

MEICAN

- MEICAN: Management Environment for Inter domain Circuits in Advanced Networks
- Provides a federated front-end for OSCARS
 - OSCARS 0.5 is operational in the Brazilian backbone Cipó
 - OSCARS 0.6 supported via a driver developed together with ESnet
- Use authorization workflows to model automate the approval chain when circuits are requested

Circuit Provisioning in MEICAN



MEICAN - Management Environment of Inter-domain Circuits for Advanced Networks

https://meican.cipo.rnp.br/circuits/reservations/add_form

MEICAN - Management Environ... x +

Feedback Sobre Ajuda Minha conta Sair (master)

MEICAN

Dashboard

- Reservas
 - Novo**
 - Status
 - Histórico
 - Autorização
- Topologias
- Usuários
- Workflows
- Acesso Externo

Nome da reserva:

☐ Redes ☒ Dispositivos

Origem

Domínio	PoP-SC
Rede	Rede PoP-SC
Dispositivo	circuitos-pop-sc
Porta	1
Tipo de VLAN	<input type="checkbox"/> Tagged
VLAN	qualquer

100 Mbps

Destino

Domínio	PoP-SC
Rede	Rede PoP-SC
Dispositivo	sw4-remep
Porta	0-6-5
Tipo de VLAN	<input type="checkbox"/> Tagged
VLAN	qualquer

Ordem dos pontos intermediários:

Florianópolis (Juniper SC)
Rede PoP-SC (sw2-remep)

10:21 (BRT)
13/09/2013

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Nome da reserva: **Disp.**

Redes ☐ Dispositivos ☒

Origem

Dominio	PoP-SC
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Dispositivo	circuitos-pop-sc
Porta	1
Tipo de VLAN	<input type="checkbox"/> Tagged
VLAN	qualquer

100 Mbps

Destino

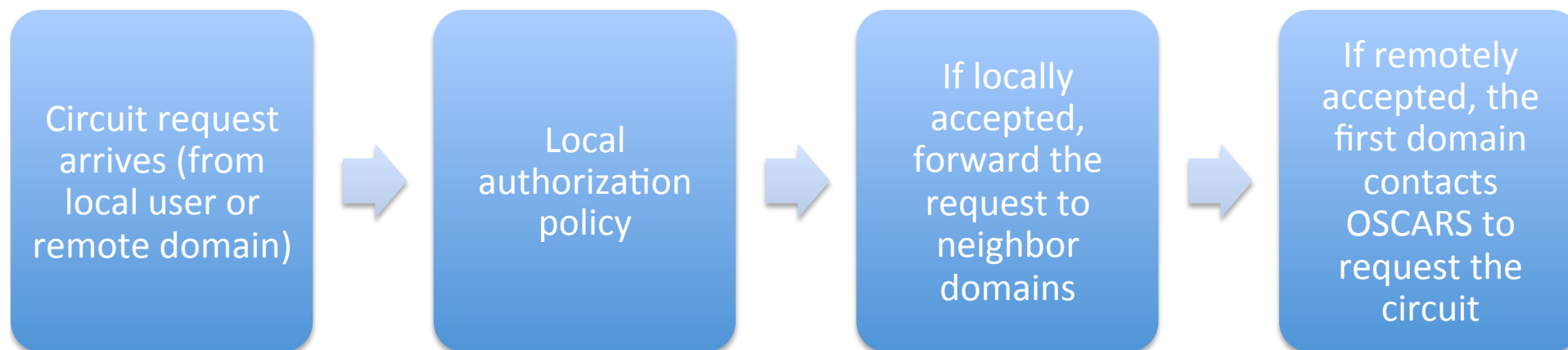
Dominio	PoP-SC
Rede	Rede PoP-SC
Dispositivo	sw4-remep
Porta	0-6-5
Tipo de VLAN	<input type="checkbox"/> Tagged
VLAN	qualquer

Ordem dos pontos intermediários:

- Florianópolis (Juniper SC)
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Authorization Flow



MEICAN Workflow Editor

MEICAN

Feedback
Sobre
Ajuda
Minha conta
Sair (popsr-eng)

Dashboard
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URNs

Add Policie Based on...
Human
Domain
Bandwidth
Time

This policie will be applied to:

☐ a specific user

☐ any user from a specific group

Wich user/group?
Fulano

Choice which actions would you like that happen?

☐ Notify a single operator

☒ Request authorization to a single operator

☐ Notify a group of operators

☐ Request a group of operators

☐ Accept a request

☐ Deny a request

Wich operator?
admin1

Would you like threat the authorization decisions?

☐ Yes

☒ No

☒ Notify a user or operator

☐ Request a authorization to a single operator

☐ Notify a group of operators

☐ Request a authorization to a group of operators

Wich user?
requester

Policie Summary

Given a arrival request
By Fulano
Request admin1
IF accept
IF reject
Notify requester

MEICAN Workflow Editor

- Local authorization policies are defined as workflows using this workflow editor. The local network operator, using simple icons move the to the inner canvas and connect them to create the authorization workflow. I won't present all details of the edition itself, but it supports very simple policies, like accepting any request automatically (which would be a default optimistic policy) to more complex things like requesting teams of operators to all accept a very critical or resource demanding circuit.
- Although some more complex policies can be specified, there are certainly even more complex policies that may not supported by this edition, since our original goal is to provide a very easy-to-use tool, instead of a more complete and wide police language.
- We designed this solution in a way that a single MEICAN instance can control several OSCARS and, thus, network domains. Because policies are stored at the MEICAN level, policies are internally hosted in virtually isolated user spaces, one space per OSCAR instance.
- We believe that the workflow editor is an interesting asset of our system because it allows incorporating more high-level, business-oriented decisions into the process of circuit request and authorization.