



# UDR Format Configuration Mode Commands

The UDR Format Configuration Mode enables configuring User Detail Record (UDR) formats.

## Command Modes

Exec > ACS Configuration > UDR Format Configuration

**active-charging service** *service\_name* > **udr-format** *format\_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(config-acs-udr)#
```



## Important

The commands or keywords/variables that are available are dependent on platform type, product version, and installed license(s).

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- [do show](#), on page 7
- [end](#), on page 8
- [event-label](#), on page 8
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## attribute

This command allows you to specify the fields and their order in UDRs.

## Product

All

## Privilege

Security Administrator, Administrator

## Command Modes

Exec > ACS Configuration > UDR Format Configuration

**active-charging service** *service\_name* > **udr-format** *format\_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(config-acs-udr)#
```

**Syntax Description**

```
attribute attribute { [ format { MM/DD/YY-HH:MM:SS | MM/DD/YYYY-HH:MM:SS |
  YYYY/MM/DD-HH:MM:SS | YYYYMMDDHHMMSS | seconds } [ localtime ] | [ {
bytes | pkts } { downlink | uplink } ] ] priority priority }
no attribute attribute [ priority priority ]
```

**no**

If added previously, removes the specified attribute from the UDR format.

**attribute attribute**

Specifies the attribute.

*attribute* must be one of the following:

Attribute	Description
<b>diameter-session-id</b>	This attribute reports Diameter session identifier. <b>Important</b> This attribute is customer specific, and is only available in 8.3 and later releases.
<b>failure-handling-mode</b>	This attribute reports failure handling mode in case the Online Charging System (OCS) goes abnormal.
<b>nemo-prefix-list</b>	This attribute reports the VRF names associated with the base session of NEMO, and NEMO MR Prefixes. <b>Important</b> This attribute is customer specific, and is available only with NEMO license.
<b>num-nemo-prefix</b>	This attribute reports the number of NEMO MR Prefixes. <b>Important</b> This attribute is customer specific, and is available only with NEMO license.
<b>radius-called-station-id</b>	This attribute reports the Called Station ID of the mobile handling the flow.
<b>radius-calling-station-id</b>	This attribute reports the Calling Station ID of the mobile handling the flow.
<b>radius-fa-nas-identifier</b>	This attribute reports the RADIUS NAS identifier of Foreign Agent (FA).
<b>radius-fa-nas-ip-address</b>	This attribute reports the RADIUS IP address of Foreign Agent (FA).
<b>radius-nas-identifier</b>	This attribute reports the RADIUS NAS identifier.
<b>radius-nas-ip-address</b>	This attribute reports the RADIUS NAS IP address. Note that this attribute is interchangeable with <b>sn-st16-ip-addr</b> for the user.

Attribute	Description
<b>radius-user-name</b>	This attribute reports the user name associated with the flow.
<b>sn-3gpp2-bsid</b>	This option has been deprecated. To configure this attribute see the <b>rule-variable</b> command.
<b>sn-3gpp2-carrier-id</b>	This option has been deprecated. To configure this attribute see the <b>rule-variable</b> command.
<b>sn-3gpp2-esn</b>	This option has been deprecated. To configure this attribute see the <b>rule-variable</b> command.
<b>sn-3gpp2-meid</b>	This option has been deprecated. To configure this attribute see the <b>rule-variable</b> command.
<b>sn-3gpp2-service-option</b>	This option has been deprecated. To configure this attribute see the <b>rule-variable</b> command.
<b>sn-acct-beginning-session</b>	This attribute reports the Session Beginning information. <b>Important</b> This attribute is customer specific, and is only available in 8.3 and later releases.
<b>sn-acct-session-continue</b>	This attribute reports the Session Continue information. <b>Important</b> This attribute is customer specific, and is only available in 8.3 and later releases.
<b>sn-acct-session-id</b>	This attribute reports the Accounting Session identifier.
<b>sn-acct-session-time</b>	This attribute reports the duration from acct-status-type:start to acct-status-type:stop. <b>Important</b> This attribute is customer specific, and is only available in 8.3 and later releases.
<b>sn-acct-status-type</b>	This attribute reports the Accounting Status identifier. <b>Important</b> This attribute is customer specific, and is only available in 8.3 and later releases.

Attribute	Description
<b>sn-charging-type</b>	This attribute reports the charging type: offline or online. <b>Important</b> This attribute is customer specific, and is only available in 8.3 and later releases.
<b>sn-closure-reason</b>	This attribute reports the reason for termination of the flow/UDR: <ul style="list-style-type: none"> <li>• 0 = CALL_TERMINATION — normal, such as subscriber session ended</li> <li>• 1 = PDSN_HO — handoff control processing specified</li> <li>• 2 = TIME_LIMIT</li> <li>• 3 = VOLUME_LIMIT</li> <li>• 4 = MGMT_INTERVENTION</li> <li>• 5 = ACCT_SESS_START</li> <li>• 6 = CCRU_RESPONSE</li> <li>• 7 = OFFLINE_CHARGING — for UDRs generated when offline charging trigger is received from DCCA</li> </ul>
<b>sn-content-id</b>	This attribute reports the unique identifier for the content-id.
<b>sn-content-label</b>	This attribute reports the identifier for text label for content-id.
<b>sn-content-vol</b>	This attribute reports the identifier for content volume.
<b>sn-correlation-id</b>	This attribute reports the RADIUS correlation identifier.
<b>sn-duration</b>	This attribute reports the time difference between the first and last packet of a single data flow accounted in the UDR record.  For example, the time difference between the first ICMP echo request and the last ICMP echo response before the record gets written for the content-id.
<b>sn-end-time</b> [ format <i>format</i> ]	This attribute reports the timestamp for last packet of flow in UTC.
<b>sn-fa-correlation-id</b>	This attribute reports the RADIUS Correlation Identifier of the Foreign Agent (FA).

Attribute	Description
<b>sn-fa-ip-address</b>	This attribute reports IP address of the FA.
<b>sn-filler-blank</b>	This attribute inserts a blank filler field, generates an empty UDR field.
<b>sn-filler-zero</b>	This attribute inserts a "0" in the UDR field.
<b>sn-format-name</b>	This attribute reports name of the UDR format used.
<b>sn-group-id</b>	This attribute reports the sequence group identifier for the records.
<b>sn-ha-ip-address</b>	This attribute reports IP address of the Home Agent (HA). <b>Important</b> This attribute is customer specific, and is only available in 8.3 and later releases.
<b>sn-local-seq-no</b>	This attribute reports unique local sequence number of UDR identifier per ACSMgr/SessMgr and linearly increasing in UDR file.
<b>sn-ocs-ip-address</b>	This attribute reports IP address of the Online Charging Server. <b>Important</b> This attribute is customer specific, and is only available in 8.3 and later releases.
<b>sn-rulebase</b>	This attribute reports name of the ACS rulebase used.
<b>sn-sequence-no</b>	This attribute reports unique sequence number (per <b>sn-sequence-group</b> and <b>radius-nas-ip-address</b> ) of UDR identifier and linearly increasing in UDR file.
<b>sn-served-bsa-addr</b>	This attribute reports address of Base Station Area being served.
<b>sn-service-name</b>	This attribute reports name of the ACS service.
<b>sn-st16-ip-addr</b>	This option has been deprecated. This attribute reports IP address of the chassis handling this flow. This attribute is interchangeable with <b>radius-nas-ip-address</b> for other systems.
<b>sn-start-time</b> [ <i>format format</i> ]	This attribute reports timestamp for first packet of flow in UTC.

Attribute	Description
<b>sn-stream-number</b>	This attribute reports unique UDR billing record identifier. <b>Important</b> This attribute is customer specific, and is only available in 8.3 and later releases.
<b>sn-subscriber-id</b>	This attribute reports subscriber ID.
<b>sn-subscriber-ipv4-address</b>	This attribute reports the IPv4 address of the subscriber.
<b>sn-subscriber-ipv6-address</b>	This attribute reports the IPv6 address of the subscriber.
<b>sn-subscriber-nat-flow-ip</b>	This attribute reports NAT IP address(es) of NAT-enabled subscriber.
<b>sn-timestamp</b>	This attribute reports timestamp when the UDR is actually generated. <b>Important</b> This attribute is customer specific, and is only available in 8.3 and later releases.
<b>sn-vrf-name</b>	This attribute indicates the VRF name associated with the base session of NEMO. <b>Important</b> This is a customer-specific attribute.

**format** { MM/DD/YY-HH:MM:SS | MM/DD/YYYY-HH:MM:SS | YYYY/MM/DD-HH:MM:SS | YYYYMMDDHHMMSS  
| seconds }

Specifies the timestamp format.

#### **localtime**

Specifies the local time. By default, timestamps are displayed in Coordinated Universal Time (UTC).

**{ bytes | pkts } { downlink | uplink }**

Specifies bytes/packets sent/received from/by mobile.

#### **priority priority**

Specifies the position priority of the field within the UDR. Lower numbered priorities (across all attribute, event-label, and rule-variable) occur first.

*priority* must be an integer from 1 through 65535. Up to 50 position priorities (across all attribute, event-label, and rule-variable) can be configured.

#### **Usage Guidelines**

Use this command to set the attributes and priority for UDR file format.

A particular field in UDR format can be entered multiple times at different priorities. While removing the UDR field using the **no attribute** command, you can either remove all occurrences of a particular field by specifying the field name or remove a single occurrence by additionally specifying the optional **priority** keyword.

Consider the following scenario. If the volume/time threshold interval is large enough (or disabled). At time  $t=0$ , 10 ICMP packets are sent, which takes 9 seconds. There is nothing for the next 100 seconds, and then again 10 ICMP packets are sent which takes 10 seconds, and then again nothing for next the 60 seconds and then the session is terminated.

In this scenario:

- sn-start-time should be  $t = 0$ .
- sn-end-time should be  $t = 0+9+100+10$  (sn-end-time would be the last ICMP packet sent).
- sn-duration should be sn-end-time minus sn-start-time, i.e.  $0+9+100+10 - 0 = 119$  seconds (since the ICMP flow would exist between the two intervals of sending ICMP packets, the sn-start-time would be that of the first packet of the flow and sn-end-time of the last packet (20th packet). Hence, sn-duration would take into account all the seconds between the first and last packet of the flow).

### Example

The following is an example of this command:

```
attribute radius-user-name priority 12
```

## do show

Executes all **show** commands while in Configuration mode.

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### Product

All

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### Privilege

Security Administrator, Administrator

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### Syntax Description

**do show**

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### Usage Guidelines

Use this command to run all Exec mode **show** commands while in Configuration mode. It is not necessary to exit the Config mode to run a **show** command.

The pipe character | is only available if the command is valid in the Exec mode.




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### Caution

There are some Exec mode **show** commands which are too resource intensive to run from Config mode. These include: **do show support collection**, **do show support details**, **do show support record** and **do show support summary**. If there is a restriction on a specific **show** command, the following error message is displayed:

```
Failure: Cannot execute 'do show support' command from Config mode.
```

---

## end

Exits the current configuration mode and returns to the Exec mode.

<b>Product</b>	All
<b>Privilege</b>	Security Administrator, Administrator
<b>Syntax Description</b>	<b>end</b>
<b>Usage Guidelines</b>	Use this command to return to the Exec mode.

## event-label

This command allows you to specify an optional event label/identifier to be used as an attribute in the UDRs.

<b>Product</b>	All
<b>Privilege</b>	Security Administrator, Administrator
<b>Command Modes</b>	Exec > ACS Configuration > UDR Format Configuration <b>active-charging service</b> <i>service_name</i> > <b>udr-format</b> <i>format_name</i> Entering the above command sequence results in the following prompt: <pre>[local]host_name(config-acs-udr)#</pre>
<b>Syntax Description</b>	<b>event-label</b> <i>event_label</i> <b>priority</b> <i>priority</i> <b>no event-label</b>  <b>no</b> If previously configured, removes the event label configuration.  <b>event_label</b> Specifies the event label/identifier to be used as UDR attribute. <i>event_label</i> must be an alphanumeric string of 1 through 63 characters.  <b>priority</b> <i>priority</i> Specifies the Comma Separated Value (CSV) position of the attribute (label/identifier) in the UDR. <i>priority</i> must be an integer from 1 through 65535.
<b>Usage Guidelines</b>	Use this command to configure an optional event label/identifier as an attribute in the UDR and its position in the UDR.



**Example**

The following is an example of this command:

```
event-label radius_csv1 priority 23
```

# exit

Exits the current mode and returns to the parent configuration mode.

<b>Product</b>	All
<b>Privilege</b>	Security Administrator, Administrator
<b>Syntax Description</b>	<b>exit</b>
<b>Usage Guidelines</b>	Use this command to return to the parent configuration mode.

# rule-variable

This command allows you to specify fields and their order in UDRs.

<b>Product</b>	All
<b>Privilege</b>	Security Administrator, Administrator
<b>Command Modes</b>	Exec > ACS Configuration > UDR Format Configuration <b>active-charging service</b> <i>service_name</i> > <b>udr-format</b> <i>format_name</i> Entering the above command sequence results in the following prompt: <pre>[local]host_name(config-acs-udr)#</pre>
<b>Syntax Description</b>	<pre><b>rule-variable</b> <i>rule_variable</i> <b>priority</b> <i>priority</i></pre> <pre><b>no rule-variable</b> <i>rule_variable</i> [ <b>priority</b> <i>priority</i> ]</pre> <p><b>no</b></p> <p>If previously configured, removes the specified rule variable configuration.</p> <p><b>rule-variable</b> <i>rule_variable</i></p> <p>Specifies the rule variable for the UDR format.</p> <p><i>rule_variable</i> must be one of the following options:</p> <ul style="list-style-type: none"> <li>• <b>bearer 3gpp2</b>: Bearer-related configuration:             <ul style="list-style-type: none"> <li>• <b>always-on</b></li> <li>• <b>bsid</b></li> </ul> </li> </ul>

- **carrier-id**
- **esn**
- **ip-qos**
- **ip-technology**
- **meid**
- **release-indicator**
- **serv-MDN**
- **service-option**
- **session-begin**
- **session-continue**




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**Important**

For more information on protocol-based rules see the *ACS Ruledef Configuration Mode Commands* chapter.

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**priority** *priority*

Specifies the CSV position of the field (protocol rule) in the UDR.

*priority* must be an integer from 1 through 65535.

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**Usage Guidelines**

Use this command to specify what field appears in which order in the UDR.

A particular field in UDR format can be entered multiple times at different priorities. While removing the UDR field using the **no rule-variable** command, you can either remove all occurrences of a particular field by specifying the field name, or remove a single occurrence by additionally specifying the optional priority keyword.

**Example**

The following is an example of this command:

```
rule-variable bearer 3gpp2 bsid priority 36
```