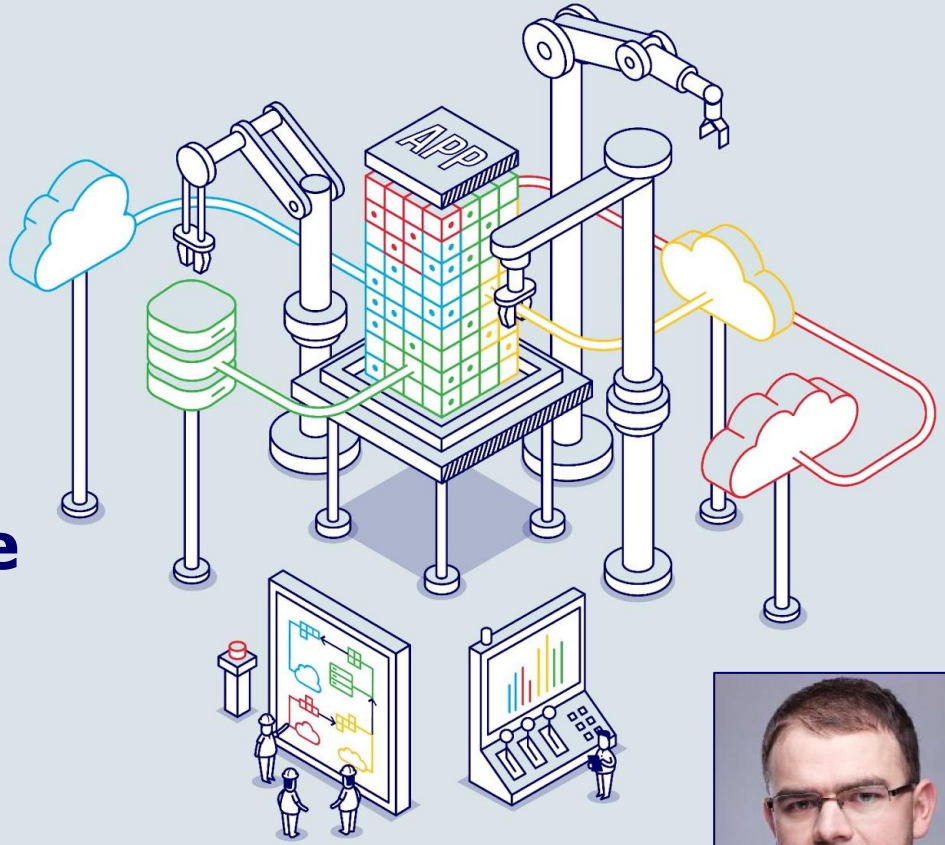
CLOUDIFY

NetDevOps: The Key to Declarative Network Automation



Sebastian Grabski - Director, Customer Solutions

Who's NetDevOps?

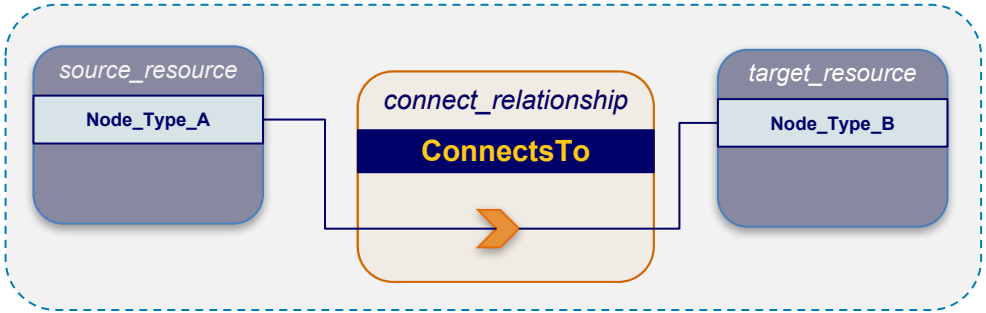
NetDevOps

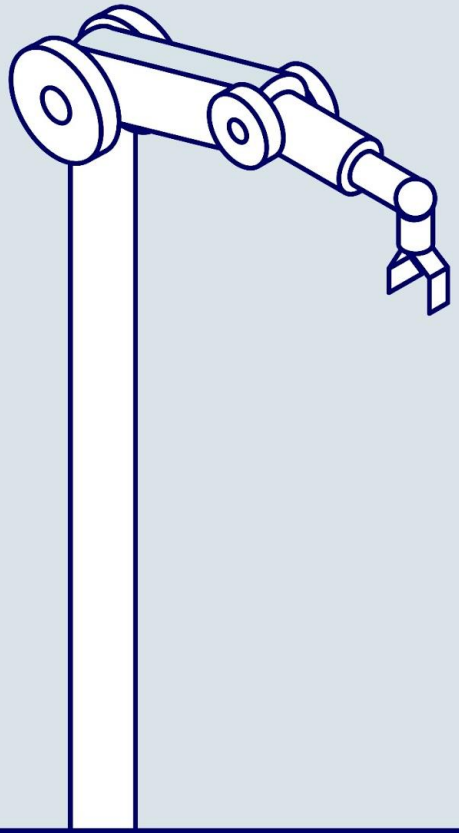
The special breed of network engineer who knows how to leverage

Declarative Network Automation

What's declarative network automation?

- abstracts "the what" (intent) from "the how" (implementation)
- leverages declarative orchestration language

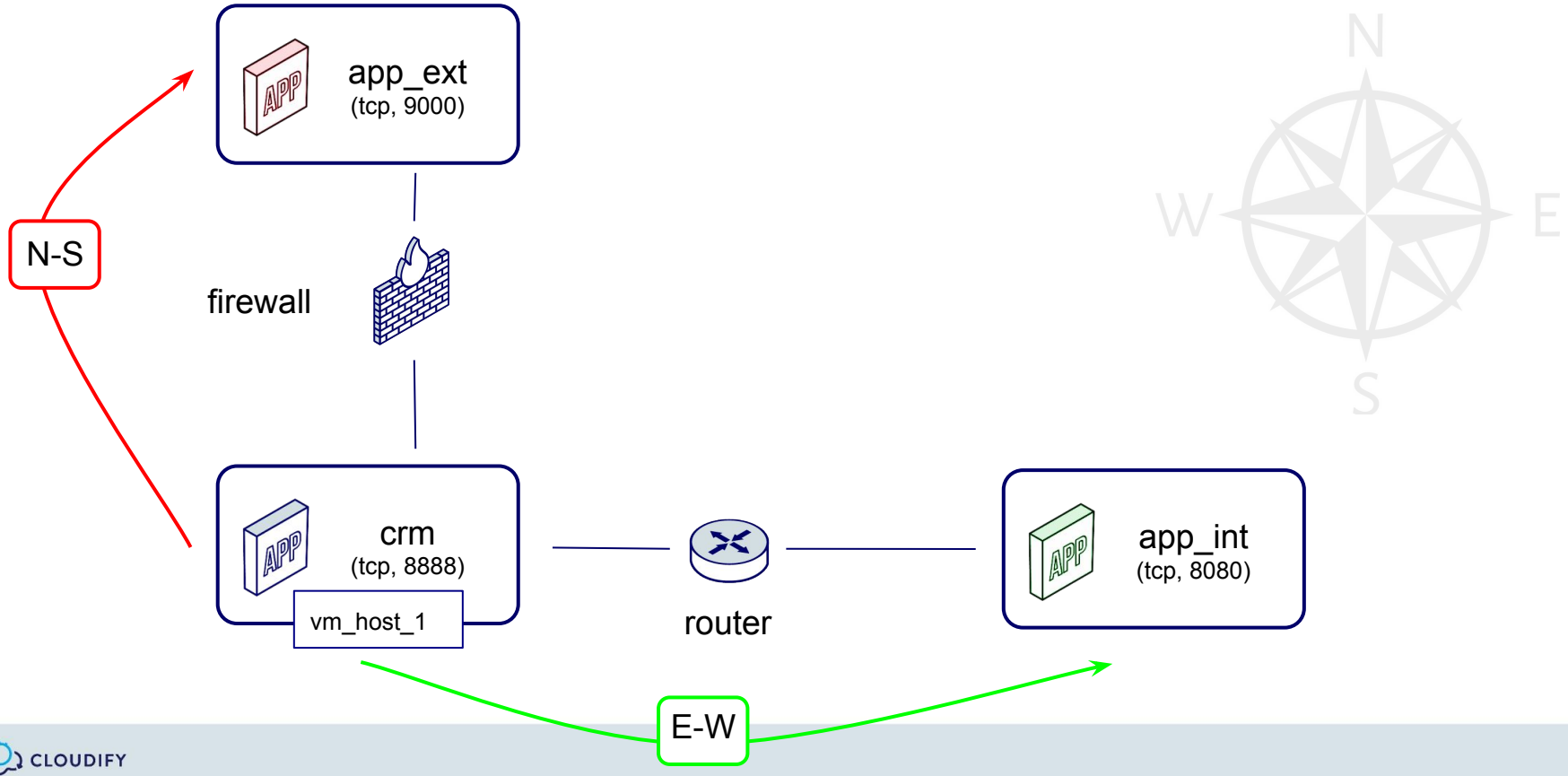


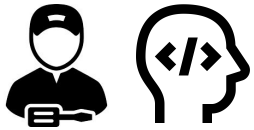


Example #1

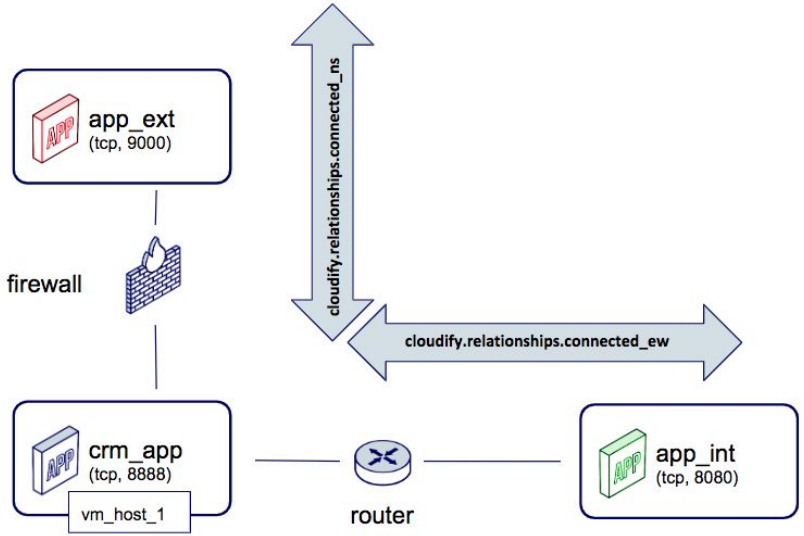
“Declarative Application Access”

The problem


app_ext
(tcp, 9000)
N-S
firewall
crm
(tcp, 8888)
vm_host_1
router
app_int
(tcp, 8080)
E-W

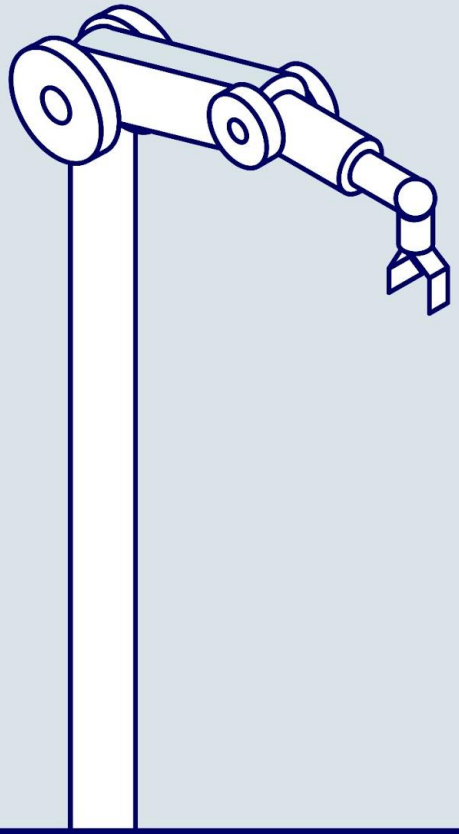


Solution




```
41    crm:
42      type: cloudify.nodes.Application
43      properties:
44        listens_on:
45          - [tcp, 8888]
46      relationships:
47        - type: cloudify.relationships.connected_ew
48          target: app_int
49        - type: cloudify.relationships.connected_ns
50          target: app_ext
51        - type: cloudify.relationships.contained_in
52          target: vm_host_1
53
54    app_int:
55      type: cloudify.nodes.Application
56      properties:
57        listens_on:
58          - [tcp, 8080]
59
60    app_ext:
61      type: cloudify.nodes.Application
62      properties:
63        listens_on:
64          - [tcp, 9000]
```

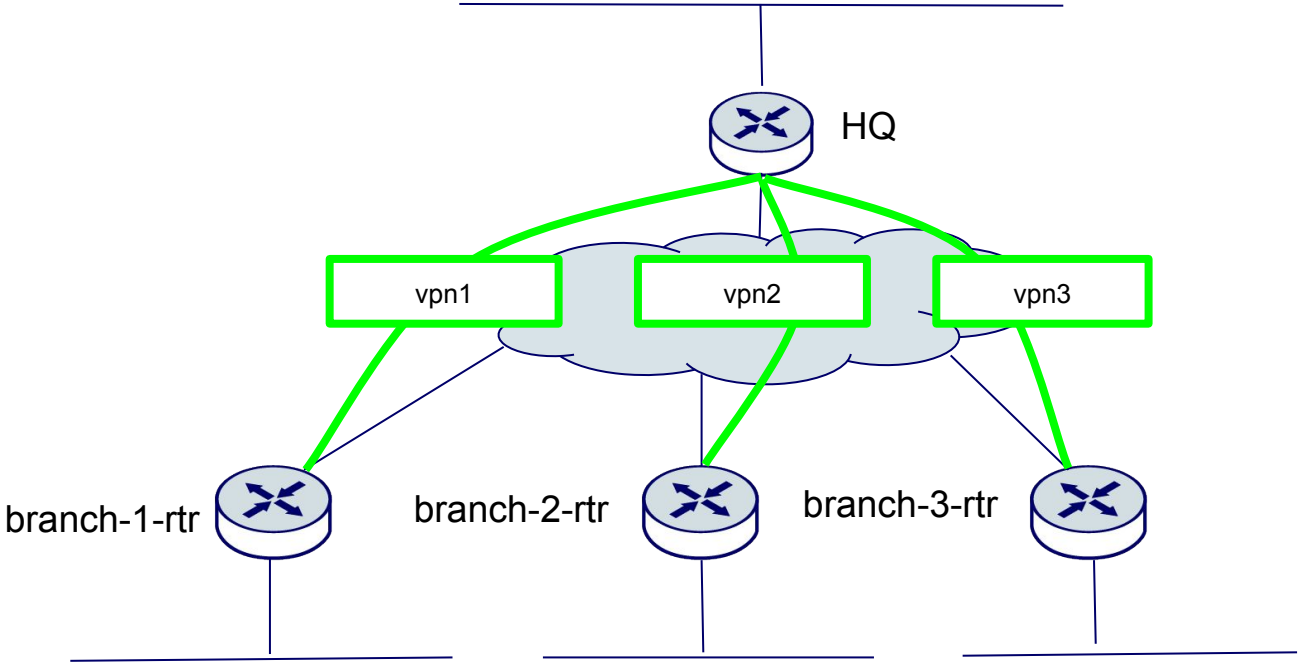
More details:
https://orchestratedthings.wordpress.com/2018/06/07/declarative-networking/



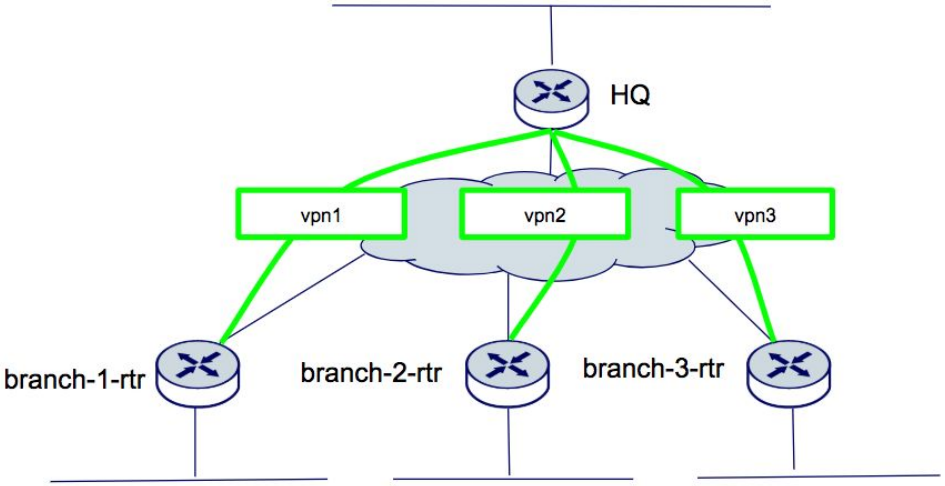
Example #2

“Declarative VPNs”

VPN topology



Solution




```
HQ:
  type: cloudify.nodes.vRouter
  relationships:
    - type: cloudify.relationships.rtr_connected_to_vpn
      target: vpn1
    - type: cloudify.relationships.rtr_connected_to_vpn
      target: vpn2
    - type: cloudify.relationships.rtr_connected_to_vpn
      target: vpn3

branch-1-rtr:
  type: cloudify.nodes.vRouter
  relationships:
    - type: cloudify.relationships.rtr_connected_to_vpn
      target: vpn1

branch-2-rtr:
  type: cloudify.nodes.vRouter
  relationships:
    - type: cloudify.relationships.rtr_connected_to_vpn
      target: vpn2

branch-3-rtr:
  type: cloudify.nodes.vRouter
  relationships:
    - type: cloudify.relationships.rtr_connected_to_vpn
      target: vpn3

vpn1:
  type: cloudify.nodes.Vpn
```

More details:
https://orchestratedthings.wordpress.com/2018/08/29/intent-based-networking-showcase-vpn-service/

Thank You

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