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Text Console Redirection Profile

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CONTENTS

33	1	Scope	9
34	2	Normative References.....	9
35	3	Terms and Definitions	9
36	4	Symbols and Abbreviated Terms	10
37	5	Synopsis.....	11
38	6	Description	11
39	7	Implementation.....	12
40	7.1	Representing a Text Console Redirection.....	12
41	7.2	Representing the Text Console Redirection Service.....	13
42	7.3	Representing the Text Console Redirection Session.....	14
43	7.4	State Management of a Text Console Redirection.....	16
44	7.5	State Management of a Text Console Redirection Service (Optional).....	17
45	7.6	State Management of a Text Console Redirection Session (Optional).....	18
46	8	Methods.....	20
47	8.1	CIM_TextRedirectionService.RequestStateChange().....	20
48	8.2	CIM_TextRedirectionSAP.RequestStateChange().....	21
49	8.3	Profile Conventions for Operations.....	22
50	8.4	CIM_BindsTo	23
51	8.5	CIM_ElementCapabilities	23
52	8.6	CIM_EnabledLogicalElementCapabilities.....	23
53	8.7	CIM_HostedService	23
54	8.8	CIM_HostedAccessPoint	24
55	8.9	CIM_ServiceAffectsElement	24
56	8.10	CIM_ServiceAccessBySAP	24
57	8.11	CIM_TextRedirectionService	24
58	8.12	CIM_TextRedirectionSAP	25
59	9	Use Cases.....	26
60	9.1	Advertising the Profile Conformance	26
61	9.2	Object Diagrams for a Monolithic Server.....	27
62	9.3	Object Diagram for Monolithic Server with Service Processor	28
63	9.4	Object Diagram for a Modular System.....	29
64	9.5	Determine Whether a System Has Text Consoles That Can Be Redirected	31
65	9.6	Determine Whether a Serial Port Can Be Redirected	31
66	9.7	Find the Text Console Redirection Services for a Computer System	31
67	9.8	Find the Original Destinations on a Computer System.....	31
68	9.9	Find the Text Console Redirection Sessions for a Service	32
69	9.10	Find the Destinations for the Redirected Text Console Flow for a Service	32
70	9.11	Find a Text Console Redirection	32
71	9.12	Determine Whether the CLP Session Is Being Used as the Redirected Text Console Destination	33
73	9.13	Determine the Type of Text Console Redirection State Management Supported	33
74	9.14	Activate a Text Console Redirection Session—Session Only.....	33
75	9.15	Activate a Singular Text Console Redirection	34
76	9.16	Stop All Text Console Redirections Associated with the Source—Session Only	36
77	9.17	Activate a Text Console Redirection —Service and Session State Management	37
78	9.18	Stop All Text Console Redirections Associated with the Service —Service and Session State Management.....	38
80	9.19	Find the Number of Active Text Console Redirection Access Points.....	38
81	9.20	Determine Whether CIM_TextRedirectionService.ElementName Can Be Modified.....	38
82	10	CIM Elements.....	38
83	10.1	CIM_RegisteredProfile.....	39
84	10.2	CIM_BindsTo	40

85	10.3	CIM_ElementCapabilities Relating CIM_TextRedirectionService to	
86		CIM_EnabledLogicalElementCapabilities.....	40
87	10.4	CIM_ElementCapabilities Relating CIM_TextRedirectionSAP to	
88		CIM_EnabledLogicalElementCapabilities.....	40
89	10.5	CIM_EnabledLogicalElementCapabilities Associated with CIM_TextRedirectionService	41
90	10.6	CIM_EnabledLogicalElementCapabilities Associated with CIM_TextRedirectionSAP	41
91	10.7	CIM_HostedAccessPoint	41
92	10.8	CIM_HostedService	42
93	10.9	CIM_SAPAvailableForElement.....	42
94	10.10	CIM_ServiceAccessBySAP	42
95	10.11	CIM_ServiceAffectsElement Relating CIM_TextRedirectionService to	
96		CIM_ComputerSystem.....	43
97	10.12	CIM_ServiceAffectsElement Relating CIM_TextRedirectionService to a Concrete	
98		Subclass of CIM_LogicalDevice	43
99	10.13	CIM_TextRedirectionService	44
100	10.14	CIM_TextRedirectionSAP	44

101

102 Figures

103	Figure 1 – Text Console Redirection Profile: Class Diagram	12
104	Figure 2 – Registered Profile	27
105	Figure 3 – Monolithic System.....	27
106	Figure 4 – Monolithic System—Serial to Serial.....	28
107	Figure 5 – Monolithic System with Service Processor.....	29
108	Figure 6 – Modular System.....	30
109	Figure 7 – Initial State of a Redirection Managed Through the Session State Only	34
110	Figure 8 – Initial State of a Singular Text Console Redirection	35
111	Figure 9 – Final State of a Singular Text Console Redirection.....	36
112	Figure 10 – Initial State of a Redirection Managed Through the Service State and Session State	37

113

114 Tables

115	Table 1 – Related Profiles.....	11
116	Table 2 – Determining Text Console Redirection state	16
117	Table 3 – CIM_TextRedirectionService.RequestStateChange() Method: Return Code Values	20
118	Table 4 – CIM_TextRedirectionService.RequestStateChange() Method: Parameters	21
119	Table 5 – CIM_TextRedirectionSAP.RequestStateChange() Method: Return Code Values	21
120	Table 6 – CIM_TextRedirectionSAP.RequestStateChange() Method: Parameters	22
121	Table 7 – Operations: CIM_BindsTo.....	23
122	Table 8 – Operations: CIM_ElementCapabilities.....	23
123	Table 9 – Operations: CIM_EnabledLogicalElementCapabilities	23
124	Table 10 – Operations: CIM_HostedService	24
125	Table 11 – Operations: CIM_HostedAccessPoint	24
126	Table 12 – Operations: CIM_ServiceAffectsElement	24
127	Table 13 – Operations: CIM_ServiceAccessBySAP.....	24
128	Table 14 – Operations: CIM_TextRedirectionService	25
129	Table 15 – Operations: CIM_TextRedirectionSAP	26
130	Table 16 – CIM Elements: Text Console Redirection Profile.....	39
131	Table 17 – Class: CIM_RegisteredProfile.....	39
132	Table 18 – Class: CIM_BindsTo	40
133	Table 19 – Class: CIM_ElementCapabilities Referencing CIM_TextRedirectionService	40

134 Table 20 – Class: CIM_ElementCapabilities Referencing CIM_TextRedirectionSAP 40

135 Table 21 – Class: CIM_EnabledLogicalElementCapabilities Associated with CIM_TextRedirectionService41

136 Table 22 – Class: CIM_EnabledLogicalElementCapabilities Associated with CIM_TextRedirectionSAP . 41

137 Table 23 – Class: CIM_HostedAccessPoint 41

138 Table 24 – Class: CIM_HostedService 42

139 Table 25 – Class: CIM_SAPAvailableForElement 42

140 Table 26 – Class: CIM_ServiceAccessBySAP 42

141 Table 27 – Class: CIM_ServiceAffectsElement Referencing CIM_ComputerSystem 43

142 Table 28 – Class: CIM_ServiceAffectsElement Referencing CIM_LogicalDevice 43

143 Table 29 – Class: CIM_TextRedirectionService 44

144 Table 30 – Class: CIM_TextRedirectionSAP 44

145

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Foreword

147 The *Text Console Redirection Profile* (DSP1024) was prepared by the DMTF.

148 DMTF is a not-for-profit association of industry members dedicated to promoting enterprise and systems
149 management and interoperability. For information about the DMTF, see <http://www.dmtf.org>.

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165

Introduction

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

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

172

Text Console Redirection Profile

173 1 Scope

174 The *Text Console Redirection Profile* extends the management capabilities of referencing profiles and
175 provides the capability to manage text console redirections provided by the system.

176 2 Normative References

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

180 DMTF DSP0004, *CIM Infrastructure Specification 2.6*,
181 http://www.dmtf.org/standards/published_documents/DSP0004_2.6.pdf

182 DMTF DSP0200, *CIM Operations over HTTP 1.3*,
183 http://www.dmtf.org/standards/published_documents/DSP0200_1.3.pdf

184 DMTF DSP1001, *Management Profile Specification Usage Guide 1.0*,
185 http://www.dmtf.org/standards/published_documents/DSP1001_1.0.pdf

186 DMTF DSP1033, *Profile Registration Profile 1.0*,
187 http://www.dmtf.org/standards/published_documents/DSP1033_1.0.pdf

188 IETF RFC5234, *ABNF: Augmented BNF for Syntax Specifications, January 2008*,
189 <http://tools.ietf.org/html/rfc5234>

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

192 3 Terms and Definitions

193 In this document, some terms have a specific meaning beyond the normal English meaning. Those terms
194 are defined in this clause.

195 The terms "shall" ("required"), "shall not," "should" ("recommended"), "should not" ("not recommended"),
196 "may," "need not" ("not required"), "can" and "cannot" in this document are to be interpreted as described
197 in [ISO/IEC Directives, Part 2](#), Annex H. The terms in parenthesis are alternatives for the preceding term,
198 for use in exceptional cases when the preceding term cannot be used for linguistic reasons. Note that
199 [ISO/IEC Directives, Part 2](#), Annex H specifies additional alternatives. Occurrences of such additional
200 alternatives shall be interpreted in their normal English meaning.

201 The terms "clause," "subclause," "paragraph," and "annex" in this document are to be interpreted as
202 described in [ISO/IEC Directives, Part 2](#), Clause 5.

203 The terms "normative" and "informative" in this document are to be interpreted as described in [ISO/IEC](#)
204 [Directives, Part 2](#), Clause 3. In this document, clauses, subclauses, or annexes labeled "(informative)" do
205 not contain normative content. Notes and examples are always informative elements.

206 The terms defined in [DSP0004](#), [DSP0200](#), and [DSP1001](#) apply to this document. The following additional
207 terms are used in this document.

- 208 **3.1**
209 **Original Destination**
210 the destination of a Text Console Flow before being redirected, modeled as an instance of
211 CIM_LogicalDevice, such as a serial port
- 212 **3.2**
213 **Service**
214 a Text Console Redirection Service
- 215 **3.3**
216 **Session**
217 a Text Console Redirection Session
- 218 **3.4**
219 **Singular Text Console Redirection**
220 a Text Console Redirection in which the MaxCurrentEnabledSAPs property of the
221 CIM_TextRedirectionService instance has a value of 1
- 222 **3.5**
223 **Text Console Flow**
224 the bidirectional text console stream that originally flows to the Original Destination, and may be
225 redirected to a new Text Console Flow destination, which is modeled as an instance of
226 CIM_ProtocolEndpoint
- 227 **3.6**
228 **Text Console Redirection**
229 refers to a text console redirection service session; this is composed of an instance of
230 CIM_TextRedirectionService, an instance of CIM_TextRedirectionSAP, and the instance of the
231 CIM_ServiceAccessBySAP between the two
- 232 **3.7**
233 **Text Console Redirection Session**
234 the instance of CIM_TextRedirectionSAP that is part of a Text Console Redirection Session
- 235 **3.8**
236 **Text Console Redirection Service**
237 the instance of CIM_TextRedirectionService that is part of a Text Console Redirection Session

238 **4 Symbols and Abbreviated Terms**

239 The following abbreviation is used in this document.

- 240 **4.1**
241 **SAP**
242 Service Access Point

- 243 **4.2**
244 **SOL**
245 Serial-over-LAN

246 **5 Synopsis**

247 **Profile Name:** Text Console Redirection

248 **Version:** 1.0.2

249 **Organization:** DMTF

250 **CIM Schema version:** 2.17

251 **Central Class:** CIM_TextRedirectionService

252 **Scoping Class:** CIM_ComputerSystem

253 The *Text Console Redirection Profile* extends the management capability of the referencing profiles by
 254 adding the capability to describe information about text console redirections.

255 CIM_TextRedirectionService shall be the Central Class of this profile. The instance of
 256 CIM_TextRedirectionService shall be the Central Instance of this profile.

257 CIM_ComputerSystem shall be the Scoping Class of this profile. The instance of CIM_ComputerSystem
 258 with which the Central Instance is associated through an instance of CIM_HostedService shall be the
 259 Scoping Instance of this profile.

260 Table 1 identifies profiles on which this profile has a dependency.

261 **Table 1 – Related Profiles**

Profile Name	Organization	Version	Requirement	Description
Profile Registration	DMTF	1.0	Mandatory	

262 **6 Description**

263 The *Text Console Redirection Profile* describes the necessary elements needed to provide the capability
 264 to manage the redirection of a Text Console Flow. The profile could manage the following text redirection
 265 capabilities of typical computer systems:

- 266 • Systems can have multiple sources of bidirectional Text Console Flows that can be redirected.
- 267 • Before being redirected, the Text Console Flow has an Original Destination, which is typically a
 268 local serial port to which a terminal is connected in order to access the Text Console Flow.
- 269 • A Text Console Flow can be redirected to one or more destinations. A destination can be
 270 another serial port or a network port. The network port facilitates remote access to the text
 271 console and is known as serial-over-LAN (SOL).
- 272 • The redirection of a Text Console Flow can be accomplished while still delivering the Text
 273 Console Flow to its Original Destination.
- 274 • A redirected Text Console Flow can be terminated by embedding a special character sequence
 275 into the Text Console Flow.

276 A Text Console Redirection comprises a Text Console Redirection Service, a Text Console Redirection
 277 Session, and the relationship between them.

- 278 • The Text Console Redirection Service, also referred to as *Service* in this profile, is represented
 279 by an instance of CIM_TextRedirectionService.
- 280 • The Text Console Redirection Session, also referred to as *Session* in this profile, is represented
 281 by an instance of CIM_TextRedirectionSAP.

- 282 • The relationship between the Service and Session is represented by an instance of
283 CIM_ServiceAccessBySAP.

284 A Text Console Redirection can be in an active, inactive, or available state. When the Text Console
285 Redirection is active, the Text Console Flow is being actively redirected to a remote console.

286 The state management of a Text Console Redirection can be performed using two mechanisms. The first
287 mechanism is through state management of the Session only. The second mechanism is through state
288 management of both the Service and the Session.

289 When state management of the Service is possible, the Service can be in an enabled or disabled state.
290 When state management of the Session is possible, the Session can be in an enabled, disabled, or
291 enabled-but-offline state.

292 An instance of CIM_TextRedirectionService can be associated with an instance of a concrete subclass of
293 CIM_LogicalDevice that represents the Original Destination of the redirected Text Console Flow.
294 Examples of Original Destinations are serial ports or pseudo-ttys.

295 An instance of CIM_TextRedirectionSAP can be associated with an instance of CIM_ProtocolEndpoint
296 that represents the endpoint where the redirected Text Console Flow can be accessed.

297 Figure 1 presents the class diagram for the *Text Console Redirection Profile*. For simplicity, the prefix
298 *CIM_* has been removed from the names of the classes.

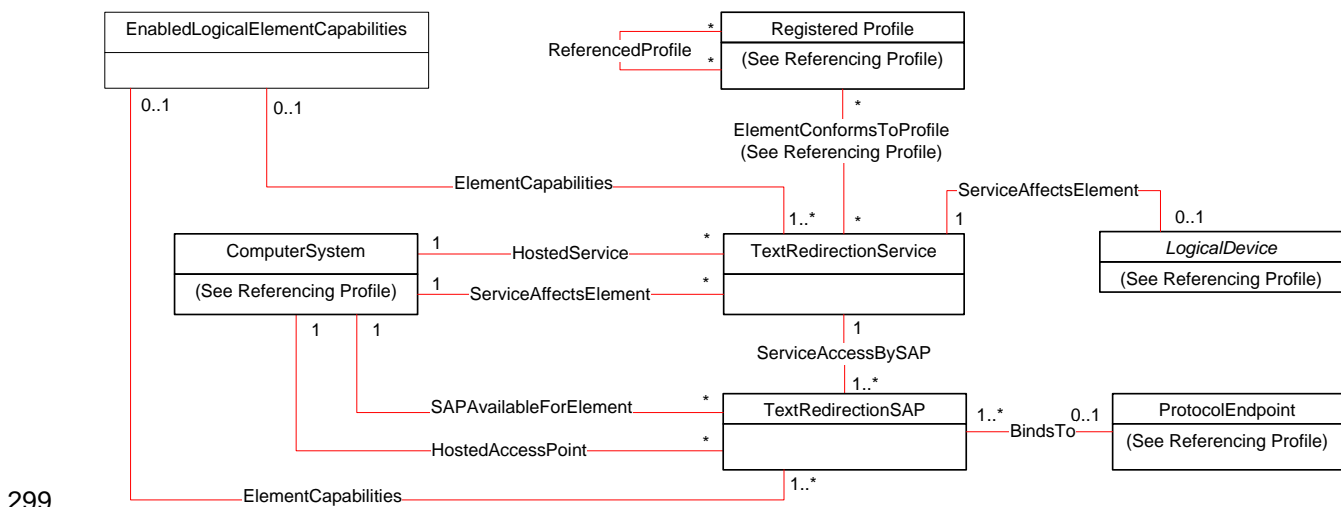


Figure 1 – Text Console Redirection Profile: Class Diagram

301 7 Implementation

302 This clause details the requirements related to the arrangement of instances and their properties for
303 implementations of this profile. Clause 8 describes the class methods required by the profile.

304 7.1 Representing a Text Console Redirection

305 A Text Console Redirection comprises an instance of CIM_TextRedirectionService, an instance of
306 CIM_TextRedirectionSAP, and an instance of the CIM_ServiceAccessBySAP association.

307 An instance of CIM_ServiceAccessBySAP shall be used to associate the instance of
308 CIM_TextRedirectionService with the instance of CIM_TextRedirectionSAP.

309 The CIM_ServiceAccessBySAP association's Antecedent property shall reference the
310 CIM_TextRedirectionService instance, and its Dependent property shall reference the
311 CIM_TextRedirectionSAP instance.

312 7.2 Representing the Text Console Redirection Service

313 An instance of CIM_TextRedirectionService shall be used to represent the Text Console Redirection
314 Service, or Service.

315 An instance of the CIM_HostedService association shall associate each instance of
316 CIM_TextRedirectionService with a hosting CIM_ComputerSystem instance.

317 The CIM_HostedService association's Antecedent property shall reference the CIM_ComputerSystem
318 instance, and its Dependent property shall reference the CIM_TextRedirectionService instance.

319 7.2.1 Representing the Original Destination

320 The instance of CIM_TextRedirectionService may be associated through an instance of
321 CIM_ServiceAffectsElement to at most one instance of a concrete subclass of CIM_LogicalDevice that
322 represents the Original Destination.

323 The CIM_ServiceAffectsElement association's Antecedent property shall reference the instance of a
324 concrete subclass of CIM_LogicalDevice, and its Dependent property shall reference the instance of
325 CIM_TextRedirectionService.

326 7.2.2 Representing the System in Which the Original Destination Resides

327 The instance of CIM_TextRedirectionService shall be associated through an instance of
328 CIM_ServiceAffectsElement with an instance of CIM_ComputerSystem that represents the system in
329 which the Original Destination resides.

330 The CIM_ServiceAffectsElement association's Antecedent property shall reference the
331 CIM_ComputerSystem instance, and its Dependent property shall reference the
332 CIM_TextRedirectionService instance.

333 7.2.3 Text Console Sharing Mode

334 When a Text Console Flow is redirected, the redirection may be exclusive or shared. Shared redirection
335 means the Original Destination of the text console is still receiving the Text Console Flow. Exclusive
336 redirection means that the Original Destination is no longer receiving the Text Console Flow.

337 The CIM_TextRedirectionService.SharingMode property shall designate whether a text console
338 redirection is exclusive or shared. A value of 2 (Exclusive) for the SharingMode property shall indicate
339 exclusive redirection. A value of 3 (Shared) for the SharingMode property shall indicate shared
340 redirection.

341 7.2.4 Maximum Number of Concurrent Redirections

342 A Text Console Flow may be redirected to multiple access points; however, the number of concurrent
343 redirections may be limited. The limitation could be the result of hardware or software resource limitations.

344 The CIM_TextRedirectionService.MaxCurrentEnabledSAPs property shall contain the maximum number
345 of instances of CIM_TextRedirectionSAP whose EnabledState property is set to 2 (Enabled), which may
346 be associated with the instance of CIM_TextRedirectionService. The Original Destination shall not be
347 counted as one of the redirected text consoles.

348 A Singular Text Console Redirection is a redirection whose instance of CIM_TextRedirectionService has
349 a MaxCurrentEnabledSAPs property with a value of 1.

350 **7.2.5 CIM_TextRedirectionService.ElementName**

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

352 The ElementName property may support being modified by the ModifyInstance operation. See 8.11.1.1.
353 This behavior is conditional. The following subclauses describe the CIM elements and behavior required
354 to determine whether an implementation supports client modification of the ElementName property.

355 **7.2.5.1 Modifying ElementName Is Supported — Conditional**

356 This subclause describes the CIM elements and behavior requirements when an implementation supports
357 client modification of the CIM_TextRedirectionService.ElementName property.

358 An instance of CIM_EnabledLogicalElementCapabilities shall be associated with the
359 CIM_TextRedirectionService instance through an instance of CIM_ElementCapabilities.

360 The CIM_EnabledLogicalElementCapabilities.ElementNameEditSupported property shall have a value of
361 TRUE.

362 The CIM_EnabledLogicalElementCapabilities.MaxElementNameLen property shall be implemented.

363 **7.2.5.2 Modifying ElementName Is Not Supported**

364 This subclause describes the CIM elements and behaviors that shall be implemented when the
365 CIM_TextRedirectionService.ElementName does not support being modified by the ModifyInstance
366 operation.

367 An instance of CIM_EnabledLogicalElementCapabilities may be associated with the
368 CIM_TextRedirectionService instance through an instance of CIM_ElementCapabilities.

369 When an instance of CIM_EnabledLogicalElementCapabilities exists, its ElementNameEditSupported
370 property shall have a value of FALSE.

371 When an instance of CIM_EnabledLogicalElementCapabilities exists, its MaxElementNameLen property
372 may be implemented. The MaxElementNameLen property is irrelevant in this context.

373 **7.2.6 CIM_RedirectionService.RedirectionServiceType**

374 The CIM.TextRedirectionService.RedirectionServiceType property shall be set to 2 (Text).

375 **7.3 Representing the Text Console Redirection Session**

376 An instance of CIM_TextRedirectionSAP shall be used to represent the Text Console Redirection
377 Session, or Session.

378 The Session is associated with computer systems through two associations. One is the computer system
379 whose Text Console Flow is being redirected. The other is the computer system that contains the
380 endpoint where the redirected Text Console Flow can be accessed.

381 The instance of CIM_TextRedirectionSAP shall be associated through an instance of
382 CIM_SAPAvailableForElement with an instance of CIM_ComputerSystem that represents the computer
383 system whose Text Console Flow is being redirected.

384 The CIM_SAPAvailableForElement association's ManagedElement property shall reference the
385 CIM_ComputerSystem instance, and its AvailableSAP property shall reference the
386 CIM_TextRedirectionSAP instance.

387 The instance of CIM_TextRedirectionSAP shall be associated through an instance of
388 CIM_HostedAccessPoint with an instance of CIM_ComputerSystem that represents the computer system
389 that contains the endpoint where the redirect Text Console Flow can be accessed.

390 The CIM_HostedAccessPoint association's Antecedent property shall reference the
391 CIM_ComputerSystem instance, and its Dependent property shall reference the
392 CIM_TextRedirectionSAP instance.

393 **7.3.1 Representing the Destination of the Redirected Text Console Flow**

394 The instance of CIM_TextRedirectionSAP may be associated through an instance of CIM_BindsTo to one
395 instance of CIM_ProtocolEndpoint that represents the endpoint where the redirected Text Console Flow
396 is accessed.

397 The CIM_BindsTo association's Antecedent property shall reference the CIM_ProtocolEndpoint instance,
398 and its Dependent property shall reference the CIM_TextRedirectionSAP instance.

399 **7.3.2 Text Console Flow Format**

400 The redirected Text Console Flow can be formatted. Examples of the Text Console Flow formats are raw
401 character stream and terminal mode. In raw-character-stream format, the characters have no special
402 meaning. In terminal-mode format, the characters have special meaning (for example, backspace).

403 The format of the redirection Text Console Flow shall be designated by the
404 CIM_TextRedirectionSAP.TextFlowType property.

405 When the redirected Text Console Flow format is a raw character stream, the
406 CIM_TextRedirectionSAP.TextFlowType property shall be set to a value of 2 (Character Stream).

407 When the redirected Text Console Flow format is in terminal mode, the
408 CIM_TextRedirectionSAP.TextFlowType property shall be set to a value of 3 (Terminal Mode).

409 When the redirected Text Console Flow format is other than a raw character stream or a terminal mode,
410 the CIM_TextRedirectionSAP.TextFlowType property shall be set to a value of 1 (Other) and the value of
411 CIM_TextRedirectionSAP.OtherTextFlowType shall contain a string that describes the format.

412 **7.3.3 Terminate a Redirected Text Console**

413 A redirected text console session may be terminated through state management of the Text Console
414 Redirection Session (see 7.4).

415 A redirected text console session can also be terminated from within the Text Console Flow by issuing a
416 specific sequence of characters.

417 When a redirected text console supports being terminated by a specific sequence of characters within the
418 redirected Text Console Flow, the CIM_TextRedirectionSAP.SessionTerminateSequence shall contain
419 the string that terminates the redirected Text Console Flow.

420 **7.3.4 CIM_TextRedirectionSAP.ElementName**

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

422 The ElementName property may support being modified by the ModifyInstance operation. See 8.12.1.1.
423 This behavior is conditional. The following subclauses describe the CIM elements and behavior required
424 to determine whether an implementation supports client modification of the ElementName property.

425 **7.3.4.1 Modifying ElementName Is Supported — Conditional**

426 This subclause describes the CIM elements and behavior requirements when an implementation supports
427 client modification of the CIM_TextRedirectionSAP.ElementName property.

428 An instance of CIM_EnabledLogicalElementCapabilities shall be associated with the
429 CIM_TextRedirectionSAP instance through an instance of CIM_ElementCapabilities.

430 The CIM_EnabledLogicalElementCapabilities.ElementNameEditSupported property shall have a value of
431 TRUE.

432 The CIM_EnabledLogicalElementCapabilities.MaxElementNameLen property shall be implemented.

433 **7.3.4.2 Modifying ElementName Is Not Supported**

434 This subclause describes the CIM elements and behaviors that shall be implemented when the
435 CIM_TextRedirectionSAP.ElementName does not support being modified by the ModifyInstance
436 operation.

437 An instance of CIM_EnabledLogicalElementCapabilities may be associated with the
438 CIM_TextRedirectionSAP instance through an instance of CIM_ElementCapabilities.

439 When an instance of CIM_EnabledLogicalElementCapabilities exists, its ElementNameEditSupported
440 property shall have a value of FALSE.

441 When an instance of CIM_EnabledLogicalElementCapabilities exists, its MaxElementNameLen property
442 may be implemented. The MaxElementNameLen property is irrelevant in this context.

443 **7.4 State Management of a Text Console Redirection**

444 A Text Console Redirection shall have the state *inactive*, *available*, or *active*.

- 445 • The Text Console Redirection is *inactive* when the Text Console Flow is not being redirected to the
446 Session.
- 447 • The Text Console Redirection is *available* when the Text Console Flow is being redirected to the
448 Session, but the session is not actively being used.
- 449 • The Text Console Redirection is *active* when the Text Console Flow is being actively redirected to
450 the Session and the session is actively being used.

451 The state of a Text Console Redirection shall be reported by the implementation using the combined
452 states of the instance of CIM_TextRedirectionService and the instance of CIM_TextRedirectionSAP
453 (Session) that are associated through an instance of CIM_ServiceAccessBySAP as follows:

- 454 • When the value of CIM_TextRedirectionService.EnabledState is 2 (Enabled) and the value of
455 CIM_TextRedirectionSAP.EnabledState is 2 (Enabled), the Text Console Redirection shall be
456 considered in active state.
- 457 • When the value of CIM_TextRedirectionService.EnabledState is 2 (Enabled) and the value of
458 CIM_TextRedirectionSAP.EnabledState is 6 (Enabled but Offline), the Text Console Redirection
459 shall be considered in available state.
- 460 • Otherwise, the Text Console Redirection shall be considered in inactive state.

461 Table 2 provides details about conditions and Text Console Redirection states.

462

Table 2 – Determining Text Console Redirection State

Condition	State	Description
CIM_RedirectionService.EnabledState = 3 (Disabled) OR CIM_TextRedirectionSAP.EnabledState = 3 (Disabled)	inactive	Service and Service Access Point have not both been enabled. Text Console Flow is not being redirected.
CIM_RedirectionService.EnabledState = 2 (Enabled) AND CIM_TextRedirectionSAP.EnabledState = 6 (Enabled but Offline)	available	Service and Service Access Point have both been enabled. Text Console Flow is not currently being redirected.
CIM_RedirectionService.EnabledState = 2 (Enabled) AND CIM_TextRedirectionSAP.EnabledState = 2 (Enabled)	active	Both Service and Service Access Point have been enabled. Text Console Flow is currently being redirected and the session is actively being used.

463 The state of the Text Console Redirection may be affected using state management of the Session only,
 464 or state management of both the Service and the Session. The state of the Text Console Redirection may
 465 also be affected by external interactions and events (for example, when a management console
 466 application begins active use of a session). Note that a session may be considered as being actively used
 467 by the implementation even when the flow of data may appear “idle”.

468 The state management of the Service is discussed in 7.5. The state management of the Session is
 469 discussed in 7.6.

470 **7.5 State Management of a Text Console Redirection Service (Optional)**

471 Support for managing the state of a Text Console Redirection Service is optional behavior. The following
 472 subclauses describe the CIM elements and behaviors that allow the client to determine whether state
 473 management of the Service is supported.

474 **7.5.1 Text Console Redirection Service State Management Is Supported — Conditional**

475 This subclause describes the CIM elements and behaviors that shall be implemented when state
 476 management of the Service is supported.

477 **7.5.1.1 CIM_EnabledLogicalElementCapabilities**

478 When state management of the Service is supported, exactly one instance of
 479 CIM_EnabledLogicalElementCapabilities shall be associated with the instance of
 480 CIM_TextRedirectionService through an instance of CIM_ElementCapabilities.

481 The CIM_ElementCapabilities association's ManagedElement property shall reference the
 482 CIM_TextRedirectionService instance, and its Capabilities property shall reference the
 483 CIM_EnabledLogicalElementCapabilities instance.

484 **7.5.1.1.1 CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported**

485 The RequestedStatesSupported property shall contain one or more of the following values: 2 (Enabled) or
 486 3 (Disabled).

487 7.5.1.2 CIM_TextRedirectionService.RequestedState

488 When the CIM_TextRedirectionService.RequestStateChange() method is successfully invoked, the value
489 of the RequestedState property shall be the value of the RequestedState parameter. If the method is not
490 successfully invoked, the value of the RequestedState property is indeterminate.

491 The CIM_TextRedirectionService.RequestedState property shall have one of the values specified in the
492 CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported property or a value of 0 (Unknown).

493 7.5.1.3 CIM_TextRedirectionService.EnabledState

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

495 When the RequestedState parameter has a value of 2 (Enabled) or 3 (Disabled) and the
496 CIM_TextRedirectionService.RequestStateChange() method completes successfully, the value of the
497 EnabledState property shall equal the value of the CIM_TextRedirectionService.RequestedState
498 property.

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

500 7.5.2 Text Console Redirection Service State Management Is Not Supported

501 This subclause describes the CIM elements and behaviors that shall be implemented when management
502 of the Service state is not supported.

503 7.5.2.1 CIM_EnabledLogicalElementCapabilities

504 When state management is not supported, an instance of CIM_EnabledLogicalElementCapabilities may
505 be associated with the CIM_TextRedirectionService instance through an instance of
506 CIM_ElementCapabilities.

507 The CIM_ElementCapabilities association's ManagedElement property shall reference the
508 CIM_TextRedirectionService instance, and its Dependent property shall reference the
509 CIM_EnabledLogicalElementCapabilities instance.

510 7.5.2.1.1 CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported

511 The CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported property shall not contain any
512 values.

513 7.5.2.2 CIM_TextRedirectionService.RequestedState

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

515 7.5.2.3 CIM_TextRedirectionService.EnabledState

516 The EnabledState property shall have one of the following values: 2 (Enabled), 3 (Disabled), or 0
517 (Unknown). The value 0 (Unknown) may be set when non-CIM instrumentation has manipulated the
518 instance of CIM_TextRedirectionService.

519 7.6 State Management of a Text Console Redirection Session (Optional)

520 Support for managing the state of a Text Console Redirection Session is optional behavior. The following
521 subclauses describe the CIM elements and behaviors that allow the client to determine whether state
522 management of the Session is supported.

523 **7.6.1 Session State Management Is Supported — Conditional**

524 This subclause describes the CIM elements and behaviors that shall be implemented when state
525 management of the Session is supported.

526 **7.6.1.1 CIM_EnabledLogicalElementCapabilities**

527 When state management of the Session is supported, exactly one instance of
528 CIM_EnabledLogicalElementCapabilities shall be associated with each instance of
529 CIM_TextRedirectionSAP through an instance of CIM_ElementCapabilities.

530 The CIM_ElementCapabilities association's ManagedElement property shall reference the
531 CIM_TextRedirectionSAP instance, and its Dependent property shall reference the
532 CIM_EnabledLogicalElementCapabilities instance.

533 **7.6.1.1.1 CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported**

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

536 **7.6.1.2 CIM_TextRedirectionSAP.RequestedState**

537 When the CIM_TextRedirectionSAP.RequestStateChange() method is successfully invoked, the value of
538 the RequestedState property shall be the value of the RequestedState parameter. If the method is not
539 successfully invoked, the value of the RequestedState property is indeterminate.

540 The CIM_TextRedirectionSAP.RequestedState property shall have one of the values specified in the
541 CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported property or a value of 0 (Unknown).

542 **7.6.1.3 CIM_TextRedirectionSAP.EnabledState**

543 The EnabledState property shall have one of the following values: 2 (Enabled), 3 (Disabled), or 6
544 (Enabled but Offline). Note that the value of EnabledState is affected by the RequestStateChange()
545 method and the current state of the Text Console Redirection and Console Flow (see 7.5).

546 When the RequestedState parameter has a value of 2 (Enabled) and the
547 CIM_TextRedirectionSAP.RequestStateChange() method completes successfully, the value of the
548 EnabledState property shall equal either 2 (Enabled) or 6 (Enabled but Offline).

549 When the RequestedState parameter has a value of 6 (Enabled but Offline) and the
550 CIM_TextRedirectionSAP.RequestStateChange() method completes successfully, the value of the
551 EnabledState property shall equal either 2 (Enabled) or 6 (Enabled but Offline).

552 When the RequestedState parameter has a value of 3 (Disabled) and the
553 CIM_TextRedirectionSAP.RequestStateChange() method completes successfully, the value of the
554 EnabledState property shall equal 3 (Disabled).

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

556 **7.6.2 Text Console Redirection Session State Management Is Not Supported**

557 This subclause describes the CIM elements and behaviors that shall be implemented when management
558 of the Session state is not supported.

559 **7.6.2.1 CIM_EnabledLogicalElementCapabilities**

560 When state management is not supported, an instance of CIM_EnabledLogicalElementCapabilities may
561 be associated with the CIM_TextRedirectionSAP instance through an instance of

562 CIM_ElementCapabilities. The existence of the CIM_ElementCapabilities instance is conditional on the
563 existence of the CIM_EnabledLogicalElementCapabilities instance.

564 The CIM_ElementCapabilities association's ManagedElement property shall reference the
565 CIM_TextRedirectionSAP instance, and its Dependent property shall reference the
566 CIM_EnabledLogicalElementCapabilities instance.

567 **7.6.2.1.1 CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported**

568 The CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported property shall not contain any
569 values.

570 **7.6.2.2 CIM_TextRedirectionSAP.RequestedState**

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

572 **7.6.2.3 CIM_TextRedirectionSAP.EnabledState**

573 The EnabledState property shall have one of the following values: 2 (Enabled), 3 (Disabled), 5 (Not
574 Applicable), or 6 (Enabled but Offline). The value 5 (Not Applicable) may be set when non-CIM
575 instrumentation has manipulated the instance of CIM_TextRedirectionSAP.

576 **8 Methods**

577 This clause details the requirements for supporting intrinsic operations and extrinsic methods for the CIM
578 elements defined by this profile.

579 **8.1 CIM_TextRedirectionService.RequestStateChange()**

580 Invocation of the RequestStateChange() method changes the element's state to the value specified in the
581 RequestedState parameter. The 2 (Enabled) and 3 (Disabled) values of the RequestedState parameter
582 shall correspond to the enabled and disabled states of the Text Console Redirection Service,
583 respectively.

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

585 Detailed requirements of the RequestStateChange() method are specified in Table 3 and Table 4.

586 No standard messages are defined.

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

589 **Table 3 – CIM_TextRedirectionService.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.

590

Table 4 – CIM_TextRedirectionService.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

591 **8.1.1 CIM_TextRedirectionService.RequestStateChange() — Conditional Support**

592 When an instance of CIM_EnabledLogicalElementCapabilities is associated with the
 593 CIM_TextRedirectionService instance and the
 594 CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported property contains at least one
 595 value, the CIM_TextRedirectionService.RequestStateChange() method shall be implemented and
 596 supported. The CIM_TextRedirectionService.RequestStateChange() method shall not return a value of 1
 597 (Not Supported).

598 **8.2 CIM_TextRedirectionSAP.RequestStateChange()**

599 Invocation of the RequestStateChange() method changes the element’s state to the value specified in the
 600 RequestedState parameter. The 2 (Enabled), 3 (Disabled), and 6 (Enabled but Offline) values of the
 601 RequestedState parameter shall correspond to enabled, disabled, and enabled-but-offline states for the
 602 Session, respectively.

603 Detailed requirements of the RequestStateChange() method are specified in Table 5 and Table 6.

604 No standard messages are defined.

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

607 **Table 5 – CIM_TextRedirectionSAP.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.

608

Table 6 – CIM_TextRedirectionSAP.RequestStateChange() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	RequestedState	uint16	Valid state values: 2 (Enabled) 3 (Disabled) 6 (Offline)
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

609 **8.2.1 CIM_TextRedirectionSAP.RequestStateChange() — Conditional Support**

610 When an instance of CIM_EnabledLogicalElementCapabilities is associated with the
611 CIM_TextRedirectionSAP instance and the
612 CIM_EnabledLogicalElementCapabilities.RequestedStatesSupported property contains at least one
613 value, the CIM_TextRedirectionSAP.RequestStateChange() method shall be implemented and
614 supported. The CIM_TextRedirectionSAP.RequestStateChange() method shall not return a value of
615 1 (Not Supported).

616 **8.2.2 Enabling a Singular Text Console Redirection**

617 When the instance of CIM_TextRedirectionSAP is associated with an instance of
618 CIM_TextRedirectionService whose MaxCurrentEnabledSAPs property has a value of 1, the method shall
619 exhibit the following additional behavior.

620 When the CIM_TextRedirectionSAP.RequestedState parameter has a value of 2 (Enabled) and the
621 CIM_TextRedirectionSAP.RequestStateChange() method completes successfully, the value of the
622 EnabledState property of all other instances of CIM_TextRedirectionSAP associated with the instance of
623 CIM_TextRedirectionService shall be set to 3 (Disabled).

624 **8.3 Profile Conventions for Operations**

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

627 The default list of operations is as follows:

- 628 • GetInstance
- 629 • Associators
- 630 • AssociatorNames
- 631 • References
- 632 • ReferenceNames
- 633 • EnumerateInstances
- 634 • EnumerateInstanceNames

635 **8.4 CIM_BindsTo**

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

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

640 **Table 7 – Operations: CIM_BindsTo**

Operation	Requirement	Messages
GetInstance	Mandatory	None

641 **8.5 CIM_ElementCapabilities**

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

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

646 **Table 8 – Operations: CIM_ElementCapabilities**

Operation	Requirement	Messages
GetInstance	Mandatory	None

647 **8.6 CIM_EnabledLogicalElementCapabilities**

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

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

652 **Table 9 – Operations: CIM_EnabledLogicalElementCapabilities**

Operation	Requirement	Messages
GetInstance	Mandatory	None
Associators	Mandatory	None
AssociatorNames	Mandatory	None
References	Mandatory	None
ReferenceNames	Mandatory	None
EnumerateInstances	Mandatory	None
EnumerateInstanceNames	Mandatory	None

653 **8.7 CIM_HostedService**

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

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

658

Table 10 – Operations: CIM_HostedService

Operation	Requirement	Messages
GetInstance	Mandatory	None

659 8.8 CIM_HostedAccessPoint

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

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

664

Table 11 – Operations: CIM_HostedAccessPoint

Operation	Requirement	Messages
GetInstance	Mandatory	None

665 8.9 CIM_ServiceAffectsElement

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

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

670

Table 12 – Operations: CIM_ServiceAffectsElement

Operation	Requirement	Messages
GetInstance	Mandatory	None

671 8.10 CIM_ServiceAccessBySAP

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

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

676

Table 13 – Operations: CIM_ServiceAccessBySAP

Operation	Requirement	Messages
GetInstance	Mandatory	None

677 8.11 CIM_TextRedirectionService

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

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

682

Table 14 – Operations: CIM_TextRedirectionService

Operation	Requirement	Messages
GetInstance	Mandatory	None
ModifyInstance	Optional	See 8.11.1.
Associators	Mandatory	None
AssociatorNames	Mandatory	None
References	Mandatory	None
ReferenceNames	Mandatory	None
EnumerateInstances	Mandatory	None
EnumerateInstanceNames	Mandatory	None

683 **8.11.1 CIM_TextRedirectionService — ModifyInstance**

684 This subclause details the specific requirements for the ModifyInstance operation applied to an instance
685 of CIM_TextRedirectionService.

686 **8.11.1.1 CIM_TextRedirectionService.ElementName Property**

687 When an instance of CIM_EnabledLogicalElementCapabilities is associated with the
688 CIM_TextRedirectionService instance and the
689 CIM_EnabledLogicalElementCapabilities.ElementNameEditSupported property has a value of TRUE, the
690 implementation shall allow the ModifyInstance operation to change the value of the ElementName
691 property of the CIM_TextRedirectionService instance. The ModifyInstance operation shall enforce the
692 length restriction specified in the MaxElementNameLen property of the
693 CIM_EnabledLogicalElementCapabilities instance.

694 When no instance of CIM_EnabledLogicalElementCapabilities is associated with the
695 CIM_TextRedirectionService instance, or the ElementNameEditSupported property of the
696 CIM_EnabledLogicalElementCapabilities instance has a value of FALSE, the implementation shall not
697 allow the ModifyInstance operation to change the value of the ElementName property of the
698 CIM_TextRedirectionService instance.

699 **8.12 CIM_TextRedirectionSAP**

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

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

704

Table 15 – Operations: CIM_TextRedirectionSAP

Operation	Requirement	Messages
GetInstance	Mandatory	None
ModifyInstance	Optional	See 8.12.1.
Associators	Mandatory	None
AssociatorNames	Mandatory	None
References	Mandatory	None
ReferenceNames	Mandatory	None
EnumerateInstances	Mandatory	None
EnumerateInstanceNames	Mandatory	None

705 8.12.1 CIM_TextRedirectionSAP — ModifyInstance

706 This subclause details the specific requirements for the ModifyInstance operation applied to an instance
707 of CIM_TextRedirectionSAP.

708 8.12.1.1 CIM_TextRedirectionSAP.ElementName Property

709 When an instance of CIM_EnabledLogicalElementCapabilities is associated with the
710 CIM_TextRedirectionSAP instance and the
711 CIM_EnabledLogicalElementCapabilities.ElementNameEditSupported property has a value of TRUE, the
712 implementation shall allow the ModifyInstance operation to change the value of the ElementName
713 property of the CIM_TextRedirectionSAP instance. The ModifyInstance operation shall enforce the length
714 restriction specified in the MaxElementNameLen property of the CIM_EnabledLogicalElementCapabilities
715 instance.

716 When no instance of CIM_EnabledLogicalElementCapabilities is associated with the
717 CIM_TextRedirectionSAP instance, or the ElementNameEditSupported property of the
718 CIM_EnabledLogicalElementCapabilities instance has a value of FALSE, the implementation shall not
719 allow the ModifyInstance operation to change the value of the ElementName property of the
720 CIM_TextRedirectionSAP instance.

721 9 Use Cases

722 This clause contains object diagrams and use cases specific to the *Text Console Redirection Profile*. The
723 use cases are informative and are not intended to define the requirements for conformance.

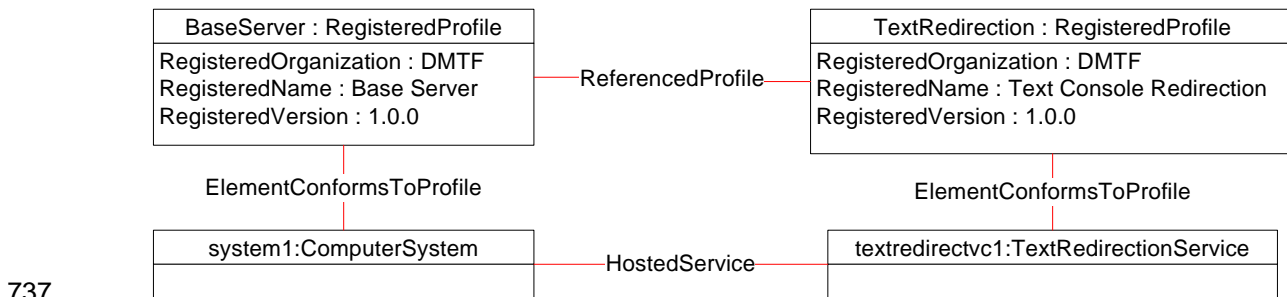
724 9.1 Advertising the Profile Conformance

725 Figure 2 shows how instances of CIM_RegisteredProfile are used to identify the version of the *Text*
726 *Console Redirection Profile* with which an instance of CIM_TextRedirectionService and its associated
727 instances conform.

728 An instance of CIM_RegisteredProfile exists for each profile that is instrumented in the system. One
729 instance of CIM_RegisteredProfile identifies the DMTF *Base Server Profile*, version 1.0.0. The other
730 instance identifies the *Text Console Redirection Profile*, version 1.0.0. The Central Instance is the
731 CIM_TextRedirectionService. The Scoping Instance is the CIM_ComputerSystem instance.

732 This instance of CIM_ComputerSystem conforms with the *Base Server Profile* version 1.0.0 as indicated
733 by the CIM_ElementConformsToProfile association with the CIM_RegisteredProfile instance.

734 This instance of CIM_TextRedirectionService conforms with the *Text Console Redirection Profile* version
 735 1.0.0 as indicated by the CIM_ElementConformsToProfile association with the CIM_RegisteredProfile
 736 instance.



737

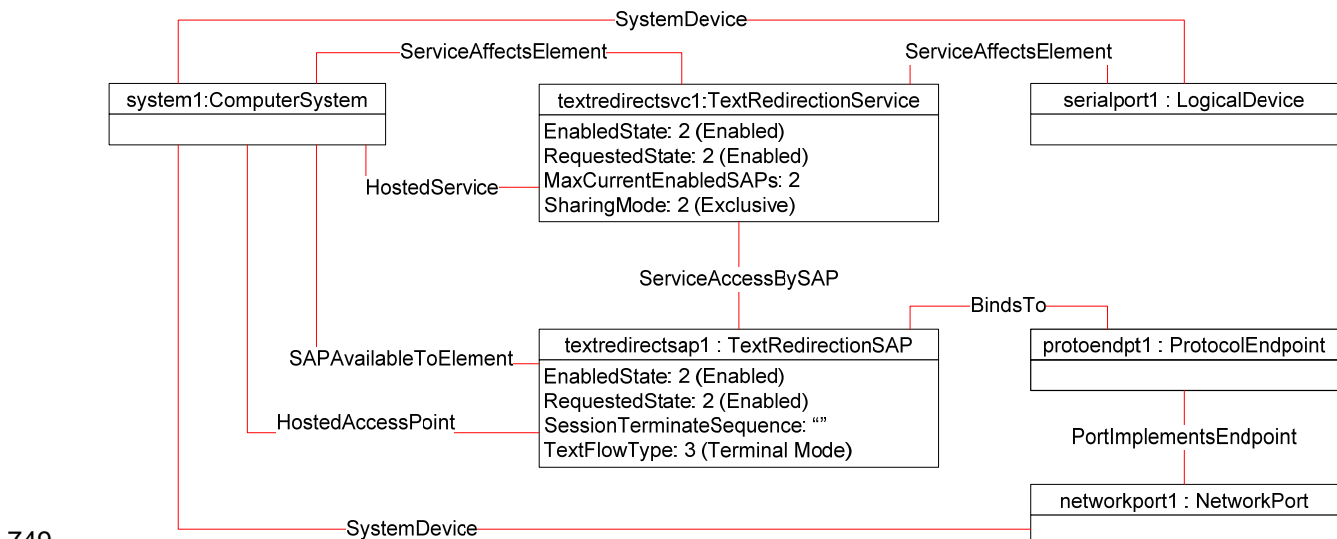
738

Figure 2 – Registered Profile

739 **9.2 Object Diagrams for a Monolithic Server**

740 Figure 3 shows a monolithic server, system1, which has a text console redirection service that can
 741 redirect the text console from the serial port to the network port. Both the serial port and the network port
 742 are part of system1 and are modeled by the instances of CIM_SystemDevice.

743 The text console session is represented with a source (textredirectsvc1), a destination (textredirectsap1),
 744 and the instance of the CIM_ServiceAccessBySAP association between them. The Text Console
 745 Redirection Service (textredirectsvc1) is hosted on system1 as represented by the CIM_HostedService
 746 association between system1 and textredirectsvc1. The service (textredirectsvc1) affects system1 as
 747 represented by the CIM_ServiceAffectsElement association between system1 and textredirectsvc1. This
 748 association signifies that system1 is the source of the text console that can be redirected.



749

750

Figure 3 – Monolithic System

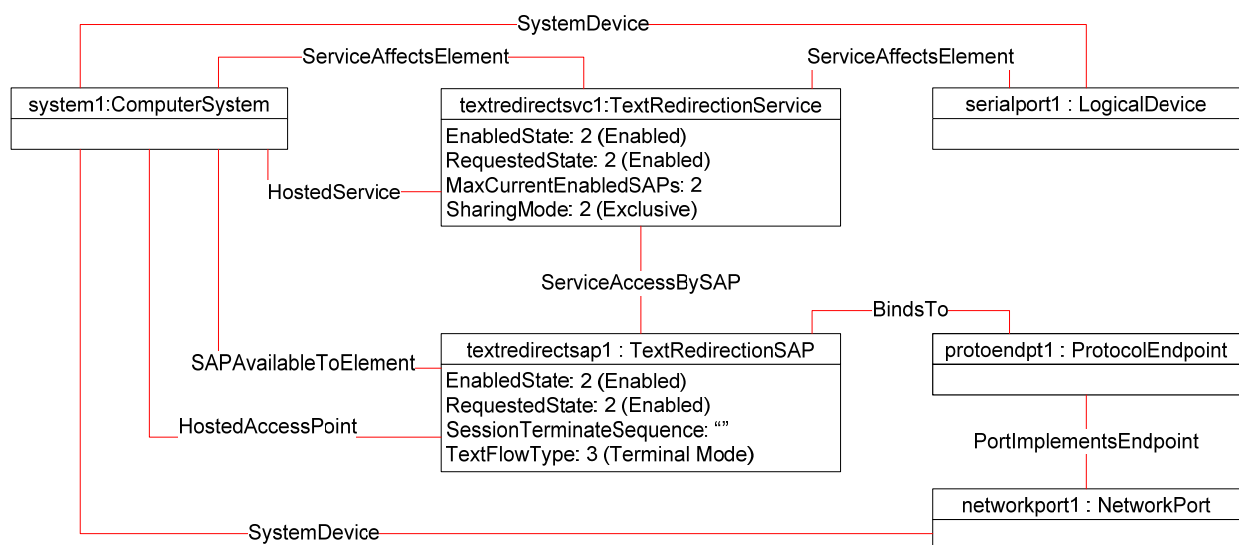
751 The service also affects serialport1 as represented by the CIM_ServiceAffectsElement association
 752 between serialport1 and textredirectsvc1. serialport1 is an instance of CIM_LogicalDevice. This
 753 association signifies that serialport1 is the Original Destination of a text console that can be redirected.

754 The Text Console Redirection Session (textredirectsap1) is hosted on system1 as represented by the
 755 CIM_HostedAccessPoint association between system1 and textredirectsap1. The Session
 756 (textredirectsap1) provides a SAP for system1 as represented by the CIM_SAPAvailableForElement
 757 association between system1 and textredirectsap1.

758 From textredirectsap1, the CIM_BindsTo association can be traversed to the CIM_ProtocolEndpoint
 759 (protoendpt1). Note that the CIM_ProtocolEndpoint can represent any protocol endpoint, such as SSH,
 760 Telnet or TCP. From protoendpt1, the CIM_PortImplementsEndpoint association can be traversed to the
 761 network port (networkport1), a device on system1.

762 The Text Console Redirection specified by textredirectsvc1 and textredirectsap1 is active because the
 763 state of the textredirectsvc1 is 2 (Enabled) and the state of the textredirectsap1 is 2 (Enabled).

764 Figure 4 shows a monolithic server, system1, which has a text console redirection service that can
 765 redirect the text console from the serial port (serialport1) to another serial port (serialport2) on the system.
 766 Both the serial ports are part of system1 and are modeled by the instances of CIM_SystemDevice.



767

768 **Figure 4 – Monolithic System—Serial to Serial**

769 9.3 Object Diagram for Monolithic Server with Service Processor

770 Figure 5 shows a monolithic server with a service processor.

771 The diagram is similar to Figure 3, but Figure 5 contains an instance of CIM_ComputerSystem, sp1, that
 772 represents the service processor, which has a network port.

773 The Text Console Redirection Service (textredirectsvc1) is hosted on sp1 as represented by the
 774 CIM_HostedService association between sp1 and textredirectsvc1.

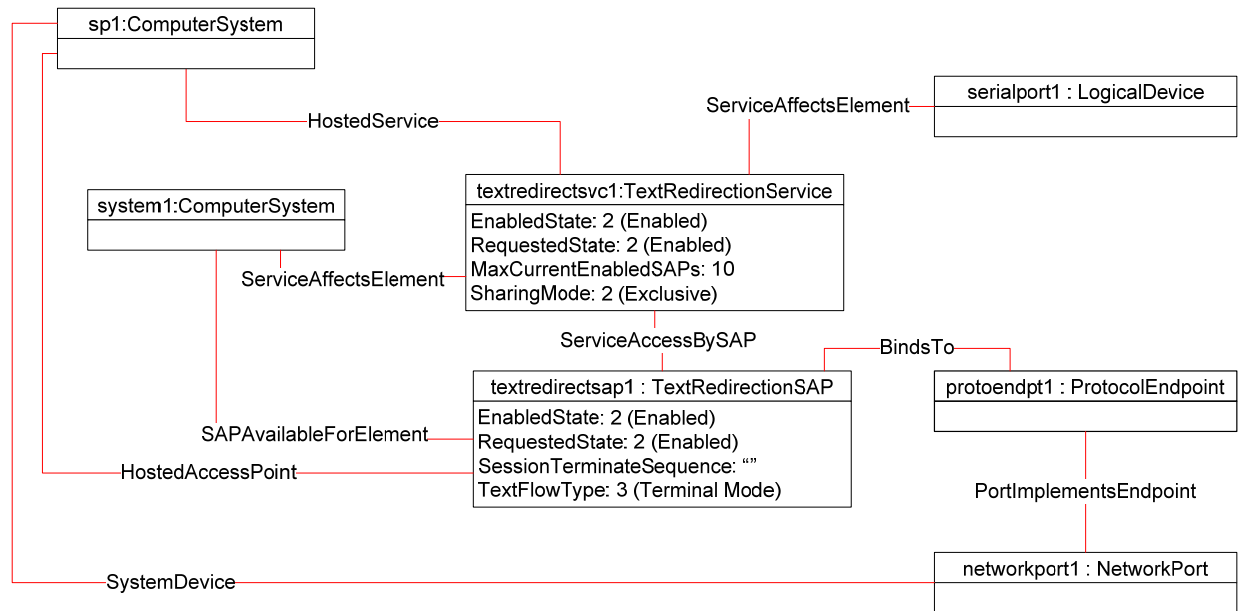
775 The service affects system1 as represented by the CIM_ServiceAffectsElement association between
 776 system1 and textredirectsvc1. This association signifies that system1 is the source of the text console that
 777 can be redirected.

778 The service also affects serialport1 as represented by the CIM_ServiceAffectsElement association
 779 between serialport1 and textredirectsvc1. This association signifies that serialport1 is the Original
 780 Destination of a text console that can be redirected.

781 The Text Console Redirection Session (textredirectsap1) is hosted on sp1 as represented by the
 782 CIM_HostedAccessPoint association between sp1 and textredirectsap1. The Session (textredirectsap1)
 783 provides a SAP for system1 as represented by the CIM_SAPAvailableForElement association between
 784 system1 and textredirectsap1.

785 From textredirectsap1, the CIM_BindsTo association can be traversed to the CIM_ProtocolEndpoint
 786 (protoendpt1). From protoendpt1, the CIM_PortImplementsEndpoint association can be traversed to the
 787 network port (networkport1), a device on sp1.

788 The Text Console Redirection specified by textredirectsvc1 and textredirectsap1 is active because the
 789 state of the textredirectsvc1 is 2 (Enabled) and the state of the textredirectsap1 is 2 (Enabled).



790

791

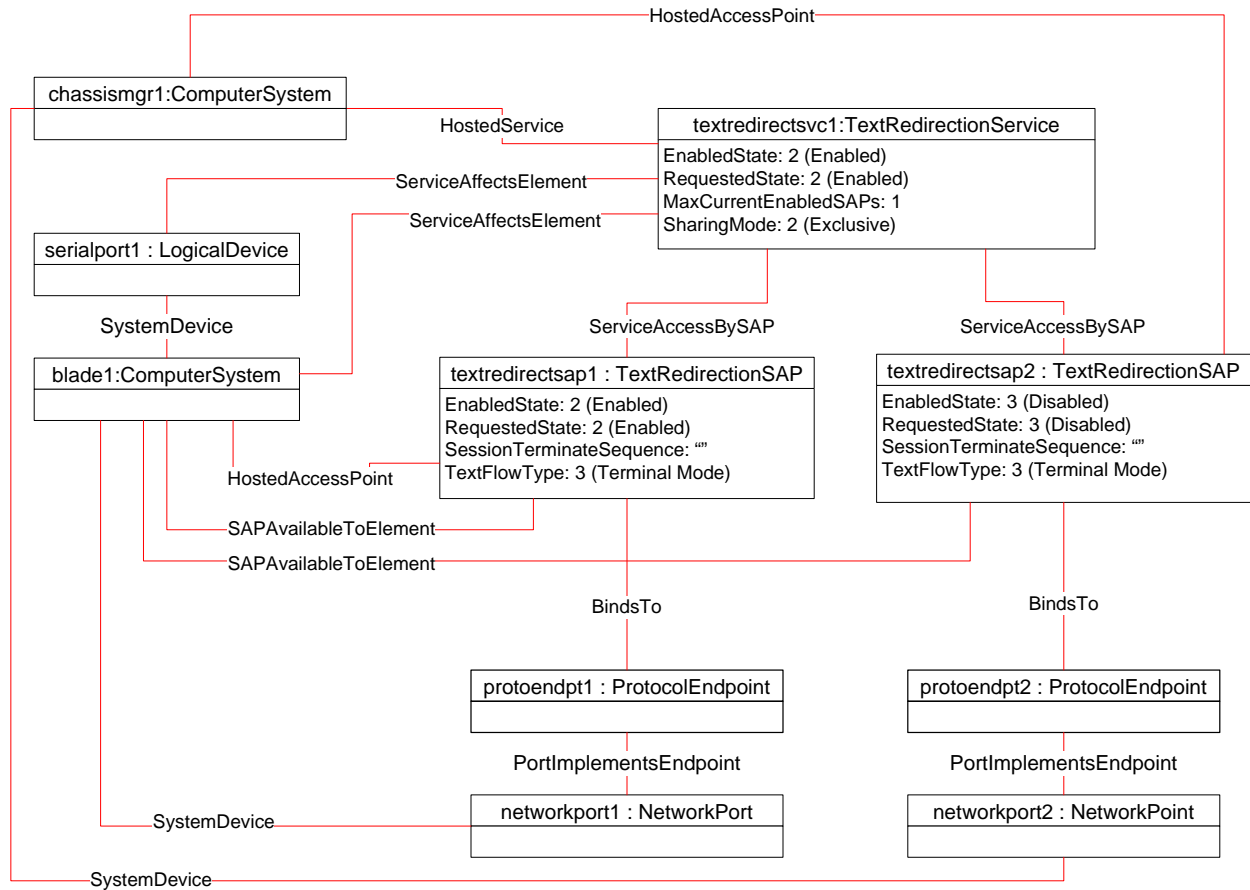
Figure 5 – Monolithic System with Service Processor

792 9.4 Object Diagram for a Modular System

793 The Figure 6 shows a modular system that can redirect the serial port on a blade to the network port of
 794 the chassis management module (CMM) or the network port of the blade. The CMM is represented by an
 795 instance of CIM_ComputerSystem, chassismgr1. The blade is represented by an instance of
 796 CIM_ComputerSystem, blade1.

797 The Text Console Redirection Service (textredirectsvc1) is hosted on chassismgr1 as represented by the
 798 CIM_HostedService association between chassismgr1 and textredirectsvc1. The service affects blade1
 799 as represented by the CIM_ServiceAffectsElement association between blade1 and textredirectsvc1. This
 800 association signifies that blade1 is the source of the text console that can be redirected.

801 The service also affects serialport1 as represented by the CIM_ServiceAffectsElement association
 802 between serialport1 and textredirectsvc1. This association signifies that serialport1 is the Original
 803 Destination of a text console that can be redirected. The instance serialport1 is associated to blade1
 804 through an instance of CIM_SystemDevice.



805

806

Figure 6 – Modular System

807 Two Text Console Redirection Sessions exist: textredirectsap1 and textredirectsap2. Each is associated
808 with the Service through an instance of CIM_ServiceAccessBySAP.

809 One Text Console Redirection Session (textredirectsap1) is hosted on blade1, as represented by the
810 CIM_HostedAccessPoint association between blade1 and textredirectsap1. The Session
811 (textredirectsap1) provides a SAP for blade1, as represented by the CIM_SAPAvailableForElement
812 association between blade1 and textredirectsap1.

813 From textredirectsap1, the CIM_BindsTo association can be traversed to the CIM_ProtocolEndpoint
814 (protoendpt1). From protoendpt1, the CIM_PortImplementsEndpoint association can be traversed to the
815 network port (networkport1), a device on blade1.

816 The other Text Console Redirection Session (textredirectsap2) is hosted on chassismgr1 as represented
817 by the CIM_HostedAccessPoint association between chassismgr1 and textredirectsap2. The Session
818 (textredirectsap2) also provides a SAP for blade1, as represented by the CIM_SAPAvailableForElement
819 association between blade1 and textredirectsap2.

820 From textredirectsap2, the CIM_BindsTo association can be traversed to the CIM_ProtocolEndpoint
821 (protoendpt2). From protoendpt2, the CIM_PortImplementsEndpoint association can be traversed to the
822 network port (networkport2), a device on chassismgr1.

823 Note that both textredirectsap1 and textredirectsap2 are associated with blade1 through the
824 CIM_SAPAvailableForElement association, because blade1 is the source of the text console redirection
825 regardless of whether the SAP is hosted on the blade1 or chassismgr1.

826 In the figure, the Text Console Redirection specified by textredirectsvc1 and textredirectsap1 is active
827 because the state of textredirectsvc1 is 2 (Enabled) and the state of textredirectsap1 is 2 (Enabled). The
828 state of textredirectsap2 is 3 (Disabled), which means that the session specified by textredirectsvc1 and
829 textredirectsap2 is not permitted to be made active.

830 **9.5 Determine Whether a System Has Text Consoles That Can Be Redirected**

831 A client can determine whether a computer system of interest has text consoles that can be redirected as
832 follows:

- 833 1) Start at the instance of CIM_ComputerSystem that represents the computer system whose text
834 consoles are of interest.
- 835 2) Enumerate the instances of the CIM_TextRedirectionService that are associated with the
836 CIM_ComputerSystem instance through an instance of CIM_ServiceAffectsElement.

837 If the enumeration is zero, the computer system has no text console that can be redirected.

838 Otherwise, the computer system has at least one text console that can be redirected. Each
839 instance of CIM_TextRedirectionService represents a Service on the computer system.

840 **9.6 Determine Whether a Serial Port Can Be Redirected**

841 A client can determine whether a serial port of interest can be redirected as follows:

- 842 1) Start at the instance of CIM_LogicalDevice that represents the serial port of interest.
- 843 2) Enumerate the instances of the CIM_TextRedirectionService that are associated with the
844 CIM_LogicalDevice through an instance of CIM_ServiceAffectsElement.

845 If the enumeration is zero, the serial port cannot be redirected.

846 Otherwise, the serial port of interest is the Original Destination for at least one Text Console
847 Redirection. Each Text Console Redirection can be found by using the
848 CIM_TextRedirectionService instance as the Service.

849 **9.7 Find the Text Console Redirection Services for a Computer System**

850 A client can determine the Text Console Redirection Service on a computer system of interest as follows:

- 851 1) Start at the instance of CIM_ComputerSystem that represents the computer system of interest.
- 852 2) Enumerate the instances of the CIM_TextRedirectionService that are associated with the
853 CIM_ComputerSystem through an instance of CIM_ServiceAffectsElement.

854 Each instance of CIM_TextRedirectionService is a Text Console Redirection Service for the
855 computer system of interest.

856 **9.8 Find the Original Destinations on a Computer System**

857 A client can determine the sources of Text Console Flows (or Original Destinations) on a computer
858 system of interest as follows:

- 859 1) Start at the instance of CIM_ComputerSystem that represents the computer system of interest.
- 860 2) Determine the Text Console Redirection Services for the computer system by using the use
861 case in 9.7.
- 862 3) From each instance of CIM_TextRedirectionService found, determine if an instance of
863 CIM_LogicalDevice is associated with the instance of CIM_TextRedirectionService through an
864 instance of CIM_ServiceAffectsElement.

865 If an instance of CIM_LogicalDevice does not exist, there may be no further information to
866 determine the Original Destination of the Text Console Redirection Service.

867 Each instance of CIM_LogicalDevice found is an Original Destination for the computer system
868 of interest.

869 **9.9 Find the Text Console Redirection Sessions for a Service**

870 A client can determine the Text Console Redirection Sessions for a Service of interest as follows:

- 871 1) Start at the instance of CIM_TextRedirectionService of interest. (The instance can be found
872 using the use case in 9.6.)
- 873 2) Enumerate the instances of CIM_TextRedirectionSAP that are associated through an instance
874 of CIM_ServiceAccessBySAP.
- 875 3) Each instance of CIM_TextRedirectionSAP is a Text Console Redirection Session for the
876 computer system of interest.

877 **9.10 Find the Destinations for the Redirected Text Console Flow for a Service**

878 A client can determine the text console redirection destinations redirected from a Service of interest as
879 follows:

- 880 1) Start at the instance of CIM_TextRedirectionService of interest. (The instance can be found
881 using the use case in 9.6.)
 - 882 2) Determine the Text Console Redirection Sessions using the use case in 9.9.
 - 883 3) From each instance of CIM_TextRedirectionSAP, determine an instance of a subclass of
884 CIM_ProtocolEndpoint is associated with the instance of CIM_TextRedirectionSAP through an
885 instance of CIM_BindsTo.
- 886 If an instance of CIM_ProtocolEndpoint does not exist, there may be no further information to
887 determine the Destination of the Text Console Redirection Session.
- 888 4) Otherwise, for each instance of CIM_ProtocolEndpoint found, traverse the
889 CIM_PortImplementsEndpoint association to the instance of CIM_NetworkPort or
890 CIM_LogicalDevice.

891 Each instance of CIM_NetworkPort or CIM_LogicalDevice is a destination of the redirected Text
892 Console Flow for the Service.

893 **9.11 Find a Text Console Redirection**

894 Finding a Text Console Redirection involves finding the Text Console Redirection Service and the Text
895 Console Redirection Session.

896 A client can find a Text Console Redirection as follows:

- 897 1) Use the steps described in 9.7 to find the CIM_TextRedirectionService instance of interest.
- 898 2) Use the steps described in 9.9 to find the CIM_TextRedirectionSAP instance of interest.

899 The instance of CIM_TextRedirectionService and instance of CIM_TextRedirectionSAP are
900 components the Text Console Redirection of interest.

9.12 Determine Whether the CLP Session Is Being Used as the Redirected Text Console Destination

A client can determine whether the CLP session is being used as a destination for redirected Text Console Flow as follows:

- 1) Start at the instance of CIM_CLPProtocolEndpoint that represents the protocol endpoint used for the CLP session.
- 2) Enumerate the CIM_BindsTo associations that reference an instance of CIM_TextRedirectionSAP.

If the enumeration returns zero, the redirected text console does not use the CLP session.

Otherwise, each Text Console Redirection Session found uses the CLP session as the destination for a redirection Text Console Flow when activated.

9.13 Determine the Type of Text Console Redirection State Management Supported

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

- 1) Start at the instance of CIM_TextRedirectionService that is a part of the Text Console Redirection of interest.
- 2) Determine whether an instance of CIM_ElementCapabilities exists that associates the instance of CIM_TextRedirectionService with an instance of CIM_EnabledLogicalElementCapabilities.

If the instance does not exist, the Text Console Redirection Session is managed through the state of the Session only.

- 3) Otherwise, on the instance of CIM_EnabledLogicalElementCapabilities found, query the value of the RequestedStateSupported property array.

If the RequestedStatesSupported property array contains no values, the Text Console Redirection is managed through the state of the Session only.

Otherwise, the Text Console Redirection can be managed through the state of both the Service and the Session.

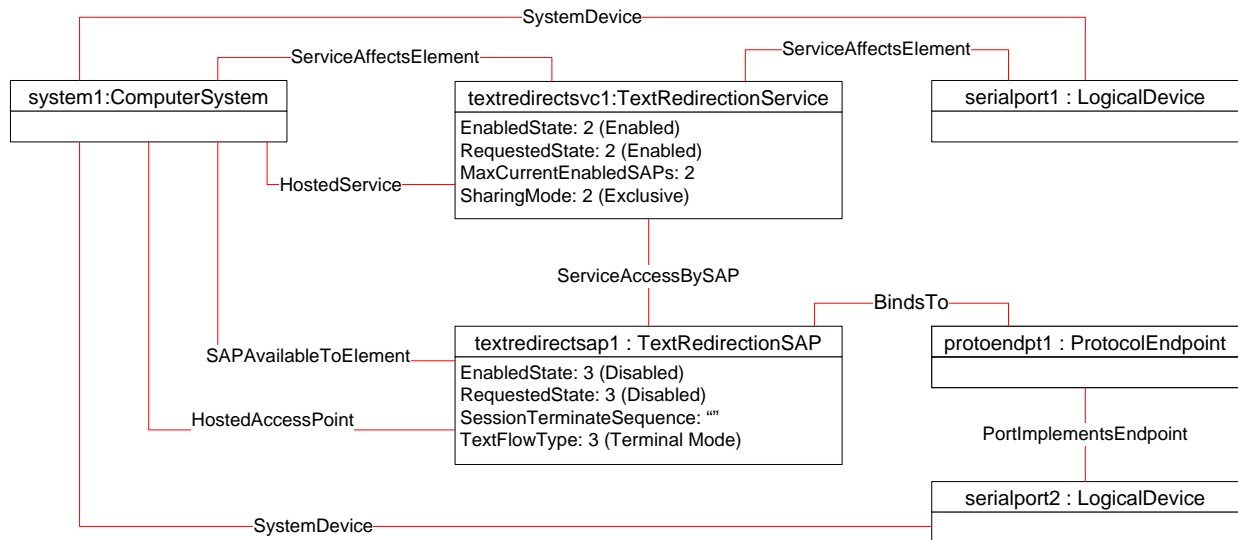
9.14 Activate a Text Console Redirection Session — Session Only

When the Text Console Redirection is managed through the state of the Session only, a client can start a text console redirection as follows:

- 1) Start at the instance of the CIM_TextRedirectionSAP that is a component of the Text Console Redirection of interest.
- 2) Invoke the RequestStateChange() method with the RequestedState parameter set to 2 (Enabled).
- 3) Verify that the CIM_TextRedirectionSAP.EnabledState property is set to a value of 6 (Enabled but Offline) or 2 (Enabled).
- 4) The Text Console Redirection is now available and may be active.

Figure 7 shows an initial state of the Text Console Redirection as inactive because the state of textredirectsvc1 is 2 (Enabled), but the state of textredirectsap1 is 3 (Disabled). The preceding steps change the state of textredirectsap1 to 6 (Enabled but Offline), thereby activating the Text Console Redirection specified by textredirectsvc1 and textredirectsap1. When the implementation detects that

942 Text Console Redirection Flow is active, the diagram of the active Text Console Redirection will look like
 943 Figure 3.



944

945 **Figure 7 – Initial State of a Redirection Managed Through the Session State Only**

946 9.15 Activate a Singular Text Console Redirection

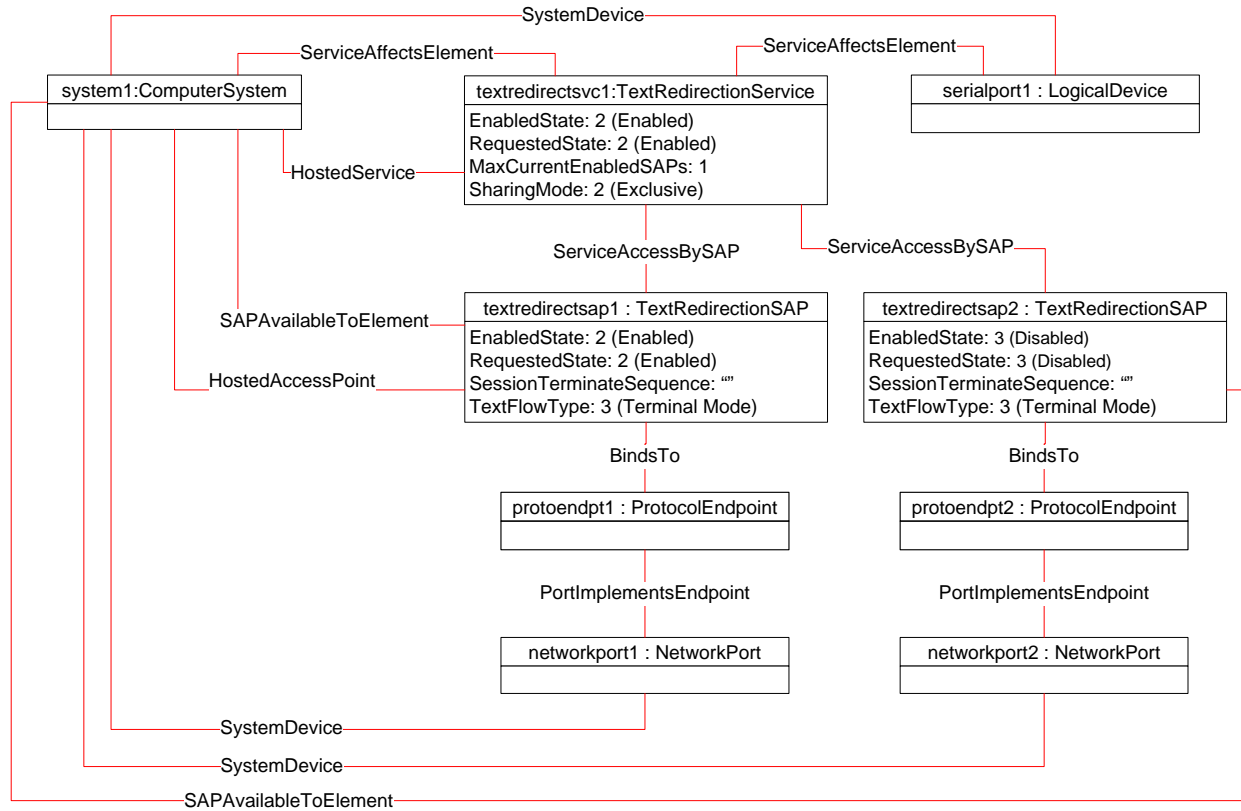
947 When the Text Console Redirection is a Singular Text Console Redirection, a client can atomically
 948 activate a Text Console Redirection and deactivate a previously activated Text Console Redirection (see
 949 8.2.2).

950 This behavior is accomplished as follows:

- 951 1) Start at the instance of the CIM_TextRedirectionSAP that is a component of the Text Console
 952 Redirection of interest.
- 953 2) Invoke the RequestStateChange() method with the RequestedState parameter set to 2
 954 (Enabled).
- 955 3) Verify that the CIM_TextRedirectionSAP.EnabledState property is set to a value of 6 (Enabled
 956 but Offline) or 2 (Enabled).
- 957 4) The Text Console Redirection is now available and may be active and any previously active
 958 session is now inactive.

959 Figure 8 shows the object diagram of the initial state of a Singular Text Console Redirection. Note that the
 960 MaxCurrentEnabledSAPs property of textredirectsvc1 is 1, by definition. The state of the Singular Text
 961 Console Redirection, specified by textredirectsvc1 and textredirectsap1, is active because the state of
 962 textredirectsvc1 is 2 (Enabled), but the state of textredirectsap1 is 2 (Enabled).

963



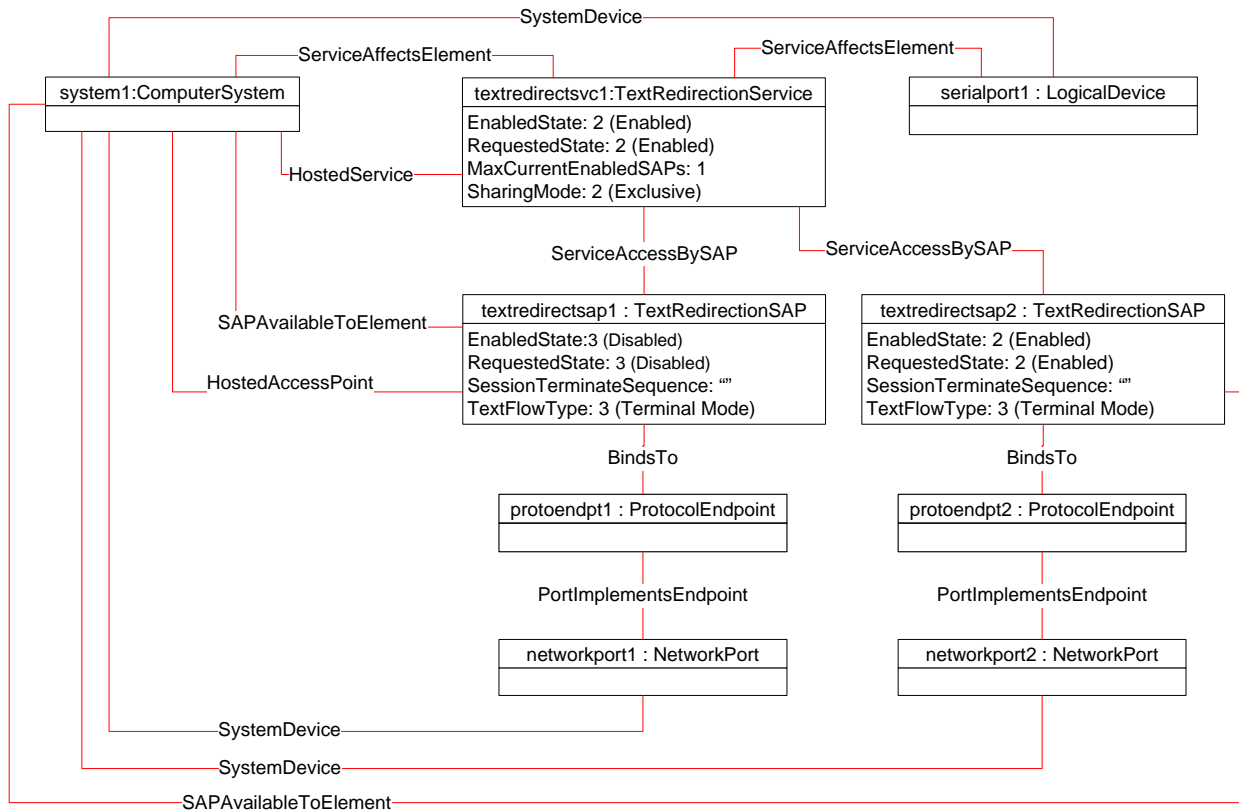
964

965

Figure 8 – Initial State of a Singular Text Console Redirection

966 The preceding steps change the state of the textredirectsap1 to 3 (Disabled) and the state of the
 967 textredirectsap2 to 6 (Enabled but Offline) or 2 (Enabled). The result is that the Text Console Redirection
 968 specified by textredirectsvc1 and textredirectsap2 is available or active, while the Text Console
 969 Redirection specified by textredirectsvc1 and textredirectsap1 is inactive.

970 Figure 9 shows the final state of the Singular Text Console Redirection when the call to the
 971 RequestStateChange() method completes successfully and the implementation detects that the Text
 972 Console Redirection Flow is active.



973

974

Figure 9 – Final State of a Singular Text Console Redirection

975 9.16 Stop All Text Console Redirections Associated with the Source—Session 976 Only

977 In the following use case, it is assumed that the client knows the instance of CIM_TextRedirectionService
978 that specifies the Text Console Redirection Service of interest.

979 When the Text Console Redirection is managed through the state of the Session only, a client can stop
980 all Text Console Redirection as follows:

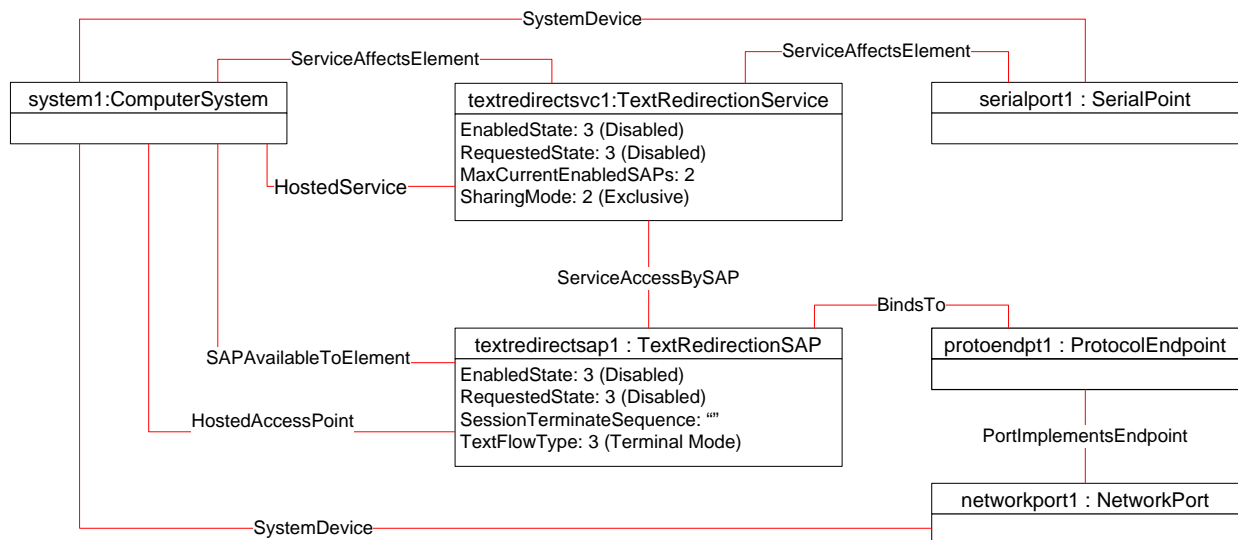
- 981 1) Start at the instance of the CIM_TextRedirectionService that represents the Text Console
982 Redirection of interest.
- 983 2) Enumerate the instances of CIM_TextRedirectionSAP that are associated with the instance of
984 CIM_TextRedirectionService through an instance of CIM_ServiceAccessBySAP.
- 985 3) For each instance of CIM_TextRedirectionSAP found, query the value of the EnabledState
986 property.
- 987 4) If the state of the CIM_TextRedirectionSAP is not 3 (Disabled), invoke the
988 RequestStateChange() method with the RequestedState parameter set to 3 (Disabled).
- 989 5) Verify that the CIM_TextRedirectionSAP.EnabledState property is set to a value of 3 (Disabled).
- 990 6) Each Text Console Redirection redirected from the Service is now inactive.

991 **9.17 Activate a Text Console Redirection — Service and Session State**
 992 **Management**

993 When the Text Console Redirection is managed through the states of both the Service and Session, a
 994 client can start a text console redirection as follows:

- 995 1) Start at the CIM_TextRedirectionService instance of interest.
- 996 2) Invoke the RequestStateChange() method with the RequestedState parameter set to 2
 997 (Enabled).
- 998 3) Verify that the CIM_TextRedirectionService.EnabledState property is set to a value of 2
 999 (Enabled).
- 1000 4) Invoke the CIM_TextRedirectionSAP.RequestStateChange() method with the RequestedState
 1001 parameter set to 2 (Enabled).
- 1002 5) Verify that the CIM_TestRedirectionSAP.EnabledState property is set to a value of 6 (Enabled
 1003 but Offline) or 2 (Enabled).
- 1004 6) The Text Console Redirection is now available or, if Text Console Redirection Flow has started,
 1005 active.

1006 Figure 10 shows the initial state of the Text Console Redirection as inactive because the state of
 1007 textredirctsvc1 is 3 (Disabled) and the state of textredirctsap1 is 3 (Disabled).. The preceding steps
 1008 change the state of textredirctsap1 to 6 (Enabled but Offline) and the state of textredirctsvc1 to 2
 1009 (Enabled), thereby enabling the Text Console Redirection specified by textredirctsvc1 and
 1010 textredirctsap1 for use. When the implementation detects that the Text Console Redirection Flow has
 1011 started, the diagram of the active Text Console Redirection would look like Figure 3.



1013 **Figure 10 – Initial State of a Redirection Managed Through the Service State and Session State**

1014 **9.18 Stop All Text Console Redirections Associated with the Service — Service** 1015 **and Session State Management**

1016 When the Text Console Redirection is managed through the states of both the Service and Session, a
1017 client can stop all Text Console Redirections associated with the Service as follows:

1018 1) Start at the instance of the CIM_TextRedirectionService that represents the Text Console
1019 Redirection of interest.

1020 2) Change the state of the CIM_TextRedirectionService instance by invoking the
1021 RequestStateChange() method with the RequestedState parameter set to 3 (Disabled).

1022 All Text Console Redirections with the CIM_TextRedirectionService as the Service are now
1023 inactive.

1024 **9.19 Find the Number of Active Text Console Redirection Access Points**

1025 A client can find the number of active text redirection sessions for a Service of interest as follows:

1026 1) Start at the CIM_TextRedirectionService instance of interest.

1027 2) Query the value of the EnabledState property.

1028 If the EnabledState property is 3 (Disabled), the number of active text redirection sessions is
1029 zero.

1030 3) If the EnabledState property is 2 (Enabled), find all instances of CIM_TextRedirectionSAP
1031 associated through an instance of CIM_ServiceAccessBySAP.

1032 4) For each found CIM_TextRedirectionSAP instance, query the value of the EnabledState
1033 property.

1034 5) Count all the CIM_TextRedirectionSAP.EnabledState properties whose value is 2 (Enabled).

1035 **9.20 Determine Whether CIM_TextRedirectionService.ElementName Can Be** 1036 **Modified**

1037 A client can determine whether the ElementName property can be modified as follows:

1038 1) Start at the instance of CIM_TextRedirectionService.

1039 2) Find the CIM_EnabledLogicalElementCapabilities instance with which it is associated by
1040 traversing the CIM_ElementCapabilities association.

1041 3) Query the value of the ElementNameEditSupported property of the
1042 CIM_EnabledLogicalElementCapabilities instance.

1043 If the value is TRUE, the CIM_TextRedirectionService.ElementName property can be modified
1044 by a client. If no instance of CIM_EnabledLogicalElementCapabilities is associated with the
1045 CIM_TextRedirectionService instance, modifying the
1046 CIM_TextRedirectionService.ElementName property is not supported.

1047 **10 CIM Elements**

1048 Table 16 shows the instances of CIM Elements for this profile. Instances of the CIM Elements shall be
1049 implemented as described in Table 16. Clauses 7 (“Implementation”) and 8 (“Methods”) may impose
1050 additional requirements on these elements.

1051

Table 16 – CIM Elements: Text Console Redirection Profile

Element Name	Requirement	Description
CIM_RegisteredProfile	Mandatory	See 10.1.
CIM_BindsTo	Optional	See 10.2.
CIM_ElementCapabilities	Optional	Referencing CIM_TextRedirectionService. See 10.3.
CIM_ElementCapabilities	Optional	Referencing CIM_TextRedirectionSAP. See 10.4.
CIM_EnabledLogicalElementCapabilities	Optional	Associated to CIM_TextRedirectionService. See 10.5.
CIM_EnabledLogicalElementCapabilities	Optional	Associated to CIM_TextRedirectionSAP. See 10.6.
CIM_HostedAccessPoint	Mandatory	See 10.7.
CIM_HostedService	Mandatory	See 10.8.
CIM_SAPAvailableForElement	Mandatory	See 10.9.
CIM_ServiceAccessBySAP	Mandatory	See 10.10.
CIM_ServiceAffectsElement	Mandatory	Referencing CIM_ComputerSystem. See 10.11.
CIM_ServiceAffectsElement	Optional	Referencing CIM_LogicalDevice. See 10.12.
CIM_TextRedirectionService	Mandatory	See 10.13.
CIM_TextRedirectionSAP	Mandatory	See 10.14.

1052 **10.1 CIM_RegisteredProfile**

1053 CIM_RegisteredProfile identifies the *Text Console Redirection Profile* in order for a client to determine
 1054 whether an instance of CIM_ComputerSystem conforms with this profile. The CIM_RegisteredProfile
 1055 class is defined by the [Profile Registration Profile](#). With the exception of the mandatory values specified
 1056 for the properties in Table 17, the behavior of the CIM_RegisteredProfile instance is in accordance with
 1057 the [Profile Registration Profile](#).

1058 **Table 17 – Class: CIM_RegisteredProfile**

Elements	Requirement	Notes
RegisteredName	Mandatory	This property shall have a value of "Text Console Redirection".
RegisteredVersion	Mandatory	This property shall have a value of "1.0.2".
RegisteredOrganization	Mandatory	This property shall have a value of 2 (DMTF).

1059 **10.2 CIM_BindsTo**

1060 The CIM_BindsTo association is used to relate the CIM_TextRedirectionSAP instance to the
 1061 CIM_ProtocolEndpoint instance that is the destination of the redirected text console. Table 18 contains
 1062 the requirements for elements of this class.

1063 **Table 18 – Class: CIM_BindsTo**

Elements	Requirement	Notes
Antecedent	Mandatory	This property shall be a reference to an instance of the CIM_ProtocolEndpoint class. See 7.3.1. Cardinality is "0..1".
Dependent	Mandatory	This property shall be a reference to an instance of the CIM_TextRedirectionSAP. See 7.3.1. Cardinality is "1..*".

1064 **10.3 CIM_ElementCapabilities Relating CIM_TextRedirectionService to**
1065 **CIM_EnabledLogicalElementCapabilities**

1066 The CIM_ElementCapabilities association is used to relate an instance of
 1067 CIM_EnabledLogicalElementCapabilities with an instance of CIM_TextRedirectionService. Table 19
 1068 contains the requirements for elements of this class.

1069 **Table 19 – Class: CIM_ElementCapabilities Referencing CIM_TextRedirectionService**

Elements	Requirement	Notes
ManagedElement	Mandatory	This property shall be a reference to an instance of CIM_TextRedirectionService. See 7.5.1.1 and 7.5.2.1. Cardinality is "1..*".
Capabilities	Mandatory	This property shall be a reference to an instance of CIM_EnabledLogicalElementCapabilities. See 7.5.1.1 and 7.5.2.1. Cardinality is "0..1".

1070 **10.4 CIM_ElementCapabilities Relating CIM_TextRedirectionSAP to**
1071 **CIM_EnabledLogicalElementCapabilities**

1072 The CIM_ElementCapabilities association is used to relate an instance of
 1073 CIM_EnabledLogicalElementCapabilities with an instance of CIM_TextRedirectionSAP. Table 20 contains
 1074 the requirements for elements of this class.

1075 **Table 20 – Class: CIM_ElementCapabilities Referencing CIM_TextRedirectionSAP**

Elements	Requirement	Notes
ManagedElement	Mandatory	This property shall be a reference to an instance of CIM_TextRedirectionSAP. See 7.6.1.1 and 7.6.2.1. Cardinality is "1..*".
Capabilities	Mandatory	This property shall be a reference to an instance of CIM_EnabledLogicalElementCapabilities. See 7.6.1.1 and 7.6.2.1. Cardinality is "0..1".

1076 **10.5 CIM_EnabledLogicalElementCapabilities Associated with**
 1077 **CIM_TextRedirectionService**

1078 CIM_EnabledLogicalElementCapabilities indicates support for managing the Text Console Redirection
 1079 Service. Table 21 contains the requirements for elements of this class.

1080 **Table 21 – Class: CIM_EnabledLogicalElementCapabilities Associated with**
 1081 **CIM_TextRedirectionService**

Elements	Requirement	Notes
InstanceID	Mandatory	Key
ElementName	Mandatory	Key
RequestedStatesSupported	Mandatory	See 7.5.1.1 and 7.5.2.1.
ElementNameEditSupported	Mandatory	See 7.2.5.1 and 7.2.5.2.
MaxElementNameLen	Conditional	See 7.2.5.1 and 7.2.5.2.

1082 **10.6 CIM_EnabledLogicalElementCapabilities Associated with**
 1083 **CIM_TextRedirectionSAP**

1084 CIM_EnabledLogicalElementCapabilities indicates support for managing the Text Console Redirection
 1085 Session. Table 22 contains the requirements for elements of this class.

1086 **Table 22 – Class: CIM_EnabledLogicalElementCapabilities Associated with**
 1087 **CIM_TextRedirectionSAP**

Elements	Requirement	Notes
InstanceID	Mandatory	Key
ElementName	Mandatory	Key
RequestedStatesSupported	Mandatory	See 7.6.1.1 and 7.6.2.1.
ElementNameEditSupported	Mandatory	See 7.3.4.1 and 7.3.4.2.
MaxElementNameLen	Conditional	See 7.3.4.1 and 7.3.4.2.

1088 **10.7 CIM_HostedAccessPoint**

1089 The CIM_HostedAccessPoint association is used to relate the CIM_TextRedirectionSAP instance to the
 1090 CIM_ComputerSystem instance to which the text console is redirected. Table 23 contains the
 1091 requirements for elements of this class.

1092 **Table 23 – Class: CIM_HostedAccessPoint**

Elements	Requirement	Notes
Antecedent	Mandatory	This property shall be a reference to an instance of the CIM_ComputerSystem class. See 7.3. Cardinality is "1".
Dependent	Mandatory	This property shall be a reference to an instance of the CIM_TextRedirectionSAP. See 7.3. Cardinality is "*".

1093 **10.8 CIM_HostedService**

1094 The CIM_HostedService association is used to relate the CIM_TextRedirectionService instance to the
 1095 CIM_ComputerSystem instance on which it is hosted. Table 24 contains the requirements for elements of
 1096 this class.

1097 **Table 24 – 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. Cardinality is "1".
Dependent	Mandatory	This property shall be a reference to an instance of the CIM_TextRedirectionService. See 7.2. Cardinality is "*".

1098 **10.9 CIM_SAPAvailableForElement**

1099 The CIM_SAPAvailableForElement association is used to relate the instance of CIM_ComputerSystem to
 1100 the instances of CIM_TextRedirectionSAP that are available as access points for the redirected text
 1101 console. Table 25 contains the requirements for elements of this class.

1102 **Table 25 – Class: CIM_SAPAvailableForElement**

Elements	Requirement	Notes
AvailableSAP	Mandatory	This property shall be a reference to an instance of the CIM_TextRedirectionSAP class. See 7.3. Cardinality is "*".
ManagedElement	Mandatory	This property shall be a reference to an instance of the CIM_ComputerSystem. See 7.3. Cardinality is "1".

1103 **10.10 CIM_ServiceAccessBySAP**

1104 The CIM_ServiceAccessBySAP association is used to relate the instance of CIM_TextRedirectionService
 1105 with the instances of CIM_TextRedirectionSAP that are enabled by the service. Table 26 contains the
 1106 requirements for elements of this class.

1107 **Table 26 – Class: CIM_ServiceAccessBySAP**

Elements	Requirement	Notes
Antecedent	Mandatory	This property shall be a reference to an instance of the CIM_TextRedirectionService class. See 7.17.1. Cardinality is "1".
Dependent	Mandatory	This property shall be a reference to an instance of the CIM_TextRedirectionSAP. See 7.17.1. Cardinality is "1..*".

1108 **10.11 CIM_ServiceAffectsElement Relating CIM_TextRedirectionService to**
 1109 **CIM_ComputerSystem**

1110 The CIM_ServiceAffectsElement association is used to relate the instance of
 1111 CIM_TextRedirectionService to the instance of CIM_ComputerSystem that represents the source of the
 1112 Text Console Flow. Table 27 contains the requirements for elements of this class.

1113 **Table 27 – Class: CIM_ServiceAffectsElement Referencing CIM_ComputerSystem**

Elements	Requirement	Notes
AffectingElement	Mandatory	This property shall be a reference to an instance of the CIM_TextRedirectionService class. See 7.1. Cardinality is "*".
AffectedElement	Mandatory	This property shall be a reference to an instance of the CIM_ComputerSystem. See 7.1. Cardinality is "1".

1114 **10.12 CIM_ServiceAffectsElement Relating CIM_TextRedirectionService to a**
 1115 **Concrete Subclass of CIM_LogicalDevice**

1116 The CIM_ServiceAffectsElement association is used to relate the instance of
 1117 CIM_TextRedirectionService to the instance of a concrete class of CIM_LogicalDevice that represents the
 1118 source of the Text Console Flow. Table 28 contains the requirements for elements of this class.

1119 **Table 28 – Class: CIM_ServiceAffectsElement Referencing CIM_LogicalDevice**

Elements	Requirement	Notes
AffectingElement	Mandatory	This property shall be a reference to an instance of the CIM_TextRedirectionService class. See 7.2.2. Cardinality is "1".
AffectedElement	Mandatory	This property shall be a reference to an instance of CIM_LogicalDevice. See 7.2.2. Cardinality is "0..1".

1120 **10.13 CIM_TextRedirectionService**

1121 The CIM_TextRedirectionService class represents the ability to manage the text console redirection
 1122 capabilities of a computer system. Table 29 contains the requirements for elements of this class.

1123 **Table 29 – Class: CIM_TextRedirectionService**

Elements	Requirement	Notes
SystemCreationClassName	Mandatory	Key
SystemName	Mandatory	Key
CreationClassName	Mandatory	Key
Name	Mandatory	Key
ElementName	Mandatory	See 7.2.5.
MaxCurrentEnabledSAPs	Mandatory	See 7.2.4.
EnabledState	Mandatory	See 7.5.
RequestedState	Mandatory	See 7.5.
SharingMode	Mandatory	See 7.2.3.
RedirectionServiceType	Mandatory	See 7.2.6.

1124 **10.14 CIM_TextRedirectionSAP**

1125 The CIM_TextRedirectionSAP class represents a text console redirection capability that is possible on a
 1126 computer system. Table 30 contains the requirements for elements of this class.

1127 **Table 30 – Class: CIM_TextRedirectionSAP**

Elements	Requirement	Notes
SystemCreationClassName	Mandatory	Key
SystemName	Mandatory	Key
Name	Mandatory	Key
CreationClassName	Mandatory	Key
ElementName	Mandatory	See 7.3.4.
EnabledState	Mandatory	See 7.6.1.3.
RequestedState	Mandatory	See 7.6.1.2.
SessionTerminateSequence	Mandatory	See 7.3.3.
TextFlowType	Mandatory	See 7.3.2.
OtherTextFlowType	Conditional	See 7.3.2.

**ANNEX A
(informative)****Change Log**1128
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Version	Date	Description
1.0.0a	2006-10-19	Initial Preliminary Release
1.0.0	2007-10-19	Initial Final Release
1.0.2	2010-11-15	Errata Revision of 1.0.1

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