RIPE NCC
RIPE NETWORK COORDINATION CENTRE

RIPE NCC and the Cloud

Cloud Strategy Framework and Service Criticality

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Cloud Strategy Framework

Quick recap

Highlights

- Cloud strategy defined with involvement from the community
- Two interim RIPE NCC services WG sessions (July and September)
  - https://www.ripe.net/participate/ripe/wg/active-wg/services/interim-sessions/interim-session-28-july-2021
  - https://www.ripe.net/participate/ripe/wg/active-wg/services/interim-sessions/interim-session-6-september-2021
- It was approved by the Executive Board in September 2021 and published in RIPE Labs
  - https://labs.ripe.net/author/felipe_victolla_silveira/ripe-ncc-cloud-strategy-framework/

Cloud Strategy Framework

- The framework is based on five principles and describes our approach to cloud operations
  - Examples of principles: seek guidance from the community, use open standards
- From this set of principles, we came up with a list of requirements for cloud services and defined different levels of strictness for each of them
- Different requirement levels apply depending on the service type and criticality
  - Service type: Global Internet Services (e.g. RPKI) or Core RIPE NCC Services (e.g. LIR Portal)
  - Service criticality: very high, high, medium, low, very low and degraded

Requirement Level per Criticality

	Very High / High	Medium	Very Low / Low
Global Internet Services	**Strict** (e.g. RPKI)	**Heightened** (e.g. RIPE DB)	**Standard** (e.g. RIR stats)
Core RIPE NCC Services	**Heightened** (e.g. Registry software)	**Standard** (e.g. LIR Portal)	**Standard** (e.g. compliance tooling)

DRAFT Service Criticality

Classifying our services

DRAFT Service Criticality Framework

- Article published recently
  - https://labs.ripe.net/author/felipe_victolla_silveira/defining-the-criticality-of-ripe-ncc-services/
- Service criticality level derives from the impact its outage can have on various internal and external areas
  - Services with a very high criticality level will cause a high impact even when they experience a short outage
- Define service criticality by the following process:
  - Determine impact areas
  - Classify duration of outages
  - Define the impact levels for each impact area
  - Determine the criticality level of the service

External Impact Areas

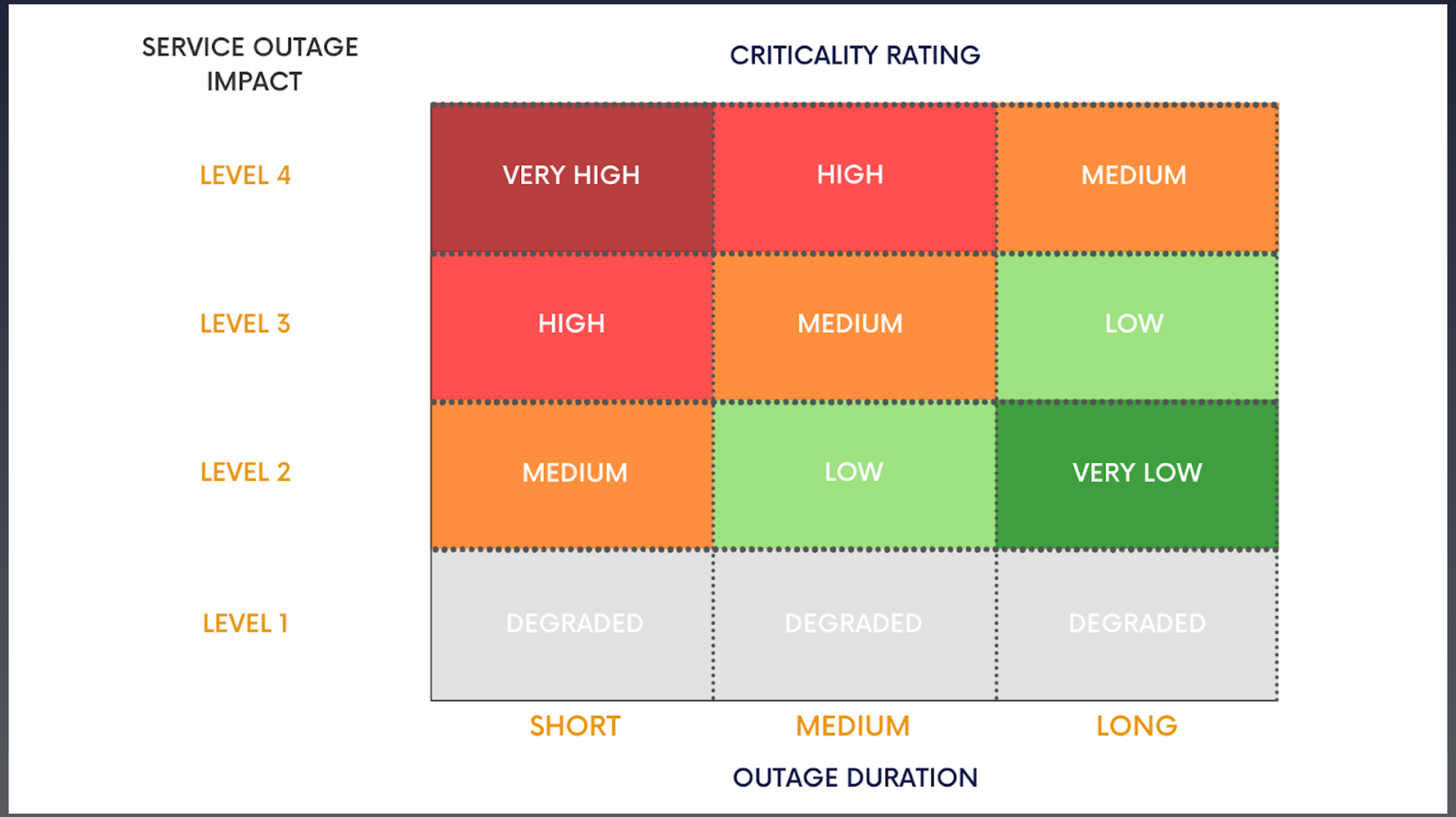
- Impact areas are based on the critical properties of the Internet as outlined in the ISOC Internet Impact Assessment Toolkit
  - https://www.internetsociety.org/resources/doc/2020/internet-impact-assessment-toolkit/introduction/

Impact area	Impact Level 4	Impact Level 3	Impact Level 2	Impact Level 1
Routing	Global Internet routing disruption	Regional routing disruption	Local routing disruption	Degraded routing performance
IP addresses	Global disruption	Regional disruption	Local disruption	Degraded/read-only
DNS	Global DNS disruption	Regional DNS disruption	Local DNS disruption	Degraded/slow

Classifying Duration of Outages

- Based on ‘classes of nines’ industry standard
- Three different outage types:
  - Short outage: roughly 15 minutes downtime per quarter (99.99% availability)
  - Medium outage: roughly 2 hours per quarter (99.9% availability)
  - Long outage: roughly 22 hours per quarter (99% availability)

Determine criticality level



Next Steps

- We want to hear from you!
- Gather community feedback following RIPE Labs article publication and this presentation
- Incorporate feedback into new draft and ask for comments and suggestions
  - New draft will include list of services classified accordingly to framework
- Publish final version of the framework

Questions

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