Modeling CNFs with juju-bundles

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Squid

- Kubernetes Operator/Charm
- It will act as a firewall and cache
- Important! It will include two primitives:
  - Addurl: add a URL to the allowed urls
  - Deleteurl: remove a URL from the allowed urls
VNFds for Squid

This will be the kdu section

For our Squid KNF.

It states our bundle and the primitives that will be exposed to OSM.

```
kdu:
  - name: squid-kdu
    juju-bundle: bundle.yaml
    kdu-configuration:
      config-primitive:
        - name: addurl
          parameter:
            - name: application
              data-type: STRING
              default-value: squid
            - name: url
              data-type: STRING
              default-value: ""
        - name: deleteurl
          parameter:
            - name: application
              data-type: STRING
              default-value: squid
            - name: url
              data-type: STRING
              default-value: ""
```
Open Source MANO

Hands on
1. Login to the AWS instance
2. Add a model in Microk8s
   ```bash
   $ juju add-model squid microk8s
   ```
3. Deploy squid charm
   ```bash
   $ juju deploy cs:~charmed-osm/squid
   ```
4. Run addurl action
   ```bash
   $ juju run-action squid/0 addurl --string-args url=etsi.org
   ```
5. Run deleteurl action
   ```bash
   $ juju run-action squid/0 deleteurl --string-args url=etsi.org
   ```
6. Change the configuration
   ```bash
   $ juju config squid port=9999
   ```
Creating our first Kubernetes operator

1. **Install charmcraft**
   
   ```
   $ sudo snap install charmcraft --channel beta
   ```

2. **Create basic project**
   
   ```
   $ charmcraft init --name basic --project-dir basic-operator
   ```

3. **Edit the charm (follow the instructor)**

4. **Build the charm**
   
   ```
   $ charmcraft build
   ```

5. **Deploy the charm**
   
   ```
   $ juju deploy ./basic.charm
   ```
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