

The logo for NIC.br features the text "nic.br" in a bold, sans-serif font. The ".br" is a vibrant green color, while "nic" is black. Below the text, the full name "Brazilian Network Information Center" is written in a smaller, black, sans-serif font.

**nic.br**  
Brazilian Network  
Information Center

The logo for EGI.br features the text "egi.br" in a bold, sans-serif font. The ".br" is a vibrant green color, while "egi" is black. Below the text, the full name "Brazilian Internet Steering Committee" is written in a smaller, black, sans-serif font.

**egi.br**  
Brazilian Internet  
Steering Committee

A row of six logos for Brazilian internet services, all in a white sans-serif font with a green ".br" domain extension. From left to right: "registro.br", "cert.br", "cetic.br", "ceptro.br", "ceweb.br", and "ix.br".

registro.br cert.br cetic.br ceptro.br ceweb.br ix.br

nic.br cgi.br

ix.br

IX Fórum OnLine – 20/03/2020

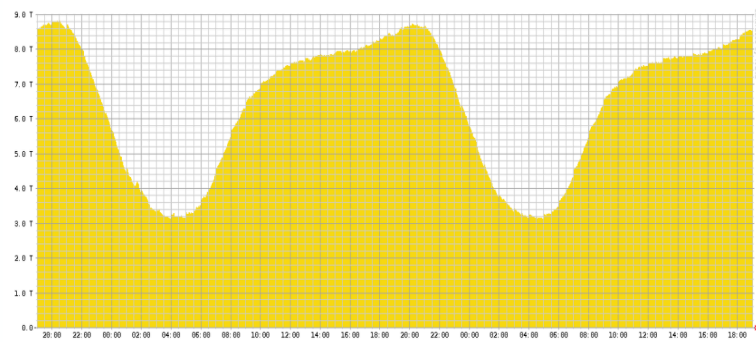


# Análise do impacto do Sars-Cov-2 nos IXPs

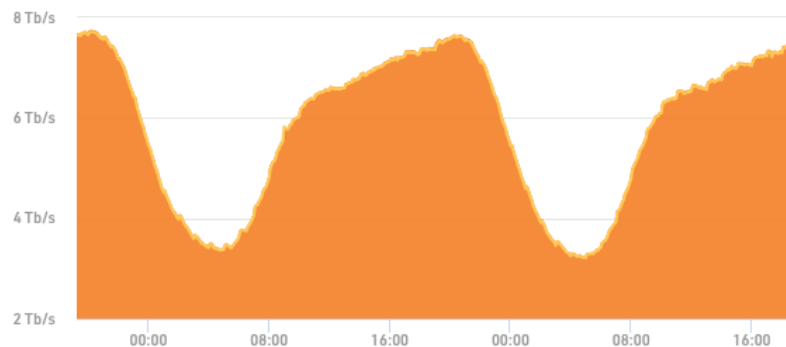
Julio Sirota

ix.br nic.br cgi.br

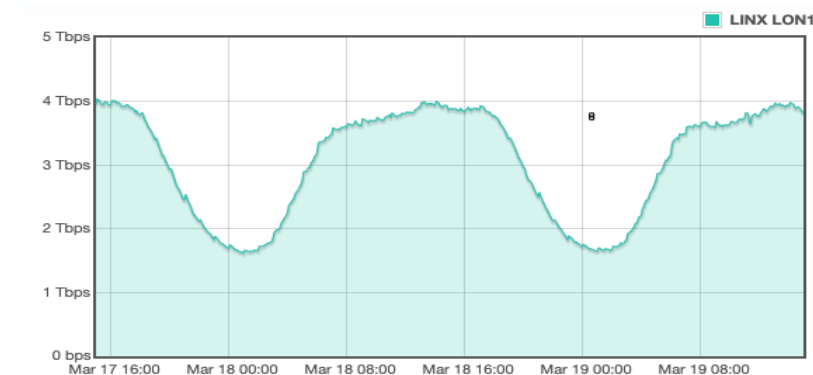
# IXs pelo Mundo



DE-CIX - 8.8 Tb/s  
+13%



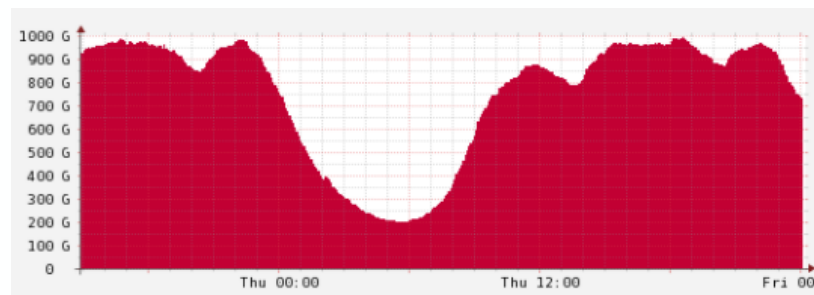
AMS-IX - 7.7 Tb/s  
+7%



LINX LON1 - 4.2 Tb/s  
+14%



MSK-IX - 3.5 Tb/s  
+3%

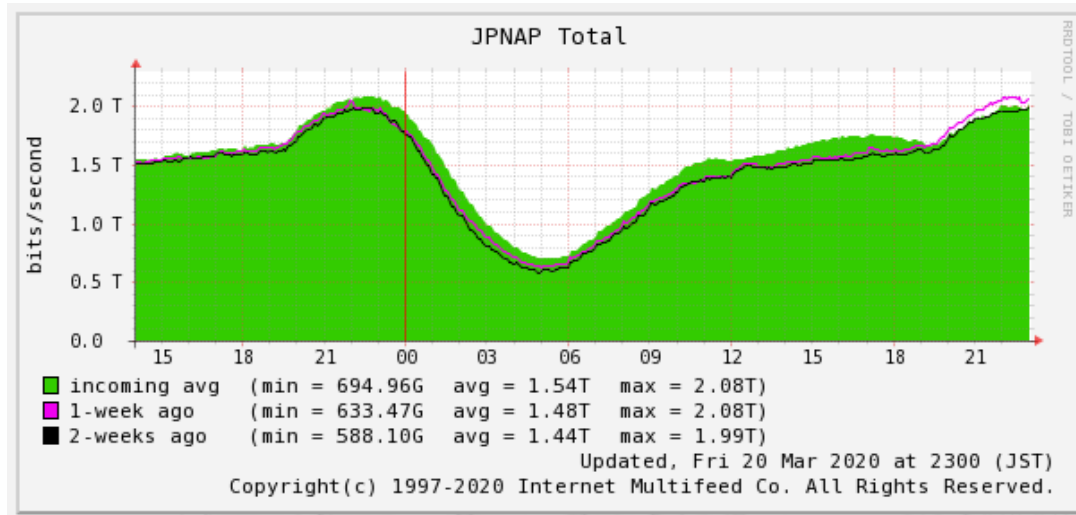


MIX (IT) - 1.0 Tb/s  
+30%



France-IX - 1.2 Tb/s  
+9%

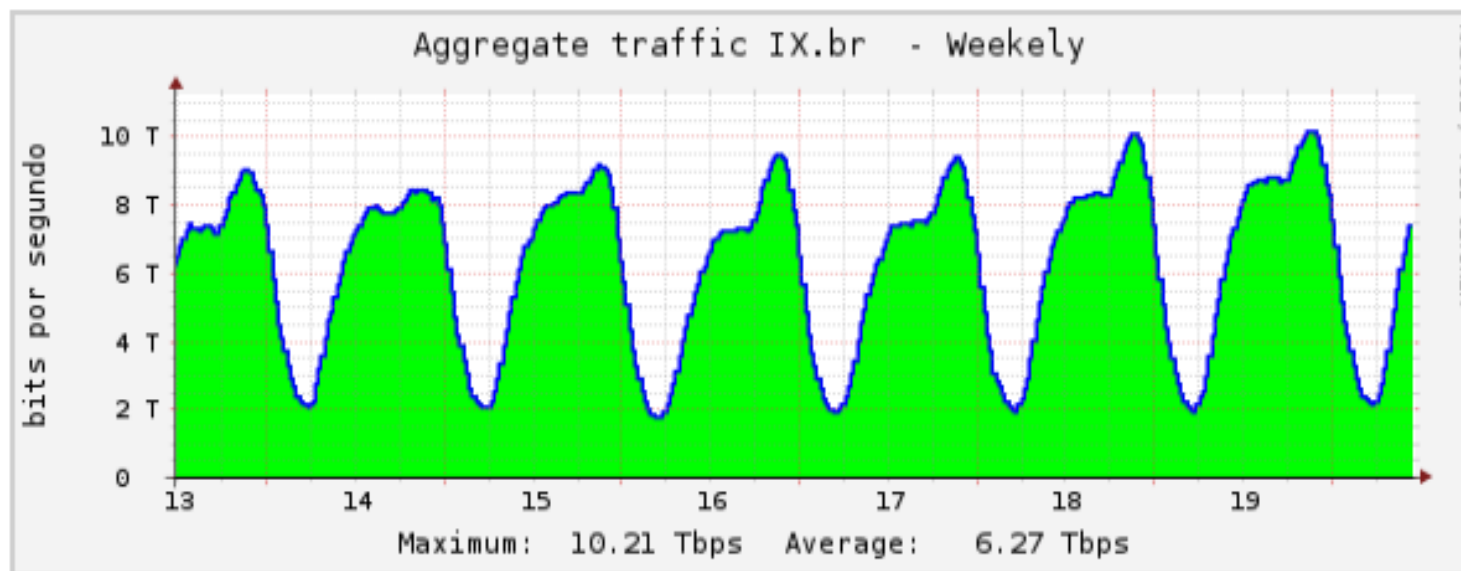
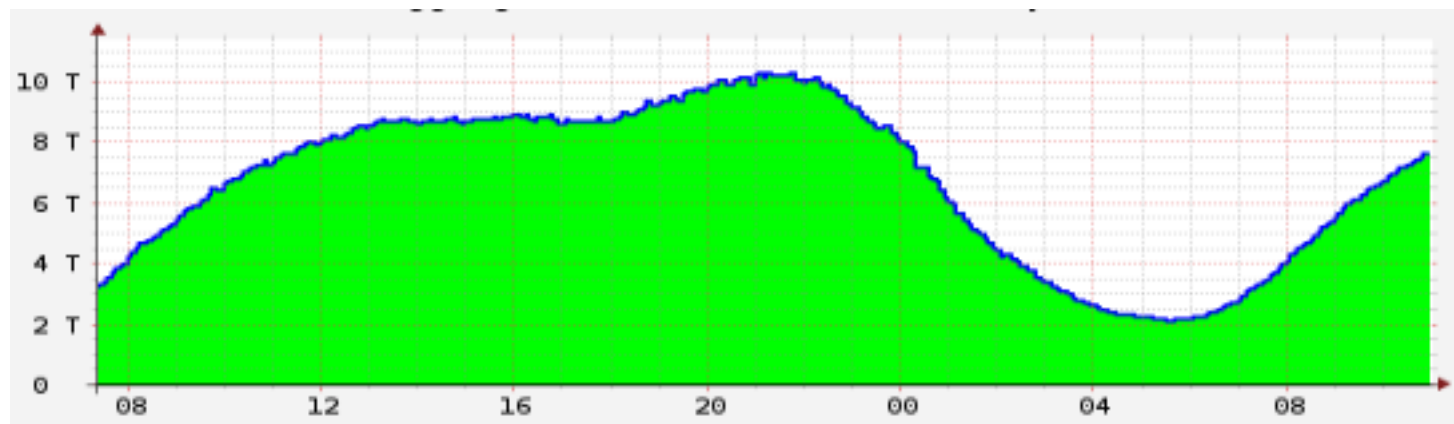
# IXs pelo Mundo



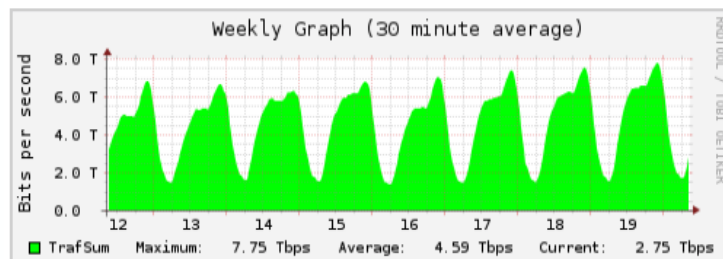
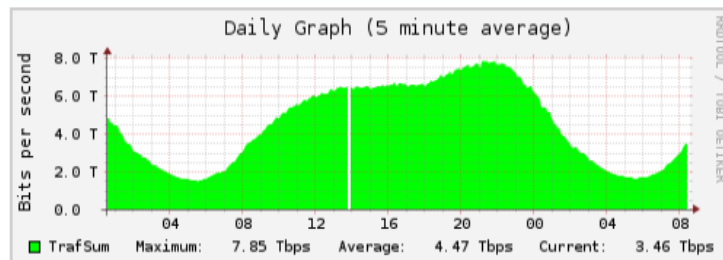
JP NAP

Crescimento  
do pico de  
tráfego  
desde  
16/03/2020

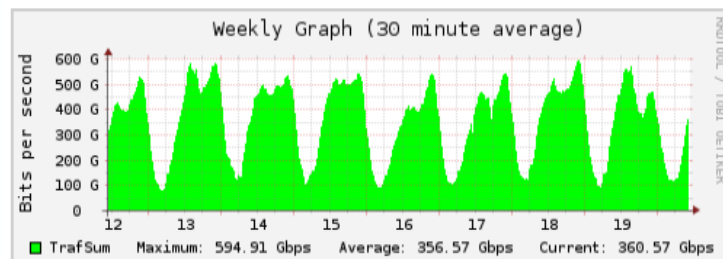
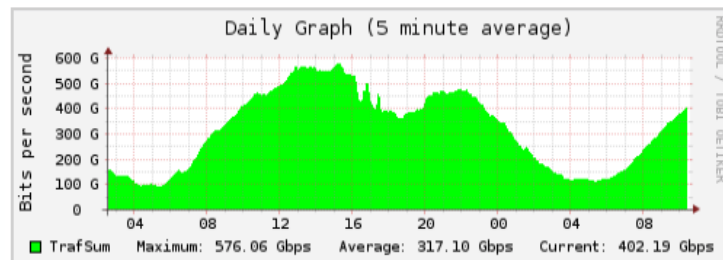
9,6 Tb/s  $\xrightarrow{+7,5\%}$  10,31 Tb/s



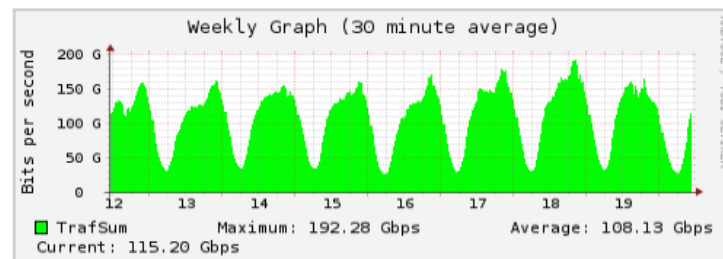
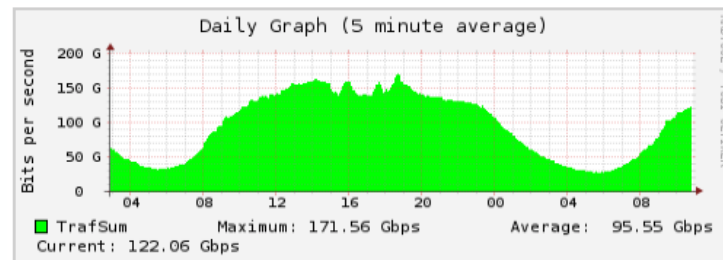




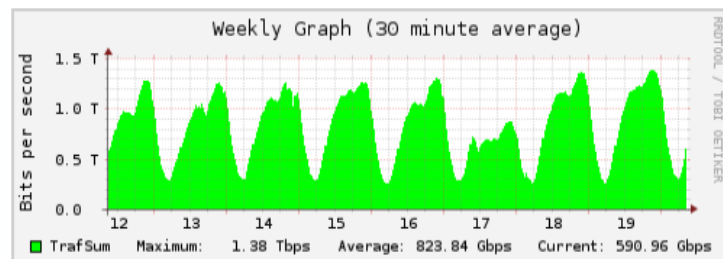
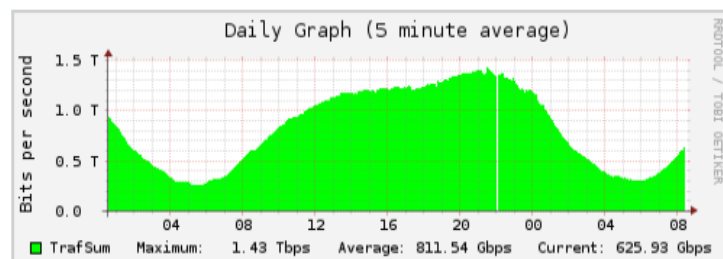
São Paulo +14%



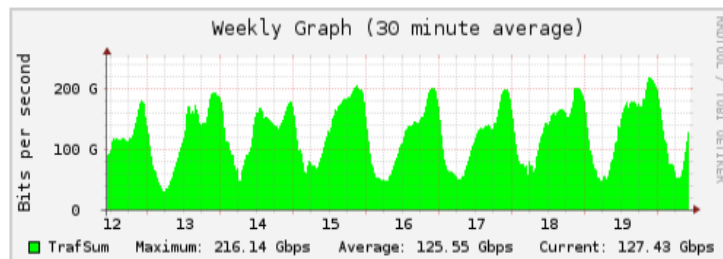
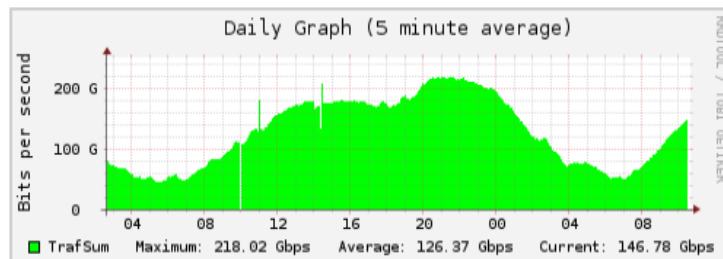
Fortaleza +9%



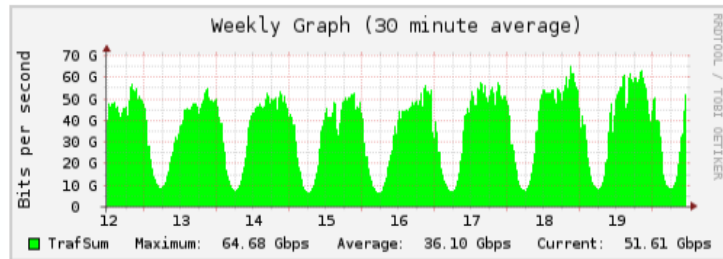
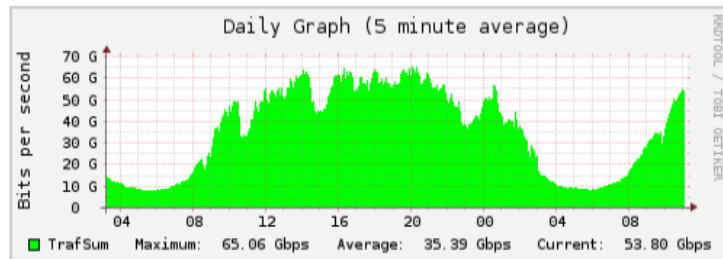
Curitiba +0%



Rio de Janeiro +15%



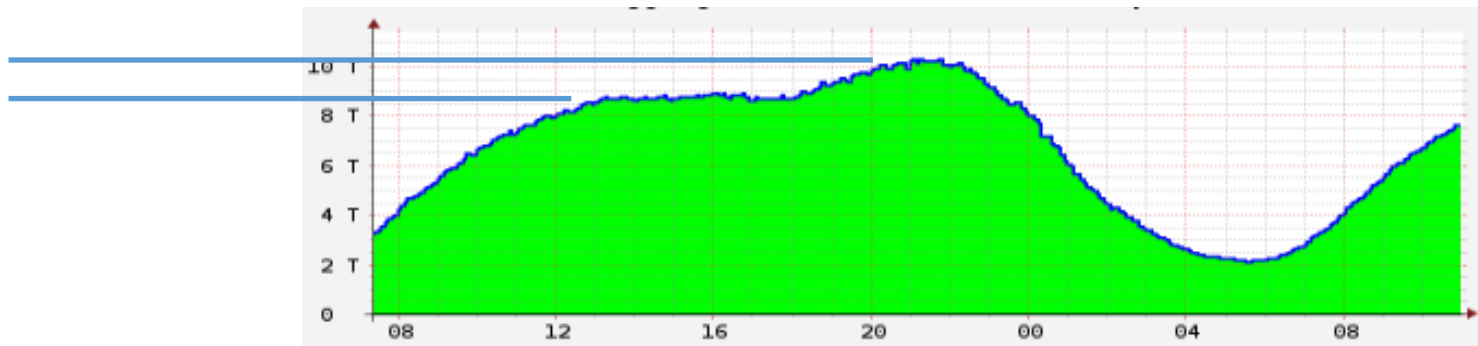
Porto Alegre +9%



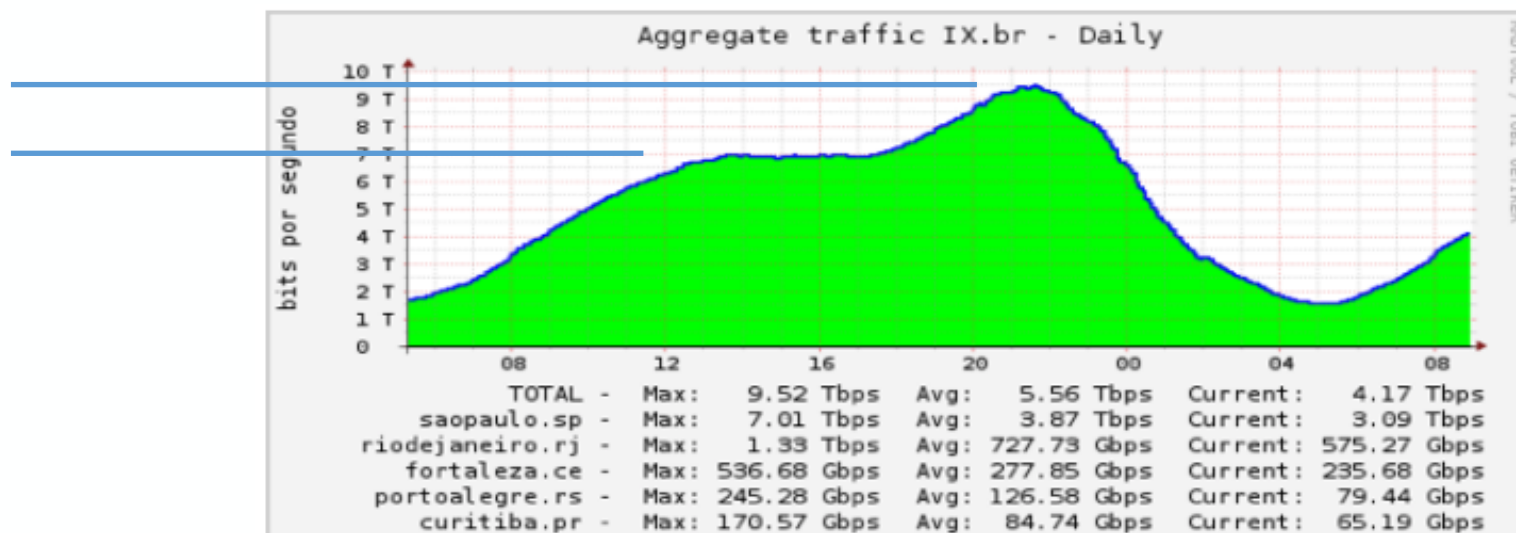
Brasília +20%

# Mudança no perfil do tráfego agregado

15%



25%



**+23%**

no volume de dados  
trafegados no IX.br de  
São Paulo, que  
representa 75% do  
agregado total, entre os  
dias 12/03 e 19/03/2020



# Principais pontos impactando os IXs da Europa

- Dificuldade de locomoção
- Dificuldade de acesso aos data centers
- Logística para o transporte de equipamentos
- Estoque de transceivers, cordões e equipamentos de rede

## Outras observações

- Telecom e IXPs considerados serviços essenciais
- Prioridade aos upgrades (recursos limitados)
- Cross connects (precisam ser provisionados)

## Como estamos trabalhando ?

- Engenharia de redes e suporte operando remotamente
- Equipe de ativação operando remotamente
- Equipe de infraestrutura operando em São Paulo remotamente e com ações pontuais e bem planejadas para provisionar upgrades e novas conexões
- Continuamos enviando materiais para as localidades fora de São Paulo onde temos parceiros para nos ajudar nas instalações
- Caso as compras de insumos sejam paralisadas, passaremos a priorizar os upgrades de capacidade

# Thanks !

[www.ix.br](http://www.ix.br)

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20/03/2020

**nic.br egi.br**  
[www.nic.br](http://www.nic.br) | [www.cgi.br](http://www.cgi.br)