

Schedule of Deployment of Changes in the Route Servers of São Paulo

Introduction

The implementation of the Actions for IX.br defined in the Program for a Safer Internet will require the change of version of the software used in the implementation of the Route Servers of São Paulo, as well as of the other places of IX.br that started to use the same platform with the same features and functionalities.

As of now, the BIRD 2.0 software is the only homologated solution that attends to the number of participants and the necessary functionalities, and at the end of this process participants must maintain BGP sessions with two Route Servers instead of the current four. With this we intend to reduce the operational load of the connected routers and increase the equivalence between the route tables of the two route servers. If a new solution is found, we will study the possibility of returning to have redundancy of technology, again increasing the number of Route Servers available.

Each Route Server will have at least one more backup server (*stand by*). In the failure of one of the main Route Servers, the contingency will be activated with the same IP address, automatically assuming the activities of the unavailable equipment. Route Servers will be strategically distributed over the local network.

The following changes are planned:

- Migration of the multi-BIRD solution v1.6 (10 virtual machines) to the BIRD v2.0 solution, either in the mono process or in the multi-process topology.
- Use BGP capability **add-path** (Additional Paths) or Multi-RIB so that participants connected to Route Servers have a greater number of routes per destination and mitigation of **hidden path**.
- Deployment of security actions for the Route Servers defined in the Actions for IX.br defined in the Program for a Safer Internet.

Stages of the deployment schedule in São Paulo

- 1) Preparation: 08/20/2018 to 10/16/2018
 - Script adjustment for the production environment
 - Development of automation routines
 - Necessary implementations in the my.ix portal
 - implementations in LG Web
 - Formalization of communication between environment Activation and Production

- 2) Replacement of Cisco RSs by the new BIRD 2.0
 - RS3 IPv4: 10/16/2018
 - RS1 IPv4: 10/18/2018

- 3) Update of two IPv6 Route Servers for BIRD 2.0
 - RS3 IPv6: 10/23/2018
 - RS1 IPv6: 25/10/2018
 -
- 4) Monitoring the operation and execution of adjustments
 - 10/29/2018 to 11/05/2018

- 5) Update another two IPv6 Route Servers to IBRD 2.0
 - RS2 IPv6: 11/06/2018
 - RS4 IPv6: 11/08/2018

- 6) Update another two IPv4 Route Servers for BIRD 2.0
 - RS2 IPv4: 11/13/2018
 - RS4 IPv4: 11/22/2018

- 7) Monitoring the operation and execution of adjustments
 - 11/22/2018 to 11/28/2018

- 8) Deactivation of two IPv6 Route Servers (will go to backup)
 - 11/29/2018

- 9) Deactivation of two IPv4 Route Server (will go to backup)
 - 12/04/2018