### Integrating Voluspa

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## Voluspa

- Generate ATS configs from much simpler YAML
  - Currently ~ 40 "adapters"
  - Adding adapter is easy
- Generates only remap related files
- Includes test config

remap.config and plugins parent.config hosting.config ssl\_multicert.config

- json-schema forces correct syntax
- Much cleaner output than TO gens (.includes, conf\_remap)

### Available Adapters

conf\_remap failover priority access\_approval parent\_child log\_type set\_header\_origin default\_ttl propstats origin\_host\_header force\_ttl authproxy transaction\_timeout parent allow\_ip video\_background\_fetch regex\_remap proxy\_cache\_control s3 negative\_ttl content\_type\_forge add\_header\_origin child strip\_query edge\_compression add\_header allow\_ip\_parent cachekey log cookie cache promote receipts log header disable cache redirect set header remove header deny\_methods

## json or YAML?

#### http://yaml.org

#### https://json-schema.org

| 1 -  | mappings:   | 418   | <b>}</b> ,               |
|------|---|-------|--------------------------|
| 2 -  | - alias:  | 419 - | "priority": {            |
| 3    | <ul> <li>cdn.bugreport.apple.com</li> </ul>           | 420   | "type": "string",        |
| 4    | origin: bugreport.apple.com                           | 421 - | "enum": [                |
| 5    | schemes: [http, https]                                | 422   | "background",            |
| 6    | ,   | 423   | "foreground",            |
| 7 -  | rules:  | 424   | "streamingaudio",        |
| 8 -  | default:  | 425   | "streamingvideo"         |
| 9    | priority: foreground                                  | 426   | ],                       |
| 10   | default_ttl: 9h                                       | 427   | "description": "QOS pric |
| 11   | <pre>set_header_origin: "X-From-CDN: Apple-CDN"</pre> | 428   | },                       |
| 12   | deny_methods: [ CONNECT, POST, PUT, DELETE ]          | 429 - | "default_ttl": {         |
| 13   |   | 430   | "type": "string",        |
| 14 - | tests:  | 431   | "description": "If the ( |
| 15 - | 301:  | 432 - | "examples": [            |
| 16   | description: http origin test                         | 433   | "10s",                   |
| 17 - | urls:   | 434   | "60m",                   |
| 18   | <ul> <li>http://cdn.bugreport.apple.com</li> </ul>    | 435   | "12h",                   |
| 19 - | success:  | 436   | "no-cache, no-store      |
| 20   | <pre>status_code: 301</pre>                           | 437   | ],                       |
| 21   |   | 438   | "pattern": "^([0-9]+[sm  |
| 22 - | 302:  | 439   | },                       |
| 23   | description: http origin test                         | 440 - | "set_header_origin": {   |
| 24 - | urls:   | 441   | "type": "string",        |
| 25   | - https://cdn.bugreport.apple.com                     | 442   | "description": "Send th  |
| 26 - | success:  | 443   | },                       |
| 27   | status_code: 302                                      | 444 - | "authproxy": {           |
|      |   | 445   | "type": "string",        |
|      |   | 446 - | "emum": [                |
|      |   | 447   | "range",                 |
|      |   |       |                          |

## The Problem

- Remap rules are hard
- Too often just raw text that is not verified for syntax
- Adding new "safe" features is hard
- Location parameter stuff is \_really\_ broken
- Deliveryservice types make no sense
- Things are changing (ATS YAML-ification)
- Traffic Control is the only one "doing it our way"

# My Proposal

- Create 2 new DS type: DNS\_VOLUSPA and HTTP\_VOLUSPA
  - No separate types for \*\_NATNL\_\*, \*\_LIVE and \*\_NO\_CACHE
- Traffic Router config (input and output) stays the same
- Use Ace YAML editor in DS view to edit / verify cache remap config
- Store YAML as text in DB
  - Gets verified against json-schema on save

### Show and Tell

https://otje.knutsel.com:8443/

(disclaimer: IANA UI Dev)

## Summary

- Use Voluspa (License: Apache) to generate ATS config files
- Change all remap related cache config in TC to be YAML
- Use Ace Editor (License: BSD) to edit YAML in DS view
- Use Voluspa to verify YAML syntax and schema compliance
- Keep Voluspa as-is, include as library with no changes
  - Increases target audience for Voluspa
  - Reduces threshold to start with TC

## What about ?

#### • Tenancy

- Will "just work" as is
- Possible to expand to have some of the enums / features by tenant, and to make them manageable by the root tenant in the future
- regex table
- Traffic Router / Traffic Monitor / CRConfig.json
  - No Changes

### Transition

- Migration
  - Could be hard to create a tool that implements all raw regex remaps...
- Coexistence
  - Include tc-remap.config in remap.config which is Voluspa
  - Concat hosting.config, ssl\_multicert.config
- Generated file cache
  - Do we want to keep genning server scope files?
    - I propose { { hostname } } replace on dest host

#### Parents

- Parent selection / Parent config
  - Map to origin at edge or core?
  - Bring Your Own Topology becomes much easier when Voluspa gens the parent.config
  - Change MID to not be an open forward proxy (remap is required)
  - Target mapping and certain adapters to EDGE/MID/...? (Voluspa expects saltstack roles)

## // TODO

- Missing adapters
  - no-cache
    - Add hosting.config to genned files?
    - Or use disable\_cache (sets proxy.config.http.cache.http=0)
  - url\_sig
  - uri\_sign
  - fq\_pacing
  - range\_request

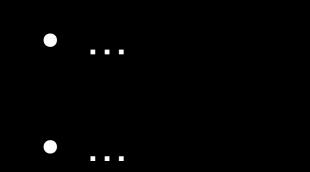
# // Voluspa TODO

- Documentation
  - Getting Started
  - User Guide
  - Adapter Dev Guide
- Cleanup
  - Some proprietary adapters
  - Saltstack ??
- Expand tests

#### Where's the Code?

#### Teasers

- CDNCheck
- Pulsavo



## Thoughts?