



Doctor Demo

DRAFT VERSION

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# Doctor demo

- 2 use cases being showcased
  - UC1: infrastructure monitoring
    - What will be shown? VMs evacuation on compute node failure
    - How it is realized?
      - Zabbix as monitoring tool; alerts are published to a messaging queue
      - Platform integrated with Nova blueprint proposed to OpenStack
  - UC2: virtual resources monitoring
    - What will be shown? VNF ACT/SBY scenario
    - How is it realized?
      - Ceilometer as monitoring tool; alerts are sent to a HTTP callback URL
      - Platform integrated with Ceilometer blueprint proposed to OpenStack

# Blueprint status

Project	Name	Lead contributor	Developer	Status
Nova	New nova API call to mark nova-compute down *	Tomi Juvonen	Roman Dobosz (server) Carlos Goncalves (client)	BP approved & merged Code under review
Ceilometer	Add 'event' type and 'event_rule' to alarm API *	Ryota Mibu	Ryota Mibu	BP approved & merged Ongoing implementation
Nova	Get valid server state	Tomi Juvonen		BP under review M-release
Nova	Add notification for service status change	Balazs Gibizer	Balazs Gibizer	BP under review M-release

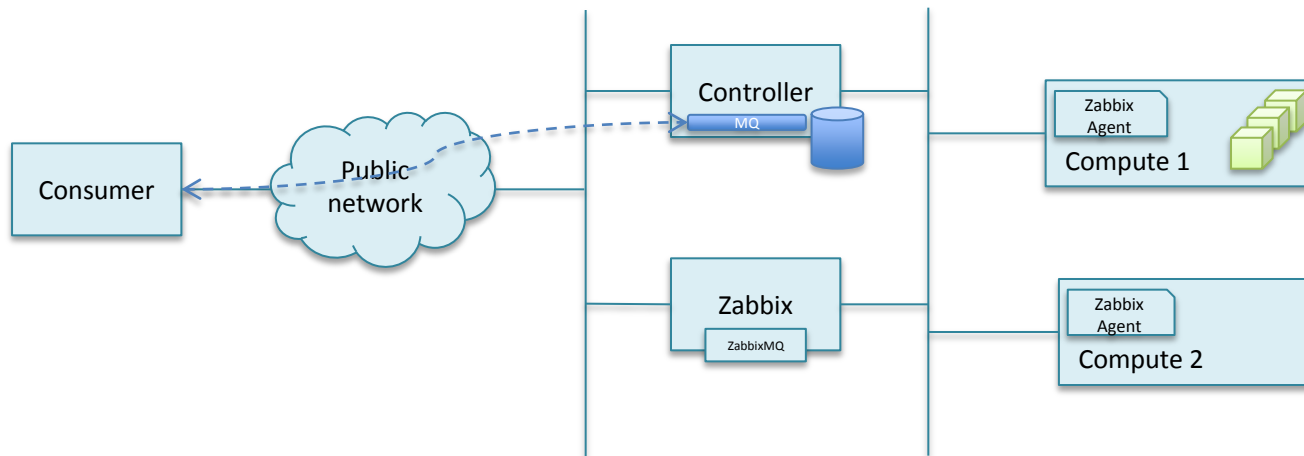
\* These blueprints were accepted in OpenStack Liberty cycle and are being showcased in this demo

For more information and latest status, please refer to [https://etherpad.opnfv.org/p/doctor\\_bps](https://etherpad.opnfv.org/p/doctor_bps)

# Doctor demo

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# Fault Management UC1: infrastructure

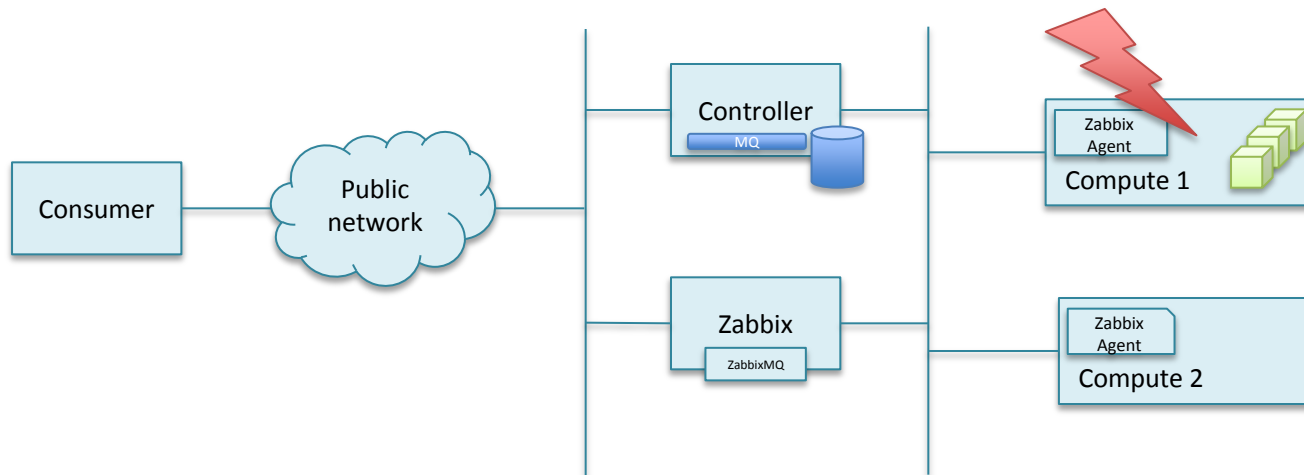


Initial deployment

Consumer\* is subscribed to a AMQP system

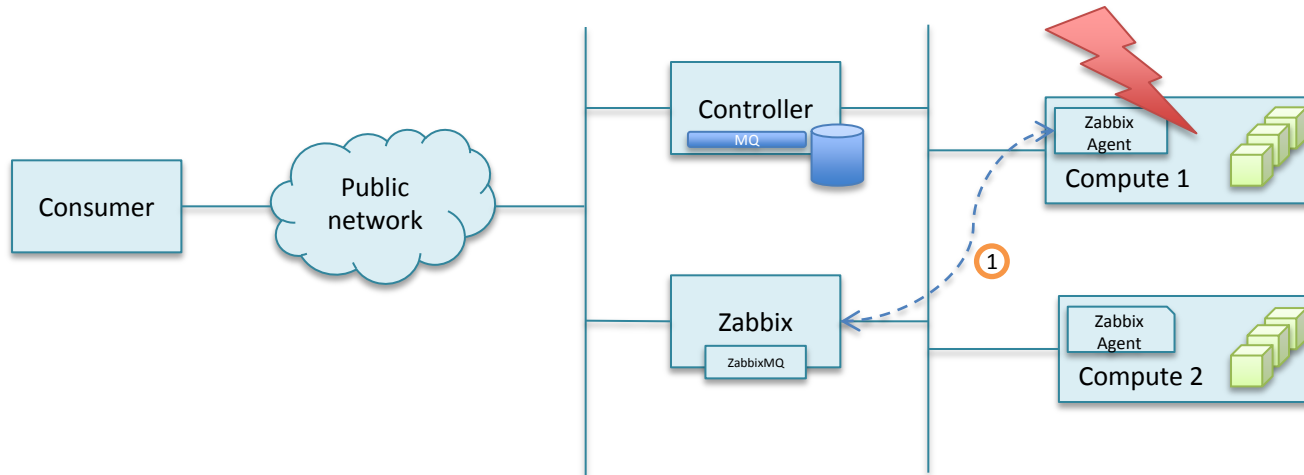
\* User-side Manager; consumer of the interfaces produced by the VIM; VNFM, NFVO, or Orchestrator in ETSI NFV terminology

# Fault Management UC1: infrastructure



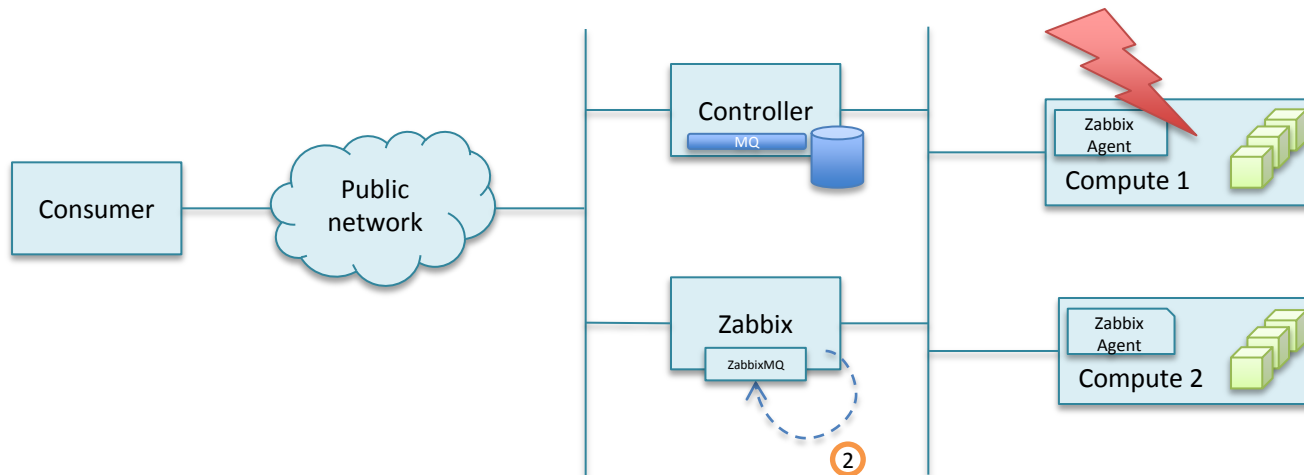
0. Failure occurs

# Fault Management UC1: infrastructure



1. Failure detected

# Fault Management UC1: infrastructure

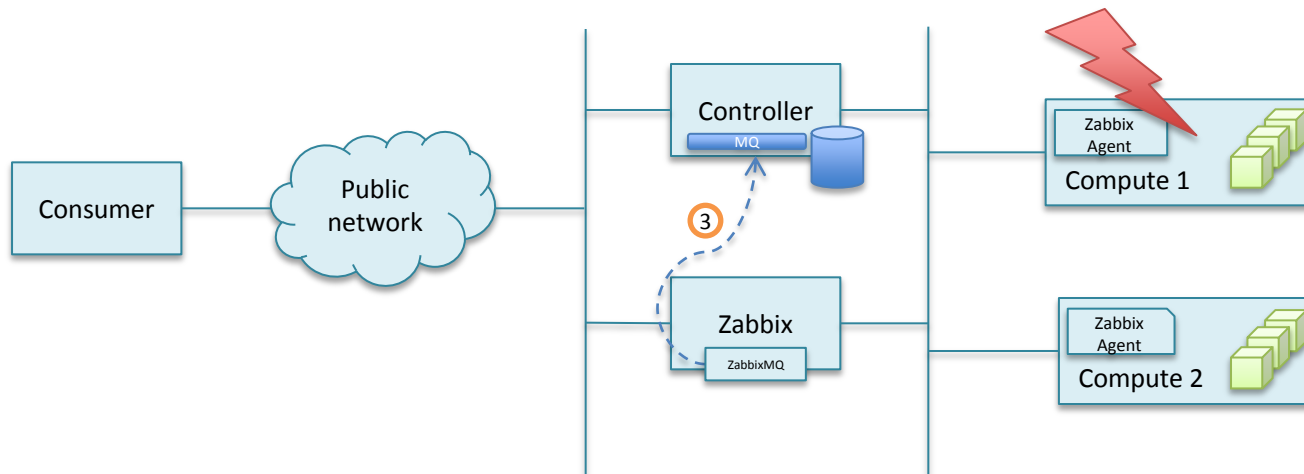


## 2. Forward alert to ZabbixMQ

ZabbixMQ developed to publish alerts to a AQMP system (e.g. RabbitMQ, Qpid)

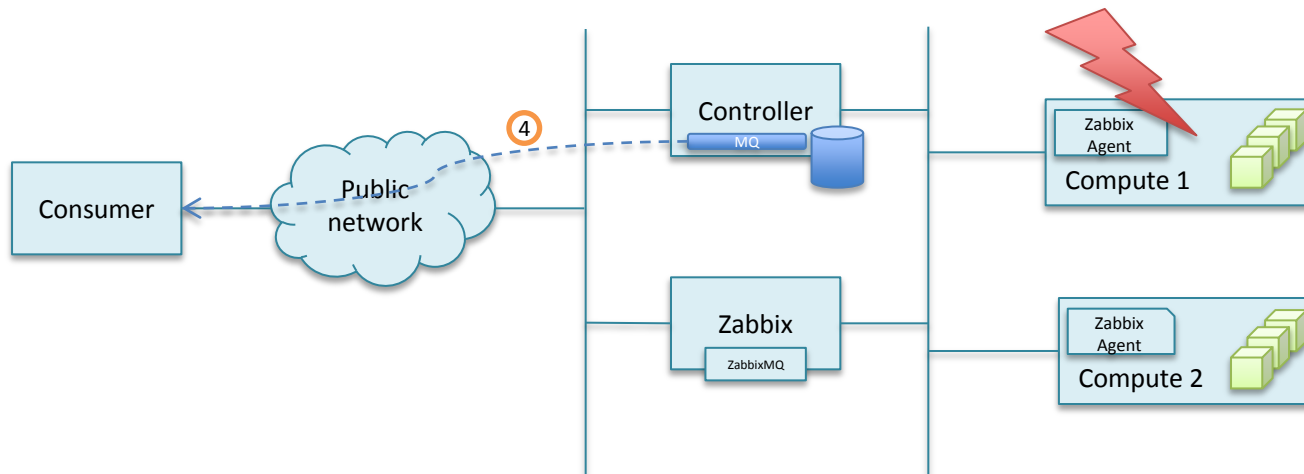


# Fault Management UC1: infrastructure



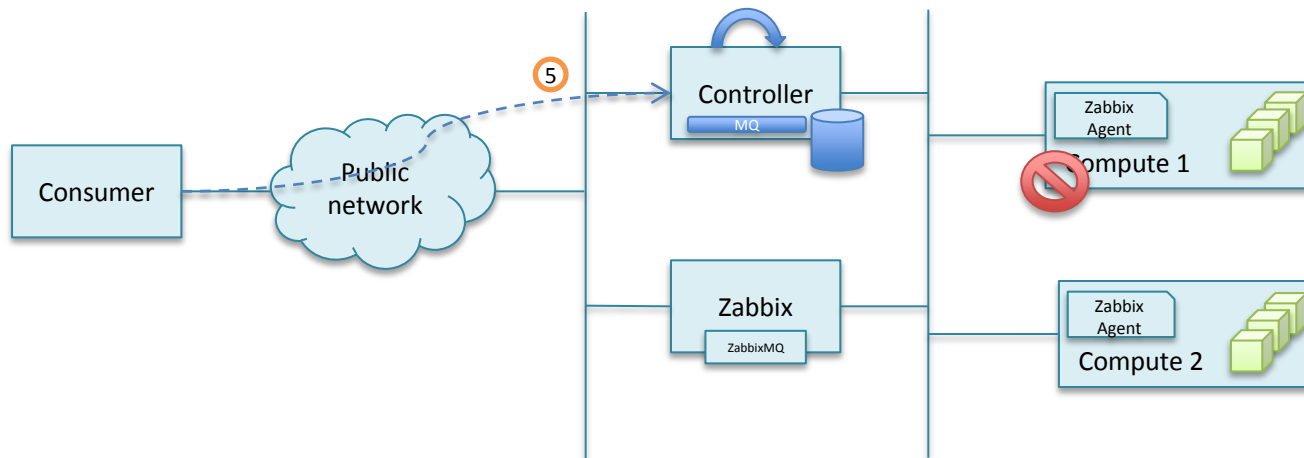
3. Publish alert to RabbitMQ (pub/sub)

# Fault Management UC1: infrastructure



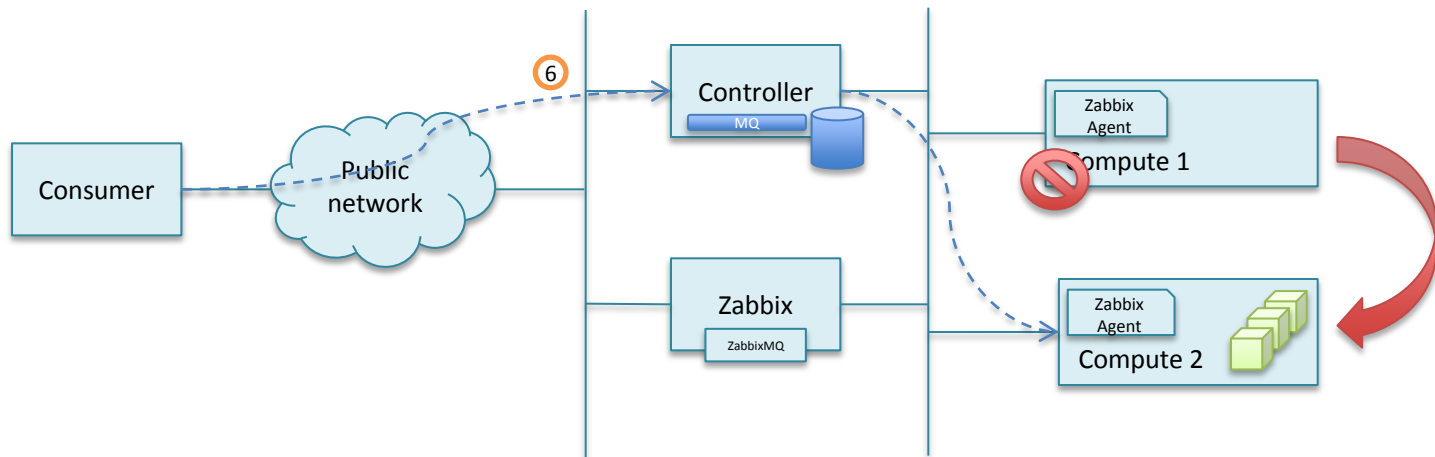
4. Consumer is notified of failure (pub/sub)

# Fault Management UC1: infrastructure



- 5. Consumer invokes fault management action
  - 5.1. Mark compute as down (Nova blueprint)

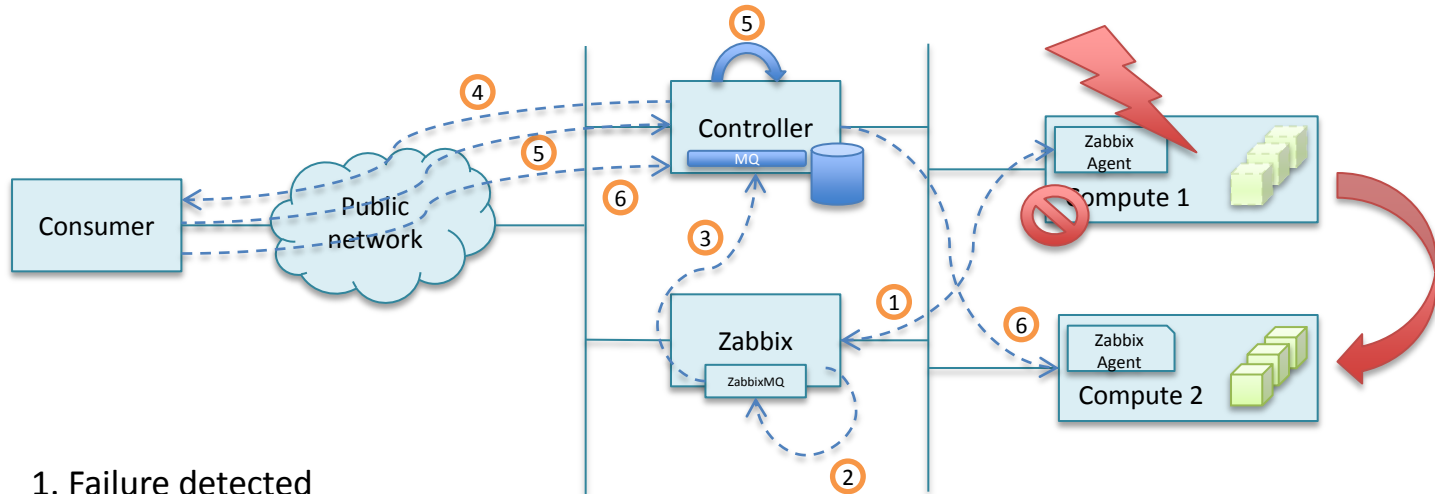
# Fault Management UC1: infrastructure



6. Consumer invokes fault management action

6.1. Evacuate VMs from Compute 1 to Compute 2

# Fault Management UC1: infrastructure

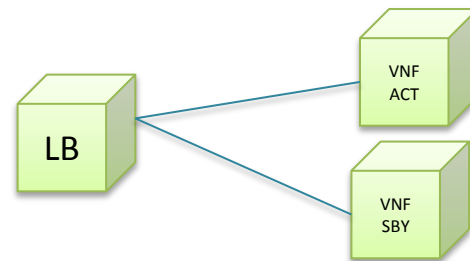


1. Failure detected
2. Forward alert to ZabbixMQ
3. Publish alert to RabbitMQ (pub/sub)
4. Consumer is notified of failure (pub/sub)
- 5 & 6. Consumer invokes fault management action

# Doctor demo

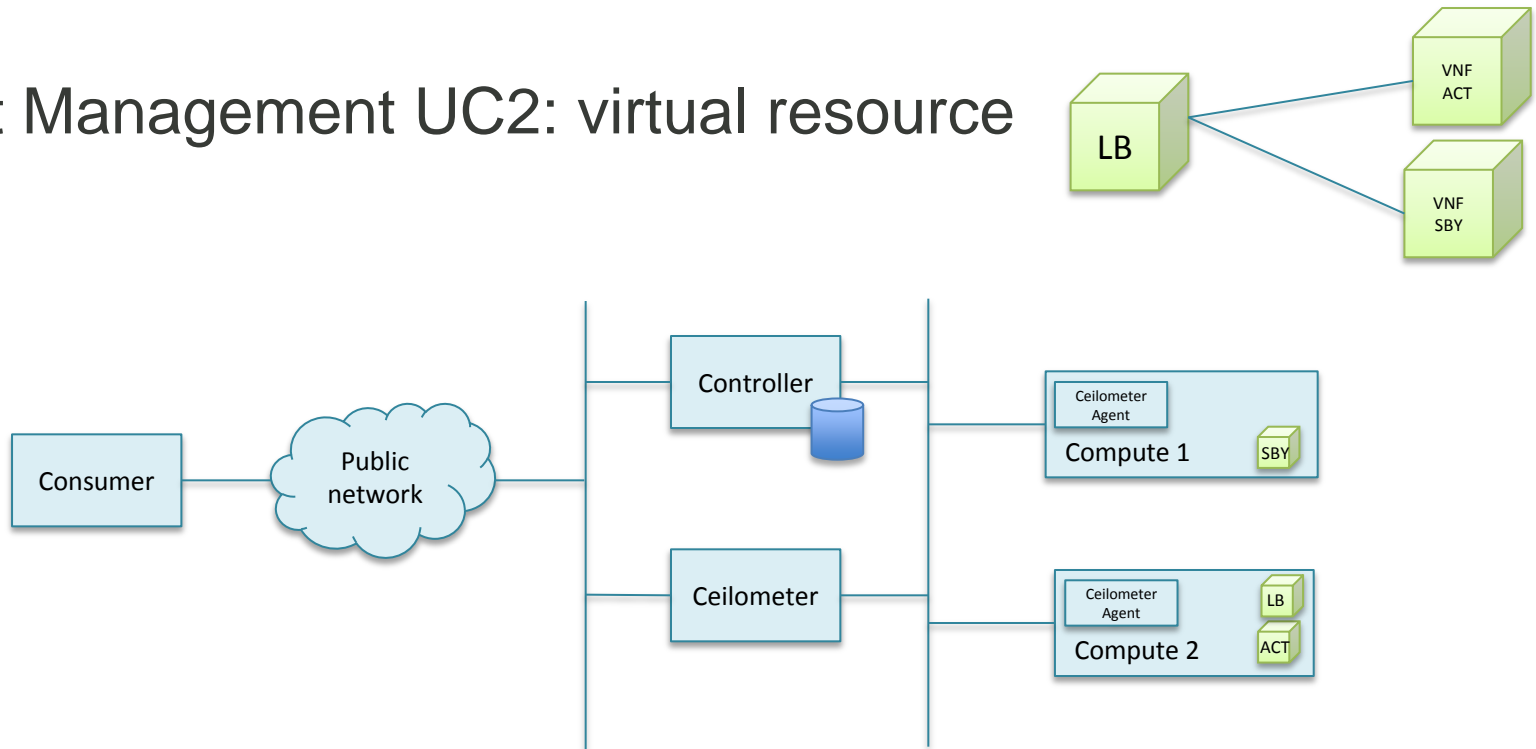
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# Fault Management UC2: virtual resource



2 VMs running a VNF in  
ACT/SBY mode logically  
connected to a load balancer

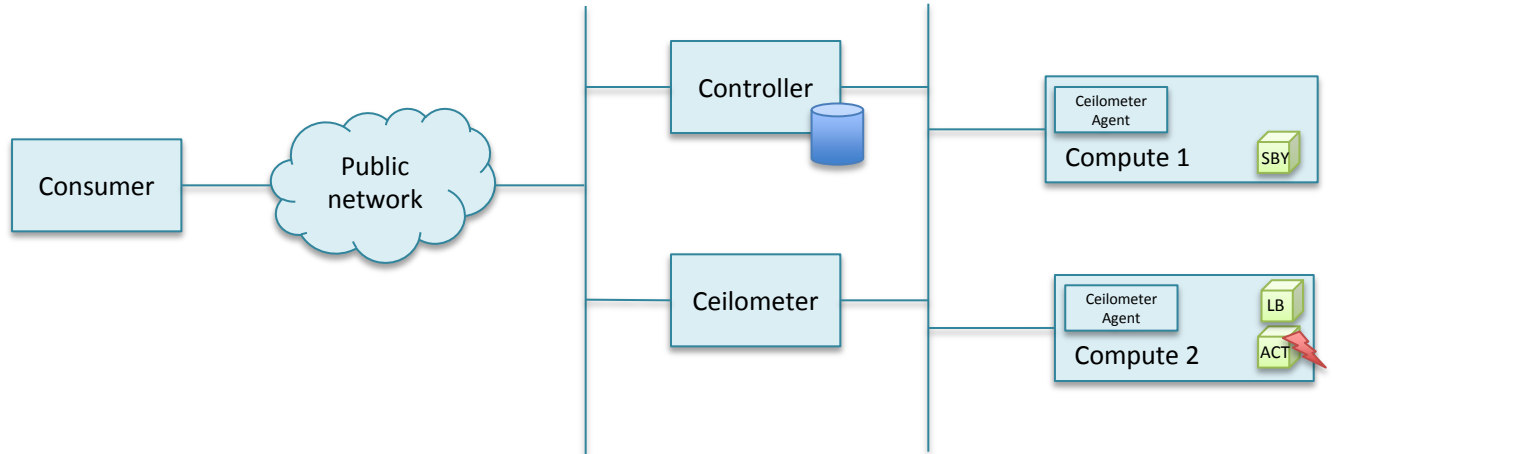
# Fault Management UC2: virtual resource



Initial deployment  
VNF Active / Standby mode

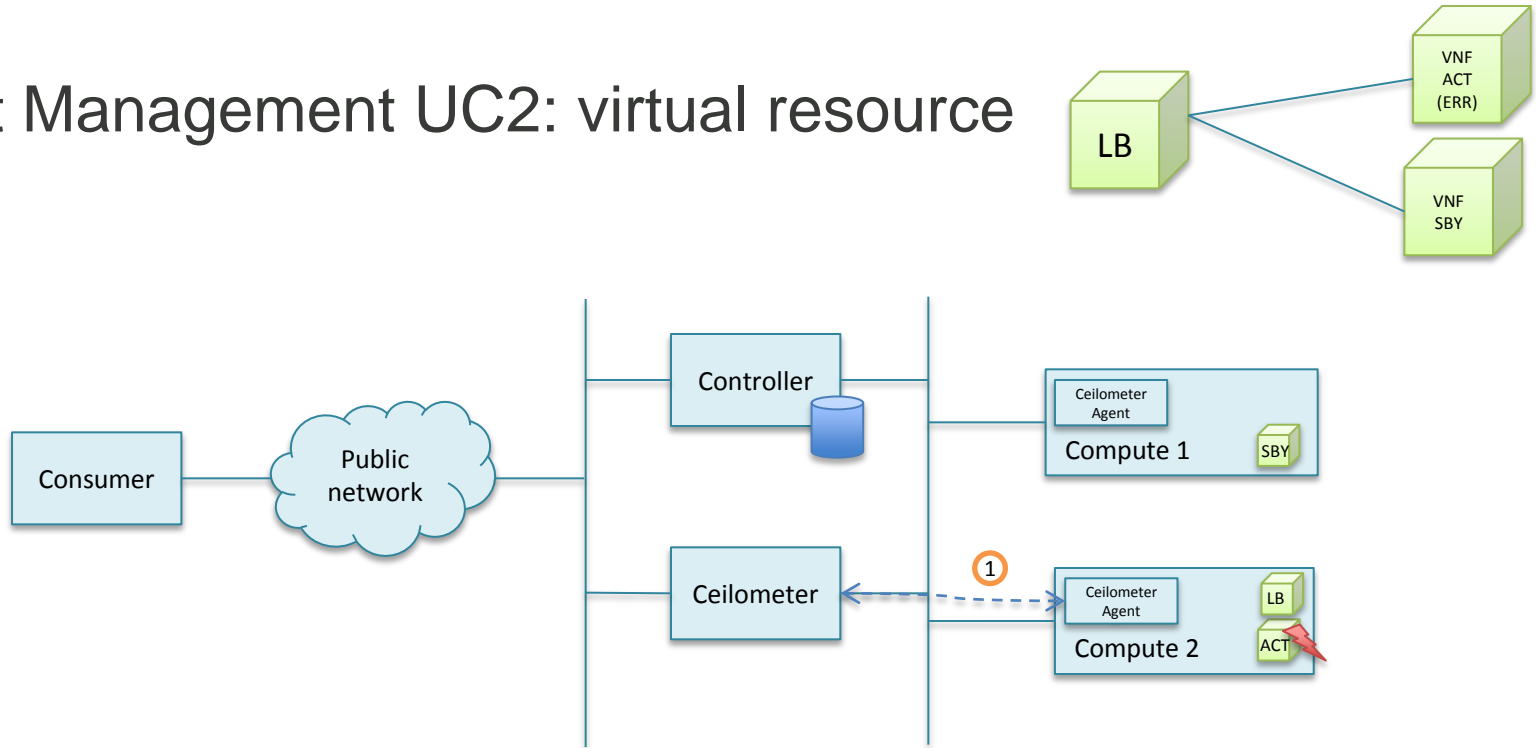


# Fault Management UC2: virtual resource



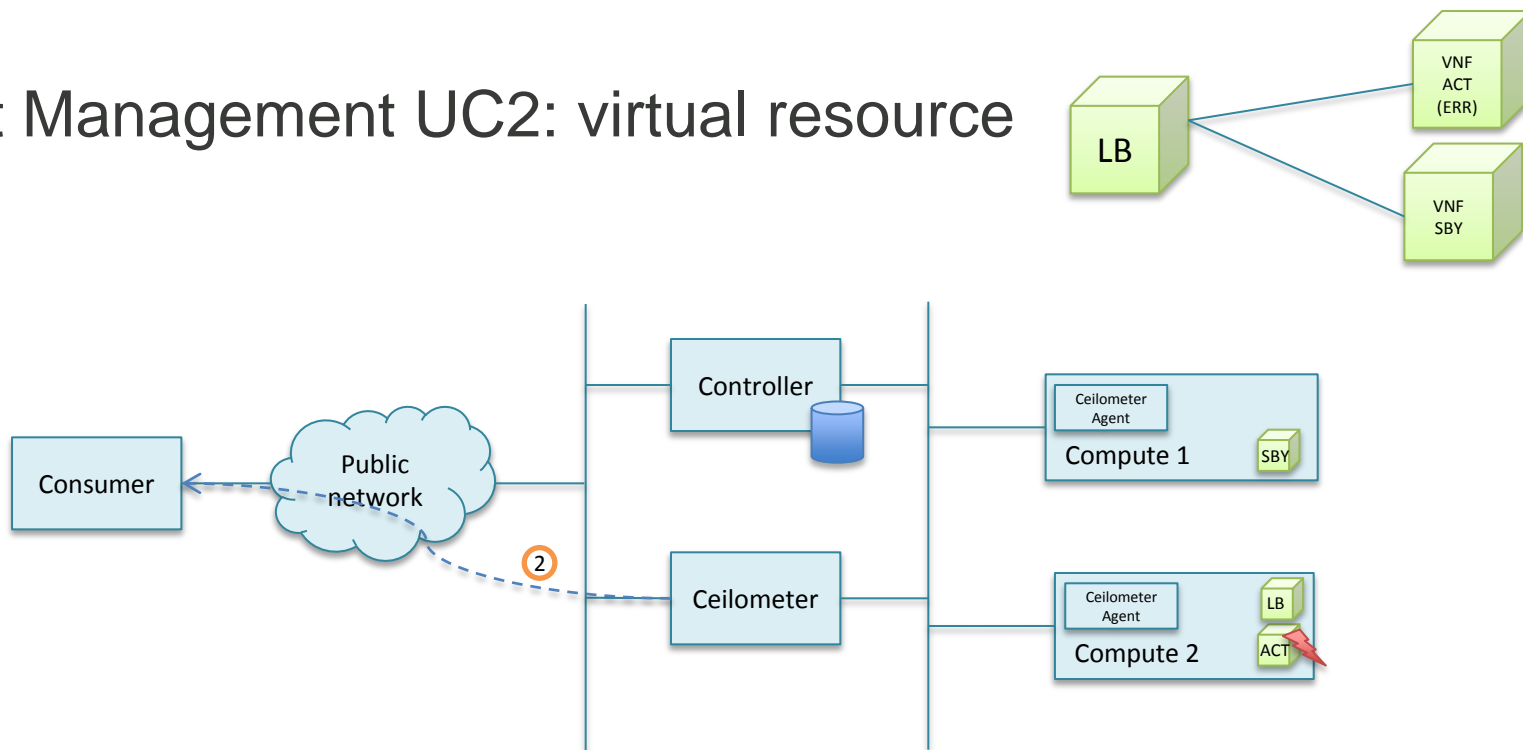
0. failure occurs

# Fault Management UC2: virtual resource



1. Failure detected

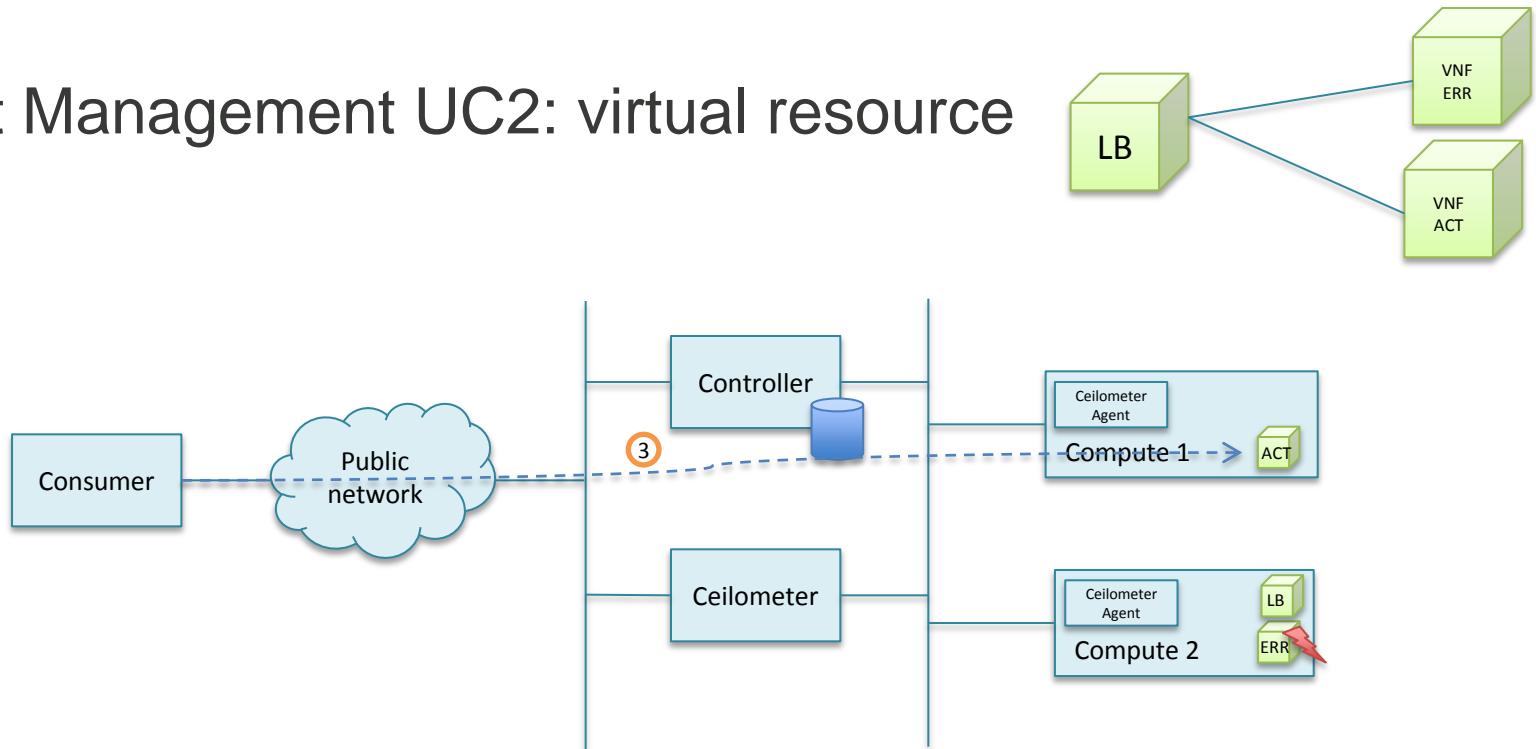
# Fault Management UC2: virtual resource



2. Ceilometer notifies Consumer of failure (Ceilometer blueprint)

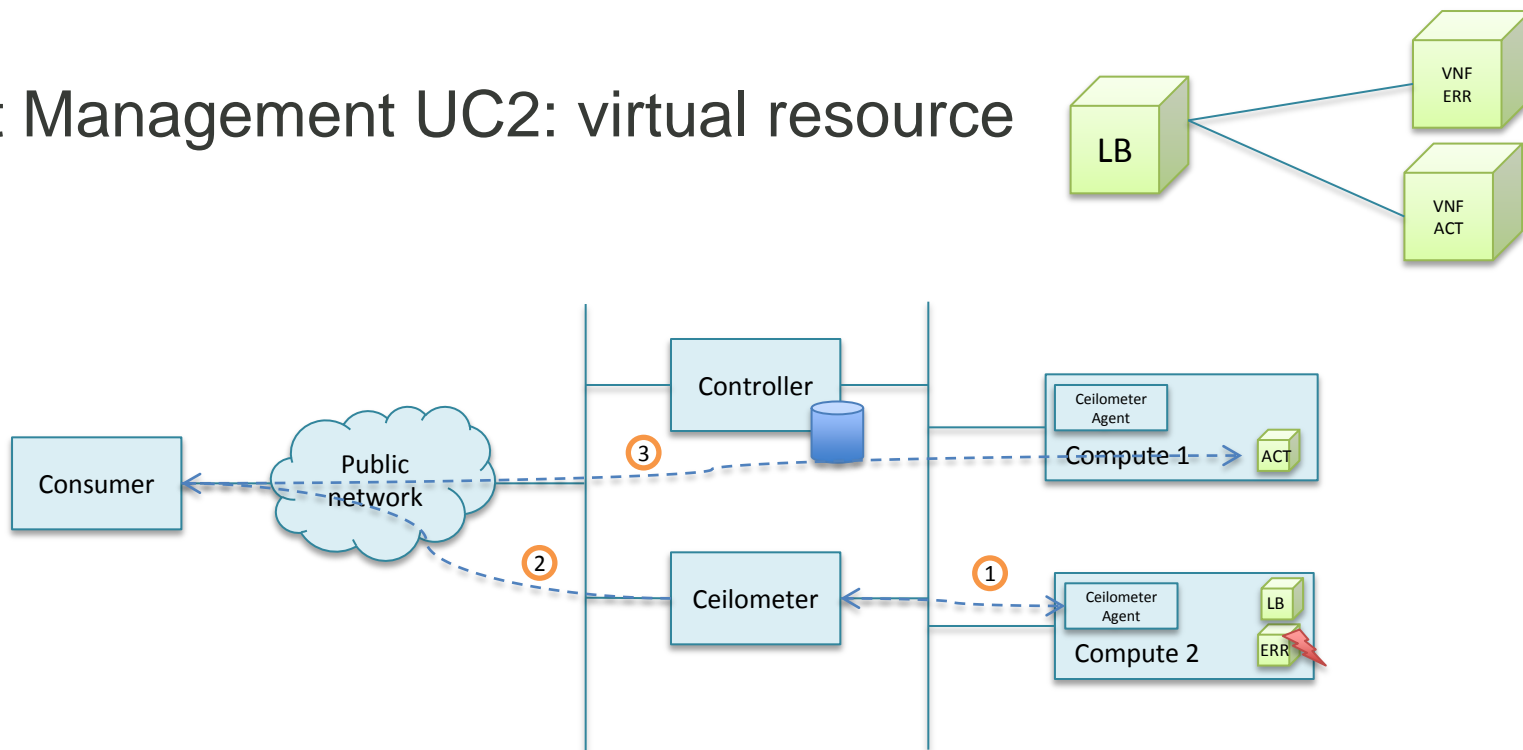
2.1. HTTP callback

# Fault Management UC2: virtual resource



3. Switch to SBY configuration

# Fault Management UC2: virtual resource



1. Failure detected
2. Ceilometer notifies Consumer of failure
3. Switch to SBY configuration

# Questions?

