flexiWAN - flexiEdge (CPE) Monitoring Requirements

This is to address the issue of CPEs showing as down in Netreo because they have not yet been set to Operational in Remedy, but Netreo shows the device as a monitored device because is onboarded to flexiWAN's flexiManage. The only way we can exclude devices is by organization in flexiWAN which is not workable because devices cannot be moved between organizations without a complete reconfiguration.

Required Changes

MUFC

Development changes will need to be made to CPMS sync function to add an API call to flexiManage when it receives a UDP message from the Automation Engine. It will also need access to the Netreo API to determine if the device is in Netreo.

Automation Engine

Development changes will need to be made to Automation Engine to make UDP calls to MUFC for flexiWAN devices based on the SD-WAN Controller & ADOM fields in Remedy.

Netreo

Development changes will need to be made to Netreo to support filtering on device configuration. For this development, I would request that both the key and the value be changeable and that it looks for the value to be in the key so we can change it later.

In the interface allow us to set the key we are looking for "label" and the value we are looking for "Monitoring" and allow the value to be a list or string. So, we can use a list now:

```
1  {
2      "labels": [
3          "Cats are better than dogs",
4          "Monitoring"
5      ]
6  }
```

Or a string later:

```
1  {
2      "Monitoring": "yes"
3  }
```

Firewall

A firewall rule will need to be added to MUFC APP servers to reach Netreo's API.

Remedy

Remedy will need to include SD-WAN Controller and ADOM entries for flexiWAN.

Monitoring Onboarding

The proposal is that devices get onboarded in Netreo when devices are set to Operational in Remedy using the following chain of events:

1. Remedy device ticket has SD-WAN Controller populated with the flexiManage.
2. Remedy device ticket is changed to Operational.
3. Automation Engine knows it is flexiWAN due to SD-WAN Controller field in Remedy and sends a UDP message to MUFC with the device name.
4. MUFC adds a label to the device called Monitoring.

```
1  {
2      "labels": [
3          "Cats are better than dogs",
4          "Monitoring"
5      ]
6  }
```

5. Netreo pulls the devices of the included organizations (I.E. what they are doing now) and onboards everything that has the Monitoring label.
6. MUFC polls the Netreo API for the device. When it finds the device in Netreo, it updates the Remedy ticket to populate the ADOM field.
7. AE performs enrichment (including tagging interfaces with MIT) tasks only if ADOM field has value.

Monitoring Offboarding

My proposal is that devices get offboarded from Netreo when devices are set to other than Operational in Remedy using the following chain of events:

1. Remedy device ticket is changed to something other than Operational with the exception of hold or customer hold.
2. Automation Engine sends a UDP message to MUFC with the device name.
3. MUFC removes a label from the device called Monitoring.

```
1  {
2      "labels": [
3          "Cats are better than dogs"
4      ]
5  }
```

4. MUFC updates the Remedy ticket to clear/remove the value in the ADOM field.
5. AE will offboard device from Netreo base on ticket being in de-installed and the ADOM field being blank.