Event Filter Profile

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Event Filter Profile

1 Scope

The Dell Event Filter Profile provides the management capabilities to view the event filters and set actions and notifications for the events.

2 Normative References

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

DMTF DSP1033, *Profile Registration Profile 1.0.0*

Dell Lifecycle Controller Best Practices Guide 1.0,
http://en.community.dell.com/techcenter/extras/m/white_papers/20066173.aspx

Dell WSMAN Licenses and Privileges 1.0

DMTF DSP0226, *Web Services for Management (WS-Management) Specification 1.1.0*

DMTF DSP0227, *WS-Management CIM Binding Specification 1.0.0*

Dell Event Message Registry, <link TBD>

Dell Tech Center MOF Library, http://www.delltechcenter.com/page/DCIM.Library.MOF

- DCIM_EFConfigurationService.mof
- DCIM_EventFilter.mof
- DCIM_LCElementConformsToProfile.mof
- DCIM_LCRegisteredProfile.mof

3 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

3.1
conditional
indicates requirements to be followed strictly in order to conform to the document when the specified conditions are met

3.2
mandatory
indicates requirements to be followed strictly in order to conform to the document and from which no deviation is permitted

3.3
may

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

3.4
optional

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

3.5
referencing profile

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

3.6
shall

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

3.7
FQDD

Fully Qualified Device Descriptor is used to identify a particular component in a system.

3.8
Interop Namespace

Interop Namespace is where instrumentation instantiates classes to advertise its capabilities for client discovery.

3.9
Implementation Namespace

Implementation Namespace is where instrumentation instantiates classes relevant to executing core management tasks.

3.10
`ENUMERATE`

Refers to WS-MAN `ENUMERATE` operation as described in Section 8.2 of DSP0226_V1.1 and Section 9.1 of DSP0227_V1.0

3.11
`GET`

Refers to WS-MAN `GET` operation as defined in Section 7.3 of DSP00226_V1.1 and Section 7.1 of DSP0227_V1.0

4 Symbols and Abbreviated Terms

4.1
CIM

Common Information Model

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71 **4.2**

72 **iDRAC**

73 integrated Dell Remote Access Controller – management controller for blades and monolithic servers

74 **4.3**

75 **CMC**

76 Chassis Manager Controller – management controller for the modular chassis

77 **4.4**

78 **LIFO**

79 Last In, First Out

80 **4.5**

81 **EF**

82 Event Filter

83

84 **5   Synopsis**

85 **Profile Name:** Event Filter

86 **Version:** 1.0.0

87 **Organization:** Dell

88 **CIM Schema Version:** 2.26 Experimental

89 **Dell Schema Version:** 1.0.0

90 **Interop Namespace:** root/interop

91 **Implementation Namespace:** root/dcim

92 **Central Class:** DCIM_EFConfigurationService

93 **Scoping Class:** DCIM_SPComputerSystem

94 The Dell Event Filter Profile is an autonomous profile that provides the management capabilities to filter
95 the events of a managed system element.

96 DCIM_EFConfigurationService shall be the Central Class.

97 Table 1 identifies profiles that are related to this profile.

98   **Table 1 – Related Profiles**

Profile Name	Organization	Version	Relationship
Profile Registration	DCIM	1.0	Reference

99 **6   Description**

100 The *Event Filter Profile* describes the properties and methods of the Event Filter in the managed system
101 element or component. This profile describes the association between the managed system element and
102 the event filters as well as the individual event filters. It also provides a way to set actions and
103 notifications for individual event filters based on category, severity or InstanceID of the event filter.

104   Figure 1 represents the class schema for *Event Filter Profile*. For simplicity, the prefix DCIM_ has been
105   removed from the names of the classes.

106   The DCIM_EFConfigurationService class represents the configuration service that allows the user to set
107   the actions and notifications of event filters based on category and severity or purely based on
108   instanceIDs of the event filter instances.

109   The DCIM_EventFilter class represents the individual event filters. Each instance of the class has many
110   attribute including the category, severity, action to be taken and notification to be sent out on case of
111   events according to these filters.
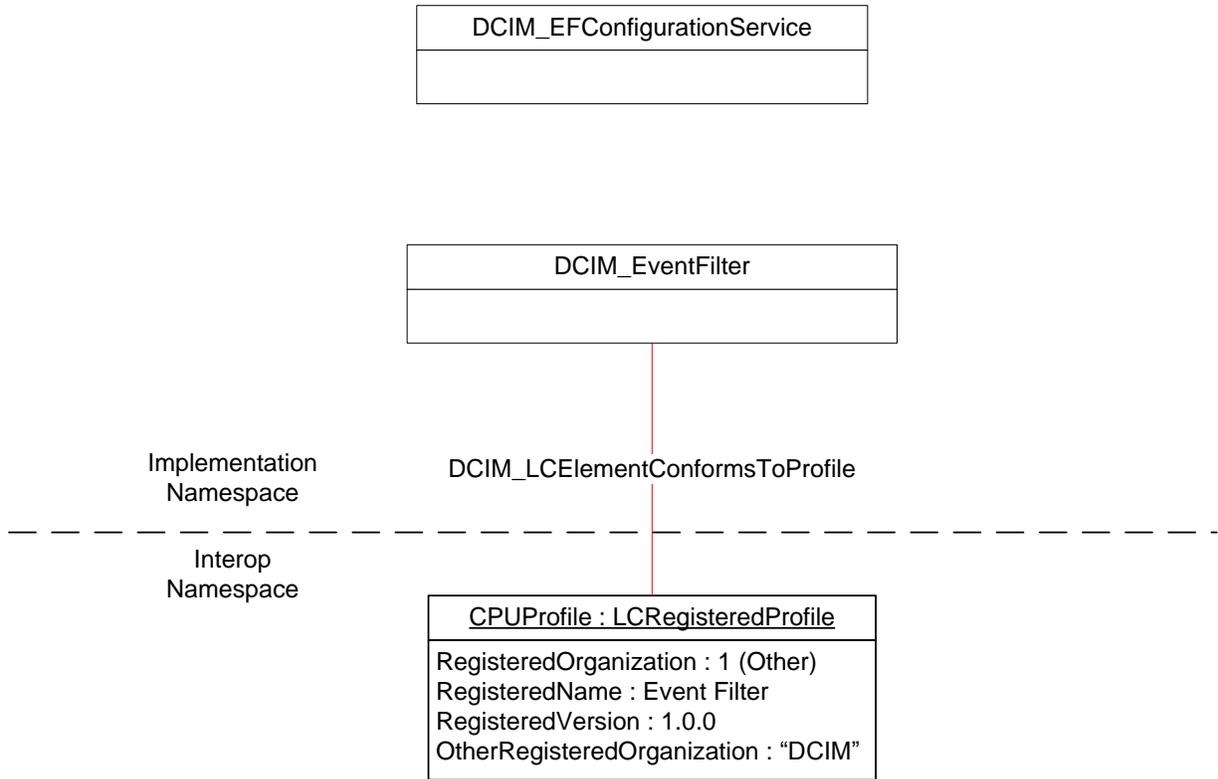
112

113   =

114   **Figure 1 – Event Filter Profile Implementation**

7 Implementation Description

116 This section describes the requirements and guidelines for implementing Dell Event FilterEvent Filter
117 Profile.

118 **Table 2 – Class Requirements: Event Filter Profile**

Element Name	Requirement	Description
Classes		
DCIM_EFConfigurationService	Mandatory	The class shall be implemented in the Implementation Namespace. It represents the EF configuration service and the methods available.
DCIM_EventFilter	Mandatory	The class shall be implemented in the Implementation Namespace. It captures the Event Filter itself.
DCIM_LCElementConformsToProfile	Mandatory	The class shall be implemented in both the Interop and *Implementation Namespaces*.
DCIM_LCElementConformsToProfile	Mandatory	The class shall be implemented in both the Interop and *Interop Namespaces*.
DCIM_LCRegisteredProfile	Mandatory	The class shall be implemented in the *Interop Namespace.*
Indications		
None defined in this profile		

119

7.1 Event Filter (EF) Configuration Service

121 This section describes the implementation for the DCIM_EFConfigurationService class.

122 This class shall be instantiated in the Implementation Namespace.

7.1.1 Resource URIs for WinRM®

124 The class Resource URI shall be "http://schemas.dell.com/wbem/wscim/1/cim-
125 schema/2/DCIM_EFConfigurationService?__cimnamespace=root/dcim"

126 The key properties shall be the SystemCreationClassName, CreationClassName, SystemName, Name.

127 The instance Resource URI for DCIM_EFConfigurationService instance shall be:
128 "http://schemas.dell.com/wbem/wscim/1/cim-
129 schema/2/DCIM_EFConfigurationService?__cimnamespace=root/dcim+SystemCreationClassName=DCI
130 M_SPComputerSystem+CreationClassName=
131 DCIM_EFConfigurationService+SystemName=systemmc+Name=DCIM:EFConfigurationService"

7.1.2 Operations

133 The following table details the implemented operations on DCIM_EFConfigurationService.

134 **Table 3 – DCIM_EFConfigurationService - Operations**

Operation Name	Requirements	Required Input
Get	Mandatory	Instance URI
Enumerate	Mandatory	Class URI
Invoke SetEventFilterByCategory()	Mandatory	Instance URI, parameter name-value pairs

Operation Name	Requirements	Required Input
Invoke SetEventFilterByInstanceIDs()	Mandatory	Instance URI, parameter name-value pairs

135 7.1.3 Properties

136 The following table details the implemented properties for DCIM_EFConfigurationService instance
137 representing the configuration service for event filters in a system. The "Requirements" column shall
138 denote the implementation requirement for the corresponding property. If the column "Property Name"
139 matches the property name, the property either shall have the value denoted in the corresponding column
140 "Additional Requirement", or shall be implemented according to the requirements in the corresponding
141 column "Additional Requirement".

142 **Table 4 – DCIM_EFConfigurationService – Properties**

Property Name	Type	Requirements	Additional Requirements
SystemCreationClassName	string	Mandatory	The property shall have value of "DCIM_SPComputerSystem".
CreationClassName	string	Mandatory	The property shall have value of "DCIM_EFConfigurationService"
SystemName	string	Mandatory	The property shall have value of "systemmc"
ElementName	string	Mandatory	The property shall have value of "Event Filters"
Name	string	Mandatory	The property shall have value of "DCIM:EFConfigurationService"

143 7.2 Event Filter

144 This section describes the implementation for the DCIM_EventFilter class.

145 For the full list of the Dell event filters, please refer to the *Dell Event Message Registry.*

146 This class shall be instantiated in the Implementation Namespace.

147 7.2.1 Resource URIs for WinRM®

148 The class Resource URI shall be "http://schemas.dell.com/wbem/wscim/1/cim-
149 schema/2/DCIM_EventFilter?__cimnamespace=root/dcim"

150 The key property shall be the InstanceID.

151 The instance Resource URI for DCIM_EventFilter instance shall be:
152 "http://schemas.dell.com/wbem/wscim/1/cim-
153 schema/2/DCIM_EventFilter?__cimnamespace=root/dcim+InstanceID=<InstanceID>"

154 7.2.2 Operations

155 The following table details the implemented operations on DCIM_EventFilter.

156 **Table 5 – DCIM_EventFilter – Operations**

Operation Name	Requirements	Required Input
Get	Mandatory	Instance URI
Enumerate	Mandatory	Class URI

157

7.2.3 Properties

159 The following table details the implemented properties for DCIM_ EventFilter instance representing the
160 event filters in a system. The "Requirements" column shall denote the implementation requirement for the
161 corresponding property. If the column "Property Name" matches the property name, the property either
162 shall have the value denoted in the corresponding column "Additional Requirement", or shall be
163 implemented according to the requirements in the corresponding column "Additional Requirement".

164 **Table 6 – DCIM_EventFilter – Properties**

Property Name	Type	Requirements	Additional Requirements
InstanceID	string	Mandatory	The property shall have a format of "DCIM:<UID>" where <UID> is a unique identifier.
Category	string	Mandatory	The property shall represent the event filter category and may have one of the following values: "Audit", "Configuration", "Storage", "System Health", and "Update".
SubCategory	string	Mandatory	The property shall represent the event filter sub-category.
SubCategoryDescription	string	Mandatory	The property shall represent description of the sub-category.
Severity	string	Mandatory	The property shall describe the event severity and may have one of the following values: "Critical", "Warning", "Informational"
Action	uint16	Mandatory	The property shall have a value from one of the values in the PossibleActions property array.
Notification[]	uint16	Mandatory	The property array shall have values from one or more of the the PossibleNotifications property array values.
PossibleActions[]	uint16	Mandatory	The property array shall have the following value: • 0 (None), • 1 (Reboot), • 2 (Power Off) , • 3 (Power Cycle).
PossibleActionDescriptions[ ]	String	Mandatory	The property array shall have the following value: "Reboot","Power Off", "Power Cycle", "None"
PossibleNotifications[]	uint16	Mandatory	The property array shall have the following value: • 0(None), • 1(IPMI Alert), • 2(SNMP Trap), • 3(Email Alert), • 4(LC Log), • 5(LCD), • 6 (OS Log).

Property Name	Type	Requirements	Additional Requirements
PossibleNotificationDescriptions[]	string	Mandatory	The property array shall have the following value: "None", "IPMI Alert", "SNMP Trap", "Email Alert", "LC Log", "LCD", "OS Log".
MessageID	string	Mandatory	For the full list of messages, please refer to the Dell Event Message Registry.

165

7.3 Event Filter Profile Registration

167 This section describes the implementation for the DCIM_LCRegisteredProfile class.

168 This class shall be instantiated in the Interop Namespace.

169 The DCIM_ElementConformsToProfile association(s)' ConformantStandard property shall reference the
170 DCIM_LCRegisteredProfile instance.

7.3.1 Resource URIs for WinRM®

172 The class Resource URI shall be "http://schemas.dmtf.org/wbem/wscim/1/cim-
173 schema/2/CIM_RegisteredProfile?__cimnamespace=root/interop"

174 The key property shall be the InstanceID property.

175 The instance Resource URI shall be: "http://schemas.dell.com/wbem/wscim/1/cim-
176 schema/2/DCIM_LCRegisteredProfile?__cimnamespace=root/interop+InstanceID=
177 DCIM:EventFilter:1.0.0"

7.3.2 Operations

179 The following table details the implemented operations on DCIM_SystemView.

180 **Table 5 – DCIM_LCRegisteredProfile - Operations**

Operation Name	Requirements	Required Input
Get	Mandatory	Instance URI
Enumerate	Mandatory	Class URI

181

7.3.3 Properties

183 The following table details the implemented properties for DCIM_LCRegisteredProfile instance
184 representing Event Filter Profile implementation. The "Requirements" column shall denote the
185 implementation requirement for the corresponding property. If the column "Name" matches the property
186 name, the property either shall have the value denoted in the corresponding column "Additional
187 Requirements", or shall be implemented according to the requirements in the corresponding column
188 "Additional Requirements".

189 **Table 6 – Class: DCIM_LCRegisteredProfile**

Properties	Requirement	Type	Description
InstanceID	Mandatory	String	This property shall have a value of "DCIM:EventFilter:1.0.0"
RegisteredName	Mandatory	String	This property shall have a value of "Event Filter".

RegisteredVersion	Mandatory	String	This property shall have a value of "1.0.0".
RegisteredOrganization	Mandatory	Uint16	This property shall have a value of 1 (Other).
OtherRegisteredOrganization	Mandatory	String	This property shall match "DCIM"
AdvertisedTypes[]	Mandatory	Uint16	This property array shall contain [1(Other), 1 (Other)].
AdvertiseTypeDescriptions[]	Mandatory	String	This property array shall contain ["WS-Identify", "Interop Namespace"].
ProfileRequireLicense[]	Mandatory	String	This property array shall describe the required licenses for this profile. If no license is required for the profile, the property shall have value NULL.
ProfileRequireLicenseStatus[]	Mandatory	String	This property array shall contain the status for the corresponding license in the same element index of the ProfileRequireLicense array property. Each array element shall contain: • "LICENSED" • "NOT_LICENSED" If no license is required for the profile, the property shall have value NULL.

190

191

8   Methods

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

8.1   DCIM_EFConfigurationService.SetEventFilterByCategory()

196 A method used to set the action and notifications for all the event filters that belong to a particular
197 category, subcategory and severity. If category, subcategory and severity are not provided as input to the
198 method then it sets the action and notifications on ALL categories, ALL subcategories and ALL
199 severities.

200   **Table 7 – DCIM_EFConfigurationService.SetEventFilterByCategory() Method: Return Code Values**

Value	Description
0	Request was successfully executed.
2	Error occurred

201   **Table 8 – DCIM_EFConfigurationService.SetEventFilterByCategory() Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN, REQ	Category	string	Category of event filter.
IN, REQ	SubCategory	string	SubCategory of event filter.
IN, REQ	Severity	string	Severity of event filter.
IN, REQ	RequestedAction	uint16	Action requested to be set for the event filter. Refer mof for values.
IN, REQ	RequestedNotification[]	uint16	Notifications requested to be set for the event filter. Refer mof for values.
OUT	MessageID	string	Error Message ID- can be used to index into Dell Message registry files
OUT	Message	string	Error Message in English corresponding to MessageID is returned if the method fails to execute
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages

202   **Table 9 – DCIM_EFConfigurationService.SetEventFilterByCategory() Method: Standard Messages**

MessageID (OUT parameter)	Message	MessageArguments[]
RAC038	The command failed	
RAC039	Invalid parameter value for %s	RequestedNotification, Category, Severity, SubCategory RequestedAction
RAC040	Missing parameter(s) %s	RequestedNotification, Category, Severity, SubCategory RequestedAction
RAC041	The Set operation on the event filter(s) failed	
RAC042	Invalid number of input parameters	
RAC043	Method failed to update some of the event filter settings.	
RAC044	Method failed to update all the event filter settings.	
RAC045	Event filter does not exist for input parameter combination	

203
204

8.2   DCIM_EFConfigurationService.SetEventFilterByInstanceIDs()

A method used to set the action and notifications for all the event filters that belong to a particular set of InstanceIDs.

The method shall return 2 (Error Occurred), if a DCIM_EventFilter instance referenced by the EFInstanceID parameter has PossibleActions property value equal to 0 (None).

Table 10 – DCIM_EFConfigurationService.SetEventFilterByInstanceIDs() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

Table 11 – DCIM_EFConfigurationService.SetEventFilterByInstanceIDs() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN, REQ	EFInstanceIDs[]	string	InstanceIDs of the event filter instances.
IN, REQ	RequestedAction	uint16	Action requested to be set for the event filter. Refer mof for values. If the RequestedNotification is NULL or blank, this parameter shall not be NULL or blank.
IN, REQ	RequestedNotification[]	uint16	Notifications requested to be set for the event filter. Refer mof for values. If the RequestedAction is NULL or blank, this parameter shall not be NULL or blank.
OUT	MessageID	string	Error Message ID- can be used to index into Dell Message registry files
OUT	Message	string	Error Message in English corresponding to MessageID is returned if the method fails to execute
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages

Table 12 – DCIM_EFConfigurationService.SetEventFilterByInstanceIDs() Method: Standard Messages

MessageID (OUT parameter)	Message	
RAC038	The command failed	
RAC039	Invalid parameter value for %s	RequestedNotification,Requested Action, EFInstanceIDs
RAC040	Missing parameter(s) %s	RequestedNotification,Requested Action, EFInstanceIDs
RAC041	The Set operation on the event filter(s) failed	
RAC042	Invalid number of input parameters	
RAC046	Unsupported notification on the filter %s	EFInstanceIDs
RAC047	Unsupported action on the filter %s	EFInstanceIDs

218

9   Use Cases

220   See *Lifecycle Controller (LC) Integration Best Practices Guide*.

10   CIM Elements

222   No additional details specified.
223

11   Privilege and License Requirement

225   The following table describes the privilege and license requirements for the listed operations . For the
226   detailed explanation of the privileges and licenses, refer to the Dell WSMAN Licenses and Privileges
227   specification.

228   **Table 13 – Privilege and License Requirements**

Class and Method	Operation	User Privilege Required	License Required
DCIM_EventFilter	ENUMERATE, GET	Login	None.
DCIM_EFConfigurationService	ENUMERATE, GET	Login	None.
DCIM_EFConfigurationService. SetEventFilterByCategory()	INVOKE	Login, Configure	LM_REMOTE_CONFIGURATION
DCIM_EFConfigurationService. SetEventFilterByInstanceIDs()	INVOKE	Login, Configure	LM_REMOTE_CONFIGURATION
DCIM_LCRegisteredProfile	ENUMERATE, GET	Login	None.
DCIM_LCElementConformsToProfile	ENUMERATE, GET	Login	None.

229 **ANNEX A**
230 **(informative)**
231
232
233 **Change Log**

Version	Date	Description
1.0.0	03/08/2012	Initial Version.
1.0.1	04/19/2012	Corrected the DCIM_EventFilter.PossibleActionStrings property name to PossibleActionDescriptions. Corrected the value None for the DCIM_EventFilter.PossibleActions property. Corrected the DCIM_EventFilter.PossibleNotificationStrings property name to PossibleNotificationDescriptions. Corrected DCIM_EventFilter.Action property constraint requirement.
1.0.2	06/13/2012	Corrected required parameters for SetEventFilterByCategory

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