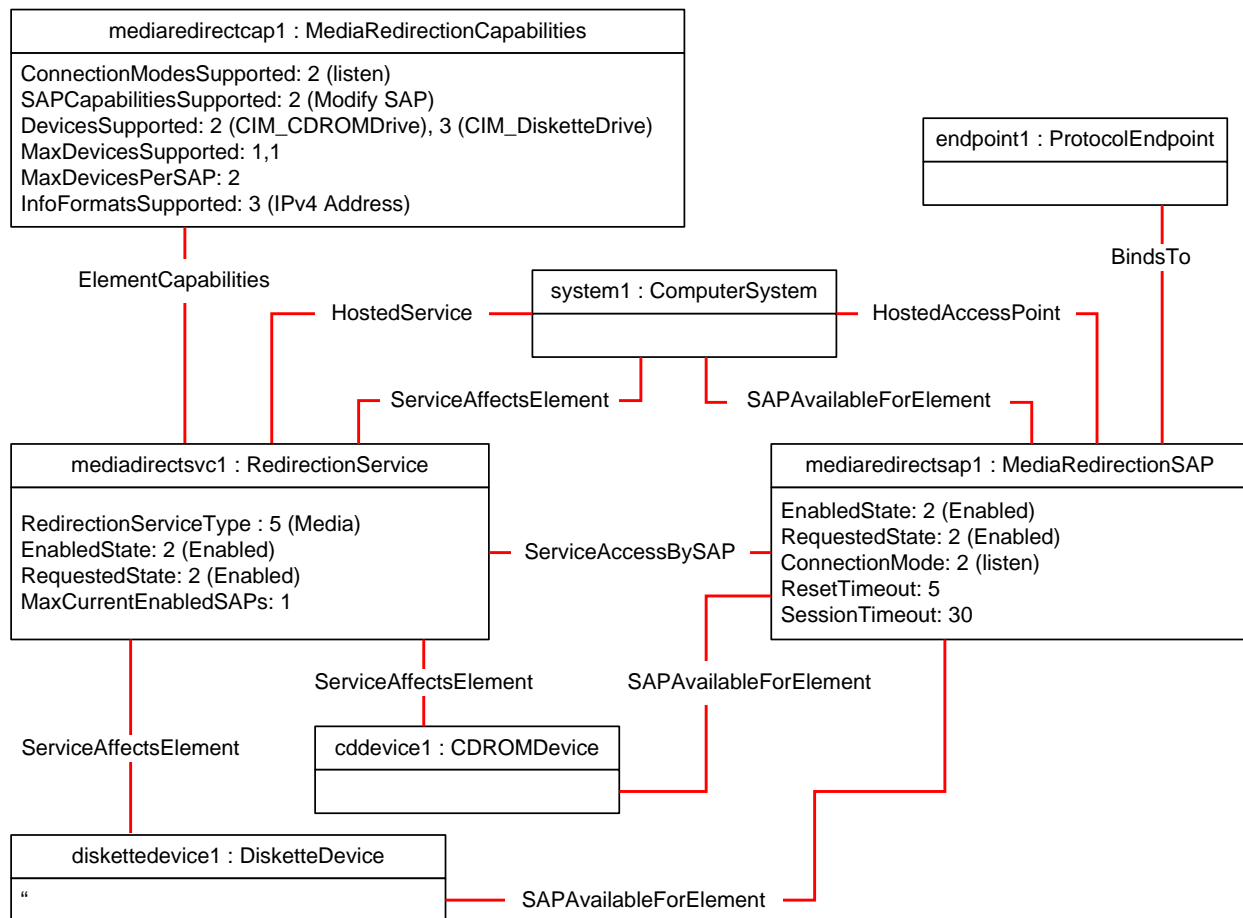
970 The CIM\_HostedAccessPoint association between mediaredirectsap1 and system1 models that  
 971 mediaredirectsap1 is hosted on system1.

972 The CIM\_SAPAvailableForElement association between system1 and mediaredirectsap1 models that  
 973 mediaredirectsap1 provides a SAP for at least one Media device residing on system1.

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

976 **9.3 Object Diagram for a Monolithic Server — Listen**

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



979

980

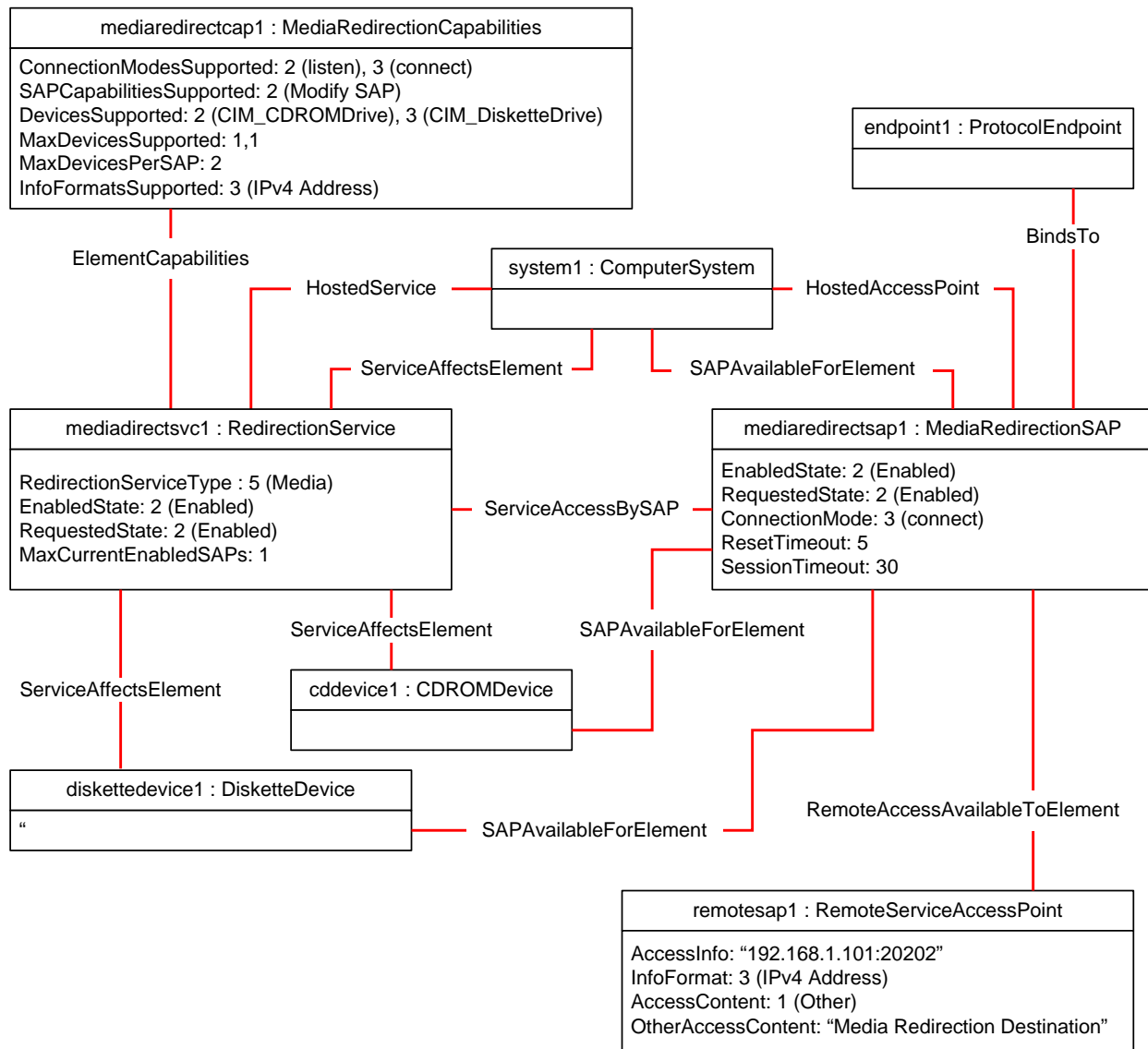
**Figure 4 – Monolithic System: Listen**

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

982 The ConnectionModesSupported property of the instance of CIM\_MediaRedirectionCapabilities shows  
 983 that the Media Redirection Service only supports the ‘listen” mode for its SAPs. The  
 984 CIM\_ServiceAccessBySAP association between mediaredirectsvc1 and mediaredirectsap1 models that  
 985 the mediaredirectsvc1 is available at mediaredirectsap1. The ConnectionMode property of  
 986 CIM\_MediaRedirectionSAP is set to "listen," which models that the SAP will wait for the Remote System  
 987 to initiate a session. The instance of CIM\_ProtocolEndpoint, Endpoint1, contains the information the  
 988 Remote System needs to initiate a session with the local Media Redirection SAP.

989 **9.4 Object Diagram for a Monolithic Server — Listen or Connect Mode**

990 Figure 5 shows a monolithic server, system1, with a Media Redirection SAP for redirection a media  
 991 storage device.



992

993

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

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

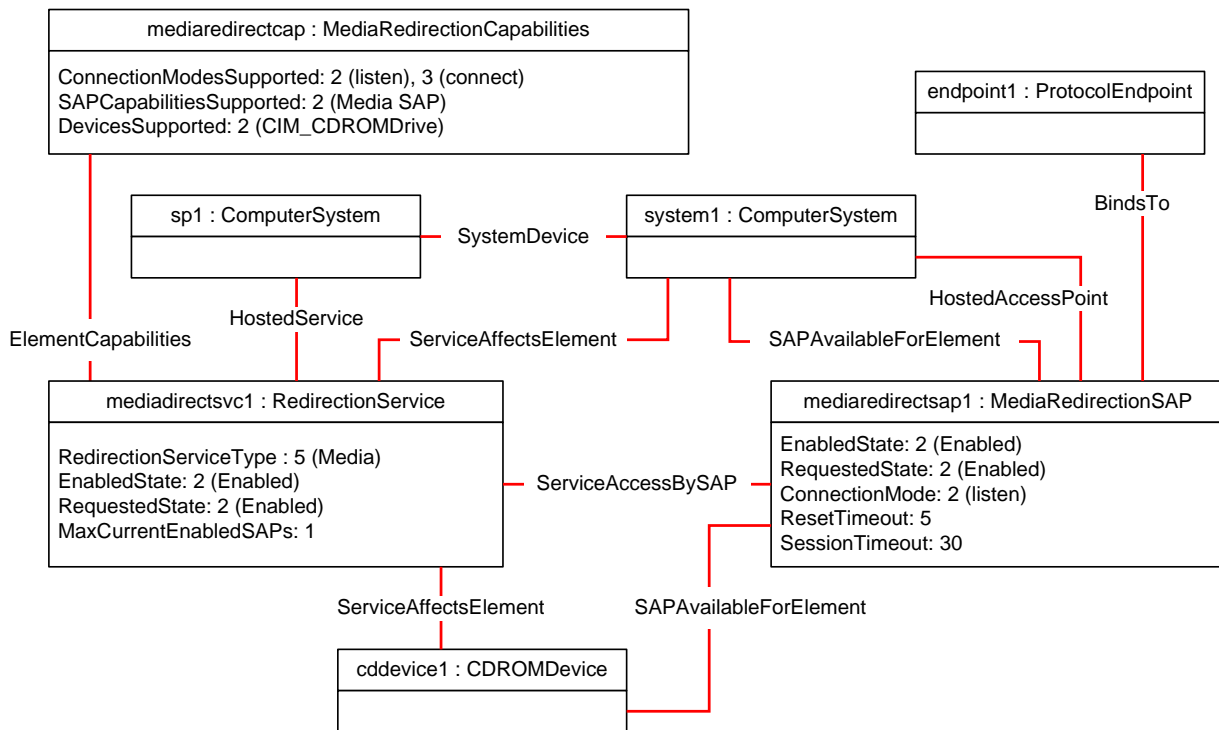
996 The ConnectionModesSupported property of the instance of CIM\_MediaRedirectionCapabilities shows  
 997 that the Media Redirection Service supports both the "listen" and "connect" mode for its SAPs. The  
 998 SAPCapabilitiesSupported property of CIM\_MediaRedirectionCapabilities shows that the properties of the  
 999 SAP may be modified. Examples of modifications include a change in the timeout properties or a  
 1000 reconfiguration of the SAP from "listen" to "connect" mode.

1001 The CIM\_ServiceAccessBySAP association between mediaredirectsvc1 and mediaredirectsap1 models  
 1002 that the mediaredirectsvc1 is available at mediaredirectsap1. Because the SAP may be configured to be  
 1003 in either "listen" or "connect" mode, it has both an instance of CIM\_ProtocolEndpoint associated to it by  
 1004 CIM\_BindsTo, and an instance of CIM\_RemoteServiceAccessPoint associated to it by  
 1005 CIM\_RemoteAccessAvailableToElement.

1006 The ConnectionMode property of CIM\_MediaRedirectionSAP has been set to "connect", so the instance  
 1007 of CIM\_RemoteServiceAccessPoint, remotesap1, has been configured with information about how to  
 1008 access the remote SAP.

1009 **9.5 Object Diagram for a Monolithic Server with Service Processor**

1010 Figure 6 shows a monolithic server with a service processor. The diagram is similar to Figure 4, but  
 1011 Figure 6 contains an instance of CIM\_ComputerSystem, sp1, that represents the service processor.



1012

1013

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

## 1014 9.6 Determine whether a System Supports Media Redirection

1015 A client can determine whether a computer system of interest supports Media Redirection as follows:

- 1016 1) Start at the instance of CIM\_ComputerSystem that represents the computer system of interest
- 1017 2) Enumerate the instances of CIM\_RedirectionService that are associated to the instance of  
1018 CIM\_ComputerSystem through an instance of the CIM\_ServiceAffectsElement association.
- 1019 3) If such an instance of CIM\_RedirectionService is not found, the computer system does not  
1020 support Media Redirection. Otherwise, the computer system does support Media Redirection.

## 1021 9.7 Identify Emulated Media Devices that Are Available through a Media 1022 Redirection SAP

1023 A client can determine the Media Redirection Media devices managed by a Service as follows:

- 1024 1) Start at the instance of CIM\_RedirectionService of interest. (The instance can be found using  
1025 the use case in 9.6.)
- 1026 2) Enumerate the instances of CIM\_MediaRedirectionSAP that are associated through an instance  
1027 of CIM\_ServiceAccessBySAP.
- 1028 3) For each instance of CIM\_MediaRedirectionSAP, enumerate the instances associated to the  
1029 CIM\_MediaRedirectionSAP through an instance of CIM\_SAPAvailableForElement.
- 1030 4) Each instance found by the enumeration represents a locally emulated Media device that is  
1031 available through a SAP.

## 1032 9.8 Determine How the Media Redirection State Is Managed

1033 A client can determine whether a Media Redirection is managed through the state of the SAP only or  
1034 through the states of both the Service and SAP, as follows:

- 1035 1) Start at the instance of CIM\_RedirectionService of interest using the use case describe in 9.6.
- 1036 2) Select the CIM\_MediaRedirectionSAP that represents the Media Redirection SAP of interest  
1037 using the use case described in 9.7.
- 1038 3) From the instance of CIM\_RedirectionService, find the instance of  
1039 CIM\_MediaRedirectionCapabilities that is associated through an instance of  
1040 CIM\_ElementCapabilities.

1041 If an instance of CIM\_MediaRedirectionCapabilities is not found, the Media Redirection cannot  
1042 be managed through the state of the Media Redirection Service.

- 1043 4) For the CIM\_MediaRedirectionCapabilities instance so found, obtain the values of the  
1044 RequestedStatesSupported property.

- 1045 5) From the instance of CIM\_MediaRedirectionSAP, find the  
1046 CIM\_EnabledLogicalElementCapabilities that is associated through an instance of  
1047 CIM\_ElementCapabilities.

1048 If an instance of CIM\_EnabledLogicalElementCapabilities is not found, the Media Redirection  
1049 cannot be managed through the state of the Media Redirection SAP.

- 1050 6) For the CIM\_EnabledLogicalElementCapabilities so found, obtain the values of the  
1051 RequestedStatesSupported property.

- 1052 7) If the CIM\_MediaRedirectionCapabilities.RequestedStatesSupported property contains no  
1053 values and the CIM\_EnabledLogicalElementCapabilities.RequestedStatesSupported contains  
1054 no values, then no state management of the Media Redirection is possible.

1055 If the CIM\_MediaRedirectionCapabilities.RequestedStatesSupported property contains no  
1056 values and the CIM\_EnabledLogicalElementCapabilities.RequestedStatesSupported contains  
1057 values, then state management of the Media Redirection is performed through state  
1058 management of the SAP only.

1059 If the CIM\_MediaRedirectionCapabilities.RequestedStatesSupported property contains values  
1060 and the CIM\_EnabledLogicalElementCapabilities.RequestedStatesSupported contains values,  
1061 then state management of the Media Redirection is possible through state management of both  
1062 the Service and the SAP.

## 1063 **9.9 Activate a Media Redirection — SAP State Management**

1064 When the Media Redirection is managed through the state of the Media Redirection SAP only, a client  
1065 can start a Media Redirection as follows:

- 1066 1) Start at the instance of the CIM\_MediaRedirectionSAP that is a component of the Media  
1067 Redirection SAP of interest.
- 1068 2) Invoke the RequestStateChange() method with the RequestedState parameter set to 2  
1069 (Enabled).
- 1070 3) Verify that the CIM\_MediaRedirectionSAP.EnabledState property has a value of 2 (Enabled).

1071 The Media Redirection is now active.

## 1072 **9.10 Activate a Media Redirection — Service and SAP State Management**

1073 When the Media Redirection is managed through the states of both the Media Redirection Service and  
1074 Media Redirection SAP, a client can start a Media Redirection as follows:

- 1075 1) Start at the CIM\_RedirectionService instance of interest.
- 1076 2) Invoke the RequestStateChange() method with the RequestedState parameter has a value of 2  
1077 (Enabled).
- 1078 3) Verify that the CIM\_RedirectionService.EnabledState property has a value of 2 (Enabled).
- 1079 4) Invoke the CIM\_MediaRedirectionSAP.RequestStateChange() method with the  
1080 RequestedState parameter has a value of 2 (Enabled).
- 1081 5) Verify that the CIM\_MediaRedirectionSAP.EnabledState property has a value of 2 (Enabled).

1082 The Media Redirection is now active.

## 1083 **9.11 Stop All Media Redirections Associated with the Service — SAP State 1084 Management**

1085 In the following use case, it is assumed that the client knows the instance of CIM\_RedirectionService of  
1086 interest.

1087 When the Media Redirection is managed through the state of the Media Redirection SAP only, a client  
1088 can stop all Media Redirections as follows:

- 1089 1) Start at the instance of the CIM\_RedirectionService that represents the Media Redirection  
1090 Service of interest.
- 1091 2) Enumerate the instances of CIM\_MediaRedirectionSAP that are associated with the instance of  
1092 CIM\_RedirectionService through an instance of CIM\_ServiceAccessBySAP.
- 1093 3) For each instance of CIM\_MediaRedirectionSAP found, query the value of the EnabledState  
1094 property.

- 1095 4) If the state of each CIM\_MediaRedirectionSAP is 2 (Enabled), invoke the  
1096 RequestStateChange() method with each RequestedState parameter set to 6 (Offline).
- 1097 5) Verify that each CIM\_MediaRedirectionSAP.EnabledState property has a value of 6 (Enabled  
1098 but Offline).
- 1099 All Media Redirections associated with the CIM\_RedirectionService instance are now inactive.

### 1100 **9.12 Stop All Media Redirections Associated with a Service — Service and SAP** 1101 **State Management**

1102 When the Media Redirection is managed through the states of both the Media Redirection Service and  
1103 Media Redirection SAP, a client can stop all Media Redirections associated with the Media Redirection  
1104 Service as follows:

- 1105 1) Start at the instance of the CIM\_RedirectionService that represents the Media Redirection  
1106 Service of interest.
- 1107 2) Change the state of the CIM\_RedirectionService instance by invoking the  
1108 RequestStateChange() method with the RequestedState parameter set to 3 (Disabled).

1109 All Media Redirections associated with the CIM\_RedirectionService instance are now inactive.

### 1110 **9.13 Find the Number of Active Media Redirection SAPs for a Service**

1111 A client can find the number of active Media Redirection SAPs for a Media Redirection Service of interest  
1112 as follows:

- 1113 1) Start at the CIM\_RedirectionService instance of interest.
- 1114 2) Query the value of the EnabledState property.
- 1115 If the EnabledState property is 3 (Disabled), the number of active Redirection SAPs is zero.
- 1116 3) If the EnabledState property is 2 (Enabled), find all instances of CIM\_MediaRedirectionSAP that  
1117 are associated with the CIM\_RedirectionService through an instance of  
1118 CIM\_ServiceAccessBySAP.
- 1119 4) For each found CIM\_MediaRedirectionSAP instance, query the value of the EnabledState  
1120 property.
- 1121 5) Count all the CIM\_MediaRedirectionSAP.EnabledState properties whose value is 2 (Enabled).

### 1122 **9.14 Determine whether CIM\_RedirectionService.ElementName Can Be Modified**

1123 A client can determine whether the ElementName property can be modified as follows:

- 1124 1) Start at the instance of CIM\_RedirectionService.
- 1125 2) Find the CIM\_MediaRedirectionCapabilities instance with which it is associated by traversing  
1126 the CIM\_ElementCapabilities association.
- 1127 3) Query the value of the ElementNameEditSupported property of the  
1128 CIM\_MediaRedirectionCapabilities instance.

1129 If the value is TRUE, the CIM\_RedirectionService.ElementName property can be modified by a  
1130 client. If no instance of CIM\_MediaRedirectionCapabilities is associated with the  
1131 CIM\_RedirectionService instance, modifying the CIM\_RedirectionService.ElementName  
1132 property is not supported.

1133 **10 CIM Elements**

1134 Table 20 shows the instances of CIM elements for this profile. Instances of the CIM elements shall be  
 1135 implemented as described in Table 20. Sections 7 ("Implementation") and 8 ("Methods") may impose  
 1136 additional requirements on these elements.

1137 **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.

1138 **10.1 CIM\_RegisteredProfile**

1139 CIM\_RegisteredProfile identifies the *Media Redirection Profile* in order for a client to determine whether  
 1140 an instance of CIM\_ComputerSystem conforms to this profile. The CIM\_RegisteredProfile class is defined  
 1141 by the [Profile Registration Profile](#). With the exception of the mandatory values specified for the properties  
 1142 in Table 21, the behavior of the CIM\_RegisteredProfile instance is in accordance with the [Profile](#)  
 1143 [Registration Profile](#).

1144 **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).



1145 **10.2 CIM\_BindsTo**

1146 The CIM\_BindsTo association is used to relate the CIM\_MediaRedirectionSAP instance to the  
 1147 CIM\_ProtocolEndpoint instance that represents the endpoint where the Media Redirection SAP is  
 1148 available. Table 22 contains the requirements for elements of this class.

1149 **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. Cardinality is "0..1".
Dependent	Mandatory	This property shall be a reference to an instance of the CIM_MediaRedirectionSAP class. See clause 7.5. Cardinality is "1..*".

1150 **10.3 CIM\_ElementCapabilities Relating CIM\_RedirectionService to**  
 1151 **CIM\_MediaRedirectionCapabilities**

1152 The CIM\_ElementCapabilities association is used to relate an instance of  
 1153 CIM\_MediaRedirectionCapabilities to an instance of CIM\_RedirectionService. Table 23 contains the  
 1154 requirements for elements of this class.

1155 **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. Cardinality is "1..*".
Capabilities	Mandatory	This property shall be a reference to an instance of CIM_MediaRedirectionCapabilities class. See 7.2.3. Cardinality is "0..1".

1156 **10.4 CIM\_ElementCapabilities Relating CIM\_MediaRedirectionSAP to**  
 1157 **CIM\_EnabledLogicalElementCapabilities**

1158 The CIM\_ElementCapabilities association is used to relate an instance of  
 1159 CIM\_EnabledLogicalElementCapabilities to an instance of CIM\_MediaRedirectionSAP. Table 24 contains  
 1160 the requirements for elements of this class.

1161 **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. Cardinality is "1..*".
Capabilities	Mandatory	This property shall be a reference to an instance of CIM_EnabledLogicalElementCapabilities class. See 7.4.4. Cardinality is "0..1".

1162 **10.5 CIM\_EnabledLogicalElementCapabilities**

1163 CIM\_EnabledLogicalElementCapabilities represents the capabilities of the Media Redirection SAP. Table  
1164 25 contains the requirements for elements of this class.

1165 **Table 25 – Class: CIM\_EnabledLogicalElementCapabilities**

Elements	Requirement	Notes
InstanceID	Mandatory	<b>Key</b>
RequestedStatesSupported	Mandatory	See 7.10.1.
ElementNameEditSupported	Mandatory	See 7.4.5.
MaxElementNameLen	Conditional	See 7.4.5. Conditional on ElementNameEditSupported

1166 **10.6 CIM\_HostedAccessPoint**

1167 The CIM\_HostedAccessPoint association is used to relate the CIM\_MediaRedirectionSAP instance to the  
1168 CIM\_ComputerSystem instance to which the Media is redirected. Table 26 contains the requirements for  
1169 elements of this class.

1170 **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. Cardinality is "1".
Dependent	Mandatory	This property shall be a reference to an instance of the CIM_MediaRedirectionSAP class. See 7.4.3. Cardinality is "*".

1171 **10.7 CIM\_HostedService**

1172 The CIM\_HostedService association is used to relate the CIM\_RedirectionService instance to the  
1173 CIM\_ComputerSystem instance on which it is hosted. Table 27 contains the requirements for elements of  
1174 this class.

1175 **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. Cardinality is "1".
Dependent	Mandatory	This property shall be a reference to an instance of the CIM_RedirectionService class. See 7.2.1. Cardinality is "*".

1176 **10.8 CIM\_RemoteAccessAvailableToElement**

1177 The CIM\_RemoteAccessAvailableToElement association is used to relate the instance of  
 1178 CIM\_MediaRedirectionSAP to the instance of CIM\_RemoteServiceAccessPoint. Table 28 contains the  
 1179 requirements for elements of this class.

1180 **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. Cardinality is "*".
Dependent	Mandatory	This property shall be a reference to an instance of the CIM_MediaRedirectionSAP class. See 7.7.1. Cardinality is "1".

1181 **10.9 CIM\_RemoteServiceAccessPoint**

1182 The CIM\_RemoteServiceAccessPoint class represents the SAP on the remote system. Table 29 contains  
 1183 the requirements for elements of this class.

1184 **Table 29 – Class: CIM\_RemoteServiceAccessPoint**

Elements	Requirement	Notes
SystemCreationClassName	Mandatory	<b>Key</b>
SystemName	Mandatory	<b>Key</b>
Name	Mandatory	<b>Key</b>
CreationClassName	Mandatory	<b>Key</b>
AccessContext	Mandatory	The property shall match the value 1 (Other).
AccessInfo	Mandatory	See 7.7.1.1.
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.

1185 **10.10 CIM\_SAPAvailableForElement Relating CIM\_MediaRedirectionSAP to**  
 1186 **CIM\_ComputerSystem**

1187 The CIM\_SAPAvailableForElement association is used to relate the instance of CIM\_ComputerSystem on  
 1188 which the Emulated Media Devices reside to the instances of CIM\_MediaRedirectionSAP that are  
 1189 available as access points for the redirected Media Devices. Table 30 contains the requirements for  
 1190 elements of this class.

1191 **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. Cardinality is "*".
ManagedElement	Mandatory	This property shall be a reference to an instance of the CIM_ComputerSystem class. See 7.4.2. Cardinality is "1".

1192 **10.11 CIM\_SAPAvailableForElement Relating CIM\_MediaRedirectionSAP to**  
 1193 **CIM\_MediaAccessDevice**

1194 The CIM\_SAPAvailableForElement association is used to relate the instance of  
 1195 CIM\_MediaRedirectionSAP to the instance of CIM\_MediaAccessDevice or a subclass of  
 1196 CIM\_MediaAccessDevice that represents the Emulated Media Device that is accessible through the  
 1197 Media Redirection SAP. Table 31 contains the requirements for elements of this class.

1198 **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. 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. Cardinality is "0..*".

1199 **10.12 CIM\_ServiceAccessBySAP**

1200 The CIM\_ServiceAccessBySAP association is used to relate the instance of CIM\_RedirectionService to  
 1201 the instances of CIM\_MediaRedirectionSAP that are enabled by the service. Table 32 contains the  
 1202 requirements for elements of this class.

1203 **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. Cardinality is "1".
Dependent	Mandatory	This property shall be a reference to an instance of the CIM_MediaRedirectionSAP class. See 7.4.1. Cardinality is "1..*".

1204 **10.13 CIM\_ServiceAffectsElement Relating CIM\_RedirectionService to**  
 1205 **CIM\_ComputerSystem**

1206 The CIM\_ServiceAffectsElement association is used to relate the instance of CIM\_RedirectionService to  
 1207 the instance of CIM\_ComputerSystem that represents the source of the Media Redirection Flow. Table 33  
 1208 contains the requirements for elements of this class.

1209 **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. Cardinality is "*".
AffectedElement	Mandatory	This property shall be a reference to an instance of the CIM_ComputerSystem class. See 7.2.2. Cardinality is "1".

1210 **10.14 CIM\_ServiceAffectsElement Relating CIM\_RedirectionService to**  
 1211 **CIM\_MediaDevice**

1212 The CIM\_ServiceAffectsElement association is used to relate the instance of CIM\_RedirectionService to  
 1213 the local emulated Media Device that can be redirected. Table 34 contains the requirements for elements  
 1214 of this class.

1215 **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. 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. Cardinality is "0..1".

1216 **10.15 CIM\_MediaAccessDevice**

1217 CIM\_MediaDevice or a subclass of CIM\_MediaAccessDevice represents the locally emulated Media  
 1218 device that can be redirected to a remote system. Table 35 contains the requirements for elements of this  
 1219 class.

1220 **Table 35 – Class: CIM\_MediaAccessDevice**

Elements	Requirement	Notes
CreationClassName	Mandatory	<b>Key</b>
DeviceID	Mandatory	<b>Key</b>

1221 **10.16 CIM\_MediaRedirectionCapabilities**

1222 CIM\_MediaRedirectionCapabilities represents the capabilities of Media Redirection Service. Table 36  
 1223 contains the requirements for elements of this class.

1224 **Table 36 – Class: CIM\_MediaRedirectionCapabilities**

Elements	Requirement	Notes
InstanceID	Mandatory	<b>Key</b>
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.

1225 **10.17 CIM\_MediaRedirectionSAP**

1226 The CIM\_MediaRedirectionSAP class represents a Media Redirection SAP. Table 37 contains the  
 1227 requirements for elements of this class.

1228 **Table 37 – Class: CIM\_MediaRedirectionSAP**

Elements	Requirement	Notes
SystemCreationClassName	Mandatory	<b>Key</b>
SystemName	Mandatory	<b>Key</b>
Name	Mandatory	<b>Key</b>
CreationClassName	Mandatory	<b>Key</b>
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.

1229 **10.18 CIM\_RedirectionService**

1230 The CIM\_RedirectionService class represents the ability to manage the Media redirection capabilities of a  
 1231 computer system. Table 38 contains the requirements for elements of this class.

1232 **Table 38 – Class: CIM\_RedirectionService**

Elements	Requirement	Notes
SystemCreationClassName	Mandatory	<b>Key</b>
SystemName	Mandatory	<b>Key</b>
CreationClassName	Mandatory	<b>Key</b>
Name	Mandatory	<b>Key</b>
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.

**ANNEX A  
(informative)**

**Change Log**

1233  
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Version	Date	Description
1.0.0	2009-06-19	DMTF Standard Release

1237  
1238