



هيئة الاتصالات والفضاء والتقنية
Communications, Space &
Technology Commission

RPKI Implementation - ICT Sector in Saudi Arabia

CST Initiative

JUN 2023

Agenda

- About the initiative
- RPKI and its benefits
- RIPE NCC
- RPKI Implementation Phases
- Implementation Plan
- RPKI Statistics in Saudi Arabia
- RPKI Implementation Rate for Saudi Arabia
- The Way Forward





Initiative

“Towards a More Secure Internet”

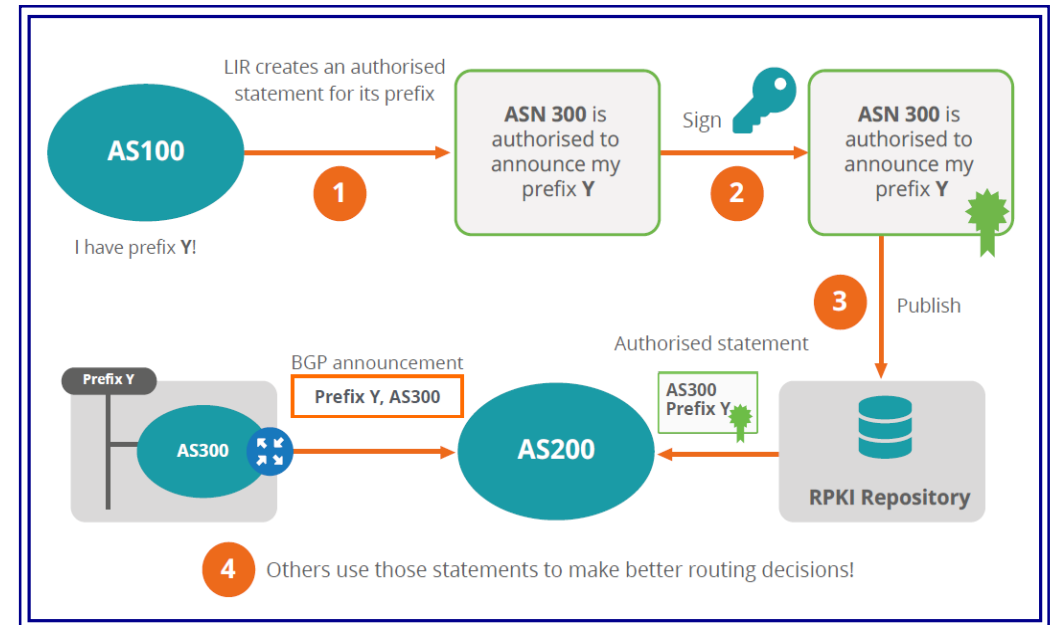
To Implement RPKI Framework

CST launched the “Towards a More Secure Internet” initiative to implement the RPKI protocol framework. The framework’s objective is authenticating the association between resource owners and their Internet resources through digital signature of the IP addresses which link it with the real owner. The initiative aims employ the RPKI framework to secure the Internet, attain a better service level for users, and achieve the highest ratio in the global indicator of internet services.



Targeted
Companies
**All IP Owners in Saudi
Arabia under CST
regulation**

How RPKI works?



Source: academy.ripe.net



Scope
**IPv4 and IPv6
Addresses**

RPKI and its benefits



RPKI decreases risk of security incidents resulting from security shortcomings in the BGP protocol

The Border Gateway Protocol (BGP), designed to route internet traffic, lacks key security features, which jeopardizes the reliability and accuracy of information, which in turn, leads to numerous incidents



2008 YouTube Incident



2018 Incident Google



The expected benefits of RPKI implementation

- **Reducing the likelihood of spoofing attacks**
- **Reducing the likelihood hijacking attacks**
- **Eliminating human errors when announcing network prefixes.**



“Towards a More Secure Internet”

The initiative was a collaboration between CST and RIPE NCC, where RIPE NCC provided technical training and guidance to the companies involved in the initiative and assisted with the signing process.

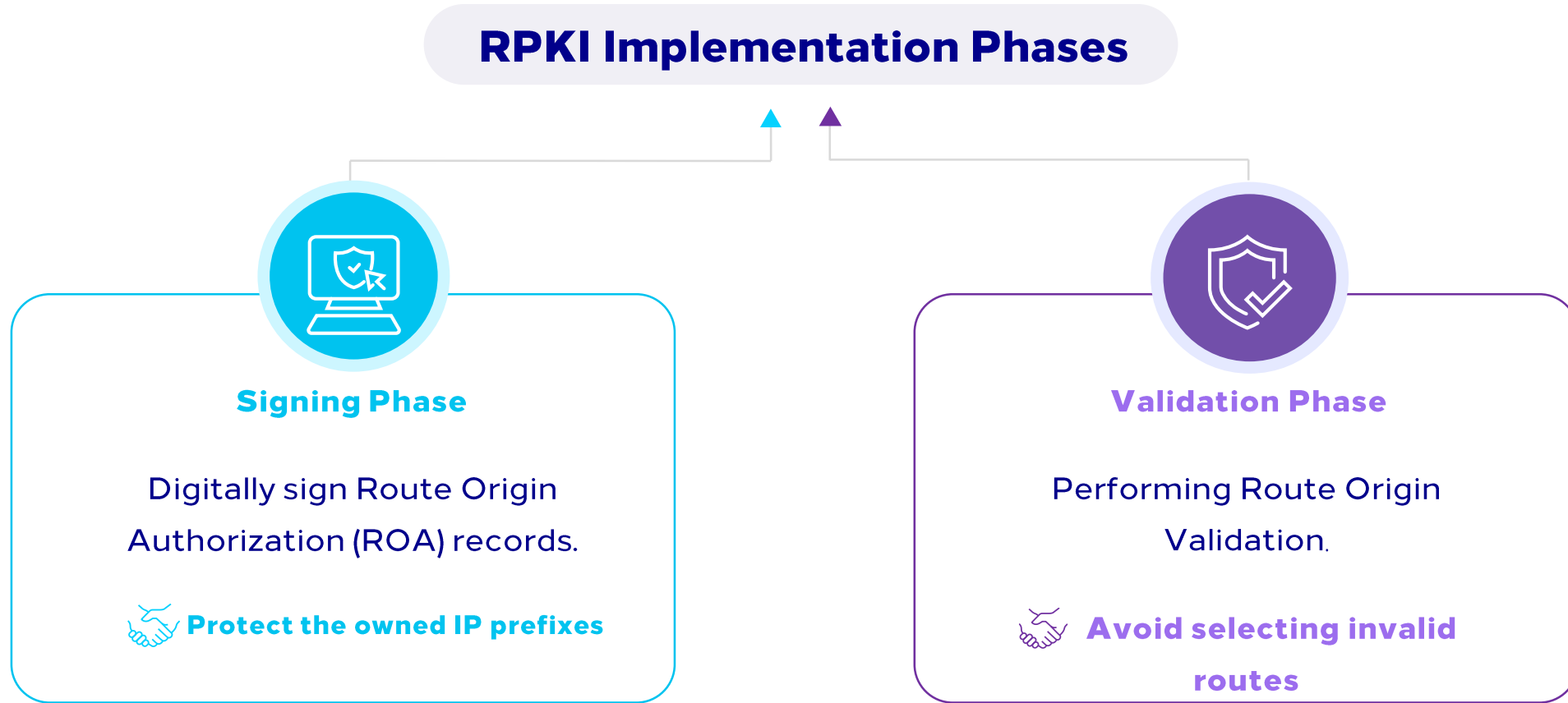


“Successful Partnership”

RIPE’s collaboration with CST team and continues support to sector companies ensured a **successful and outstanding venture.**



RPKI Implementation Phases



Implementation Plan



Targeted Companies

Identifying target companies and assigning their representatives in the initiative



Technical Training

Technical training for assigned representatives clarifying the protocol and its method of operation



Signing ROA

Create and register internet address licenses for target companies



Validation

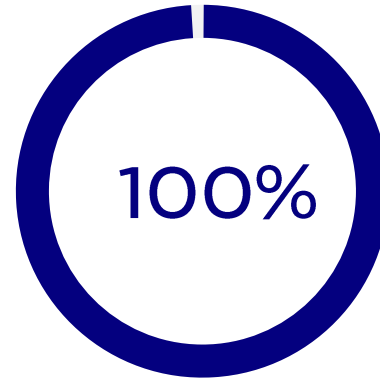
Activate and enable the authentication (RPKI) feature for each company

RPKI Statistics in Saudi Arabia

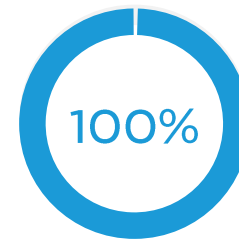
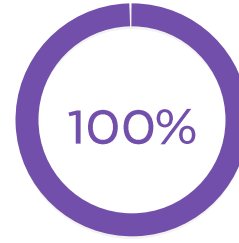
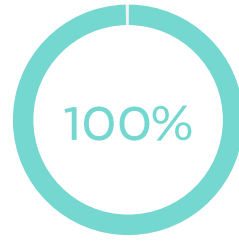
The percentage of signing network address for the first batch of companies



KSA Percentage



Telecom companies



RPKI Implementation Rate for Saudi Arabia

RPKI Implementation Rate for Saudi Arabia

The percentage of signed network prefixes for KSA increased from 15% to 95% within three months of the initiative's launch.



Source: <https://stats.labs.apnic.net/roa/SA>



Validation Phase

After the successful completion of the RPKI signing in collaboration with RIPE NCC, we are starting the second phase of the initiative and moving forward with the RPKI “Validation Phase” of the “Towards a More Secure Internet” project to enable network operators to take full advantage of the RPKI protocol.



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Thank You