FUI Redirection

Revision History

> **Note**   Revision history details are not provided for features introduced before release 21.24.

Revision Details	Release
Added support for appending the original URL to the redirect URL.	21.28.m10
First introduced.	Pre 21.24

Feature Description

CUPS supports the Final Unit Indication (FUI) redirect feature on the Online Charging System (OCS) to configure automatic URL redirects for mobile subscribers whose quota is exhausted. When the subscriber quota is exhausted, this feature enables redirection to a pre-configured URL to recharge their account.

The OCS sends the FUI redirect information in one of the Diameter Attribute Value Pair (AVP) in the Credit Control Answer-Update (CCA-U) message. The FUI redirect information (when the feature is enabled at the OCS) is normally received when the OCS wants to indicate to the UPF that this is the last allocated unit before the subscriber quota is exhausted.

The FUI Redirection feature supports the following functionalities:

- FUI Redirection with HTTP URL

- FUI Redirection for the HTTP GET request

- Control the starting of validity timer for FUI redirect using the **diameter redirect-validity-timer immediate** CLI command.

The **traffic-start** keyword option is not supported.

- Control the behavior of marking redirected HTTP flow as free-of-charge using the **diameter fui-redirected-flow allow** CLI command. The redirected traffic gets redirected if the rule is executed from FUI-Redirect.

- Appending the original URL to the redirect URL

  See the *Appending Original URL to Redirect URL* section for more information.

Limitations

The FUI Redirection feature has the following known limitations:

- No support for FUI Redirection with Filter-IDs or Filter-Rules.

- No support for token-based mechanism to exit redirection.

- No support for the WSP protocol in CUPS.

- No support for the **redirect-require-user-agent** CLI command to verify the presence of user agents in the HTTP header. Even if the user-agent is not configured, redirection works.

Appending Original URL to Redirect URL

UPF supports dynamic Advice of Charge (AoC) redirections with URL provided by Online Charging System (OCS). This redirection is performed for a particular Service ID/Rating Group combination without affecting the flows mapped to other Service ID/Rating Group combinations.

For redirection to an AoC or top-up server, the UPF appends the original HTTP URL to the redirected session. To append the original URL for redirection, the OCS indicates to the CP and UP by specifying a special "?" character to the end of the AoC redirection. The redirect URL will be appended with the original URL information using the token name configured with the **diameter redirect-url-token** command. The AoC server redirects the user to the original location on completion of AoC.

How it Works

The following is the procedure to append the original URL before redirection:

1. In the redirect URL, the "&" character replaces the "?" character at the end of the AoC page provided by OCS.

2. A configurable parameter will be appended after the "&" character. The parameter name is case sensitive.

    If the parameter is not configured, then the default string will be appended after the "&" character.

3. An "=" will be appended to the parameter.

4. The subscriber's original URL will be appended to the "=" character.

5. The original URL will be percent encoded.

Example:

Original URL:

```
http://homepage/
```

OCS provided URL:

```
http://test.dev.mms.ag/test/aoc.htm?appName=Return&CODE=UPSELL&OCSCode=FWB&SessionID=4:0001-diamproxy.st40gy2;
130020198;9243;1b02:12000:12000:H:AOC:1299597546:UPSELL:N&transID=AOCPurchasepage?
```

URL after append:

```
http://test.dev.mms.ag/test/aoc.htm?appName=Return&CODE=UPSELL&OCSCode=FWB&SessionID=4:0001-diamproxy.st40gy2;
130020198;9243;1b02:12000:12000:H:AOC:1299597546:UPSELL:N&transID=AOCPurchasepage&returnUrl=http%3A%2F%2Fhomepage%2F
```

Limitations

This feature has the following known limitation:

- If there is no existing configuration to enable URL parsing, the redirect URL will not get appended with the original URL.

Configuring Redirect URL Token

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To configure a token for appending the original URL to the redirect address, use the following configuration:

```
configure
   active-charging service service_name
      credit-control
         diameter redirect-url-token token_string
         exit
```

NOTES:

- **diameter redirect-url-token** *token_string*: Specify the redirect URL token name as an alphanumeric string of size 1 through 63 characters.

- If this command is not configured and the received URL comes up with a "?" character at the end, then the default string "returnurl" will be appended after the "&" character.