Migrating the Monitoring Agent

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Each ESC instance has an agent to monitor it to enable ESC to control recovery and scaling operations. Following are the various scenarios that need migration of the monitoring agent:

1. Migrating from **local** to **distributed**

   For example:

   When introducing a new D-MONA into a data center.

2. Migrating from **distributed** to **local**

   For example:

   When performing a software upgrade.

3. Migrating from **distributed** to **distributed**

   For example:

   When performing load balancing.

4. Migrating many instances in quick succession from **distributed** to **distributed**

   For example:

   Disaster recovery

Follow the following procedures for migrating the monitoring agent:

Procedure

Step 1	Adding/editing the <monitoring_agent> tag value in the KPI config section of the deployment datamodel:

a) To migrate to a D-MONA do the following:

Set <monitoring_agent>dmonaName://dmona-dep-name</monitoring_agent> where dmona-dep-name is the deployment name of the D-MONA.

b) To migrate to local mona do the following:

Set <monitoring_agent>dmonaName://local_mona</monitoring_agent> where local_mona is a special identifier introduced in ESC 5.3 for local mona

Step 2 Performing a service update using the updated deployment datamodel:

When you perform a service update, it will unset the monitor on the current monitoring agent, update the VNF with new monitoring agent, and set monitor on the new monitoring agent.

For more information on the monitoring_agent parameter, see the Deploying VNFs with Explicit D-MONA Mapping chapter.

Post Migration Notifications

ESC sends three notifications to NorthBound after migration:

1. SERVICE_UPDATED notification:

   This notification is sent to indicate if the update was successful.

2. VM_SET_MONITOR_STATUS notification:

   This notification is sent to indicate the status of setting monitor on the new monitoring agent for each VM in the VNF.

3. SVC_SET_MONITOR_STATUS notification

   This notification is sent to indicate the service level status of setting monitor for a deployment.

Monitoring agent migration is considered successful when NorthBound receives a successful SERVICE_UPDATED and SVC_SET_MONITOR_STATUS notification.

The following example shows a VM_SET_MONITOR_STATUS notification:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<notification xmlns="urn:ietf:params:xml:ns:netconf:notification:1.0">
  <eventTime>2020-08-06T14:04:47.124+00:00</eventTime>
  <escEvent xmlns="http://www.cisco.com/esc/esc">
    <status>SUCCESS</status>
    <status_code>200</status_code>
    <status_message>VM monitor setting completed successfully.</status_message>
    <depname>test-dep</depname>
    <tenant_id>563fba7044c847a6a370cc10d5ef7d57</tenant_id>
    <depid>995f6849-0599-4287-bc3b-fca6de7bfcb2</depid>
    <vm_group>g1</vm_group>
    <vm_source>
      <vmid>ca40ccb1-fe21-4846-a15f-79900e7e3baa</vmid>
      <vmname>test-dep_g1_0_88e9b2af-aef2-472c-84c1-1dbbf96df31f</vmname>
     <generated_vmname>test-dep_g1_0_88e9b2af-aef2-472c-84c1-1dbbf96df31f</generated_vmname>

      <hostid>16e897fa14b3d1ecee0f7489a7a9ac7902f66c1f017437f27474a4c5</hostid>
      <hostname>my-ucs-3</hostname>
      <interfaces>
        <interface>
          <nicid>0</nicid>
          <type>virtual</type>

<vim_interface_name>test-dep_g1_0_88e9b2af-aef2-472c-84c1-1dbbf96df31f</vim_interface_name>
```

```
            <port_id>f8cc9d5b-6bb0-4050-98bd-8aa25d71a68c</port_id>
            <network>3d8a4b3d-6ced-4733-8143-6cea6da85411</network>
            <subnet>e0f2da9e-0c8d-4351-847a-1bf36cc3ffdc</subnet>
            <ip_address>172.29.0.9</ip_address>
            <mac_address>fa:16:3e:f6:3b:b7</mac_address>
            <netmask>255.255.240.0</netmask>
            <gateway>172.29.0.1</gateway>
          </interface>
        </interfaces>
        <properties>
          <property>
            <name>monitoring_agent</name>
            <value>dmonaName://test-dmona-dep-1</value>
          </property>
        </properties>
      </vm_source>
      <event>
        <type>VM_SET_MONITOR_STATUS</type>
      </event>
    </escEvent>
</notification>
```

The following example shows a SVC_SET_MONITOR_STATUS notification:

```
<?xml version="1.0" encoding="UTF-8"?>
<notification xmlns="urn:ietf:params:xml:ns:netconf:notification:1.0">
  <eventTime>2020-08-06T14:04:47.132+00:00</eventTime>
  <escEvent xmlns="http://www.cisco.com/esc/esc">
    <status>SUCCESS</status>
    <status_code>200</status_code>
    <status_message>Service monitor setting completed successfully.</status_message>
    <depname>test-dep</depname>
    <tenant>admin</tenant>
    <tenant_id>563fba7044c847a6a370cc10d5ef7d57</tenant_id>
    <depid>995f6849-0599-4287-bc3b-fca6de7bfcb2</depid>
    <monitoring>
      <vm_group>
        <name>g1</name>
        <monitoring_agent>dmonaName://test-dmona-dep-1</monitoring_agent>
        <status_message>VM group setting monitor completed successfully.</status_message>
      </vm_group>
    </monitoring>
    <event>
      <type>SVC_SET_MONITOR_STATUS</type>
    </event>
  </escEvent>
</notification>
```

For information on monitoring agent migration in VNFs using ETSI API, see the Migrating the Monitoring Agent chapter in the Cisco ElasticServices Controller ETSI NFV MANO User Guide.