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61		Foreword
62 63		ord Log Profile SM CLP Mapping Specification (DSP0810) was prepared by the Server ment Working Group.
64	Conve	ntions
65 66		udo-code conventions utilized in this document are the Recipe Conventions as defined in SNIA 1.0, section 7.6.
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79	Introduction

80 81 82 83	This document defines the SM CLP mapping for CIM elements described in the <u>Record Log Profile</u> . The information in this specification, combined with the <u>SM CLP-to-CIM Common Mapping Specification 1.0</u> , is intended to be sufficient to implement SM CLP commands relevant to the classes, properties, and methods described in the <u>Record Log Profile</u> using CIM operations.
84 85	The target audience for this specification is implementers of the SM CLP support for the <u>Record Log Profile</u> .

Record Log Profile SM CLP Mapping Specification

87 **1 Scope**

- 88 This specification contains the requirements for an implementation of the SM CLP to provide access to,
- and implement the behaviors of, the *Record Log Profile*.

90 2 Normative References

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

94 2.1 Approved References

- 95 DMTF DSP0216, SM CLP-to-CIM Common Mapping Specification 1.0,
- 96 http://www.dmtf.org/standards/published_documents/DSP0216_1.0.pdf
- 97 DMTF DSP1010, Record Log Profile1.0,
- 98 http://www.dmtf.org/stadards/published_documents/DSP1010_1.0.pdf
- 99 SNIA, Storage Management Initiative Specification (SMI-S) 1.1.0,
- 100 http://www.snia.org/tech_activities/standards/curr_standards/smi

101 2.2 Other References

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

104 3 Terms and Definitions

- For the purposes of this document, the following terms and definitions apply.
- 106 **3.1**
- 107 can
- 108 used for statements of possibility and capability, whether material, physical, or causal
- 109 3.2
- 110 cannot
- 111 used for statements of possibility and capability, whether material, physical or causal
- 112 **3.3**
- 113 conditional
- indicates requirements to be followed strictly in order to conform to the document when the specified
- 115 conditions are met
- 116 **3.4**
- 117 mandatory
- indicates requirements to be followed strictly in order to conform to the document and from which no
- 119 deviation is permitted

- 120 **3.5**
- 121 **may**
- indicates a course of action permissible within the limits of the document
- 123 **3.6**
- 124 need not
- indicates a course of action permissible within the limits of the document
- 126 **3.7**
- 127 optional
- indicates a course of action permissible within the limits of the document
- 129 **3.8**
- 130 shall
- indicates requirements to be followed strictly in order to conform to the document and from which no
- 132 deviation is permitted
- 133 **3.9**
- 134 shall not
- indicates requirements to be followed strictly in order to conform to the document and from which no
- 136 deviation is permitted
- 137 **3.10**
- 138 should
- 139 indicates that among several possibilities, one is recommended as particularly suitable, without
- mentioning or excluding others, or that a certain course of action is preferred but not necessarily required
- 141 **3.11**
- 142 should not
- 143 indicates that a certain possibility or course of action is deprecated but not prohibited

144 4 Symbols and Abbreviated Terms

- 145 The following symbols and abbreviations are used in this document.
- 146 **4.1**
- 147 **CIM**
- 148 Common Information Model
- 149 **4.2**
- 150 **CLP**
- 151 Command Line Protocol
- 152 **4.3**
- 153 **DMTF**
- 154 Distributed Management Task Force
- 155 **4.4**
- 156 **IETF**
- 157 Internet Engineering Task Force

- 158 **4.5**
- 159 **SM**
- 160 Server Management
- 161 **4.6**
- 162 **SMI-S**
- 163 Storage Management Initiative Specification
- 164 **4.7**

- 165 **SNIA**
- 166 Storage Networking Industry Association

5 Recipes

- The following is a list of the common recipes used by the mappings in this specification. For a definition of each recipe, see the *SM CLP-to-CIM Common Mapping Specification 1.0* (DSP0216).
- 170 smResetRSC
- smShowInstance
- smShowInstances
- smShowAssociationInstance
- smShowAssociationInstances
- 175 smStartRSC
- 176 smStopRSC

177 6 Mappings

- 178 The following sections detail the mapping of CLP verbs to CIM Operations for each CIM class defined in
- the Record Log Profile. Requirements specified here related to support for a CLP verb for a particular
- 180 class are solely within the context of this profile.

181 6.1 CIM_ElementCapabilities

- 182 The cd, exit, help, and version verbs shall be supported as described in DSP0216.
- 183 Table 1 lists each SM CLP verb, the required level of support for the verb in conjunction with the target
- class, and, when appropriate, a cross-reference to the section detailing the mapping for the verb and
- target. Table 1 is for informational purposes only; in case of a conflict between Table 1 and requirements
- detailed in the following sections, the text detailed in the following sections supersedes the information in
- 187 Table 1.

188

Table 1 – Command Verb Requirements for CIM_ElementCapabilities

Command Verb	Requirement	Comments
Create	Not supported	
Delete	Not supported	
Dump	Not supported	
Load	Not supported	
Reset	Not supported	

Command Verb	Requirement	Comments
Set	Not supported	
Show	Shall	See 6.1.2
Start	Not supported	
Stop	Not supported	

- 189 No mapping is defined for the following verbs for the specified target: create, delete, dump, exit,
- 190 load, reset, set, start, and stop.

Ordering of Results 191 6.1.1

- 192 When results are returned for multiple instances of CIM ElementCapabilities, implementations shall
- 193 utilize the following algorithm to produce the natural (that is, default) ordering:
- 194 Results for CIM_ElementCapabilities are unordered; therefore, no algorithm is defined.

6.1.2 Show 195

- This section describes how to implement the show verb when applied to an instance of 196
- CIM ElementCapabilities. Implementations shall support the use of the show verb with 197
- 198 CIM_ElementCapabilities.

6.1.2.1 199 Show Command Form for Multiple Instances Target -CIM_EnabledLogicalElementCapabilities Reference 200

- 201 This command form is used to show many instances of CIM_ElementCapabilities. This command form
- 202 corresponds to a show command issued against instances of CIM_ElementCapabilities where only one
- reference is specified and the reference is to the scoping instance of 203
- CIM EnabledLogicalElementCapabilities. 204

205 6.1.2.1.1 **Command Form**

206 show <CIM_ElementCapabilities multiple instances>

207 6.1.2.1.2 **CIM Requirements**

- 208 See CIM ElementCapabilities in the "CIM Elements" section of the Record Log Profile for the list of
- mandatory properties. 209

6.1.2.1.3 210 **Behavior Requirements**

6.1.2.1.3.1 **Preconditions** 211

- 212 In this section \$instance represents the instance of CIM_EnabledLogicalElementCapabilities which is
- 213 referenced by CIM_ElementCapabilities.
- 214 #all is true if the "-all" option was specified with the command; otherwise, #all is false.

215 6.1.2.1.3.2 Pseudo Code

```
216
      #propertylist[] = NULL;
217
      if ( false == #all)
218
       {
219
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
220
              Requirements)>;
221
```

225 6.1.2.2 Show Command Form for a Single Instance – CIM_RecordLog Reference

- 226 This command form is used to show a single instance of CIM_ElementCapabilities. This command form
- 227 corresponds to a show command issued against a single instance of CIM_ElementCapabilities where
- 228 only one reference is specified and the reference is to the instance of CIM_RecordLog.

229 **6.1.2.2.1** Command Form

230 show <CIM_ElementCapabilities single instance>

231 **6.1.2.2.2 CIM Requirements**

- 232 See CIM_ElementCapabilities in the "CIM Elements" section of the Record Log Profile for the list of
- 233 mandatory properties.
- 234 **6.1.2.2.3 Behavior Requirements**
- 235 **6.1.2.2.3.1** Preconditions
- 236 In this section \$instance represents the instance of CIM RecordLog which is referenced by
- 237 CIM ElementCapabilities.
- 238 #all is true if the "-all" option was specified with the command; otherwise, #all is false.

239 **6.1.2.2.3.2** Pseudo Code

```
240
      #propertylist[] = NULL;
241
      if ( false == #all)
242
243
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
244
             Requirements)>;
245
246
      &smShowAssociationInstances ( "CIM_ElementCapabilities", $instance.getInstancePath(),
247
          #propertylist[] );
248
      &smEnd;
```

249 6.1.2.3 Show Command Form for a Single Instance Target – Both References

- 250 This command form is for the show verb applied to a single instance. This command form corresponds to
- 251 a show command issued against CIM_ElementCapabilities where both references are specified and
- 252 therefore the desired instance is unambiguously identified.
- 253 **6.1.2.3.1 Command Form**
- 254 show <CIM_ElementCapabilities single instance>
- 255 **6.1.2.3.2 CIM Requirements**
- See CIM_ElementCapabilities in the "CIM Elements" section of the <u>Record Log Profile</u> for the list of
- 257 mandatory properties.

- 258 6.1.2.3.3 Behavior Requirements
- 259 **6.1.2.3.3.1 Preconditions**
- 260 In this section \$instanceA represents the referenced instance of CIM_RecordLog through the
- 261 CIM_ElementCapabilities association. \$instanceB represents the instance of
- 262 CIM_EnabledLogicalElementCapabilities which is referenced by CIM_ElementCapabilities.
- 263 #all is true if the "-all" option was specified with the command; otherwise, #all is false.

6.1.2.3.3.2 Pseudo Code

264

274

276

277

278

279 280

281

```
265
      #propertylist[] = NULL;
266
      if ( false == #all)
267
268
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
269
             Requirements)>;
270
271
      &smShowAssociationInstance ( "CIM_ElementCapabilities", $instanceA.getInstancePath(),
272
          $instanceB.getInstancePath(), #propertylist[] );
273
      &smEnd;
```

6.2 CIM_EnabledLogicalElementCapabilities

275 The cd, exit, help and version verbs shall be supported as described in DSP0216.

Table 2 lists each SM CLP verb, the required level of support for the verb in conjunction with the target class, and, when appropriate, a cross-reference to the section detailing the mapping for the verb and target. Table 2 is for informational purposes only; in case of a conflict between Table 2 and requirements detailed in the following sections, the text detailed in the following sections supersedes the information in Table 2.

Table 2 – Command Verb Requirements for CIM EnabledLogicalElementCapabilities

Command Verb	Requirement	Comments
Create	Not supported	
Delete	Not supported	
Dump	Not supported	
Load	Not supported	
Reset	Not supported	
Set	Not supported	
Show	Shall	See 6.2.2.
Start	Not supported	
Stop	Not supported	

No mapping is defined for the following verbs for the specified target: create, delete, dump, load, reset, start, and stop.

284 6.2.1 Ordering of Results

- 285 When results are returned for multiple instances of CIM_EnabledLogicalElementCapabilities,
- 286 implementations shall utilize the following algorithm to produce the natural (that is, default) ordering:
- Results for CIM_EnabledLogicalElementCapabilities are unordered; therefore, no algorithm is defined.
- 289 **6.2.2** Show
- 290 This section describes how to implement the show verb when applied to an instance of
- 291 CIM_EnabledLogicalElementCapabilities. Implementations shall support the use of the show verb with
- 292 CIM EnabledLogicalElementCapabilities.
- 293 6.2.2.1 Show Command Form for Multiple Instances Target
- 294 This command form is used to show many instances of CIM EnabledLogicalElementCapabilities.
- 295 **6.2.2.1.1 Command Form**
- 296 show <CIM_EnabledLogicalElementCapabilities multiple instances>
- 297 **6.2.2.1.2 CIM Requirements**
- 298 See CIM_EnabledLogicalElementCapabilities in the "CIM Elements" section of the Record Log Profile for
- 299 the list of mandatory properties.
- 300 6.2.2.1.3 Behavior Requirements
- 301 **6.2.2.1.3.1** Preconditions
- 302 In this section \$containerInstance represents the instance of CIM_ConcreteCollection with
- 303 ElementName property that contains "Capabilities" and is associated to the targeted instances of
- 304 CIM EnabledLogicalElementCapabilities through the CIM MemberOfCollection association.
- 305 #all is true if the "-all" option was specified with the command; otherwise, #all is false.

306 **6.2.2.1.3.2** Pseudo Code

```
307
      #propertylist[] = NULL;
308
      if ( false == #all)
309
      {
310
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
311
             Requirements)>;
312
313
      &smShowInstances ( "CIM EnabledLogicalElementCapabilities", "CIM MemberOfCollection",
314
          $containerInstance.getInstancePath(), #propertylist[] );
      &smEnd;
315
```

316 6.2.2.2 Show Command Form for a Single Instance Target

- 317 This command form is used to show a single instance of CIM EnabledLogicalElementCapabilities.
- 318 **6.2.2.2.1 Command Form**
- 319 show <CIM_EnabledLogicalElementCapabilities single instance>

320 **6.2.2.2.2 CIM Requirements**

- See CIM_EnabledLogicalElementCapabilities in the "CIM Elements" section of the <u>Record Log Profile</u> for the list of mandatory properties.
- and not of mandatory proportion

323 **6.2.2.2.3 Behavior Requirements**

324 **6.2.2.2.3.1** Preconditions

325 In this section \$instance represents the targeted instance of CIM EnabledLogicalElementCapabilities.

```
326 $instance=<CIM_EnabledLogicalElementCapabilities single instance>;
```

327 #all is true if the "-all" option was specified with the command; otherwise, #all is false.

6.2.2.2.3.2 Pseudo Code

328

337

344

6.3 CIM_LogManagesRecord

338 The cd, exit, help, and version verbs shall be supported as described in DSP0216.

Table 3 lists each SM CLP verb, the required level of support for the verb in conjunction with the target class, and, when appropriate, a cross-reference to the section detailing the mapping for the verb and target. Table 3 is for informational purposes only; in case of a conflict between Table 3 and requirements detailed in the following sections, the text detailed in the following sections supersedes the information in Table 3.

Table 3 – Command Verb Requirements for CIM_LogManagesRecord

Command Verb	Requirement	Comments
Create	Not supported	
Delete	Not supported	
Dump	Not supported	
Load	Not supported	
Reset	Not supported	
Set	Not supported	
Show	Shall	See 6.3.2.
Start	Not supported	
Stop	Not supported	

No mapping is defined for the following verbs for the specified target: create, delete, dump, exit, load, reset, set, start, and stop.

347 6.3.1 Ordering of Results

- When results are returned for multiple instances of CIM_LogManagesRecord, implementations shall
- utilize the following algorithm to produce the natural (that is, default) ordering:
- Results for CIM LogManagesRecord are unordered; therefore, no algorithm is defined.

351 **6.3.2 Show**

- 352 This section describes how to implement the show verb when applied to an instance of
- 353 CIM LogManagesRecord. Implementations shall support the use of the show verb with
- 354 CIM_LogManagesRecord.

355 6.3.2.1 Show Command Form for Multiple Instances Target – CIM_RecordLog Reference

- 356 This command form is used to show many instances of CIM_LogManagesRecord. This command form
- 357 corresponds to a show command issued against instances of CIM_LogManagesRecord where only one
- 358 reference is specified and the reference is to the scoping instance of CIM_RecordLog

359 **6.3.2.1.1 Command Form**

360 show <CIM_LogManagesRecord multiple instances>

361 **6.3.2.1.2 CIM Requirements**

- 362 See CIM_LogManagesRecord in the "CIM Elements" section of the Record Log Profile for the list of
- 363 mandatory properties.

364 6.3.2.1.3 Behavior Requirements

365 **6.3.2.1.3.1** Preconditions

- In this section \$instance represents the instance of CIM_RecordLog which is referenced by
- 367 CIM LogManagesRecord.
- 368 #all is true if the "-all" option was specified with the command; otherwise, #all is false.

369 **6.3.2.1.3.2** Pseudo Code

```
370
      #propertylist[] = NULL;
371
      if ( false == #all)
372
373
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
374
             Requirements)>;
375
376
      &smShowAssociationInstances ( "CIM_LogManagesRecord", $instance.getInstancePath(),
377
          #propertylist[] );
      &smEnd;
378
```

379 6.3.2.2 Show Command Form for a Single Instance – CIM_LogEntry Reference

- 380 This command form is used to show a single instance of CIM_LogManagesRecord. This command form
- 381 corresponds to a show command issued against a single instance of CIM_LogManagesRecord where
- 382 only one reference is specified and the reference is to the instance of CIM LogEntry.

383 **6.3.2.2.1 Command Form**

384 show <CIM_LogManagesRecord single instance>

- 385 **6.3.2.2.2 CIM Requirements**
- 386 See CIM_LogManagesRecord in the "CIM Elements" section of the <u>Record Log Profile</u> for the list of
- 387 mandatory properties.
- 388 6.3.2.2.3 Behavior Requirements
- 389 **6.3.2.2.3.1 Preconditions**
- 390 In this section \$instance represents the instance of CIM LogEntry which is referenced by
- 391 CIM_LogManagesRecord.
- 392 #all is true if the "-all" option was specified with the command; otherwise, #all is false.
- 393 **6.3.2.2.3.2** Pseudo Code

```
394
      #propertylist[] = NULL;
395
      if ( false == #all)
396
397
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
398
             Requirements)>;
399
400
      &smShowAssociationInstances ( "CIM_LogManagesRecord", $instance.getInstancePath(),
401
          #propertylist[] );
402
      &smEnd;
```

- 403 6.3.2.3 Show Command Form for a Single Instance Target Both References
- This command form is for the show verb applied to a single instance. This command form corresponds to
- 405 a show command issued against CIM_LogManagesRecord where both references are specified and
- 406 therefore the desired instance is unambiguously identified.
- 407 **6.3.2.3.1 Command Form**
- 408 show <CIM LogManagesRecord single instance>
- 409 **6.3.2.3.2 CIM Requirements**
- 410 See CIM_LogManagesRecord in the "CIM Elements" section of the Record Log Profile for the list of
- 411 mandatory properties.
- 412 6.3.2.3.3 Behavior Requirements
- 413 **6.3.2.3.3.1** Preconditions
- In this section \$instanceA represents the referenced instance of CIM_RecordLog through
- 415 CIM_LogManagesRecord association. \$instanceB represents the instance of CIM_LogEntry which is
- 416 referenced by CIM_LogManagesRecord.
- 417 #all is true if the "-all" option was specified with the command; otherwise, #all is false.

428

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437

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442 443

444

6.3.2.3.3.2 Pseudo Code

```
419
      #propertylist[] = NULL;
420
      if ( false == #all)
421
422
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
423
             Requirements)>;
424
425
      &smShowAssociationInstance ( "CIM_LogManagesRecord", $instanceA.getInstancePath(),
426
          $instanceB.getInstancePath(), #propertylist[] );
427
      &smEnd;
```

6.4 CIM_LogEntry

429 The cd, exit, help and version verbs shall be supported as described in DSP0216.

Table 4 lists each SM CLP verb, the required level of support for the verb in conjunction with the target class, and, when appropriate, a cross-reference to the section detailing the mapping for the verb and target. Table 4 is for informational purposes only; in case of a conflict between Table 4 and requirements detailed in the following sections, the text detailed in the following sections supersedes the information in Table 4.

Table 4 – Command Verb Requirements for CIM_LogEntry

Command Verb	Requirement	Comments
Create	Not supported	
Delete	May	
Dump	Not supported	
Load	Not supported	
Reset	Not supported	
Set	Not supported	
Show	Shall	See 6.4.3.
Start	Not supported	
Stop	Not supported	

436 No mapping is defined for the following verbs for the specified target: create, delete, dump, and load.

6.4.1 Ordering of Results

When results are returned for multiple instances of CIM_LogEntry, implementations shall utilize the following algorithm to produce the natural (that is, default) ordering:

 Results for CIM_LogEntry instances are based on the TimeStamp property of the CIM_LogEntry class. The natural order is descending: LIFO (Last In, First Out), from the newest log entry to the oldest. In the rare case when TimeStamp values for some CIM_LogEntry instances are equal, it is left up to the implementation to sort those instances.

6.4.2 **Delete**

This section describes how to implement the delete verb when applied to an instance of CIM_LogEntry.

Implementations may support the use of the delete verb with CIM_LogEntry. Deleting all the instances

- of CIM_LogEntry aggregated within a CIM_RecordLog instance corresponds to clearing the log. Deleting
- 448 a single instance of CIM LogEntry corresponds to removing an entry from the log. Implementation may
- support one or both of the below command forms.

450 6.4.2.1 Delete Multiple Instances – All Instance of Log Entries

- 451 Used to clear all the log entries as all CIM_LogEntry instances contained within the CIM_RecordLog are
- 452 the target.

462

- 453 **6.4.2.1.1 Command Form**
- 454 delete <CIM_LogEntry multiple instances>
- 455 **6.4.2.1.2 CIM Requirements**
- 456 uint32 CIM_RecordLog.ClearLog()
- 457 6.4.2.1.3 Behavior Requirements
- 458 6.4.2.1.3.1 Preconditions
- In this section \$containerInstance is the instance of CIM_RecordLog, which represents the container
- 460 log for the entries to be deleted, and is associated to the targeted instances of CIM_LogEntry through the
- 461 CIM_LogManagesRecord association.

6.4.2.1.3.2 Pseudo Code

```
463
      #Error = &smOpEnumerateInstances ( "CIM_LogEntry", $deleteInstances[] );
464
      if (0 != #Error.code)
465
466
          //includes &smEnd;
467
          &smProcessOpError (#Error);
468
469
      %InArguments[] = {};
470
      %OutArguments[] = {};
471
      #Error = InvokeMethod ($containerInstance.getInstancePath(),
472
             "ClearLog",
473
             %InArguments[],
474
             %OutArguments[],
475
             #returnStatus);
476
      if (0 != #Error.code)
477
478
          //method invocation failed
479
          if ( (null != #Error.$error) && (null != #Error.$error[0]) )
480
481
             //if the method invocation contains an embedded error
482
             //use it for the Error for the overall job
483
             &smAddError($job, #Error.$error[0]);
484
             &smMakeCommandStatus($job);
485
             &smEnd;
486
          }
487
          else if ( 17 == #Error.code )
488
489
             //17 - CIM_ERR_METHOD_NOT_FOUND
490
             // The specified extrinsic method does not exist.
491
             $OperationError = smNewInstance("CIM_Error");
```

```
492
             // CIM_ERR_METHOD_NOT_FOUND
493
             $OperationError.CIMStatusCode = 17;
494
             //Software Error
495
             $OperationError.ErrorType = 10;
496
             //Unknown
497
             $OperationError.PerceivedSeverity = 0;
498
             $OperationError.OwningEntity = DMTF:SMCLP;
499
             $OperationError.MessageID = 0x00000001;
500
             $OperationError.Message = "Operation is not supported."
501
             &smAddError($job, $OperationError);
502
             &smMakeCommandStatus($job);
503
             &smEnd;
504
         }
505
         else
506
507
             //operation failed, but no detailed error instance, need to make one up
508
             //make an Error instance and associate with job for Operation
509
             $OperationError = smNewInstance("CIM_Error");
510
             //CIM_ERR_FAILED
511
             $OperationError.CIMStatusCode = 1;
512
             //Software Error
513
             $OperationError.ErrorType = 4;
514
             //Unknown
515
             $OperationError.PerceivedSeverity = 0;
516
             $OperationError.OwningEntity = DMTF:SMCLP;
517
             $OperationError.MessageID = 0x00000009;
518
             $OperationError.Message = "An internal software error has occurred.";
519
             &smAddError($job, $OperationError);
520
             &smMakeCommandStatus($job);
521
             &smEnd;
522
523
524
      //if CIM op failed
525
      else if (0 == #returnStatus)
526
527
          //completed successfully
528
         &smCommandCompleted($job);
529
         &smEnd;
530
531
      else if (1 == #returnStatus)
532
533
         //unsupported
534
         $OperationError = smNewInstance("CIM_Error");
535
         //CIM_ERR_NOT_SUPPORTED
536
         $OperationError.CIMStatusCode = 7;
537
         //Other
538
         $OperationError.ErrorType = 1;
539
         //Low
540
         $OperationError.PerceivedSeverity = 2;
541
         $OperationError.OwningEntity = DMTF:SMCLP;
542
         $OperationError.MessageID = 0x00000001;
543
          $OperationError.Message = "Operation is not supported.";
544
          &smAddError($job, $OperationError);
```

```
545
          &smMakeCommandStatus($job);
546
          &smEnd;
547
      }
548
      else
549
550
          // generic failure
551
          $OperationError = smNewInstance("CIM_Error");
552
          //CIM_ERR_FAILED
553
          $OperationError.CIMStatusCode = 1;
554
         //Other
555
         $OperationError.ErrorType = 1;
556
          //Low
557
          $OperationError.PerceivedSeverity = 2;
558
          $OperationError.OwningEntity = DMTF:SMCLP;
559
          $OperationError.MessageID = 0x00000002;
560
          $OperationError.Message = "Failed. No further information is available.";
561
          &smAddError($job, $OperationError);
562
          &smMakeCommandStatus($job);
563
          &smEnd;
564
565
      for #i in $deleteInstances[]
566
567
          &smDisplayInstance ( $deleteInstances[#i] );
568
569
      &smEnd;
```

570 6.4.2.2 Delete a Single Instance

- 571 This command is used to delete a single entry within the log.
- 572 **6.4.2.2.1 Command Form**
- 573 delete <CIM_LogEntry single instance>
- 574 **6.4.2.2.2 CIM Requirements**
- See CIM_LogEntry in the "CIM Elements" section of the <u>Record Log Profile</u> for the list of mandatory properties.
- 577 6.4.2.2.3 Behavior Requirements
- 578 **6.4.2.2.3.1 Preconditions**
- \$instanceLogRecord=<CIM_LogEntry single instance>;
- 580 **6.4.2.2.3.2** Pseudo Code

```
581
      #Error = &smOpDeleteInstance ( $instanceLogRecord.getInstancePath() );
582
      //deletes association classes referencing the instance as well
583
      if (0 != Error.code)
584
585
         &smProcessOpError (#Error);
586
          //includes end;
587
588
      &smDisplayInstance ( $instanceLogRecord );
589
      &smEnd;
```

590 **6.4.3 Show**

- This section describes how to implement the show verb when applied to an instance of CIM_LogEntry.
- Implementations shall support the use of the show verb with CIM_LogEntry.
- 593 6.4.3.1 Show Command Form for Multiple Instances Target
- This command form is used to show many instances of CIM_LogEntry.
- 595 **6.4.3.1.1 Command Form**
- 596 show <CIM_LogEntry multiple instances>
- 597 **6.4.3.1.2 CIM Requirements**
- See CIM_LogEntry in the "CIM Elements" section of the <u>Record Log Profile</u> for the list of mandatory
- 599 properties.
- 600 6.4.3.1.3 Behavior Requirements
- 601 **6.4.3.1.3.1 Preconditions**
- In this section \$containerInstance represents the instance of CIM_RecordLog which represents the
- log and is associated to the targeted instances of CIM LogEntry through the CIM LogManagesRecord
- 604 association.
- 605 #all is true if the "-all" option was specified with the command; otherwise, #all is false.
- 606 **6.4.3.1.3.2** Pseudo Code

```
607
      #propertylist[] = NULL;
608
      if (false == #all)
609
610
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
611
             Requirements)>;
612
613
      &smShowInstances ( "CIM_LogEntry", "CIM_LogManagesRecord",
614
          $containerInstance.getInstancePath(), #propertylist[] );
615
      &smEnd;
```

- 616 6.4.3.2 Show Command Form for a Single Instance Target
- This command form is used to show a single instance of CIM_LogEntry.
- 618 **6.4.3.2.1 Command Form**
- 619 show <CIM_LogEntry single instance>
- 620 **6.4.3.2.2 CIM Requirements**
- See CIM_LogEntry in the "CIM Elements" section of the Record Log Profile for the list of mandatory
- 622 properties.
- 623 6.4.3.2.3 Behavior Requirements
- 624 6.4.3.2.3.1 Preconditions
- 625 In this section \$instance represents the targeted instance of CIM_LogEntry.

```
626
      $instance=<CIM_LogEntry single instance>;
```

#all is true if the "-all" option was specified with the command; otherwise, #all is false.

6.4.3.2.3.2 **Pseudo Code**

627

628

637

641

644

646

649

```
629
      #propertylist[] = NULL;
630
      if ( false == #all)
631
632
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
633
             Requirements)>;
634
635
      &smShowInstance ( $instance.getInstancePath(), #propertylist[] );
636
      &smEnd;
```

6.5 CIM_RecordLog

638 The cd, exit, help, and version verbs shall be supported as described in DSP0216.

639 Table 5 lists each SM CLP verb, the required level of support for the verb in conjunction with the target 640 class, and, when appropriate, a cross-reference to the section detailing the mapping for the verb and target. Table 5 is for informational purposes only; in case of a conflict between Table 5 and requirements 642 detailed in the following sections, the text detailed in the following sections supersedes the information in 643 Table 5.

Table 5 – Command Verb Requirements for CIM_RecordLog

Command Verb	Requirement	Comments
Create	Not supported	
Delete	Not supported	
Dump	Not supported	
Load	Not supported	
Reset	May	See 6.5.2.
Set	May	See 6.5.3.
Show	Shall	See 6.5.4.
Start	May	See 6.5.5.
Stop	May	See 6.5.6.

645 No mapping is defined for the following verbs for the specified target: create, delete, dump, and load.

6.5.1 **Ordering of Results**

647 When results are returned for multiple instances of CIM RecordLog, implementations shall utilize the 648 following algorithm to produce the natural (that is, default) ordering:

Results for CIM_RecordLog are unordered; therefore, no algorithm is defined.

6.5.2 650 Reset

651 This section describes how to implement the reset verb when applied to an instance of 652 CIM RecordLog. Implementations may support the use of the reset verb with CIM RecordLog.

653 **6.5.2.1 Command Form**

654 reset <CIM_RecordLog single instance>

655 **6.5.2.2 CIM Requirements**

```
uint16 EnabledState;
uint16 RequestedState;
uint32 CIM_RecordLog.RequestStateChange (
    [IN] uint16 RequestedState,
    [OUT] REF CIM_ConcreteJob Job,
    [IN] datetime TimeoutPeriod );
```

662 6.5.2.3 Behavior Requirements

663 6.5.2.3.1.1 Preconditions

- In this section \$instance represents the targeted instance of CIM_RecordLog.
- \$instance=<CIM_RecordLog single instance>;

666 **6.5.2.3.2** Pseudo Code

```
&smResetRSC ( $instance.getInstancePath() );
&smEnd;
```

- 669 **6.5.3 Set**
- This section describes how to implement the set verb when it is applied to an instance of
- 671 CIM_RecordLog. Implementations may support the use of the set verb with CIM_RecordLog.
- The set verb is used to modify descriptive properties of the CIM_RecordLog instance.

673 6.5.3.1 General Usage of Set for a Single Property

- This command form corresponds to the general usage of the set verb to modify a single property of a
- target instance. This is the most common case.
- The requirement for supporting modification of a property using this command form shall be equivalent to
- the requirement for supporting modification of the property using the ModifyInstance operation as defined
- 678 in the Record Log Profile.
- 679 **6.5.3.1.1 Command Form**
- set <CIM_RecordLog single instance> propertyname>=propertyvalue>
- 681 **6.5.3.1.2 CIM Requirements**
- 682 See CIM_RecordLog in the "CIM Elements" section of the Record Log Profile for the list of mandatory
- 683 properties.

684 6.5.3.1.3 Behavior Requirements

690 6.5.3.2 General Usage of Set for Multiple Properties

- This command form corresponds to the general usage of the set verb to modify multiple properties of a
- target instance where there is not an explicit relationship between the properties. This is the most
- 693 common case.
- The requirement for supporting modification of a property using this command form shall be equivalent to
- the requirement for supporting modification of the property using the ModifyInstance operation as defined
- 696 in the Record Log Profile.

697 **6.5.3.2.1 Command Form**

700 **6.5.3.2.2 CIM Requirements**

See CIM_RecordLog in the "CIM Elements" section of the <u>Record Log Profile</u> for the list of mandatory properties.

703 6.5.3.2.3 Behavior Requirements

```
704
      $instance=<CIM_RecordLog single instance>
705
      #propertyNames[] = {cpropertyname>};
706
      for \#i < n
707
708
         #propertyNames[#i] = ropertname#i>
709
         #propertyValues[#i] = cpropertyvalue#i>
710
711
      &smSetInstance ( $instance, #propertyNames[], #propertyValues[] );
712
      &smEnd;
```

713 **6.5.4 Show**

- 714 This section describes how to implement the show verb when applied to an instance of CIM RecordLog.
- 715 Implementations shall support the use of the show verb with CIM RecordLog.

716 6.5.4.1 Show Command Form for Multiple Instances Target

- 717 This command form is used to show many instances of CIM_RecordLog.
- 718 **6.5.4.1.1 Command Form**
- 719 show <CIM RecordLog multiple instances>
- 720 **6.5.4.1.2 CIM Requirements**
- 721 See CIM_RecordLog in the "CIM Elements" section of the <u>Record Log Profile</u> for the list of mandatory
- 722 properties.
- 723 6.5.4.1.3 Behavior Requirements
- 724 **6.5.4.1.3.1** Preconditions
- 725 In this section \$containerInstance represents the instance of CIM_ConcreteCollection which
- 726 represents the collection of logs and is associated to the targeted instances of CIM_RecordLog through
- 727 the CIM_MemberOfCollection association.
- #all is true if the "-all" option was specified with the command; otherwise, #all is false.

729 **6.5.4.1.3.2** Pseudo Code

```
730
      #propertylist[] = NULL;
731
      if ( false == #all)
732
733
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
734
             Requirements)>;
735
736
      &smShowInstances ( "CIM_RecordLog", "CIM_MemberOfCollection",
737
          $containerInstance.getInstancePath(), #propertylist[] );
738
      &smEnd;
```

739 6.5.4.2 Show Command Form for a Single Instance Target

- 740 This command form is used to show a single instance of CIM_RecordLog.
- 741 **6.5.4.2.1 Command Form**
- 742 show <CIM_RecordLog single instance>
- 743 **6.5.4.2.2 CIM Requirements**
- 744 See CIM_RecordLog in the "CIM Elements" section of the Record Log Profile for the list of mandatory
- 745 properties.
- 746 6.5.4.2.3 Behavior Requirements
- 747 6.5.4.2.3.1 Preconditions
- 748 In this section \$instance represents the targeted instance of CIM_RecordLog.
- 749 \$instance=<CIM_RecordLog single instance>;
- 750 #all is true if the "-all" option was specified with the command; otherwise, #all is false.

751 **6.5.4.2.3.2 Pseudo Code**

- 760 **6.5.5 Start**
- 761 This section describes how to implement the start verb when applied to an instance of
- 762 CIM_RecordLog. Implementations may support the use of the start verb with CIM_RecordLog.
- 763 **6.5.5.1 Command Form**
- 764 start <CIM_RecordLog single instance>
- 765 6.5.5.2 CIM Requirements
- 766 uint16 EnabledState;

```
vint16 RequestedState;
uint32 CIM_RecordLog.RequestStateChange (
    [IN] uint16 RequestedState,
    [OUT] REF CIM_ConcreteJob Job,
    [IN] datetime TimeoutPeriod );
```

772 6.5.5.3 Behavior Requirements

773 **6.5.5.3.1.1 Preconditions**

- 774 In this section \$instance represents the targeted instance of CIM_RecordLog.
- 775 \$instance=<CIM_RecordLog single instance>;

776 **6.5.5.3.1.2** Pseudo Code

```
777  &smStartRSC ( $instance.getInstancePath() );
778  &smEnd;
```

779 **6.5.6 Stop**

- 780 This section describes how to implement the stop verb when applied to an instance of CIM_RecordLog.
- 781 Implementations may support the use of the stop verb with CIM_RecordLog.

782 **6.5.6.1 Command Form**

783 stop <CIM_RecordLog single instance>

784 6.5.6.2 CIM Requirements

```
vint16 EnabledState;
vint16 RequestedState;
vint32 CIM_RecordLog.RequestStateChange (
   [IN] uint16 RequestedState,
   [OUT] REF CIM_ConcreteJob Job,
   [IN] datetime TimeoutPeriod );
```

791 6.5.6.3 Behavior Requirements

792 **6.5.6.3.1 Preconditions**

- 793 In this section \$instance represents the targeted instance of CIM_RecordLog.
- 794 \$instance=<CIM_RecordLog single instance>;

795 **6.5.6.3.1.1 Pseudo Code**

```
796   &smStopRSC ( $instance.getInstancePath() );
797   &smEnd;
```

798 6.6 CIM_UseOfLog

- 799 The cd, exit, help, and version verbs shall be supported as described in DSP0216.
- Table 6 lists each SM CLP verb, the required level of support for the verb in conjunction with the target class, and, when appropriate, a cross-reference to the section detailing the mapping for the verb and
- target. Table 6 is for informational purposes only; in case of a conflict between Table 6 and requirements
- detailed in the following sections, the text detailed in the following sections supersedes the information in
- 804 Table 6.

Table 6 - Command Verb Requirements for CIM_UseOfLog

Command Verb	Requirement	Comments
Create	Not supported	
Delete	Not supported	
Dump	Not supported	
Load	Not supported	
Reset	Not supported	
Set	Not supported	
Show	Shall	See 6.6.2.
Start	Not supported	
Stop	Not supported	

No mapping is defined for the following verbs for the specified target: create, delete, dump, exit, load, reset, set, start, and stop.

808 6.6.1 Ordering of Results

- When results are returned for multiple instances of CIM_UseOfLog, implementations shall utilize the following algorithm to produce the natural (that is, default) ordering:
- Results for CIM UseOfLog are unordered; therefore, no algorithm is defined.

812 **6.6.2 Show**

- This section describes how to implement the show verb when applied to an instance of CIM_UseOfLog.
- 814 Implementations shall support the use of the show verb with CIM UseOfLog.
- 815 6.6.2.1 Show Command Form for Multiple Instances Target CIM_RecordLog Reference
- This command form is used to show many instances of CIM_UseOfLog. This command form corresponds
- 817 to a show command issued against instances of CIM UseOfLog where only one reference is specified
- and the reference is to the scoping instance of CIM_RecordLog.
- 819 **6.6.2.1.1 Command Form**
- 820 show <CIM_UseOfLog multiple instances>
- 821 **6.6.2.1.2 CIM Requirements**
- 822 See CIM UseOfLog in the "CIM Elements" section of the Record Log Profile for the list of mandatory
- 823 properties.
- 824 6.6.2.1.3 Behavior Requirements
- 825 **6.6.2.1.3.1 Preconditions**
- 826 In this section \$instance represents the instance of CIM_RecordLog which is referenced by
- 827 CIM UseOfLog.
- 828 #all is true if the "-all" option was specified with the command; otherwise, #all is false.

6.6.2.1.3.2 Pseudo Code

829

```
830
      #propertylist[] = NULL;
831
      if ( false == #all)
832
833
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
834
             Requirements)>;
835
      }
836
      &smShowAssociationInstances ( "CIM_UseOfLog", $instance.getInstancePath(),
837
          #propertylist[] );
838
      &smEnd;
```

839 6.6.2.2 Show Command Form for Multiple Instances – CIM_ManagedSystemElement Reference

- This command form is used to show many instances of CIM_UseOfLog. This command form corresponds
- to a show command issued against instances of CIM_UseOfLog where only one reference is specified
- and the reference is to the scoping instance of a subclass of CIM_ManagedSystemElement.

843 **6.6.2.2.1 Command Form**

844 show <CIM_UseOfLog multiple instances>

845 **6.6.2.2.2 CIM Requirements**

- See CIM_UseOfLog in the "CIM Elements" section of the <u>Record Log Profile</u> for the list of mandatory
- 847 properties.

863

848 6.6.2.2.3 Behavior Requirements

849 **6.6.2.2.3.1** Preconditions

- 850 In this section \$instance represents the instance of a subclass of CIM_ManagedSystemElement which
- is referenced by CIM_UseOfLog.
- 852 #all is true if the "-all" option was specified with the command; otherwise, #all is false.

853 **6.6.2.2.3.2** Pseudo Code

```
854
      #propertylist[] = NULL;
855
      if (false == #all)
856
      {
857
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
858
             Requirements)>;
859
860
      &smShowAssociationInstances ( "CIM_UseOfLog", $instance.getInstancePath(),
861
          propertylist[] );
862
      &smEnd;
```

6.6.2.3 Show Command Form for a Single Instance Target – Both References

This command form is for the show verb applied to a single instance. This command form corresponds to a show command issued against CIM_UseOfLog where both references are specified and therefore the desired instance is unambiguously identified.

867 **6.6.2.3.1 Command Form**

868 show <CIM_UseOfLog single instance>

869 **6.6.2.3.2 CIM Requirements**

- 870 See CIM_UseOfLog in the "CIM Elements" section of the <u>Record Log Profile</u> for the list of mandatory
- 871 properties.
- 872 6.6.2.3.3 Behavior Requirements
- 873 **6.6.2.3.3.1** Preconditions
- 874 In this section \$instanceA represents the referenced instance of CIM RecordLog through
- 875 CIM_UseOfLog association. \$instanceB represents the instance of a subclass of
- 876 CIM_ManagedSystemElement which is referenced by CIM_UseOfLog.
- #all is true if the "-all" option was specified with the command; otherwise, #all is false.

878 **6.6.2.3.3.2** Pseudo Code

```
879
      #propertylist[] = NULL;
880
      if ( false == #all)
881
882
          #propertylist[] = <array of mandatory non-key property names (see CIM</pre>
883
             Requirements)>;
884
885
      &smShowAssociationInstance ( "CIM_UseOfLog", $instanceA.getInstancePath(),
886
          $instanceB.getInstancePath(), propertylist[] );
887
      &smEnd;
```

888

889 890	ANNEX A (informative)
891	(IIIIOIIIIativo)
892	

Change Log

Version	Date	Author	Description
1.0.0	2009-07-14		DMTF Standard Release

894

893