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FiTP extension request(s)
How to deal with?

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New Request(s)

Specifying a protocol, which shall be commonly used, implies the following prerequisites

- Secure implementation
- Easy to use
- Widely accepted

How to handle those new requests?

Token Based Networking (1)

Support for firewalls that support tokenised traffic authentication

Those have hardware support for HMAC-SHAx algorithms.

3100,GAcR,Allow=*n*,*h1*,*h2*,*GRI, TokenKey*

A user_PI requests access for an application which wants to communicate between ip addresses h1 and h2. Application uses Token Based Networking (TBN) and firewall is token-aware. Tokenized traffic will be authenticated with Global Resource Identifier (GRI) and the TokenKey.

GRI is a text identifier representing an unsigned long long (64bits) value either in digits or hex such as 0xAABBCCDD11223344. GRI must be a unique number for a server_PI at any moment. Therefore, the positive or negative answer to this request depends on the checking result of GRI in the existing list with granted GRIs.

TokenKey is a text identifier, expressed in digits or hex (0xAA…), which may have different lengths, according to the authentication algorithm requested to be used, as follows:

20Bytes for HMAC-SHA1,
32Bytes for HMAC-SHA256,
48Bytes for HMAC-SHA384,
64Bytes for HMAC-SHA512

Token Based Networking (2)

3100, GAcR,ACK,Allow= *n,h1,h2,GRI*

Positive acknowledgement to the grant request n. **For h1 and h2 specification see *3100 user_PI command above. This positive acknowledgement includes a positive result to checking that the requested GRI is not already in used by another granted request.***

However, the details are not yet done, due to the various scenarios in which firewalls might work. For example, I do not know how a chain of firewalls would work with one single GRI. We have solved this issue in AAA end-to-end path setup, but here might be different issues involved. Therefore, I would take the chance and put some efforts in this respect if you are open to the idea of supporting TBN firewalls.

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Questions and discussion