



Management Environment of Inter-domain Circuits for Advanced Networks

Quick Start Guide

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Management Environment of Inter-domain Circuits for Advanced Networks is a Web application that enables users to request VCs between well-defined end-points that, depending on operation policies and human authorisation located in the intermediate domains that connect source and destination end-points.

Our solution uses Business Process Management (BPM) concepts for managing the VCs establishment process, since VC requested by end-user to network devices configurations.

The main contribution of the proposed solution is to provide dynamic authorization strategies composed for policies and human support.

Circuit Reservation

MEICAN allows network end-users to request, in a more user-friendly way, dedicated virtual circuits in Dynamic Circuits Networks (DCN). With MEICAN, you can create a circuit reservation using a map that contains devices.

Moreover, you can specify the device, port, VLAN tag, bandwidth, and the period during which the circuit will be activated.

Step-by-step:

- Click Circuits -> Reserve.
- Click on the Start button to select your circuit path.
- Select start and destination devices by placing the mouse over them on the map. After that, select your Port and VLAN to complete your endpoint information.
- Click on Next step.
- Set your bandwidth requirement.
- Click on Next step.
- Select the period of time you want the circuit to be active (recurrence options can be selected).
- Click on Next step.
- Fill the circuit name and confirm your request.
- You will be redirect to circuit details page.

Circuit Status

You can see the circuits status to track your progress. When you request a circuit reservation, you are automatically redirected to status page of the scheduled circuit.

Step-by-step:

- Click Circuits -> Status
- To see circuit details, click in the eye icon
- Status should switch quickly to “**Resources ready**”
- If authorization needs to be manually evaluated you should see “**Waiting Authorization**” in the Authorization field.
- When the reservation is authorized Status will switch to “**Provisioned**” and Authorization to “**Authorized**”

Authorization

In some cases, the reservations need to be authorized by administrators and MEICAN enables them to accomplish these authorizations.

Administrators can accept or reject users requests and leave an observation using an intelligent mechanism.

Step-by-step:

- Click Reservations -> Authorization. Alternatively you can use the exclamation (!) sign with the number of notifications at the top part of the screen, then click in See Authorizations
- Select a reservation by clicking Answer.
- Either accept or reject a reservation request by clicking the thumbs up or down icon and providing an appropriate message to the requester user, if you want. Alternatively you can Accept/Reject All requests at once (useful when many requests are performed through recurrence).
- You should notice the status change to “**Authorized**” or “**Denied**” at the list on right.

Workflows

Authorization workflows can be used to automate the decision-making process along the multiple domains where end-users circuits pass through.

Editors users can design workflows to filter by bandwidth, involving domains, devices, duration, requester user and groups. Also, can request that a user or group to authorize manually.

Step-by-step to Manage:

- Click Workflows - Status
- You can Remove, Edit, Copy, Enable and Disable a workflow by click on respective icons. (just remember that only one workflow can be active per domain at a time)

Step-by-step to Create:

- Click Workflows - New
- If you are allowed for create workflows in more of one domain, you need select one of this domains
- Type a name for your workflow
- Drag units, drop and link them
- Click Save. If your workflow have any problem, you will receive a warning message

Automated Tests

This functionality perform tests on two endpoints to find errors, make logs, and report them to the administrators.

To verify the state of the network, MEICAN allows administrators to program automated tests in the network environment.

Step-by-step to create a Automated Test:

- Select a port and a VLAN as source.
- Select a port and a VLAN as destination.
- Select the recurrence of the test.
- Click Save and wait the schedule processing (two minutes).

Topology Viewer

The Topology Viewer is a dynamic way to view the DCN network topology known by the application.

It shows devices or networks geographically located on a map with their respective links (blue lines).

Clicking on a link is possible to know the elements connected by it.

Topology Discovery

The Topology Discovery is the element that communicates with the pre-specified topology provider to perform the update of the application topology to ensure that future reservations will not fail by inconsistencies in an, by example, identifier of a network element.

Step-by-step to create a Discovery Rule:

- Click on Topologies -> Discovery
- On rules box, click on Add.
- Set a name.
- Select the type of the topology provider.
- Enable or disable the Auto apply changes.
- Select the Provider protocol.
- Set the URL of the topology provider.
- Click Save.

To execute the Discovery with a specific Rule:

- Click on Start Discovery button on discovery rules list.
- Wait the processing.
- Verify the reports on notifications or on Topology Viewer. You can also see all changes clicking on eye icon in the respective task (discovery execution) from Tasks List.