Integrating Voluspa

A Proposal jvd@apache.org

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	} ,
2 -	- alias:	419 -	"priority": {
3	 cdn.bugreport.apple.com 	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	 http://cdn.bugreport.apple.com 	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

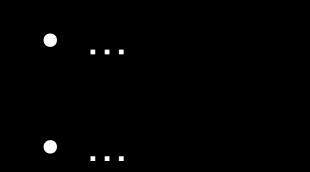
// Voluspa TODO

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

Where's the Code?

Teasers

- CDNCheck
- Pulsavo



Thoughts?