



Integrating Voluspa

A Proposal
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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
- json-schema forces correct syntax
- Much cleaner output than TO gens (.includes, conf_remap)

```
remap.config and plugins  
parent.config  
hosting.config  
ssl_multicert.config
```

Available Adapters

failover conf_remap
header_rewrite
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
strip_query add_header_origin child
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:
2   - alias:
3     - cdn.bugreport.apple.com
4     origin: bugreport.apple.com
5     schemes: [http, https]
6
7 rules:
8   default:
9     priority: foreground
10    default_ttl: 9h
11    set_header_origin: "X-From-CDN: Apple-CDN"
12    deny_methods: [CONNECT, POST, PUT, DELETE ]
13
14 tests:
15   301:
16     description: http origin test
17     urls:
18       - http://cdn.bugreport.apple.com
19     success:
20       status_code: 301
21
22   302:
23     description: http origin test
24     urls:
25       - https://cdn.bugreport.apple.com
26     success:
27       status_code: 302
```

```
418 },
419 - "priority": {
420   "type": "string",
421 -   "enum": [
422     "background",
423     "foreground",
424     "streamingaudio",
425     "streamingvideo"
426   ],
427   "description": "QoS prio
428 },
429 - "default_ttl": {
430   "type": "string",
431   "description": "If the O
432 -   "examples": [
433     "10s",
434     "60m",
435     "12h",
436     "no-cache, no-store,
437   ],
438   "pattern": "^[0-9]+[smh
439 },
440 - "set_header_origin": {
441   "type": "string",
442   "description": "Send thi
443 },
444 - "authproxy": {
445   "type": "string",
446 -   "enum": [
447     "range",
448     "..."
```

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?