Edge Microgateway
Logging and Debugging

Agenda

- Logging

- Debugging

Logging

- By default the Microgateway logs all API request to the log file in the /var/tmp directory.
  - Logging level is set to **error** starting in v2.3.1
- The config file allows users to change the log directory and the log level.
- rotate_interval
  - Does not compress the previous log file
  - It creates a new log file with a new timestamp

```
edgemicro:
  home: ../gateway
  port: 8000
  max_connections: -1
  max_connections_hard: -1
  logging:
    level: error
    dir: /var/tmp
    stats_log_interval: 60
    rotate_interval: 24
```

Logging

Log files have the following naming convention

      edgemicro-<Host Name>-<Instance ID>-<Log Type>.log

There are three log types:

  api - Logs all requests and responses that flow through Edge Microgateway. API counters (stats) and errors are
      also logged to this file.

  err - Logs anything sent to stderr.

  out - Logs anything sent to stdout.

NOTE: Every time Microgateway is restarted it creates a new log file with a new instance ID.

Log File Format - Items to note

```
(1) 1436403888651 info req m=GET, u=/, h=localhost:8000, r=::1:59715, i=0
(2) 1436403888665 info treq m=GET, u=/, h=127.0.0.18080, i=0
(3) 1436403888672 info tres s=200, d=7, i=0
(4) 1436403888676 info res s=200, d=11, i=0
```

Details of the log file format can be found here.

- req - request from client
- treq - Microgateway's request to target
- tres - response from target to Microgateway
- res - Microgateway's response to client

Logging

- Set the log level to "warn" or "error" for production servers with high traffic.

- Compress, archive and remove older log files at regular intervals.

- Use "info" in lower environments for debugging and troubleshooting.

Debugging

- The following command will enable debugging and send log statements directly to the console.

    - Useful for debugging custom plugins

    - Troubleshooting Microgateway settings

```
DEBUG=* edgemicro agent proc -c start -k <key>  -s <secret>
```

Debugging

```
...
gateway:index starting edgemicro +0ms
  gateway:index starting edgemicro +0ms
cba34480-cd3e-11e6-aa09-59f0d3217088 edge micro listening on port 8000
cba1e4f0-cd3e-11e6-bd38-d923ec49f060 edge micro listening on port 8000
  gateway:init ignoring unsequenced plugins: accumulate-request-and-set-content-length, mash-
up, sample, accumulate-request, accumulate-response, header-uppercase, quota, quota-memory,
spikearrest, transform-uppercase +57ms
installed plugin from analytics
installed plugin from oauth
  gateway:index starting edgemicro +0ms
cba84d90-cd3e-11e6-afbc-ffa3d3f05597 edge micro listening on port 8000
I Checking for change in configuration
info: config download from https://edgemicroservices-us-east-1.apigee.net/edgemicro/
bootstrap/organization/org/environment/test returned 200 OK
info: products download from https://org-env.apigee.net/edgemicro-auth/products returned 200
OK
info: jwt_public_key download from https://org-env.apigee.net/edgemicro-auth/publicKey
returned 200 OK
...
```

Microgateway Labs

Complete the following Edge Microgateway Labs.

- Lab - Log File

- Lab - Debug the custom plugin

THANK YOU