

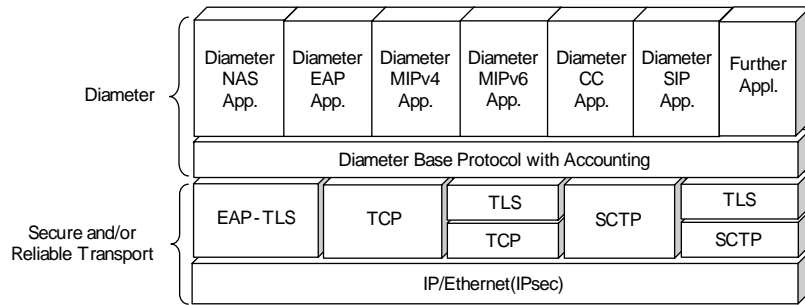
# AAA

## On the International Standardization of AAA Technology

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 (M.H. Kim) AAA  
 (H.D. Lee) AAA  
 (H.J. Yoo) AAA

AAA(Authentication, Authorization, and Accounting) / , ,  
 Mobile IP, VoIP / / ,  
 IETF AAA IETF AAA Diameter  
 RFC 6  
 6 가 . Diameter AAA  
 IETF AAA .

I. (capabilities)  
 , watch dog 가  
 IETF AAA(Authentication, Authorization, and  
 Accounting) [1] AAA ( 1) Diameter  
 Diameter ,  
 RADIUS(Remote Authentication Dial In User Service) PAP/CHAP(Password Authentication Protocol/Challenge Authentication Protocol)  
 ,  
 AAA NASREQ(Network Access Service Requirements)  
 1998 12 , AAA Diame- , EAP(Extensible Authentication Protocol)  
 ter .  
 Diameter SCTP(Stream Control Transmission Protocol) EAP ,  
 Mobile IPv4 .  
 , Base , Credit Control  
 , SIP(Session Initiation Protocol)  
 Diameter VoIP(Voice over IP)  
 SIP , Mobile IPv6  
 , AVP(Attribute-Value Pair) , Mobile IPv6 bootstrapping



( 1) Diameter

AAA

RADIUS

Diameter

## II. AAA

IETF AAA

Base 가 RFC(Request for Comments) 가 , Mobile IP EAP , NASREQ , SIP , Credit Control . AAA

RFC 6 가 6 가

Diameter CMS(Cryptographic Message Syntax) end-to-end

AAA ( redirect - ) end-to-end

60 AAA 가 , RA-

DIUS

AAA Diameter

Diameter QoS , Mobile IPv6 , PANA(Protocol for carrying Authentication for Network Access)

### 1. IETF AAA

Diameter

, 1998 6 RFC , 6 가 IESG(Internet Engineering Steering Group) RFC 가

#### • AAA RFC

- Accounting Attributes and Record Formats, RFC 2924
- Introduction to Accounting Management, RFC 2975
- Criteria for Evaluating AAA Protocols for Network Access, RFC 2989
- Authentication, Authorization, and Accounting: Protocol Evaluation, RFC 3127
- Authentication, Authorization and Accounting(AAA) Transport Profile, RFC 3539
- Diameter Base Protocol, RFC 3588

#### • AAA

- Diameter Mobile IPv4 Application
- Diameter Network Access Server Application

- Diameter Extensible Authentication Protocol(EAP) Application
- Diameter Credit-Control Application
- Diameter Session Initiation Protocol(SIP) Application
- Uniform Resource Identifier(URI) Schemes for Authentication, Authorization and Accounting(AAA) Protocols

tenance , Bernard Aboba  
 .  
 , MIPv6(Mobile IPv6) MIPv6  
 bootstrapping AAA  
 가 , MIPv6  
 MIPv6 bootstrapping  
 AAA  
 .

2.

가. 60th IETF AAA

EAP  
 naming Diameter  
 Credit Control , SIP  
 SIP  
 . Mobile IPv4 ap-  
 plication ID IESG  
 20 IESG  
 .  
 EAP , SIP , Mobile IPv4 ,  
 NASREQ RFC IESG  
 , Credit Control  
 AAA

Diameter QoS  
 가 .

Diameter

. 61th IETF AAA

61 AAA 가  
 , RADIUS  
 , RADIUS ,  
 SIP, Mobile IP .  
 AAA Diameter main-

III. Diameter

1.

RADIUS가  
 UDP(User Datagram Protocol)  
 ,  
 .  
 TCP(Transmission Control Protocol) SCTP  
 , IPsec(Internet  
 Protocol Security protocol) TLS(Transport  
 Layer Security)  
 .  
 NAS(Network Access Server) Di-  
 ameter Diameter relay,  
 proxy, redirect Diameter  
 가  
 < 1>

< 1> Diameter 가

		Diameter		
	TCP	Selectively, MUST(*)	MUST	MUST
	SCTP	Selectively, MUST(*)	MUST	MUST
	IPsec	MUST	MUST	MUST
	TLS	MAY	MUST	MUST

) TCP, SCTP

, Transport Profile . http://www.  
 Diameter TLS rfc-editor.org/errata.html 가 .  
 IPsec ,  
 Diameter IPsec **3. NASREQ EAP**  
 , TLS  
 failover NASREQ [3] EAP [4] 2002  
 Transport Profile , EAP NASREQ 6  
 2003 6 RFC 3539 가 EAP  
 . EAP  
**2. Base**  
 Base [2] IETF AAA NAS EAP EAP  
 RFC 3588 2003 9 AAA NASREQ 16 IESG  
 . Base Diameter NAS ID  
 , Failed AVP QoS Filter Rule AVP  
 17  
 IESG  
 EAP 2002 가  
 ,  
 NASREQ  
 . 60 EAP  
 AVP  
 AVP . , EAP  
 . EAP  
 가 Fragmentation  
 EAP-MTU가 Framed-  
 MTU , Key Name AVP  
 AVP가 IANA  
 , EAP  
 09 가 RFC 2004 9  
 IESG .  
**4. Mobile IPv4**  
 Mobile IP 2001 2  
 ,

19, 2004 6 05 가 IESG  
 , IESG ID . IESG  
 9 06 가 Proposed Stan-  
 Mobile IPv4 [5] Credit-Control  
 Mobile IP , 04  
 AAA , Connecathon 2001 ,  
 Mobile IP  
 AAA 가 가 , Credit-Control  
 가 Mobile IPv4  
 AAA  
 AAA  
 Mobile IP NAI(Network  
 Access Identifier) AAA HA  
 (Home Agent)  
 Mobile IP (draft-ietf-  
 mip4-aaa-nai-03)가 “Mobile IPv4 Extension  
 for Carrying Network Access Identifiers”  
 RFC 3846 , AAA  
 AAA  
 (mobility security association)  
 (draft-ietf-mip4-aaa-key-06)가  
 RFC

**5. Credit - Control**

Diameter Credit-Control  
 [6] Base  
 GSM(Global System for Mobile communi-  
 cation)  
 가  
 Diame-  
 ter 2003 10  
 AAA

2004 6 05 가 IESG  
 . IESG  
 Proposed Stan-  
 dard RFC  
 Credit-Control  
 , 04  
 , Credit-Control

**6. SIP**

Diameter 가 SIP  
 SIP Diameter  
 SIP AAA  
 [7].  
 digest Grouped SIP Au-  
 thenticate AVP가 03 가 .  
 60 IETF RADIUS SIP  
 가  
 , SIP MAR/MAA(Multimedia-  
 Authentication-Request/Answer)  
 SIP body digest  
 가  
 Proposed Standard RFC 04  
 IESG

**7. Mobile IPv6**

AAA IETF  
 AAA 60 IETF  
 가 Diameter  
 Mobile IPv6  
 Di-  
 ameter Mobile IPv6 Application(draft-le-aaa-  
 diameter-mobileipv6-03.txt)

[8].  
 , 61 IETF MIPv6  
 Mobile IPv6 bootstrapping(  
 )  
 bootstrapping  
 AAA  
 가 , AAA boot-  
 strapping  
 EAP  
 IKE(Internet Key Exchange)  
 IPsec 가  
 [10]. 61 IETF MIPv6  
 Mobile IPv6 bootstrapping  
 , AAA  
 Mobile IPv6 bootstrapping  
 가 가  
 AAA Diameter EAP  
 , AAA  
 [11],[12],  
 Mobile IPv6  
 bootstrapping  
 AAA  
 ICMPv6(Internet Control Message Protocol for  
 IPv6) PANA가 61  
 PANA  
 [13]-[15].

[9],  
 AAA  
 1991 AAA  
 RADIUS  
 SLIP(Serial Line Internet Protocol)  
 PPP(Point-to-Point Protocol)  
 AAA  
 ,  
 IETF AAA  
 AAA Diame-  
 ter  
 ,  
 Mobile IPv4, Mobile  
 IPv6  
 AAA 가  
 ,  
 가  
 ,  
 Diameter  
 ,  
 Diameter

#### IV.

IP  
 ,  
 QoS ,

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