

Install CFSSL and CFSSLJSON - CloudFlare's KPI toolkit

Written by Pim on Wednesday January 10, 2018 - 0 Comments (http://www.pimwiddershoven.nl/entry/install-cfssl-and-cfssljson-cloudflare-kpi-toolkit#disqus_thread) - Permalink (</entry/install-cfssl-and-cfssljson-cloudflare-kpi-toolkit>)
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The tools CFSSL and CFSSLJSON from CloudFlare make life a lot easier when you have to generate certificate signing requests (CSR), certificates, and keys on a regular basis, or you want to use it as a development tool to automate this for you.

The installation of the tool is pretty straightforward:

```
$ curl https://pkg.cfssl.org/R1.2/cfssl_linux-amd64 -o /usr/local/bin/cfssl
$ curl https://pkg.cfssl.org/R1.2/cfssljson_linux-amd64 -o /usr/local/bin/cfssljson
$ chmod +x /usr/local/bin/cfssl /usr/local/bin/cfssljson
```

The tools are now ready-to-use!

Generating a CSR is now super easy. First, create a JSON file and save it to disk:

```
{
  "hosts": [
    "www.my-awesome-company.com (http://www.my-awesome-company.com)"
  ],
  "CN": "www.my-awesome-company.com (http://www.my-awesome-company.com)",
  "key": {
    "algo": "rsa",
    "size": 2048
  },
  "names": [{
    "C": "NL",
    "L": "Amsterdam",
    "ST": "Noord-Holland",
    "O": "My Company",
    "OU": "Operations"
  }]
}
```

Then, use the CFSSL and CFSSLJSON tools to generate a CSR and key:

```
cfssl genkey csr.json | cfssljson -bare my_awesome_company_com
```

Send the CSR to the CA to receive a signed certificate or sign it yourself:

```
cfssl selfsign www.my-awesome-company.com (http://www.my-awesome-company.com) csr.json | cfssljson -bare my_awesome_company_com
```

It's also possible to create your own CA. You need a CA JSON configuration file to enable signing and a JSON file to generate the certificate and key.

ca-csr.json:

```
{
  "CN": "Dev CA",
  "key": {
    "algo": "rsa",
    "size": 2048
  },
  "names": [
    {
      "C": "NL",
      "L": "Amsterdam",
      "ST": "Noord-Holland"
    }
  ]
}
```

And initialize the CA:

```
cfssl gencert -initca ca-csr.json | cfssljson -bare ca -
```

Then create the ca-config.json to configure the signing and profiles:

```
{
  "signing": {
    "default": {
      "expiry": "168h"
    },
    "profiles": {
      "client": {
        "expiry": "43800h",
        "usages": [
          "signing",
          "key encipherment",
          "client auth"
        ]
      }
    }
  }
}
```

Generate new certificates using your own CA:

```
cfssl gencert -ca=ca.pem -ca-key=ca-key.pem -config=ca-config.json -profile=client my-cert.json | cfssljson -bare my_certificate
```

Done for now! Have fun generating CSR, certs, and keys using CFSSL and CFSSLJSON!

0 Comments

Pim Widdershoven

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Dick van Santbrink — Exact mijn probleem. Geen idee waar ik het zoeken moet. Had even gehoopt dat de juni update van ubnt iet op zou lossen, maar ...

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Greg Golin — Yeah, part two would be great :) Particularly curious about your setup with regards to the nginx-ingress.

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locmer — Pim als je een minuutje of 2 hebt kan je naar mijn config kijken? Ik wil graag IPTV via port eth2 laten lopen maar ik doe ik iets fout (vlan 4 ...

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Diego Saprizza — Very cool article. I would love to see your final snippet for release, seems pretty red.

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