

Service Criticality Form

RIPE Database

Introduction

This form is used to gather input from the community on the service criticality. The framework is detailed in <https://labs.ripe.net/author/razvano/service-criticality-framework/>. The service criticality has three components:

Confidentiality:

What is the highest possible impact of a data confidentiality-related incident (data leak)?

Integrity:

What is the highest possible impact of a data integrity-related incident (hacking)?

Availability:

What is the highest possible impact of a service availability-related incident (outage)? All our services are designed with at least 99% availability, so please consider outages of up to 22 hours.

Service Overview

Table 1: Service Overview

Service purpose	Public Internet Registry for the RIPE NCC region, comprising: <ul style="list-style-type: none">• Internet Number Registry• Internet Routing Registry• Reverse delegations
Service owner(s)	Edward Shryane
Stakeholders	Internal: Software Engineering, Registry Services, Global Information Infrastructure, Research and Development, Legal, Learning and Development, Communications External: mainly RIPE Database WG
Types of data that the service stores or processes	Internet numbers (inetnum, inet6num, aut-num) Routing (route, route6) Reverse delegation (domain) Organisation and Person/Role Contacts
Critical parts of the service	Query (port 43, REST API, NRTM, web application) FTP dumps (whole database and split files)
Non-critical parts of the service	Update (REST API, Mailupdates, Syncupdates)

Impact Areas

Global Routing

	Low	Medium	High	Very High
Global Routing	No / negligible impact	Limited reachability issues	Widespread reachability issues	Widespread and persistent reachability issues

Incident Impact on Global Routing	Incident Severity
Confidentiality: (Impact level of incidents such as data leaks)	
A data breach in itself does not affect global routing since this is public data.	Low
Integrity: (Impact level of incidents such as hack attempts)	
Malicious changes to routing data or contact details: due to the time it might take to identify and reverse any malicious changes, an incident could impact ISPs that depend on routing data.	Medium
Availability: (Impact level of service outage incidents, up to 22 hours per quarter)	
In case of an outage, no queries or updates can be performed. At most, we would have a minor impact on routing if the information is outdated or unavailable	Medium

IP addresses and AS Numbers

	Low	Medium	High	Very High
IP addresses and AS Numbers	No / negligible impact	Local disruptions (registration information not being available for some localised entities)	Regional disruptions (registration information not being available for the RIPE NCC region)	Global disruptions (lack of registration information for all AS Numbers and IP addresses)

Incident Impact on IP Addresses and AS Numbers	Impact Severity
Confidentiality: (Impact level of incidents such as data leaks)	
A data breach in itself does not affect IP addresses and AS Numbers since this is public data.	Low
Integrity: (Impact level of incidents such as hack attempts)	
Malicious changes to the IP addresses and AS Numbers or contact details: due to the time it might take to identify and reverse any malicious changes, an incident could impact users	Medium

depending on IP address and AS Number data.		
Availability: (Impact level of service outage incidents, up to 22 hours per quarter)		
Impact of a service outage: <ul style="list-style-type: none"> • The RIPE NCC cannot update resource ownership (transfers, M&As, providing new resources), affecting some ISPs. • Users cannot update contact information for a resource or organisation (meaning operators may not be able to make contact to resolve network issues). • Users cannot update credentials. • Users cannot update resources (network information is out of date). 	High	

Global DNS

	Low	Medium	High	Very High
Global DNS	No / negligible impact	Local DNS issues	Widespread DNS issues	Widespread and persistent DNS issues

Incident Impact on Global DNS		Incident Severity
Confidentiality: (Impact level of incidents such as data leaks)		
A data breach in itself does not affect reverse delegation since this is public data.		Low
Integrity: (Impact level of incidents such as hack attempts)		
Malicious changes to many domain objects; malicious changes to zone, technical, admin contact details		Low
Availability: (Impact level of service outage incidents, up to 22 hours per quarter)		
<ul style="list-style-type: none"> • Reverse delegations cannot be created or updated (leading to outdated zone information in DNS). • Users cannot query for contact information for a reverse delegation. 		Medium