Oracle® Communications Billing and Revenue Management

ECE RADIUS Gateway Protocol Implementation Conformance Statement



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Oracle Communications Billing and Revenue Management ECE RADIUS Gateway Protocol Implementation Conformance Statement, Release 16.26.0

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About This Content

This guide serves as a protocol implementation compliance statement (PICS) for Oracle Communications Billing and Revenue Management Elastic Charging Engine (ECE) Remote Authentication Dial In User Service (RADIUS) Gateway. Each chapter lists the supported messages and attribute-value pairs for the RADIUS authentication, authorization, and accounting protocols.

Audience

This guide is intended for system administrators, product integrators, and developers. Readers must be familiar with the following:

- Elastic Charging Engine
- RADIUS protocol
- RADIUS accounting protocol

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RADIUS Protocol

Learn how Oracle Communications Billing and Revenue Management Elastic Charging Engine (ECE) Remote Authentication Dial In User Service (RADIUS) Gateway maps the RADIUS access-control messages for the RADIUS protocol defined in RFC-2865 and RFC-2869.

Topics in this document:

- Section Compliance
- Access-Request AVPs
- Access-Accept AVPs
- Access-Reject AVPs
- Access-Challenge AVPs

See also "RADIUS Accounting Protocol".

Section Compliance

Table 1-1 lists the compliance information for the RADIUS protocol sections in RFC-2865.

Table 1-1 RFC-2865 Section Compliance

Section Number	Section	Status	Notes
1	Introduction	Not applicable	-
1.1	Specification of Requirements	Not applicable	-
1.2	Terminology	Not applicable	-
2	Operation	Partially supported	-
2.1	Challenge/Response	Supported	-
2.2	Interoperation with PAP and CHAP	Not supported	-
2.3	Proxy	Not applicable	-
2.4	Why UDP?	Not applicable	-
2.5	Retransmission Hints	Supported	-
2.6	Keep-Alives Considered Harmful	Supported	-
3	Packet Format	Supported	-
4	Packet Types	Supported	-
4.1	Access-Request	Supported	-
4.2	Access-Accept	Supported	-
4.3	Access-Reject	Supported	-
4.4	Access-Challenge	Supported	-
5	Attributes	Supported	-
5.1	User-Name	Supported	-

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Table 1-1 (Cont.) RFC-2865 Section Compliance

Section Number	Section	Status	Notes
5.2	User-Password	Supported	-
5.3	CHAP-Password	Supported	-
5.4	NAS-IP-Address	Supported	-
5.5	NAS-Port	Supported	-
5.6	Service-Type	Supported	-
5.7	Framed-Protocol	Supported	-
5.8	Framed-IP-Address	Supported	-
5.9	Framed-IP-Netmask	Supported	-
5.10	Framed-Routing	Supported	-
5.11	Filter-Id	Supported	-
5.12	Framed-MTU	Supported	-
5.13	Framed-Compression	Supported	-
5.14	Login-IP-Host	Supported	-
5.15	Login-Service	Supported	-
5.16	Login-TCP-Port	Supported	-
5.17	(unassigned)	Supported	-
5.18	Reply-Message	Supported	-
5.19	Callback-Number	Supported	-
5.20	Callback-Id	Supported	-
5.21	(unassigned)	Supported	-
5.22	Framed-Route	Supported	-
5.23	Framed-IPX-Network	Supported	-
5.24	State	Supported	-
5.25	Class	Supported	-
5.26	Vendor-Specific	Supported	-
5.27	Session-Timeout	Supported	-
5.28	Idle-Timeout	Supported	-
5.29	Termination-Action	Supported	-
5.30	Called-Station-Id	Supported	-
5.31	Calling-Station-Id	Supported	-
5.32	NAS-Identifier	Supported	-
5.33	Proxy-State	Supported	-
5.34	Login-LAT-Service	Supported	-
5.35	Login-LAT-Node	Supported	-
5.36	Login-LAT-Group	Supported	-
5.37	Framed-AppleTalk-Link	Supported	-
5.38	Framed-AppleTalk-Network	Supported	-

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Table 1-1 (Cont.) RFC-2865 Section Compliance

Section Number	Section	Status	Notes
5.39	Framed-AppleTalk-Zone	Supported	-
5.40	CHAP-Challenge	Supported	-
5.41	NAS-Port-Type	Supported	-
5.42	Port-Limit	Supported	-
5.43	Login-LAT-Port	Supported	-
5.44	Table of Attributes	Supported	-
6	IANA Considerations	No requirement	-
6.1	Definition of Terms	No requirement	-
6.2	Recommended Registration Policies	No requirement	-
7	Examples	Supported	-
7.1	User Telnet to Specified Host	Supported	-
7.2	Framed User Authenticating with CHAP	Supported	-
7.3	User with Challenge-Response card	Not supported	-
8	Security Considerations	Not supported	-
9	Change Log	No requirement	-
10	References	No requirement	-
11	Acknowledgements	No requirement	-
12	Chair's Address	No requirement	-
13	Authors' Addresses	No requirement	-
14	Full Copyright Statement	No requirement	-

Table 1-2 lists the compliance information for the RADIUS protocol sections in RFC-2869.

Table 1-2 RFC-2869 Section Compliance

Section Number	Section	Status	Notes
1	Introduction	Not applicable	-
1.1	Specification of Requirements	Not applicable	-
1.2	Terminology	Not applicable	-
2	Operation	Partially supported	-
2.1	RADIUS support for Interim Accounting Updates	Not supported	-
2.2	RADIUS support for Apple Remote Access Protocol	Not supported	-
2.3	RADIUS Support for Extensible Authentication Protocol (EAP)	Supported	-
2.3.1	Protocol Overview	Supported	-
2.3.2	Retransmission	Supported	-
2.3.3	Fragmentation	Not supported	-

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Table 1-2 (Cont.) RFC-2869 Section Compliance

Section Number	Section	Status	Notes
2.3.4	Examples	Supported	-
2.3.5	Alternative Uses	Supported	-
3	Packet Format	Supported	-
4	Packet Types	Supported	-
5	Attributes	Partially supported	-
5.1	Acct-Input-Gigawords	Not supported	-
5.2	Acct-Output-Gigawords	Not supported	-
5.3	Event-Timestamp	Not supported	-
5.4	ARAP-Password	Not supported	-
5.5	ARAP-Features	Not supported	-
5.6	ARAP-Zone-Access	Not supported	-
5.7	ARAP-Security	Not supported	-
5.8	ARAP-Security-Data	Not supported	-
5.9	Password-Retry	Not supported	-
5.10	Prompt	Not supported	-
5.11	Connect-Info	Not supported	-
5.12	Configuration-Token	Not supported	-
5.13	EAP-Message	Supported	-
5.14	Message-Authenticator	Supported	-
5.15	ARAP-Challenge-Response	Not supported	-
5.16	Acct-Interim-Interval	Not supported	-
5.17	NAS-Port-Id	Supported	-
5.18	Framed-Pool	Not supported	-
5.19	Table of Attributes	Not supported	-
6	IANA Considerations	No requirement	-
7	Security Considerations	Supported	-
7.1	Message-Authenticator Security	Supported	-
7.2	EAP Security	Supported	-
7.2.1	Separation of EAP server and PPP authenticator	Not supported	-
7.2.2	Connection hijacking	Not supported	-
7.2.3	Man in the middle attacks	Not supported	-
7.2.4	Multiple databases	Not supported	-
7.2.5	Negotiation attacks	Not supported	-
8	References	No requirement	-
9	Acknowledgements	No requirement	-
10	Chair's Address	No requirement	-
11	Authors' Addresses	No requirement	-

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Table 1-2 (Cont.) RFC-2869 Section Compliance

Section Number	Section	Status	Notes
12	Full Copyright Statement	No requirement	-

Access-Request AVPs

Table 1-3 lists the compliance information for Access-Request attribute-value pairs (AVPs).

Table 1-3 Access-Request AVPs

RADIUS AVP	Status	Notes
User-Name	Supported	-
User-Password	Supported	-
CHAP-Password	Supported	-
CHAP-Challenge	Supported	-
NAS-IP-Address	Supported	-
NAS-Port	Supported	-
NAS-Port-Type	Supported	-
NAS-Identifier	Supported	-
Service-Type	Supported	-
Framed-Protocol	Supported	-
Framed-IP-Address	Supported	-
Framed-IP-Netmask	Supported	-
Framed-MTU	Supported	-
Framed-Compression	Supported	-
Login-IP-Host	Supported	-
Callback-Number	Supported	-
Called-Station-Id	Supported	-
Calling-Station-Id	Supported	-
State	Supported	-
Proxy-State	Supported	-
Login-LAT-Service	Supported	-
Login-LAT-Node	Supported	-
Login-LAT-Group	Supported	-
Login-LAT-Port	Supported	-
Vendor-Specific	Supported	-
EAP-Message	Supported	-
Message-Authenticator	Supported	-

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Access-Accept AVPs

Table 1-4 lists the compliance information for Access-Accept AVPs.

Table 1-4 Access-Accept AVPs

RADIUS AVP	Status	Notes
User-Name	Supported	-
Service-Type	Supported	-
Framed-Protocol	Supported	-
Framed-IP-Address	Supported	-
Framed-IP-Netmask	Supported	-
Framed-Routing	Supported	-
Framed-Route	Supported	-
Framed-IPX-Network	Supported	-
Framed-AppleTalk-Link	Supported	-
Framed-AppleTalk-Network	Supported	-
Framed-AppleTalk-Zone	Supported	-
Filter-Id	Supported	-
Framed-MTU	Supported	-
Framed-Compression	Supported	-
Login-IP-Host	Supported	-
Login-Service	Supported	-
Login-TCP-Port	Supported	-
Reply-Message	Supported	-
Callback-Number	Supported	-
Callback-Id	Supported	-
Class	Supported	-
Session-Timeout	Supported	-
Idle-Timeout	Supported	-
Termination-Action	Supported	-
State	Supported	-
Proxy-State	Supported	-
Login-LAT-Service	Supported	-
Login-LAT-Node	Supported	-
Login-LAT-Group	Supported	-
Login-LAT-Port	Supported	-
Port-Limit	Supported	-
Vendor-Specific	Supported	-
Acct-Session-Id	Supported	-
EAP-Message	Supported	-

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Table 1-4 (Cont.) Access-Accept AVPs

RADIUS AVP	Status	Notes
Message-Authenticator	Supported	-

Access-Reject AVPs

Table 1-5 lists the compliance information for Access-Reject AVPs.

Table 1-5 Access-Reject AVPs

RADIUS AVP	Status	Notes
User-Name	Supported	-
Reply-Message	Supported	-
Class	Supported	-
Proxy-State	Supported	-
Vendor-Specific	Supported	-
Acct-Session-Id	Supported	-
EAP-Message	Supported	-
Message-Authenticator	Supported	-

Access-Challenge AVPs

Table 1-6 lists the compliance information for Access-Challenge AVPs.

Table 1-6 Access-Challenge AVPs

RADIUS AVP	Status	Notes
Reply-Message	Supported	-
Session-Timeout	Supported	-
Idle-Timeout	Supported	-
State	Supported	-
Proxy-State	Supported	-
Vendor-Specific	Supported	-
EAP-Message	Supported	-
Message-Authenticator	Supported	-

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RADIUS Accounting Protocol

Learn how Oracle Communications Billing and Revenue Management Elastic Charging Engine (ECE) Remote Authentication Dial In User Service (RADIUS) Gateway maps the RADIUS accounting messages for the RADIUS protocol defined in RFC-2866.

Topics in this document:

- Section Compliance
- Accounting-Request AVPs
- Accounting-Response AVPs

See also "RADIUS Protocol".

Section Compliance

Table 2-1 lists the compliance information for the RADIUS Accounting protocol sections in RFC-2866.

Table 2-1 RFC-2866 Section Compliance

Section Number	Section	Status	Notes
1	Introduction	Not applicable	-
1.1	Specification of Requirements	Not applicable	-
1.2	Terminology	Not applicable	-
2	Operation	Supported	-
2.1	Proxy	Not supported	-
3	Packet Format	Supported	-
4	Packet Types	Supported	-
4.1	Accounting-Request	Supported	-
4.2	Accounting-Response	Supported	-
5	Attributes	Supported	-
5.1	Acct-Status-Type	Supported	-
5.2	Acct-Delay-Time	Supported	-
5.3	Acct-Input-Octets	Supported	-
5.4	Acct-Output-Octets	Supported	-
5.5	Acct-Session-Id	Supported	-
5.6	Acct-Authentic	Supported	-
5.7	Acct-Session-Time	Supported	-
5.8	Acct-Input-Packets	Supported	-
5.9	Acct-Output-Packets	Supported	-

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Table 2-1 (Cont.) RFC-2866 Section Compliance

Section Number	Section	Status	Notes
5.10	Acct-Terminate-Cause	Supported	-
5.11	Acct-Multi-Session-Id	Supported	-
5.12	Acct-Link-Count	Supported	-
5.13	Table of Attributes	Supported	-
6	IANA Considerations	Supported	-
7	Security Considerations	Supported	-
8	Change Log	Not applicable	-
9	References	No requirement	-
10	Acknowledgements	No requirement	-

Accounting-Request AVPs

Table 2-2 describes how ECE supports Accounting-Request attribute-value pairs (AVPs).

Table 2-2 Accounting-Request AVPs

RADIUS Accounting AVP	Status	Notes
User-Name	Supported	This is a mandatory AVP.
NAS-IP-Address	Supported	This is a mandatory AVP.
NAS-Identifier	Supported	This is a mandatory AVP.
NAS-Port-Type	Supported	-
Class	Supported	-
Service-Type	Supported	-
Framed-Protocol	Supported	-
Framed-IP-Address	Supported	-
Framed-IP-Netmask	Supported	-
Framed-MTU	Supported	-
Framed-Compression	Supported	-
Login-IP-Host	Supported	-
Callback-Number	Supported	-
Called-Station-Id	Supported	-
Calling-Station-Id	Supported	-
Proxy-State	Supported	-
Login-LAT-Service	Supported	-
Login-LAT-Node	Supported	-
Login-LAT-Group	Supported	-
Login-LAT-Port	Supported	-
CHAP-Challenge	Supported	-

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Table 2-2 (Cont.) Accounting-Request AVPs

RADIUS Accounting AVP	Status	Notes
Acct-Status-Type	Supported	This is a mandatory AVP.
Acct-Delay-Time	Supported	-
Acct-Input-Octets	Supported	-
Acct-Output-Octets	Supported	-
Acct-Session-Id	Supported	This is a mandatory AVP.
Acct-Authentic	Supported	-
Acct-Session-Time	Supported	-
Acct-Input-Packets	Supported	-
Acct-Output-Packets	Supported	-
Acct-Terminate-Cause	Supported	-
Acct-Multi-Session-Id	Supported	-
Acct-Link-Count	Supported	-
Vendor-Specific	Supported	-

Accounting-Response AVPs

The Accounting-Response message does not contain any AVPs.

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