



CHAPTER **33**

Internet Protocol Detail Record Login Event Generator Templates

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Introduction

This chapter describes the Internet Protocol Details Record (IPDR) Login Event Generator (LEG) Templates. This chapter consists of these sections:

- [IPDR Templates, page 33-1](#)
- [Subscriber Accounting Management Interface Specification \(SAMIS\) Templates, page 2](#)
- [Additional Standard Templates, page 3](#)

IPDR Templates

An IPDR template is a specification of the layout of fields within a data record. It defines the structure of data records including the data type, meaning, and location of the fields in the record.

The following default templates are available:

- [Subscriber Accounting Management Interface Specification \(SAMIS\) Templates, page 33-2](#)
- [Additional Standard Templates, page 33-3](#)

Subscriber Accounting Management Interface Specification (SAMIS) Templates

The cable modem termination system (CMTS) supports a collection of usage information for use in a billing interface known as Subscriber Accounting Management Interface Specification (SAMIS).

SAMIS uses the business model defined by IPDR.org and IPDR streaming protocol (IPDR/SP) for a reliable and resource-efficient transmission of accounting data.



Note

In IPDR only mode, the Subscriber Manager receives the interval based SAMIS messages at a lower rate. This may lead to a delay in getting the Vlink association for DOCSIS 3.0 subscribers. To achieve fast convergence of Vlink association we recommend that you use SNMP BG option along with IPDR.

The following is an example of the SAMIS-1 template:

```
<complexType name="SAMIS-TYPE-1">
  <complexContent>
    <extension base="ipdr:IPDRType">
      <sequence>
        <element ref="DOCSIS-CMTS:CmtsHostName" />
        <element ref="DOCSIS-CMTS:CmtsSysUpTime" />
        <element ref="DOCSIS-CMTS:CmtsIpv4Addr" />
        <element ref="DOCSIS-CMTS:CmtsIpv6Addr" />
        <element ref="DOCSIS-CMTS:CmtsMdIfName" />
        <element ref="DOCSIS-CMTS:CmtsMdIfIndex" />
        <element ref="DOCSIS-CM:CmMacAddr" />
        <element ref="DOCSIS-CM:CmIpv4Addr" />
        <element ref="DOCSIS-CM:CmIpv6Addr" />
        <element ref="DOCSIS-CM:CmIpv6LinkLocalAddr" />
        <element ref="DOCSIS-CM:CmQosVersion" />
        <element ref="DOCSIS-CM:CmRegStatusValue" />
        <element ref="DOCSIS-CM:CmLastRegTime" />
        <element ref="DOCSIS-REC:RecType" />
        <element ref="DOCSIS-REC:RecCreationTime" />
        <element ref="DOCSIS-QOS:ServiceFlowChSet" />
        <element ref="DOCSIS-QOS:ServiceAppId" />
        <element ref="DOCSIS-QOS:ServiceDsMulticast" />
        <element ref="DOCSIS-QOS:ServiceIdentifier" />
        <element ref="DOCSIS-QOS:ServiceGateId" />
        <element ref="DOCSIS-QOS:ServiceClassName" />
        <element ref="DOCSIS-QOS:ServiceDirection" />
        <element ref="DOCSIS-QOS:ServiceOctetsPassed" />
        <element ref="DOCSIS-QOS:ServicePktsPassed" />
        <element ref="DOCSIS-QOS:ServiceSlaDropPkts" />
        <element ref="DOCSIS-QOS:ServiceSlaDelayPkts" />
        <element ref="DOCSIS-QOS:ServiceTimeCreated" />
        <element ref="DOCSIS-QOS:ServiceTimeActive" />
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

Additional Standard Templates

These additional templates are available:

- [CMTS-CM-REG-STATUS-TYPE Template, page 33-3](#)
- [DOCSIS-CPE-TYPE Template, page 33-4](#)

CMTS-CM-REG-STATUS-TYPE Template

This IPDR record contains one cable modem registration status instance representing a single cable modem that has been registered with the CMTS.

```
<complexContent>
  <extension base="ipdr:IPDRType">
    <sequence>
      <element ref="DOCSIS-CMTS:CmtsHostName" />
      <element ref="DOCSIS-CMTS:CmtsSysUpTime" />
      <element ref="DOCSIS-CMTS:CmtsMdIfName" />
      <element ref="DOCSIS-CMTS:CmtsMdIfIndex" />
      <element ref="DOCSIS-CMTS-CM-NODE-CH:CmtsMdCmSgId" />
      <element ref="DOCSIS-CMTS-CM-NODE-CH:CmtsRcpId" />
      <element ref="DOCSIS-CMTS-CM-NODE-CH:CmtsRccStatusId" />
      <element ref="DOCSIS-CMTS-CM-NODE-CH:CmtsRcsId" />
      <element ref="DOCSIS-CMTS-CM-NODE-CH:CmtsTcsId" />
      <element ref="DOCSIS-CM:CmMacAddr" />
      <element ref="DOCSIS-CM:CmIpv4Addr" />
      <element ref="DOCSIS-CM:CmIpv6Addr" />
      <element ref="DOCSIS-CM:CmIpv6LinkLocalAddr" />
      <element ref="DOCSIS-CM:CmQosVersion" />
      <element ref="DOCSIS-CM:CmRegStatusValue" />
      <element ref="DOCSIS-CM:CmLastRegTime" />
      <element ref="DOCSIS-REC:RecType" />
      <element ref="DOCSIS-REC:RecCreationTime" />
    </sequence>
  </extension>
</complexContent>
</complexType>
```

DOCSIS-CPE-TYPE Template

DOCSIS-CPE-TYPE is an IPDR service definition schema that defines the customer premises equipment (CPE). This IPDR data record references the imported global elements.

```
<complexType name="CPE-TYPE">
  <complexContent>
    <extension base="ipdr:IPDRType">
      <sequence>
        <element ref="DOCSIS-CMTS:CmtsHostName"/>
        <element ref="DOCSIS-CMTS:CmtsSysUpTime"/>
        <element ref="DOCSIS-CMTS:CmtsMdIfName"/>
        <element ref="DOCSIS-CMTS:CmtsMdIfIndex"/>
        <element ref="DOCSIS-CM:CmMacAddr"/>
        <element ref="DOCSIS-REC:RecType"/>
        <element ref="DOCSIS-CPE:CpeMacAddr"/>
        <element ref="DOCSIS-CPE:CpeIpv4Addr"/>
        <element ref="DOCSIS-CPE:CpeIpv6Addr"/>
        <element ref="DOCSIS-CPE:CpeFqdn"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
```

IPDR Template Attributes

This section provides details of the attributes associated with the IPDR templates supported by Cisco SCMS Subscriber Manager. The attributes that are not mandatory for Vlink Association may be used for policy association. You may use any of the attribute or combinations of the attributes, with in the same template, for policy association in IPDR LEG.

Table 33-1 IPDR Template Attributes

Service Definition	Attributes	Example	Comments and Notes
SAMIS-TYPE-1	CmtsHostName	'b-test-cmts-11'	Mandatory for Vlink Association.
	CmtsSysUpTime	—	—
	CmtsIpv4Addr	—	—
	CmtsIpv6Addr	—	—
	CmtsMdIfName	—	—
	CmtsMdIfIndex	1061	Mandatory for Vlink Association.
	CmMacAddr	00 00 00 23 be f8 ca b3	Mandatory for Vlink Association.
	CmIpv4Addr	—	—
	CmIpv6Addr	—	—
	CmIpv6LinkLocalAddr	—	—
	CmQosVersion	—	—
	CmRegStatusValue	—	—
	CmLastRegTime	—	—
	RecType	—	—
	RecCreationTime	—	—
	ServiceFlowChSet	HexBinary:bcd	Mandatory for Vlink Association.
	ServiceAppId	—	—
	ServiceDsMulticast	—	—
	ServiceIdentifier	—	—
	ServiceGateId	—	—
ServiceClassName	—	—	
ServiceDirection	1	—	
ServiceOctetsPassed	—	—	
ServicePktsPassed	—	—	

Table 33-1 IPDR Template Attributes

Service Definition	Attributes	Example	Comments and Notes
	ServiceSlaDropPkts	—	—
	ServiceSlaDelayPkts	—	—
	ServiceTimeCreated	—	—
	ServiceTimeActive	—	—
CMTS CM REG STATUS TYPE	CmtsHostName	'b-test-cmts-11'	Mandatory for Vlink Association.
	CmtsSysUpTime	—	—
	CmtsMdIfName	—	—
	CmtsMdIfIndex	1061	Mandatory for Vlink Association.
	CmtsMdCmSgId	—	—
	CmtsRcpId	—	—
	CmtsRccStatusId	—	—
	CmtsRcsId	13	Mandatory for Vlink Association.
	CmtsTcsId	6	Mandatory for Vlink Association.
	CmMacAddr	00 00 00 23 be f8 ca b3	Mandatory for Vlink Association.
	CmIpv4Addr	IP_V4:10.12.150.142	Mandatory for Vlink Association.
	CmIpv6Addr	—	—
	CmIpv6LinkLocalAddr	—	—
	CmQosVersion	—	—
	CmRegStatusValue	—	—
	CmLastRegTime	—	—
RecType	1		
RecCreationTime	—	—	
CPE TYPE	CmtsHostName	'b-test-cmts-11'	Mandatory for Vlink Association.
	CmtsSysUpTime	—	—
	CmtsMdIfName	—	—
	CmtsMdIfIndex	1061	Mandatory for Vlink Association.
	CmMacAddr	00 00 00 23 be f8 ca b3	Mandatory for Vlink Association.
	RecType	1	—
	CpeMacAddr	00 00 00 23 be f8 cc bb	Mandatory for Vlink Association.

Table 33-1 IPDR Template Attributes

Service Definition	Attributes	Example	Comments and Notes
	CpeIpv4Addr	IP_V4:10.12.150.142	Mandatory for Vlink Association.
	CpeIpv6Addr	—	—
	CpeFqdn	—	—

