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Foreword

120 The *Record Log Profile* (DSP1010) was prepared by the Physical Platform Profiles Working Group.

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141

Introduction

142 This document defines classes to describe the record logs of a managed system element. Also included
143 are descriptions of the associations that can be used to associate the record log classes to DMTF profile
144 version information. The information in this specification should be sufficient for a provider or consumer of
145 this data to identify unambiguously the classes, properties, methods, and values that shall be instantiated
146 and manipulated to represent and manage record logs of managed system elements and subsystems
147 modeled using the DMTF CIM core and extended model definitions.

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

150 Document conventions

151 Typographical conventions

152 The following typographical conventions are used in this document:

- 153 • Document titles are marked in *italics*.

154

Record Log Profile

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1 Scope

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The *Record Log Profile* is an autonomous profile that provides the management capabilities to represent logs of a managed system element. The log is modeled as referencing the managed system elements that populate the log, and the profile registration for the schema implementation version information.

159

2 Normative References

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

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165

DMTF DSP0004, *CIM Infrastructure Specification 2.5*,
http://www.dmtf.org/standards/published_documents/DSP0004_2.5.pdf

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

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169

DMTF DSP0228, *Message Registry XML Schema 1.1*,
http://schemas.dmtf.org/wbem/messageregistry/1/dsp0228_1.1.xsd

170
171

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

172
173

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

174
175

DMTF DSP8007, *Platform Message Registry 1.1*,
http://schemas.dmtf.org/wbem/messageregistry/1/dsp8007_1.1.xml

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177

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

178

3 Terms and Definitions

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

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

187
188

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

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

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

194 **3.1**

195 **Record Data Format**

196 refers to a log entry where the LogEntry data is contained in RecordData property whose data structure is
197 described by RecordFormat property.

198 **3.2**

199 **referencing profile**

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

202 **3.3**

203 **Standard Message Format**

204 refers to a log entry where the LogEntry data is contained in Message and/or MessageArguments
205 properties

206 **3.4**

207 **unspecified**

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

209 **4 Symbols and Abbreviated Terms**

210 The following symbols and abbreviations are used in this document.

211 **4.1**

212 **LIFO**

213 Last In, First Out

214 **5 Synopsis**

215 **Profile Name:** Record Log

216 **Version:** 2.0.0

217 **Organization:** DMTF

218 **CIM Schema Version:** 2.25

219 **Central Class:** CIM_RecordLog

220 **Scoping Class:** CIM_RecordLog

221 The *Record Log Profile* is an autonomous profile that provides the management capabilities to represent
222 logs of a managed system element. Version 2.0.0 of the *Record Log Profile* adds the standard message
223 format capability to the logs. The CIM_EnabledLogicalElementCapabilities class that was previously
224 Optional was subclassed as CIM_RecordLogCapabilities and is now Mandatory.

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

226

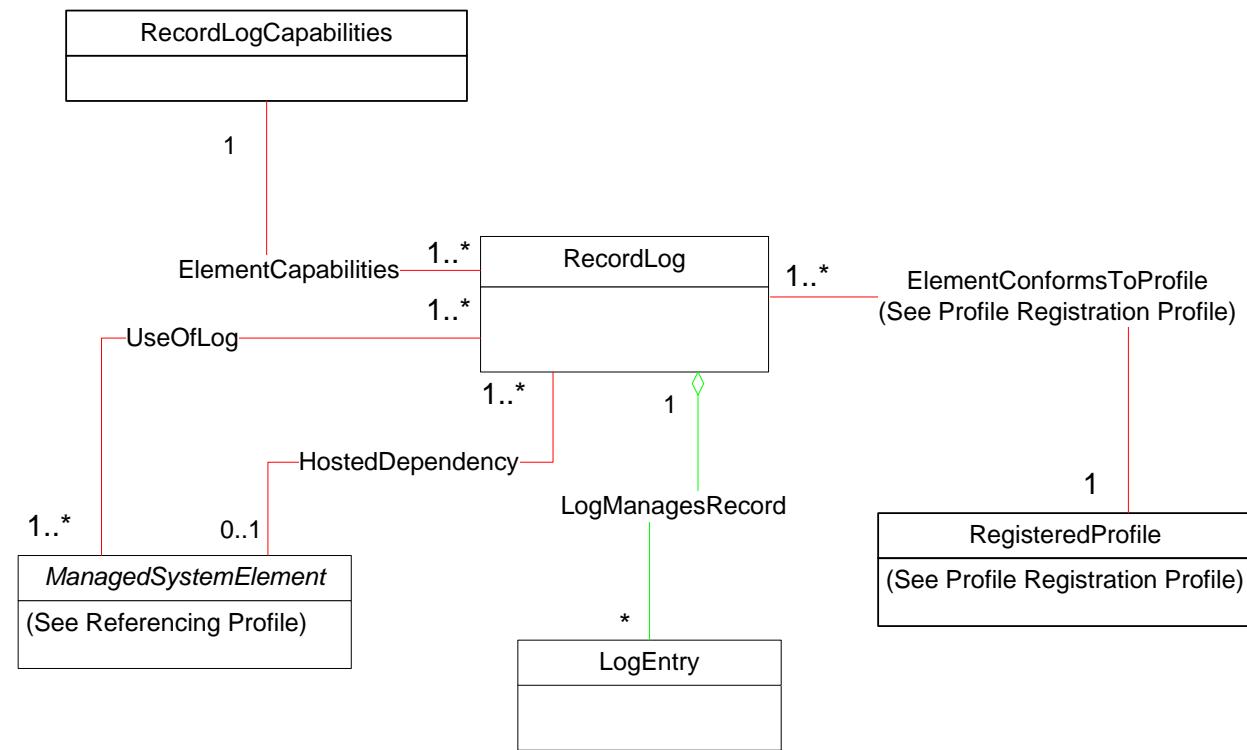
Table 1 – Related Profiles

Profile Name	Organization	Version	Requirement	Description
Profile Registration	DMTF	1.0.	Mandatory	None

227 6 Description

228 The *Record Log Profile* describes the properties and methods of logs generated by the managed system
 229 element or component. This profile describes the association between the managed system element and
 230 the generated logs as well as how individual log entries are contained within a record log.

231 Figure 1 represents the class schema for the *Record Log Profile*. For simplicity, the prefix CIM_ has been
 232 removed from the names of the classes.



233

Figure 1 – Record Log Profile: Class Diagram

235 The CIM_RecordLog class represents the container for the log entries. The individual log entries, which
 236 are represented by the CIM_LogEntry instances, are aggregated under the CIM_RecordLog instance
 237 through the CIM_LogManagesRecord association. The managed system element that is associated with
 238 the log, uses the log, or populates the log is referenced through the CIM_UseOfLog association.

239 The CIM_LogEntry class contains properties describing the information about individual records, such as
 240 message text and timestamp. CIM_RecordLog describes the general properties of the log, such as its
 241 maximal length and state.

242 **7 Implementation**

243 This section details the requirements and guidelines related to the arrangement of instances and their
244 properties for implementations of this profile. For a list of all required methods, see 8 (“Methods”). For
245 properties, see 10 (“CIM Elements”).

246 **7.1 Representing Logs**

247 Each log in a managed system shall be represented by a single instance of CIM_RecordLog. Each entry
248 in the log shall be represented by a single instance of CIM_LogEntry. The entries of the log, which are
249 represented by the instances of CIM_LogEntry, shall be associated through the instance of
250 CIM_LogManagesRecord to the instance of CIM_RecordLog.

251 **7.1.1 CIM_LogEntry.LogInstanceId**

252 The CIM_LogEntry.LogInstanceId shall have the same value as the InstanceID property of the instance
253 of CIM_RecordLog that is associated with the instance CIM_LogEntry through an instance of
254 CIM_LogManagesRecord.

255 **7.1.2 CIM_LogEntry.LogName**

256 The CIM_LogEntry.LogName shall have the same value as the ElementName property of the instance of
257 CIM_RecordLog that is associated with the instance CIM_LogEntry through an instance of
258 CIM_LogManagesRecord.

259 **7.1.3 CIM_LogEntry Data**

260 The CIM_LogEntry data information shall be implemented using one or more of the following formats:

- 261 • Record Data Format
- 262 • Standard Message Format

263 **7.1.3.1 When the CIM_LogEntry Implements the Record Data Format**

264 When the Record Data Format is supported for a log entry the
265 CIM_RecordLogCapabilities.SupportedRecordTypes property shall include the value 2 (Record Data) and
266 it shall be implemented as described in the following sections.

267 **7.1.3.1.1 CIM_LogEntry.RecordData**

268 The CIM_LogEntry.RecordData property shall be implemented. The RecordData property shall be non-
269 NULL and shall contain information about the log entry.

270 **7.1.3.1.2 CIM_LogEntry.RecordFormat**

271 The CIM_LogEntry.RecordFormat property shall be implemented if the RecordData property is
272 implemented (non-NULL). The RecordFormat property shall specify the format of the data provided by the
273 RecordData property.

274 **7.1.3.2 When the CIM_LogEntry Does Not Implement the Record Data Format**

275 If the Record Data Format is not supported for the log entry, the RecordData and RecordFormat
276 properties shall be NULL.

277 **7.1.3.3 When the CIM_LogEntry Implements the Standard Message Format**

278 When the Standard Message Format is supported for a log entry, the SupportedRecordTypes property
279 shall include the value 3 (Standard Messages) and it shall be implemented as described in the following
280 sections. The implementation will need to implement at least one of the following properties: Message
281 and/or MessageArguments.

282 **7.1.3.3.1 CIM_LogEntry.MessageID**

283 The CIM_LogEntry.MessageID property shall be specified. The value of the MessageID property conveys
284 a message from a message registry and shall be set to the concatenation of the PREFIX and
285 SEQUENCE_NUMBER attribute values, as specified in the message registry (that is, no further padding
286 or adjustment of these values takes place).

287 **7.1.3.3.2 CIM_LogEntry.Message**

288 The CIM_LogEntry.Message property may be implemented.

289 If the MessageArguments property is NULL (not implemented), then the Message property shall be
290 implemented and the value of the Message property shall be non-NUL.

291 If the MessageArguments property is non-NUL (implemented) and the Message property is not
292 implemented, then the value of the Message property shall be NULL.

293 **7.1.3.3.3 CIM_LogEntry.MessageArguments**

294 The CIM_LogEntry.MessageArguments property may be implemented.

295 If the Message property is NULL (not implemented), then the MessageArguments property shall be
296 implemented and the value of the MessageArguments property shall be non-NUL.

297 If the Message property is non-NUL (implemented) and the MessageArguments property is not
298 implemented, then the value of the MessageArguments shall be NULL.

299 If the MessageArguments property is implemented but the message does not contain any dynamic
300 elements, then the MessageArguments property shall be implemented as an empty array. Otherwise the
301 MessageArguments property shall contain the values for all of the dynamic elements for the message.

302 **7.1.3.3.4 CIM_LogEntry.PerceivedSeverity**

303 The CIM_LogEntry.PerceivedSeverity property shall be specified if the implementation is supporting
304 Standard Messages.

305 **7.1.3.3.5 CIM_LogEntry.OwningEntity**

306 The CIM_LogEntry.OwningEntity property shall be specified if the implementation is supporting Standard
307 Messages.

308 **7.1.3.4 When CIM_LogEntry does not implement the Standard Message Format**

309 When Standard Message Format is not supported for a log entry the associated properties shall be
310 NULL. These properties are:

- 311 • MessageID
312 • Message
313 • MessageArguments
314 • PerceivedSeverity

315 • OwningEntity

316 **7.2 CIM_RecordLogCapabilities**

317 There shall be an instance of CIM_RecordLogCapabilities that specifies the capabilities of the associated
318 record log. The instance of CIM_RecordLogCapabilities shall be associated with the CIM_RecordLog
319 instance through an instance of CIM_ElementCapabilities and be used for advertising the capabilities of
320 the CIM_RecordLog instance.

321 There shall be at most one instance of CIM_RecordLogCapabilities associated with a given instance of
322 CIM_RecordLog.

323 **7.2.1 CIM_RecordLogCapabilities.SupportedRecordTypes**

324 The CIM_RecordLogCapabilities.SupportedRecordTypes property shall indicate which formats are
325 supported by the implementation. A Record Log shall support at least one of the following formats:
326 Record Data Format and/or Standard Message Format. . If both the Record Data Format and Standard
327 Message Format are supported the client will need to check the individual property values to determine
328 which format is available in each individual log entry.

329 At least one format shall be implemented and specified in the SupportedRecordTypes property of the
330 CIM_RecordLogCapabilities instance. The SupportedRecordTypes property shall be non-NULL and shall
331 not be an empty array.

332 **7.2.1.1 SupportedRecordTypes with Only Record Data Format**

333 If the SupportedRecordTypes property contains only 2 (Record Data), then the RecordData and
334 RecordFormat properties of all instances of CIM_LogEntry associated with the instance of
335 CIM_RecordLog shall be Non-NULL.

336 **7.2.1.2 SupportedRecordTypes with Only Standard Message Format**

337 If the SupportedRecordTypes property contains only 3 (Standard Messages), then the PerceivedSeverity,
338 OwningEntity, MessageID properties and at least one of the properties Message and MessageArguments
339 of all instances of CIM_LogEntry associated with the instance of CIM_RecordLog shall be Non-NULL.

340 **7.2.1.3 SupportedRecordTypes with Record Data and Standard Message Formats**

341 If the SupportedRecordTypes property contains only 2 (Record Data) and 3 (Standard Messages) the
342 following conditions shall be implemented.

343 If the MessageID property of an instance of CIM_LogEntry associated with the instance of
344 CIM_RecordLog is NULL, then the RecordData and RecordFormat properties of the instance of
345 CIM_LogEntry shall be non-NULL.

346 If the RecordData and RecordFormat properties of an instance of CIM_LogEntry associated with the
347 instance of CIM_RecordLog are NULL, then the PerceivedSeverity, OwningEntity, MessageID properties
348 and at least one of the properties Message and MessageArguments of the instance of CIM_LogEntry
349 shall be non-NULL.

350 **7.2.2 CIM_RecordLogCapabilities.RequestedStatesSupported**

351 The CIM_RecordLogCapabilities.RequestedStatesSupported property is an array that contains the
352 supported requested states for the instance of CIM_RecordLog. This property shall be the super set of
353 the values to be used as the RequestedState parameter in the RequestStateChange() method (see 8.2).
354 The value of the CIM_RecordLogCapabilities.RequestedStatesSupported property shall be an empty
355 array or any combination of the following values: 2 (Enabled), 3 (Disabled), or 11 (Reset).

356 **7.2.3 CIM_RecordLogCapabilities.ElementNameEditSupported**

357 The CIM_RecordLogCapabilities.ElementNameEditSupported property shall have a value of TRUE when
358 the implementation supports client modification of the CIM_RecordLog.ElementName property.

359 **7.2.4 CIM_RecordLogCapabilities.MaxElementNameLen**

360 The MaxElementNameLen property shall be implemented when the ElementNameEditSupported
361 property has a value of TRUE.

362 **7.3 Log State Management (Optional)**

363 Log state management consists of the CIM_RecordLog.RequestStateChange() method being supported
364 (see 8.2) and the value of the CIM_RecordLog.RequestedState not matching 12 (Not Applicable).

365 **7.3.1 Log State Management Support**

366 When a CIM_RecordLogCapabilities.RequestedStatesSupported property is an empty array, log state
367 management shall not be supported.

368 When a CIM_RecordLogCapabilities instance is associated with the CIM_RecordLog instance and the
369 value of the CIM_RecordLogCapabilities.RequestedStatesSupported property is not an empty array, log
370 state management shall be supported.

371 **7.4 CIM_RecordLog.RequestedState**

372 The CIM_RecordLog.RequestedState property shall have a value of 12 (Not Applicable), 5 (No Change),
373 or a value contained in the CIM_RecordLogCapabilities.RequestedStatesSupported property array of the
374 associated CIM_RecordLogCapabilities instance (see 7.2.2).

375 When log state management is supported and the RequestStateChange() method is successfully
376 executed, the RequestedState property shall be set to the value of the RequestedState parameter of the
377 RequestStateChange() method. After the RequestStateChange() method has successfully executed, the
378 RequestedState and EnabledState parameters shall have equal values, with the exception of the
379 transitional requested state 11 (Reset). The value of the RequestedState property may also change as a
380 result of a non-CIM implementation's request for a change to the log's enabled state.

381 **7.4.1 RequestedState — 12 (Not Applicable) Value**

382 When log state management is not supported, the value of the CIM_RecordLog.RequestedState property
383 shall be 12 (Not Applicable).

384 **7.4.2 RequestedState — 5 (No Change) Value**

385 When log state management is supported, the initial value of the CIM_RecordLog.RequestedState
386 property shall be 5 (No Change).

387 **7.5 Representing Log State**

388 The log's state shall be represented by two properties: CIM_RecordLog.EnabledState (see 7.5.1) and
389 CIM_RecordLog.LogState (see 7.5.2).

390 **7.5.1 CIM_RecordLog.EnabledState**

391 Table 2 describes the mapping between the values of the CIM_RecordLog.EnabledState property and the
392 corresponding description of the state of the log. The CIM_RecordLog.EnabledState property shall match
393 the values that are specified in Table 2. When the RequestStateChange() method executes but does not

394 complete successfully and the log is in an indeterminate state, the CIM_RecordLog.EnabledState
 395 property shall have a value of 5 (Not Applicable). The value of this property may also change as a result
 396 of a non-CIM implementation's change to the log's enabled state.

397 **Table 2 – EnabledState Value Description**

Value	Description	Extended Description
2	Enabled	Log shall be enabled; new log entries may be added.
3	Disabled	Log shall be disabled; new log entries shall not be added.
5	Not Applicable	Log state is indeterminate, or the log state management is not supported.
6	Enabled but Offline	Log shall be enabled, but new log entries shall not be added. See 7.5.1.1.

398 **7.5.1.1 CIM_RecordLog.EnabledState — 6 (Enabled but Offline) Value**

399 When the log is enabled but has reached its maximum capacity of entries and the
 400 CIM_RecordLog.OverwritePolicy property has a value of 7 (Never Overwrites), the
 401 CIM_RecordLog.EnabledState property shall have a value of 6 (Enabled but Offline).

402 When the CIM_RecordLog.OverwritePolicy property has a value of 2 (Wraps When Full), the
 403 CIM_RecordLog.EnabledState property shall not have a value of 6 (Enabled but Offline).

404 **7.5.2 CIM_RecordLog.LogState**

405 The CIM_RecordLog.LogState property is used to describe a more granular state of the log than that of
 406 the CIM_RecordLog.EnabledState property. Table 3 describes the mapping between the values of the
 407 CIM_RecordLog.LogState property and the corresponding description of the granular state of the log. The
 408 CIM_RecordLog.LogState property shall match the values that are specified in Table 3. Additionally,
 409 Table 3 describes the mapping between the LogState property and the EnabledState property. When the
 410 CIM_RecordLog.LogState property has a value that matches the value in the "LogState Value" column in
 411 Table 3, the CIM_RecordLog.EnabledState property shall have a value that matches the value in the
 412 "EnabledState Value" column for that row.

413 **Table 3 – LogState Value Description and Mapping to EnabledState Value**

LogState Value	Description	EnabledState Value	Extended Description
0	Unknown	5 (Not Applicable)	See the "Extended Description" column of Table 2 for the corresponding EnabledState value.
2	Normal	2 (Enabled)	See the "Extended Description" column of Table 2 for the corresponding EnabledState value.
3	Erasing	Any value in Table 2	Log shall be in the process of erasing its entries. See 7.5.2.1.
4	Not Applicable	Any value in Table 2	LogState property is not used to describe more granular state of the log, and EnabledState property shall be used only to represent the log state.

414 **7.5.2.1 CIM_RecordLog.LogState — 3 (Erasing) Value**

415 The instrumentation may be able to represent the transitional states of the log, such as the state when the
 416 log entries are being cleared. When the log is being cleared through the invocation of the ClearLog()
 417 method or by a non-CIM implementation, the CIM_RecordLog.LogState property shall have a value of 3
 418 (Erasing).

419 **7.6 CIM_UseOfLog**

420 At least one instance of the CIM_UseOfLog association shall reference an instance of CIM_RecordLog
 421 and an instance of the subclass of CIM_ManagedSystemElement.

422 **7.7 CIM_HostedDependency**

423 An instance of the CIM_HostedDependency association may reference an instance of CIM_RecordLog
 424 and an instance of the subclass of CIM_ManagedSystemElement.

425 **7.8 CIM_RecordLog.OverwritePolicy Property**

426 The CIM_RecordLog.OverwritePolicy property indicates the behavior of the log when it has reached the
 427 maximum capacity of its entries. The CIM_RecordLog.OverwritePolicy property also affects the
 428 CIM_RecordLog.EnabledState property, as described in 7.5.1.1.

429 The log could be designed such that when the log reaches its maximum capacity, new entries would
 430 overwrite the oldest entries. An example of this type of log would be circular buffer logs.

431 When the new log entries overwrite the old log entries, the CIM_RecordLog.OverwritePolicy property has
 432 a value of 2 (Wraps When Full). When the new log entries never overwrite the old log entries, the
 433 CIM_RecordLog.OverwritePolicy property has a value of 7 (Never Overwrites).

434 **8 Methods**

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

437 **8.1 CIM_RecordLog.ClearLog()**

438 The CIM_RecordLog.ClearLog() method is used to request the deletion of all entries in the record log for
 439 an instance of CIM_RecordLog. A return code value of zero shall indicate that the clearing of the log
 440 entries was successfully initiated.

441 CIM_RecordLog.ClearLog() return code values shall be as specified in Table 4.

442 No parameters or standard messages are defined for the CIM_RecordLog.ClearLog() method.

443 **Table 4 – CIM_RecordLog.ClearLog() Method: Return Code Values**

Value	Description
0	Request was successfully executed.
1	Method is not supported in the implementation.
2	Error occurred

444 **8.2 CIM_RecordLog.RequestStateChange()**

445 Invocation of the CIM_RecordLog.RequestStateChange() method shall attempt to change the element's
 446 state to the value that is specified in the RequestedState parameter.

447 Return code values for the RequestStateChange() method shall be as specified in Table 5 where the
 448 method-execution behavior matches the return-code description. Parameters for the
 449 RequestStateChange() method are specified in Table 6.

450 When log state management is supported, the RequestStateChange() method shall be implemented and
 451 shall not return a value of 1 (Not Supported) (see 7.3.1).

452 When the RequestedState parameter is set to 2 (Enabled) but the CIM_RecordLog.EnabledState
 453 property has a value of 6 (Enabled but Offline), the RequestStateChange() method invocation shall return
 454 2 (Error Occurred).

455 Invoking the CIM_RecordLog.RequestStateChange() method multiple times could result in earlier
 456 requests being overwritten or lost.

457 No standard messages are defined for this method.

458 **Table 5 – CIM_RecordLog.RequestStateChange() Method: Return Code Values**

Value	Description
0	Request was successfully executed.
1	Method is not supported in the implementation.
2	Error occurred
4096	Job started

459 **Table 6 – CIM_RecordLog.RequestStateChange() Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN, REQ	RequestedState	uint16	State: 2 (Enabled) 3 (Disabled) 11 (Reset)
OUT	Job	CIM_ConcreteJob REF	Returned if job started.
IN, REQ	TimeoutPeriod	Datetime	Client-specified maximum amount of time that the transition to a new state is supposed to take: 0 or NULL — No time requirements <interval> — Maximum time allowed

460 **8.3 Profile Conventions for Operations**

461 This profile specification defines operations in terms of [DSP0200](#).

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

464 The default list of operations is as follows:

- 465 • `Associators()`
- 466 • `AssociatorNames()`
- 467 • `EnumerateInstances()`
- 468 • `EnumerateInstanceNames()`
- 469 • `GetInstance()`
- 470 • `References()`
- 471 • `ReferenceNames()`

472 **8.4 CIM_ElementCapabilities**

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

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

477 **Table 7 – Operations: CIM_ElementCapabilities**

Operation	Requirement	Messages
<code>Associators</code>	Unspecified	None
<code>AssociatorNames</code>	Unspecified	None
<code>References</code>	Unspecified	None
<code>ReferenceNames</code>	Unspecified	None

478 **8.5 CIM_RecordLogCapabilities**

479 All operations in the default list in 8.3 shall be implemented as defined in [DSP0200](#).

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

481 **8.6 CIM_RecordLog**

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

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

486 **Table 8 – Operations: CIM_RecordLog**

Operation	Requirement	Messages
<code>ModifyInstance</code>	Optional: See 8.6.1.	None

487 **8.6.1 CIM_RecordLog — ModifyInstance**

488 This section details the requirements for the `ModifyInstance` operation applied to an instance of
 489 `CIM_RecordLog`. The `ModifyInstance` operation may be supported.

490 The ModifyInstance operation shall be supported and CIM_RecordLog.ElementName shall be modifiable
 491 when the ElementNameEditSupported property of the CIM_EnabledLogicalElementCapabilities instance
 492 that is associated with the CIM_RecordLog instance has a value of TRUE. See 8.6.2.

493 **8.6.2 CIM_RecordLog.ElementName**

494 When the ElementNameEditSupported property of the CIM_EnabledLogicalElementCapabilities instance
 495 that is associated with the CIM_RecordLog instance has a value of TRUE, the implementation shall allow
 496 the ModifyInstance operation to change the value of the ElementName property of the CIM_RecordLog
 497 instance. The ModifyInstance operation shall enforce the length restriction specified in the
 498 MaxElementNameLen property of the CIM_EnabledLogicalElementCapabilities instance.

499 When the associated CIM_EnabledLogicalElementCapabilities instance does not exist or the
 500 ElementNameEditSupported property of the associated CIM_EnabledLogicalElementCapabilities
 501 instance has a value of FALSE, the implementation shall not allow the ModifyInstance operation to
 502 change the value of the ElementName property of the CIM_RecordLog instance.

503 **8.7 CIM_LogEntry**

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

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

508 **Table 9 – Operations: CIM_LogEntry**

Operation	Requirement	Messages
DeleteInstance	Optional: See section 8.7.1 for additional requirements.	None

509 **8.7.1 CIM_LogEntry DeleteInstance**

510 CIM_LogEntry DeleteInstance operation shall be optional. The implementation shall also remove any
 511 association instances that reference the instance of CIM_LogEntry, including the instance of
 512 CIM_LogManagesRecord.

513 **8.8 CIM_UseOfLog**

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

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

518 **Table 10 – Operations: CIM_UseOfLog**

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

519 **8.9 CIM_LogManagesRecord**

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

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

524 **Table 11 – Operations: CIM_LogManagesRecord**

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

525 **8.10 CIM_HostedDependency**

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

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

530 **Table 12 – Operations: CIM_HostedDependency**

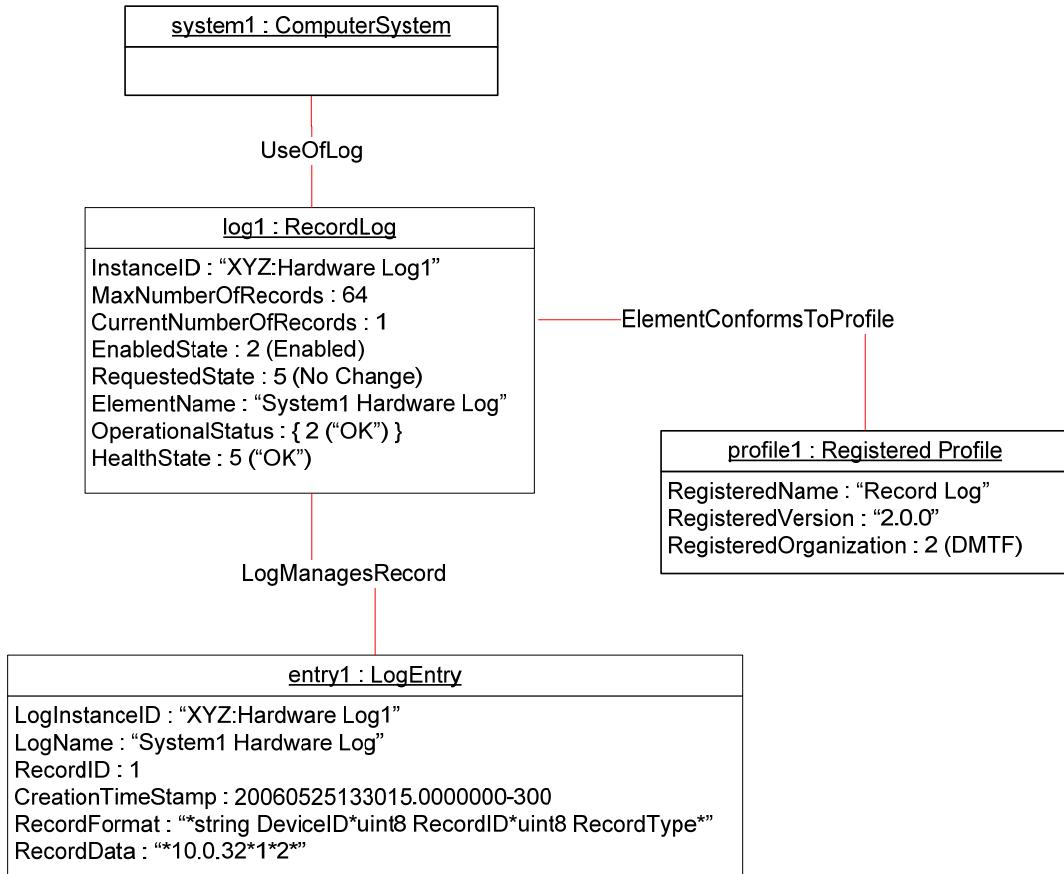
Operation	Requirement	Messages
Associators	Unspecified	None
AssociatorNames	Unspecified	None
References	Unspecified	None
ReferenceNames	Unspecified	None

531 **9 Use Cases**

532 This section contains object diagrams and use cases for the *Record Log Profile*.

533 **9.1 Object Diagrams**

534 Figure 2 represents possible instances of *Record Log Profile* classes. In this case, system1 uses log1 for
 535 its hardware log. log1 has only one record, but it has a maximum capacity of 64 records. The value of the
 536 EnabledState property for log1 is 1 (Enabled), which means the log is active. Profile registration
 537 information is represented with the profile1 instance.



539

Figure 2 – RecordLog Instance

540 Figure 3 represents a possible instantiation of the *Record Log Profile*. log1, which is the hardware log for
 541 system1, has four log entries. entry1 is a log entry for clearing the log, entry2 and entry3 are sensor
 542 logged information, and entry4 contains information about the logged-in users. If the ClearLog() method
 543 is supported on log1, the client might execute the ClearLog() method on log1 to erase the entries.
 544 Depending on the log1 settings, some of the entries may not be erasable through executing the
 545 ClearLog() method. Figure 4 shows the change of instances of CIM_LogEntry after the successful
 546 execution of the ClearLog() method on log1.

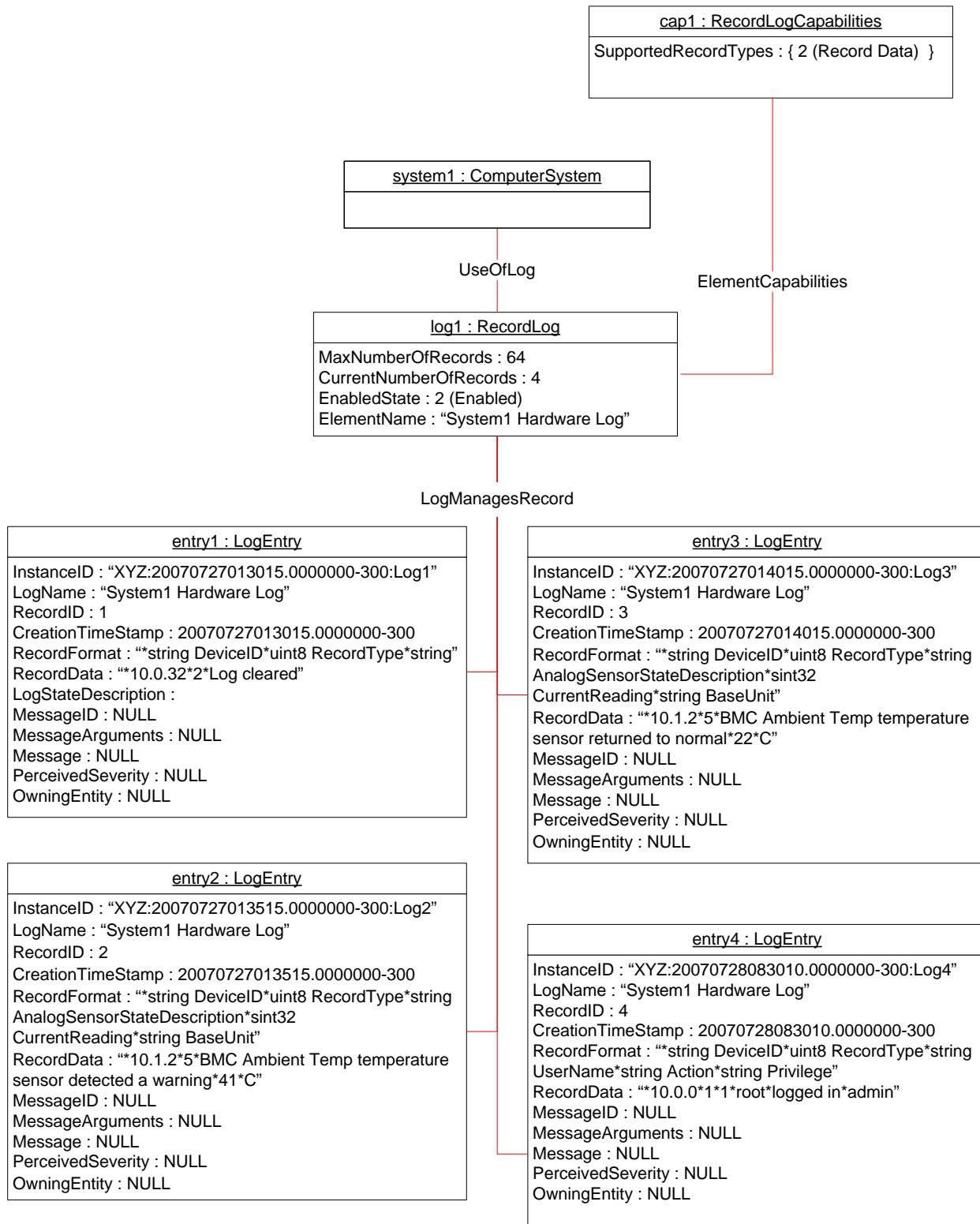
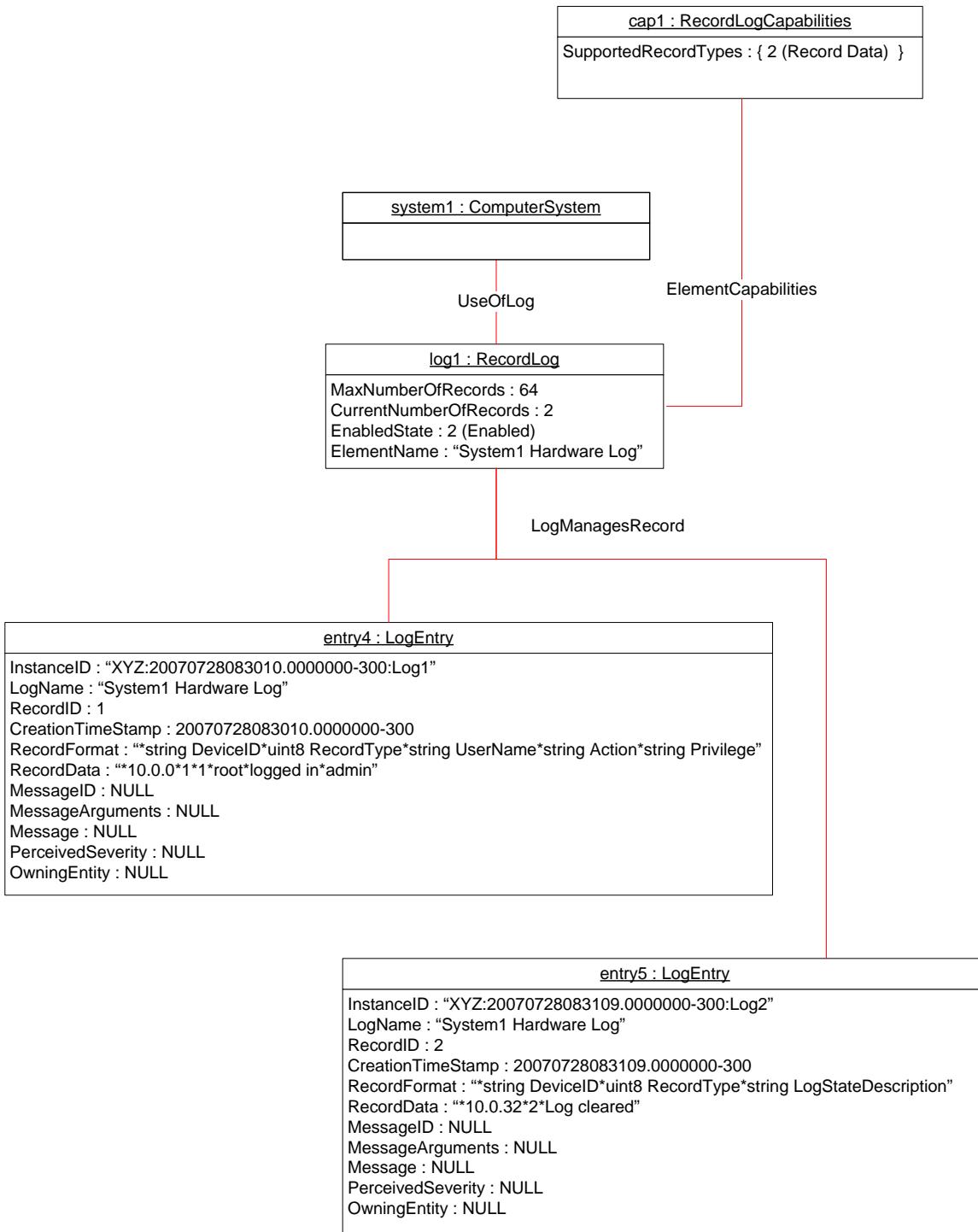


Figure 3 – RecordLog Instance Before the Log Is Cleared

549 Figure 4 shows the representation of log1 after the ClearLog() method successfully executed. entry1,
 550 entry2, and entry3 from Figure 3 have been erased. Because of log1's policies, entry4 has not been
 551 erased and still exists in log1. entry5 is a new log entry that has been added to the log after the
 552 successful clearing of log1. Note that the RecordID properties have been reset for the entries in log1.



553

554

Figure 4 – RecordLog Instance after the Log Is Cleared

555 **9.2 Identify the Log by the Name**

556 To select a log by its name, a client can select the CIM_RecordLog instance in which the ElementName
557 property corresponds to the desired name.

558 **9.3 Browse the Records of the Log**

559 To browse log records, a client can iterate through all the instances of CIM_LogEntry that are associated
560 through the CIM_LogManagesRecord association to the given instance of CIM_RecordLog and sort them
561 based on the RecordID.

562 **9.4 Sort the Log Records Based on the Time Stamp of the Log Entry**

563 A client can sort log records by time stamp as follows:

- 564 1) Iterate through all the instances of CIM_LogEntry that are associated through the
565 CIM_LogManagesRecord association to the given instance of CIM_RecordLog that represents
566 the log record.
- 567 2) Sort the instances of CIM_LogEntry based on the CreationTimeStamp property value in LIFO
568 order.

569 **9.5 Delete a Log Entry**

570 A client can delete a log entry as follows:

- 571 1) Select the instance of CIM_LogEntry that represents the desired log entry to be deleted.
- 572 2) Execute DeleteInstance operation on the selected instance of CIM_LogEntry.

573 Upon successful execution, the instance of CIM_LogEntry and the instance of CIM_LogManagesRecord
574 that associates the log entry to the instance of CIM_RecordLog are deleted.

575 **9.6 Clear the Log**

576 To clear the log, a client can execute the ClearLog() method for the given instance of CIM_RecordLog.

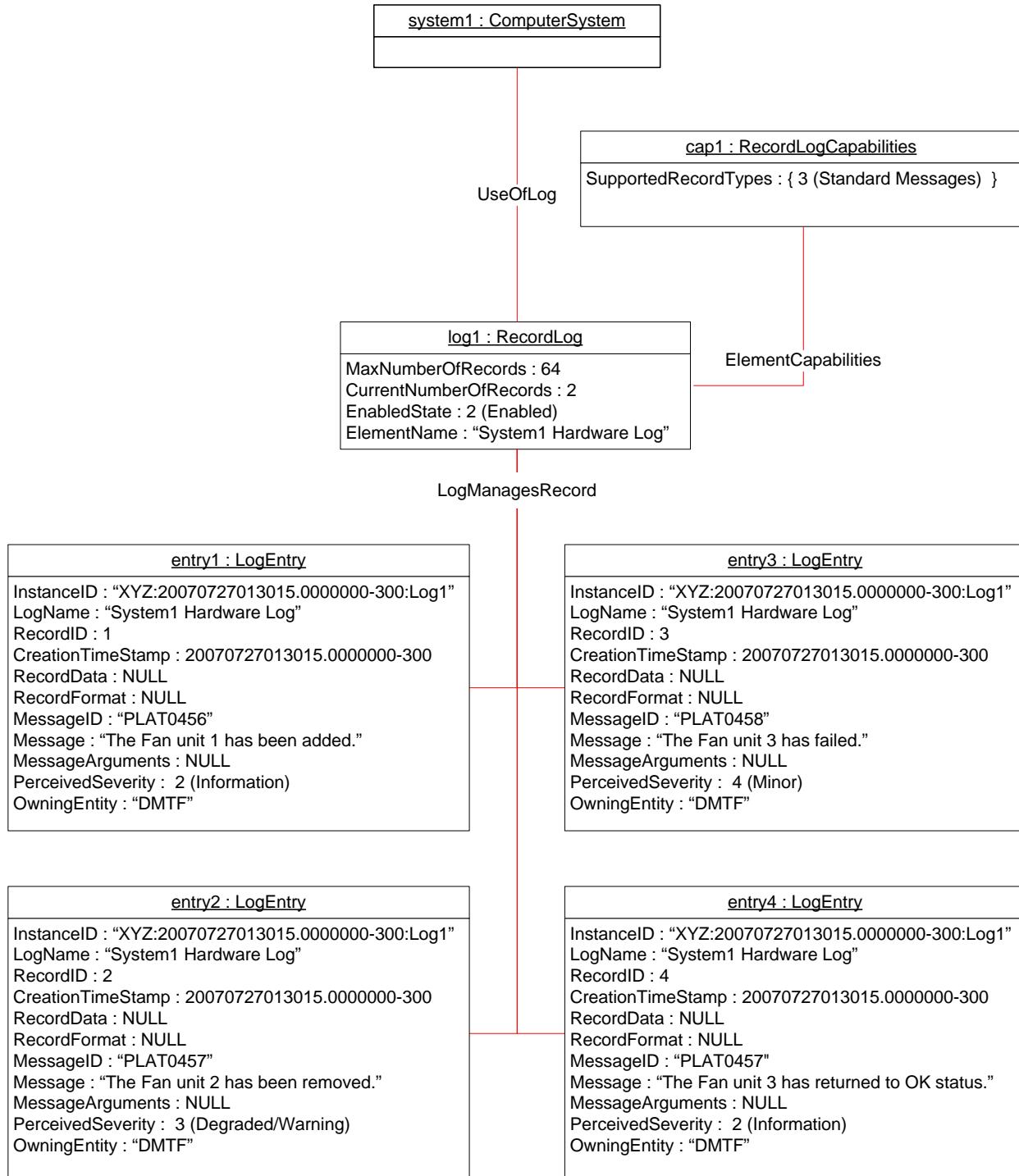
577 **9.7 Determine Which Record Types Are Supported**

578 A client can determine which record types are supported as follows:

- 579 1) From the instance of CIM_RecordLog use the CIM_ElementCapabilities association to obtain
580 the associated instance of CIM_RecordLogCapabilities.
- 581 2) The SupportedRecordTypes property of the CIM_RecordLogCapabilities instance indicates
582 which record types are supported by the implementation.

583 **9.8 RecordLog Instance for Standard Messages**

584 Figure 5 shows four messages using the standard message record log type. For these record log entries
585 that support standard messages only the Message property has been supplied but the message
586 arguments are not; therefore, the MessageArguments property is NULL.



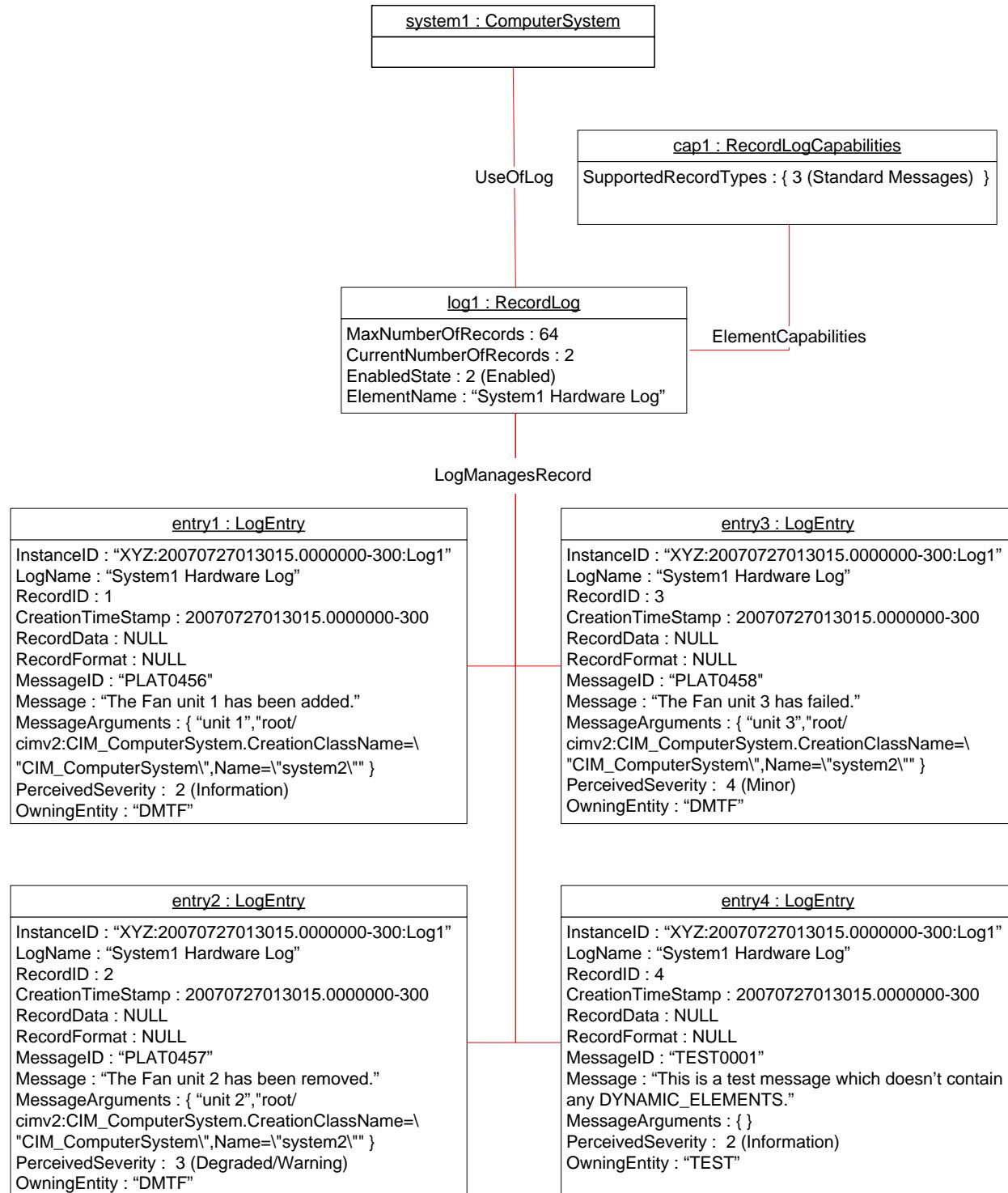
587

588

Figure 5 – RecordLog Instance for Standard Messages

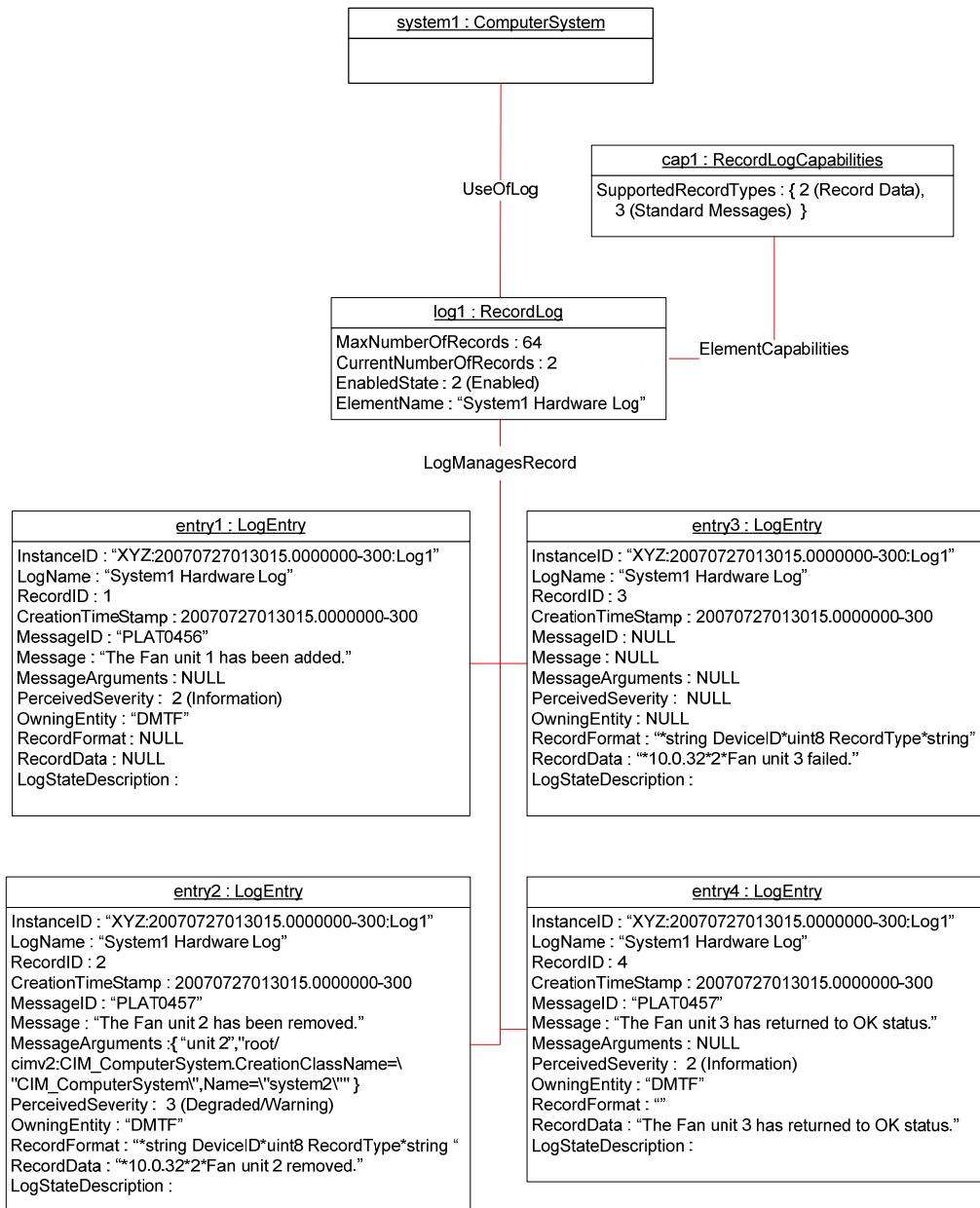
589 **9.9 RecordLog Instance for Standard Messages with MessageArguments**
590 **Supported**

591 Figure 6 shows four messages using the standard message record log type. For these record log entries
592 that support standard messages both the Message and MessageArguments properties are supported.
593 entry4 shows a potential message that does not contain any DYNAMIC_ELEMENTS. For this case, the
594 MessageArguments property is an empty array.

**Figure 6 – RecordLog with Standard Message and MessageArguments**

598 9.10 RecordLog Instance for Record Data and Standard Messages

599 Figure 7 shows a Record Log that supports both the Record Data and Standard Message formats. In
 600 addition, for the standard messages both the Message and MessageArguments properties are supplied.
 601 The entry1 log entry contains only the Standard Message Format with the Message property, but not the
 602 MessageArguments property. The entry2 log entry contains both the Record Data and Standard Message
 603 Formats. The entry3 log entry contains only the Record Data Format. And the entry4 log entry contains
 604 both the Record Data and Standard Message Formats. The entry4 log entry shows properties for the
 605 Record Data Format where the RecordFormat property is an empty string, which indicates that the
 606 RecordData is a free-format string.



608 **Figure 7 – RecordLog Instances for Both Record Types**

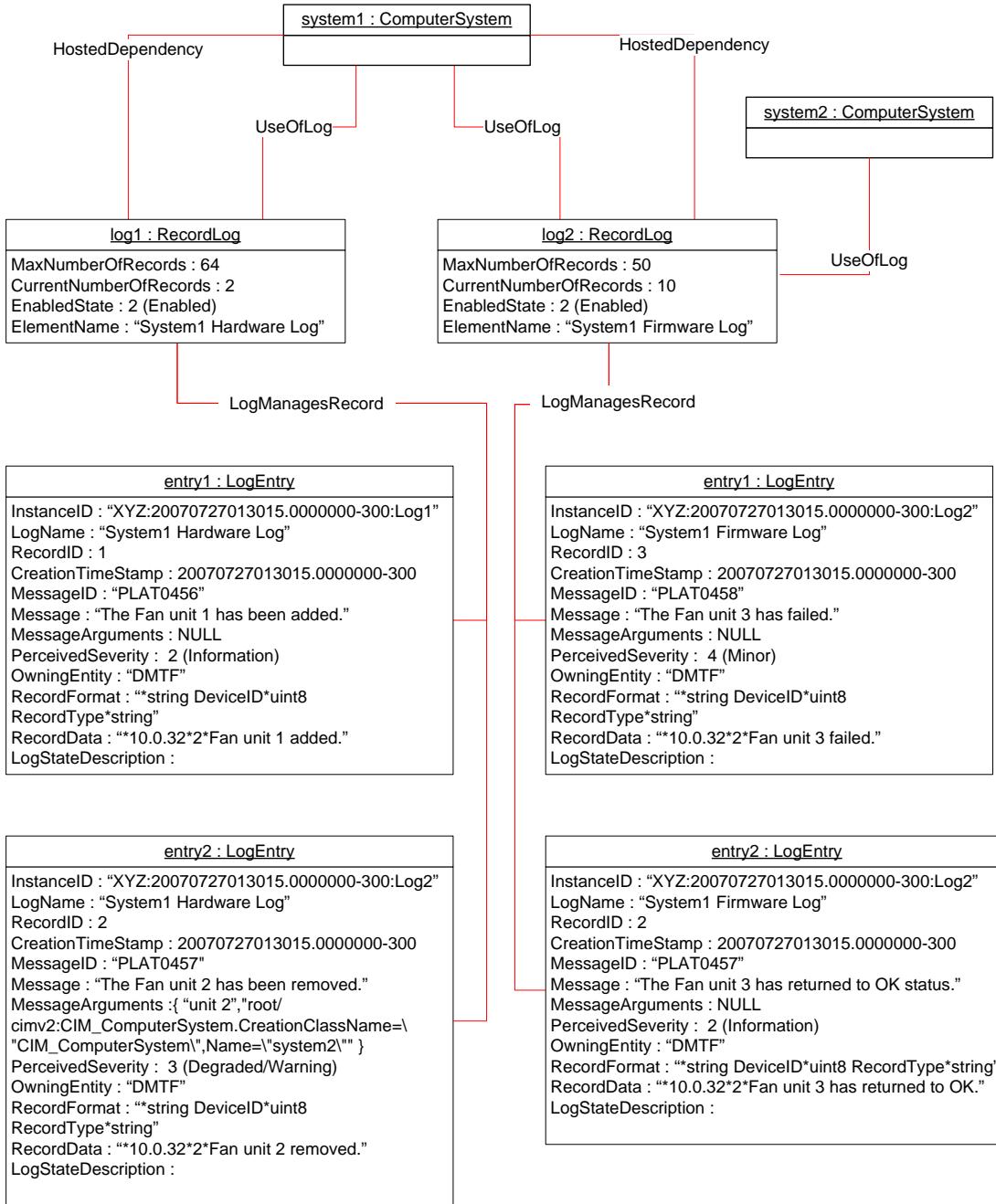
607

609 9.11 List All Logs Hosted on This System

610 Figure 8 shows two record logs. Both of these record logs are used by and hosted on system1. system2
611 uses log2 but does not host any record logs.

612 A client can list all logs hosted on system1 as follows:

- 613 1) From the CIM_ComputerSystem instance for system1 enumerate all CIM_HostedDependency
614 association instances where CIM_RecordLog is the result class.

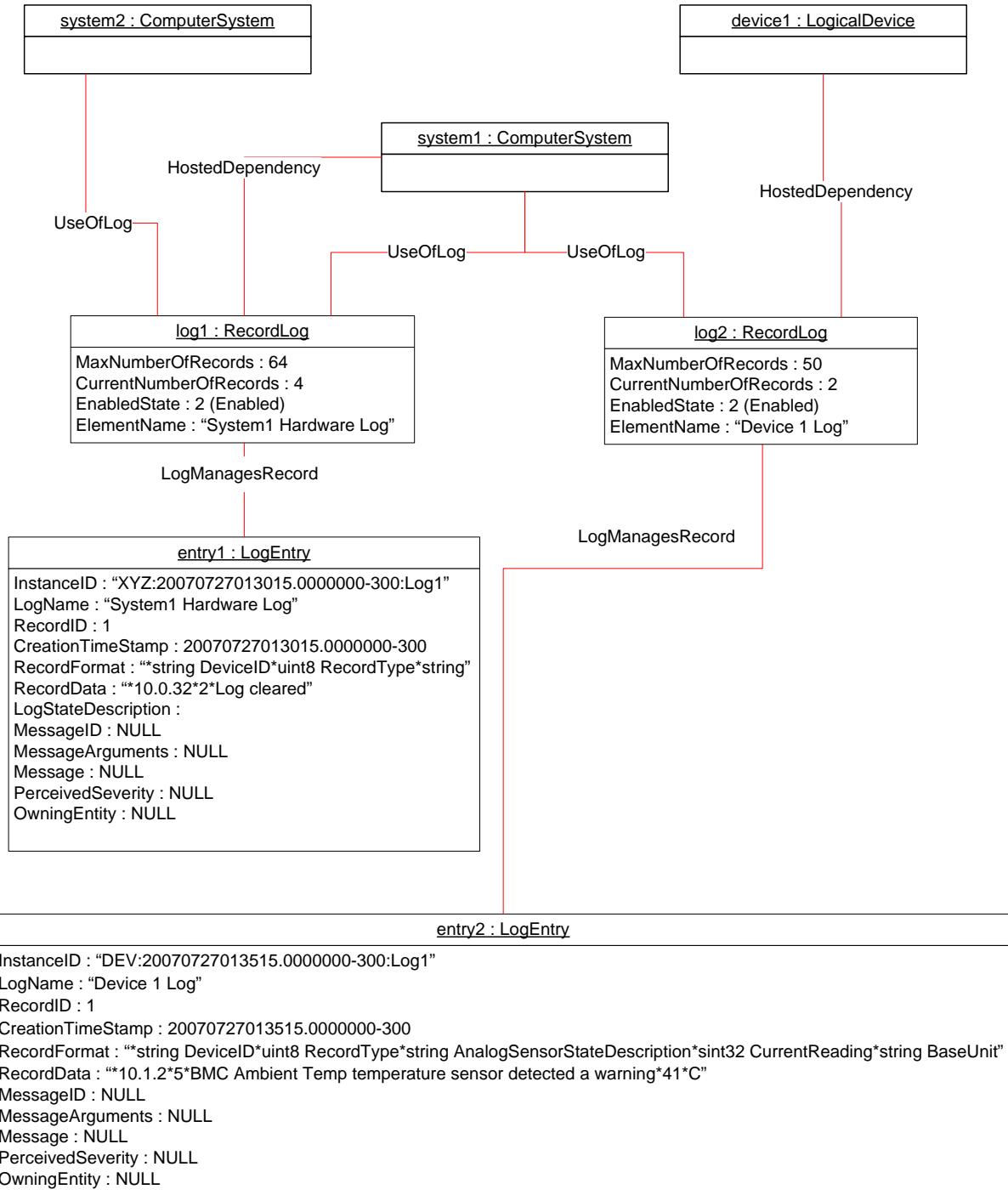


615

616

Figure 8 – Record Log Hosted on system1

617 Figure 9 shows two record logs (log1 and log2). log1 is hosted on system1 and used by system1 and
 618 system2. log2 is hosted on device1 and is used by system1.



619

620

Figure 9 – Record Logs Hosted on system1 and device1

621 10 CIM Elements

622 Table 13 shows the instances of CIM Elements for this profile. Instances of the CIM Elements shall be
 623 implemented as described in Table 13. Sections 7 (“Implementation”) and 8 (“Methods”) may impose
 624 additional requirements on these elements.

625 **Table 13 – CIM Elements: Record Log Profile**

Element Name	Requirement	Description
Classes		
CIM_ElementCapabilities	Optional	See 10.1.
CIM_RecordLogCapabilities	Mandatory	See 7.2 and 10.2.
CIM_LogManagesRecord	Optional	See 10.3.
CIM_LogEntry	Optional	See 10.4.
CIM_RecordLog	Mandatory	See 10.5.
CIM_RegisteredProfile	Mandatory	See 10.6.
CIM_UseOfLog	Mandatory	See 10.7.
CIM_HostedDependency	Optional	See 10.8.
Indications		
None defined in this profile		

626 10.1 CIM_ElementCapabilities

627 CIM_ElementCapabilities associates an instance of CIM_RecordLog with an instance of
 628 CIM_EnabledLogicalElementCapabilities that describes the capabilities of CIM_RecordLog. Table 14
 629 provides information about the properties of CIM_ElementCapabilities.

630 **Table 14 – Class: CIM_ElementCapabilities**

Elements	Requirement	Notes
ManagedElement	Mandatory	Key: This property shall reference the instance of CIM_RecordLog that represents the log. Cardinality 1..*, indicating one or many references
Capabilities	Mandatory	Key: This property shall reference the instance of CIM_EnabledLogicalElement that represents the capabilities of the log. Cardinality 0..1, indicating zero or one reference

631 10.2 CIM_RecordLogCapabilities

632 CIM_RecordLogCapabilities represents the capabilities of the log. Table 15 provides information about
633 the properties of CIM_RecordLogCapabilities.

634 **Table 15 – Class: CIM_RecordLogCapabilities**

Elements	Requirement	Notes
InstanceID	Mandatory	Key
RequestedStatesSupported	Mandatory	See 7.2.2.
ElementNameEditSupported	Mandatory	See 7.2.3.
MaxElementNameLen	Conditional	See 7.2.4.
SupportedRecordTypes	Mandatory	See 7.2.1.

635 10.3 CIM_LogManagesRecord

636 CIM_LogManagesRecord associates the CIM_RecordLog instance, which represents the log, with an
637 instance of CIM_LogEntry, which represents an entry within the log. Table 16 provides information about
638 the properties of CIM_LogManagesRecord.

639 **Table 16 – Class: CIM_LogManagesRecord**

Elements	Requirement	Notes
Log	Mandatory	Key: This property shall reference the CIM_RecordLog instance that represents the log. Cardinality 1, indicating one reference
Record	Mandatory	Key: This property shall reference the instance of CIM_LogEntry that represents the entry within the log. Cardinality *, indicating many references

640 10.4 CIM_LogEntry

641 CIM_LogEntry represents the log entry within the log in the managed system. Table 17 provides
642 information about the properties of CIM_LogEntry.

643 **Table 17 – Class: CIM_LogEntry**

Elements	Requirement	Notes
InstanceID	Mandatory	Key
LogInstanceID	Optional	See 7.1.1.
LogName	Optional	See 7.1.2.
RecordID	Mandatory	None
CreationTimeStamp	Mandatory	None
RecordData	Conditional	See 7.1.3.1.1 and 7.2.1.
RecordFormat	Conditional	See 7.1.3.1.2 and 7.2.1.
ElementName	Mandatory	The property shall match pattern “*”.

Elements	Requirement	Notes
PerceivedSeverity	Conditional	See 7.1.3.3.4 and 7.2.1.
OwningEntity	Conditional	See 7.1.3.3.5 and 7.2.1.
MessageID	Conditional	See 7.1.3.3.1 and 7.2.1.
Message	Conditional	See 7.1.3.3.2 and 7.2.1.
MessageArguments	Conditional	See 7.1.3.3.2 and 7.2.1.

644 10.5 CIM_RecordLog

645 CIM_RecordLog represents the log in the managed system. Table 18 provides information about the
646 properties of CIM_RecordLog.

647 **Table 18 – Class: CIM_RecordLog**

Elements	Requirement	Notes
InstanceID	Mandatory	Key
MaxNumberOfRecords	Mandatory	A value of 0 shall mean “Unknown” or “Not Applicable”.
LogState	Mandatory	See 7.5.2.
OverwritePolicy	Mandatory	See 7.8.
RequestedState	Mandatory	See 7.4.
EnabledState	Mandatory	See 7.5.1.
OperationalStatus	Mandatory	None
HealthState	Mandatory	None
ElementName	Mandatory	The property shall match pattern “.*”.
CurrentNumberOfRecords	Optional	None

648 10.6 CIM_RegisteredProfile

649 CIM_RegisteredProfile identifies the *Record Log Profile* in order for a client to determine the conformance
650 with the profile. The CIM_RegisteredProfile class is defined by the [Profile Registration Profile](#). With the
651 exception of the mandatory values specified for the properties in Table 19, the behavior of the
652 RegisteredProfile instance is per the [Profile Registration Profile](#).

653 **Table 19 – Class: CIM_RegisteredProfile**

Elements	Requirement	Description
RegisteredName	Mandatory	This property shall have a value of “Record Log”.
RegisteredVersion	Mandatory	This property shall have a value of “2.0.0”.
RegisteredOrganization	Mandatory	This property shall have a value of 2 (DMTF).

654 NOTE: Previous versions of this document included the suffix “Profile” for the RegisteredName value. If
655 implementations querying for the RegisteredName value find the suffix “Profile”, they should ignore the suffix, with
656 any surrounding white spaces, before any comparison is done with the value as specified in this document.

657 **10.7 CIM_UseOfLog**

658 CIM_UseOfLog associates CIM_RecordLog, which represents the log, with a subclass of
 659 CIM_ManagedSystemElement, which represents the element that uses or populates the log. Table 20
 660 provides information about the properties of CIM_UseOfLog.

661 **Table 20 – Class: CIM_UseOfLog**

Elements	Requirement	Notes
Antecedent	Mandatory	<p>Key: This property shall reference the CIM_RecordLog instance that represents the log. Cardinality 1..*, indicating one or many references</p>
Dependent	Mandatory	<p>Key: This property shall reference the instance of a subclass of CIM_ManagedSystemElement (such as CIM_ComputerSystem) that owns the log. Cardinality 1..*, indicating one or many references</p>

662 **10.8 CIM_HostedDependency**

663 CIM_HostedDependency associates CIM_RecordLog, which represents the log, with a subclass of
 664 CIM_ManagedElement, which represents the element that hosts the log. Table 21 provides information
 665 about the properties of CIM_HostedDependency.

666 **Table 21 – Class: CIM_HostedDependency**

Elements	Requirement	Notes
Antecedent	Mandatory	<p>Key: This property shall reference the CIM_RecordLog instance that represents the log. Cardinality 1..*, indicating one or many references</p>
Dependent	Mandatory	<p>Key: This property shall reference the instance of a subclass of CIM_ManagedSystemElement (such as CIM_ComputerSystem) that hosts the log. Cardinality 1..*, indicating one or many references</p>

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670

ANNEX A (informative)

Change Log

Version	Date	Description
1.0.0b	2006-08-16	Preliminary Standard version.
1.0.0c	2007-02-14	Preliminary Standard refresh. Updated the value/valuemaps of CIM_RecordLog.OverwrrityPolicy and updated the CIM schema version from 2.11 to 2.14 to reflect the corresponding schema containing the change mentioned.
1.0.0	2007-10-04	Final Standard version
1.0.1	2008-09-23	Errata 1.0.1
2.0.0	2010-05-20	DMTF Standard, with the following changes: <ul style="list-style-type: none">• Add Standard Message support. Either Record Data or Standard Message Format must be implemented.• The new class CIM_RecordLogCapabilities, which subclasses (and replaces) CIM_EnabledLogicalElementCapabilities, must now be implemented.

671