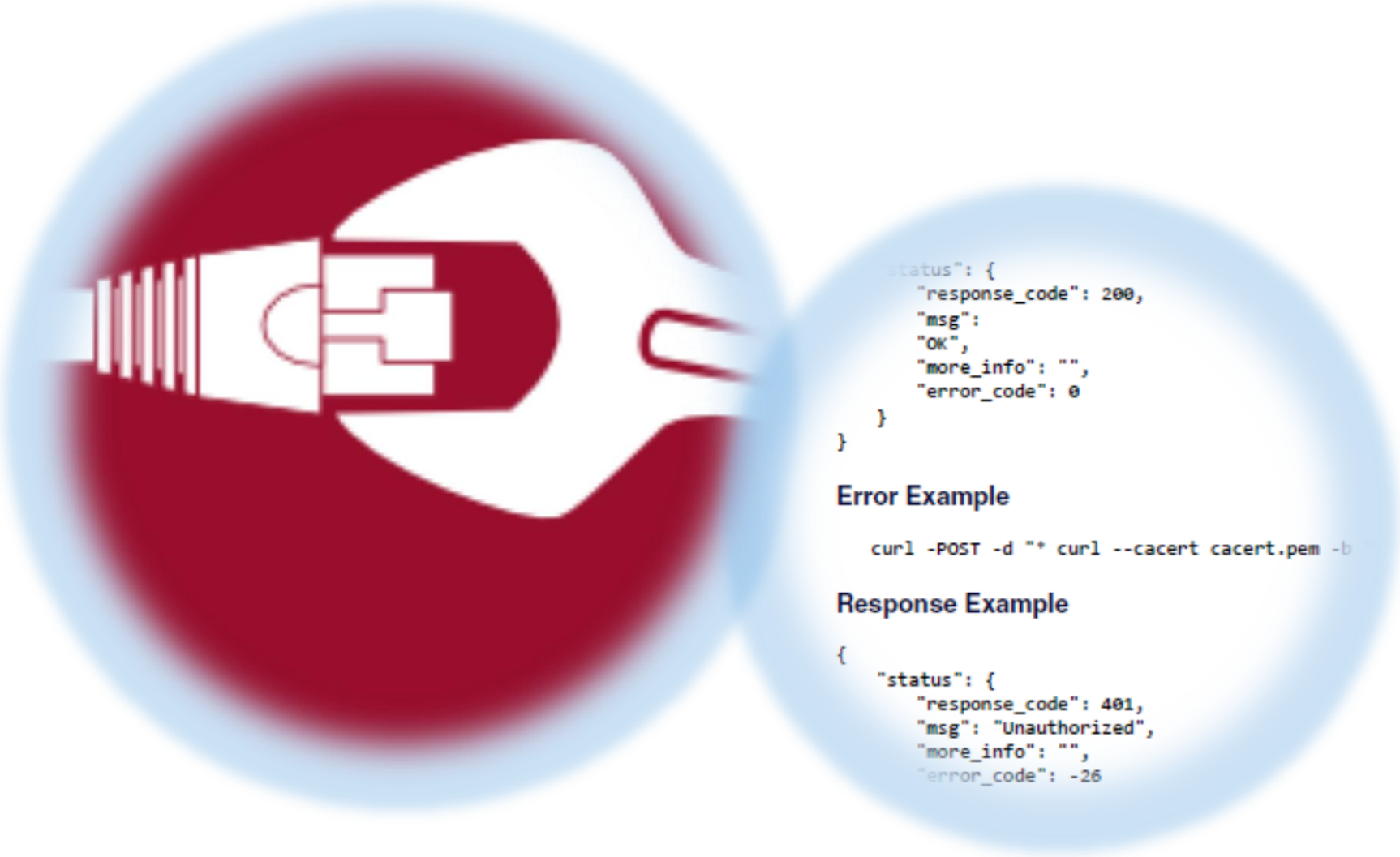
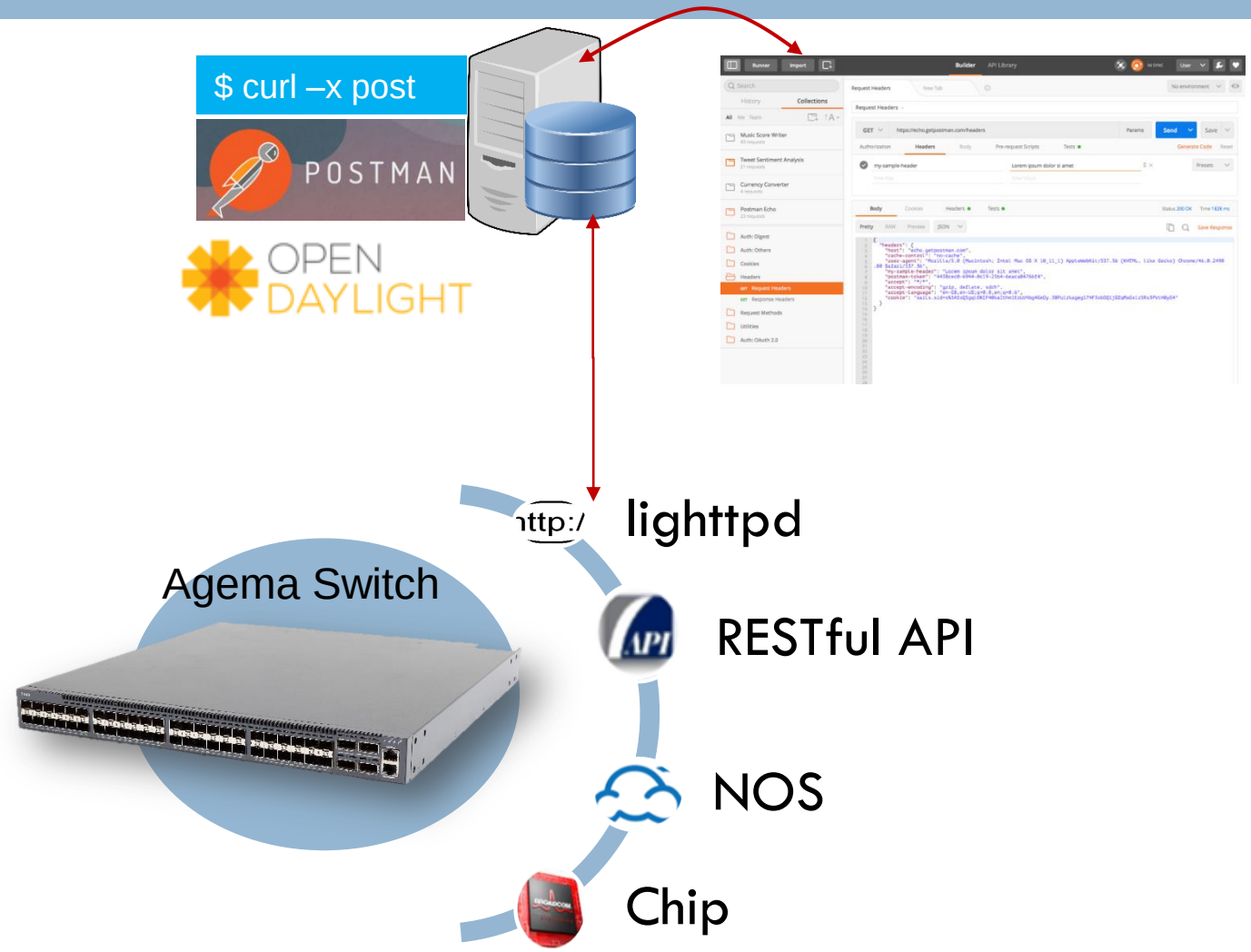
Programmatic Network Monitoring and Management



Background

1. RESTCONF provides mechanism to install, manipulate and delete configuration of network devices
2. It uses XML based data encoding, as opposed to closed, and ever changing Command Line Interfaces (CLI)
3. Allows the device to expose a full, formal application programming interface (API) to the admin
4. Reduces deployment cost and allows timely access to features consistently across all devices
5. Reduces opex and training needs
6. Allows for creation of self-service portals

Architectural Overview



Configuring Agema Switch

POSTMAN

Install chrome browser

Install postman: www.getpostman.com

cURL
Curl URL Request Library

Install cusl: # sudo apt-get install curl

OPEN DAYLIGHT

https://wiki.opendaylight.org/view/OpenDaylight_Controller:MD-SAL:Restconf#How_to_start_and_access_Restconf

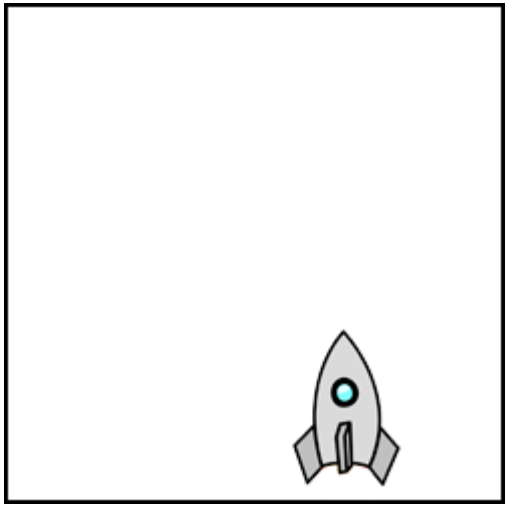
Prepare & Install ODL Helium SR3
https://wiki.opendaylight.org/view/Install_On_Ubuntu_14.04

Load odl-restconf-all
https://wiki.opendaylight.org/view/OpenDaylight_Controller:MD-SAL:Restconf#How_to_start_and_access_Restconf

Agema Switch

Make user you are running 3.2.x.x
show version

lighttpd Agent is running
show process process-list
Modify any http settings via # http



Agema

BACKUP SLIDES

Log in and system

Log-in to get Session ID (SID)

POST http://192.168.3.20:8080/open/v1/login?method=post&username=admin&password=

System RFC 1213 read

GET http://192.168.3.20:8080/open/v1/system1213

GET http://192.168.3.20:8080/open/v1/system1213?method=get&x=-99 (Should get an error)

PUT http://192.168.3.20:8080/open/v1/system1213?method=put&sysName=Demo

GET http://192.168.3.20:8080/open/v1/system1213

Interfaces

Edit interface:

GET http://192.168.3.20:8080/open/v1/interfaces?interface=0/1
PUT http://192.168.3.20:8080/open/v1/interfaces?interface=0/1&mtuSize=1552
GET http://192.168.3.20:8080/open/v1/interfaces?interface=0/1
PUT http://192.168.3.20:8080/open/v1/interfaces?interface=0/1&mtuSize=1518

Edit VLAN:

GET http://192.168.3.20:8080/open/v1/vlans
POST http://192.168.3.20:8080/open/v1/vlans?method=post&id=10&name=demo
GET http://192.168.3.20:8080/open/v1/vlans
GET http://192.168.3.20:8080/open/v1/vlans?id=10
DELETE http://192.168.3.20:8080/open/v1/vlans?method=delete&id=10
GET http://192.168.3.20:8080/open/v1/vlans

Tenant Management

L2ol3tenants (VxLAN):

GET http://192.168.3.20:8080/open/v1/l2ol3tenants

POST

http://192.168.3.20:8080/open/v1/l2ol3tenants?method=post&tenant=123&tunnelType=2&localTepI
pAddr=192.168.3.10&vlanId=1

GET http://192.168.3.20:8080/open/v1/l2ol3tenants?method=get&tenant=123

PUT http://192.168.3.20:8080/open/v1/l2ol3tenants?method=put&tenant=123&vlanId=10

GET http://192.168.3.20:8080/open/v1/l2ol3tenants

DELETE http://192.168.3.20:8080/open/v1/l2ol3tenants?method=delete&tenant=123

GET http://192.168.3.20:8080/open/v1/l2ol3tenants?method=get&tenant=123