
CAMARA
THE TELCO GLOBAL API ALLIANCE
Quality by Design
API Proposal

Overview

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Problem Statement: End users can experience degraded quality, leading to suboptimal application performance. This can be caused by various factors across the network between the end device and the service, or issues within the application itself.

Quality by Design (QbD) is a concept of Network as a Service that transforms applications into network monitoring tools by leveraging a set of APIs to facilitate two-way communication between applications and the network, enhancing customer experience.

This approach provides true visibility into user experience by allowing applications to share real-time Key Performance Indicators (KPIs) and network requirements that can be correlated with network performance.

Example Flow

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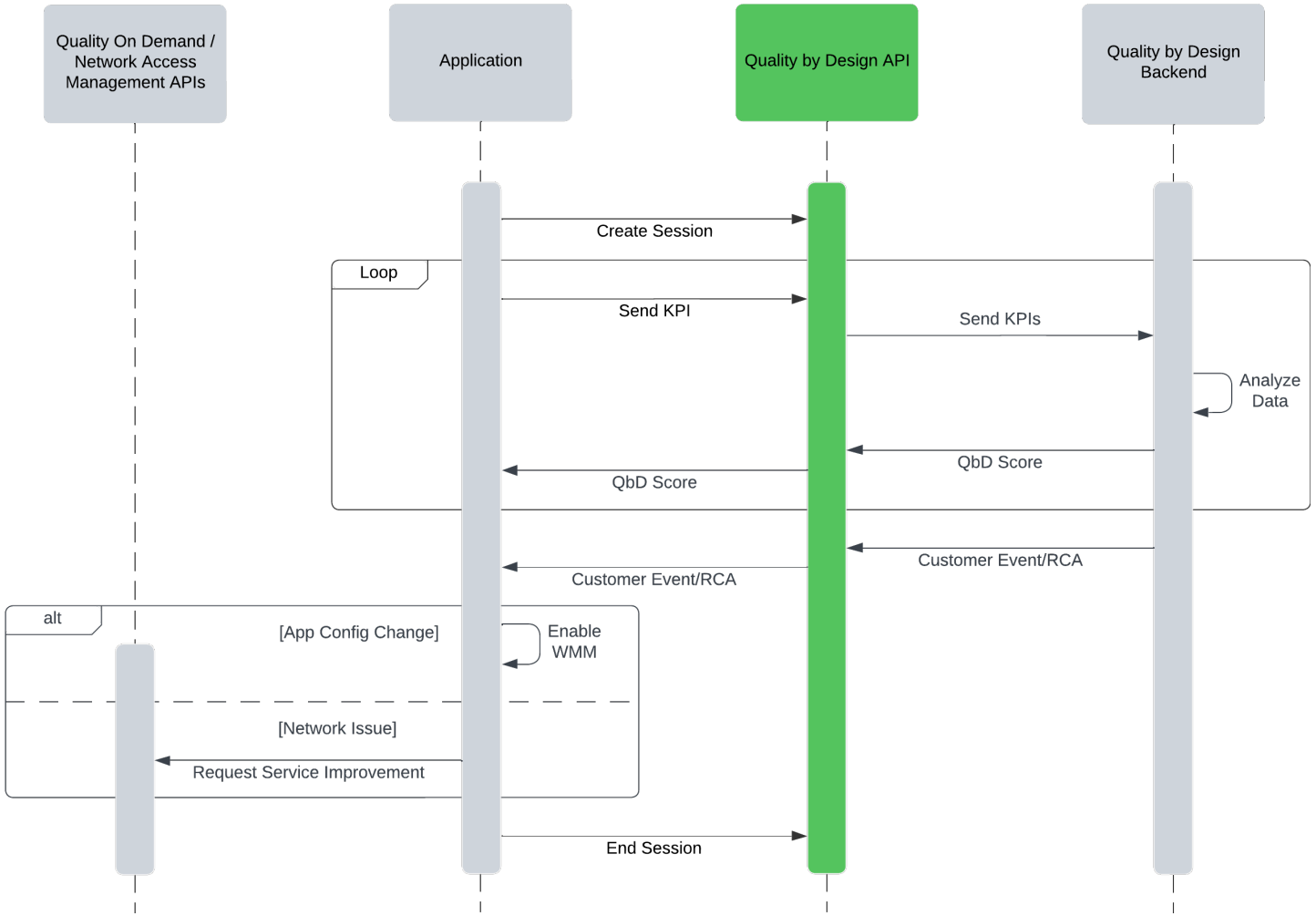
Allows application to:

- Create session
- Send KPIs to network operator
- Receive QbD score
- Receive event/RCA
- Respond to RCA
  - Update app config
  - Request service improvement
- End Session

Quality By Design API Example Flow



Use Case – Wi-Fi Congestion

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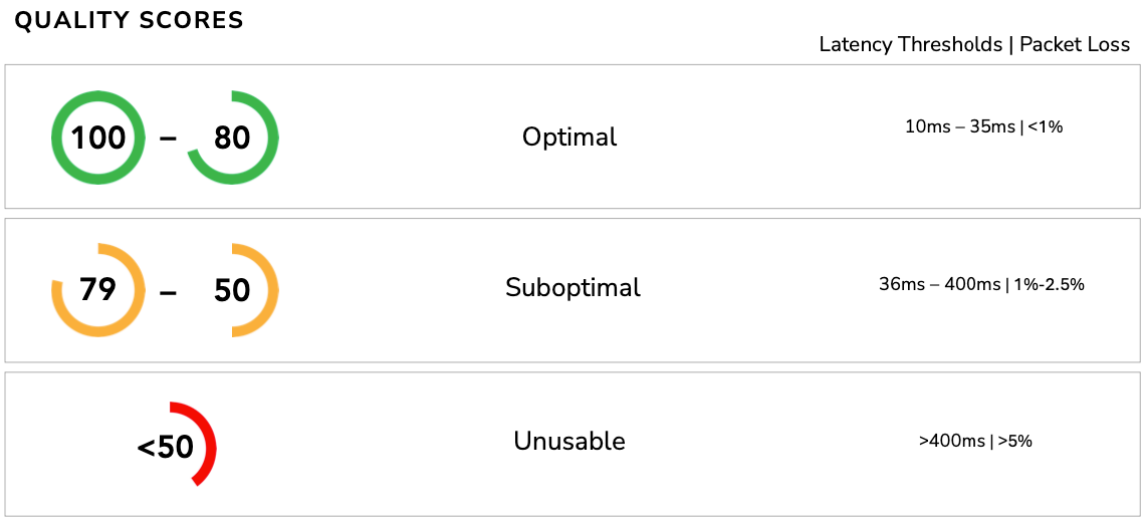
Common Wi-Fi congestion scenario affecting performance for applications such as video conferencing.



Sample Thresholds

- Application configures thresholds for KPIs such as latency and packet loss
- Network operator analyzes KPIs sent and calculates QbD score
- When score drops below threshold, event is triggered to start root cause analysis
- Example: root cause is Wi-Fi congestion. WMM could be enabled for the application to prioritize network traffic and improve video quality

Use Case – Access Network Impairment

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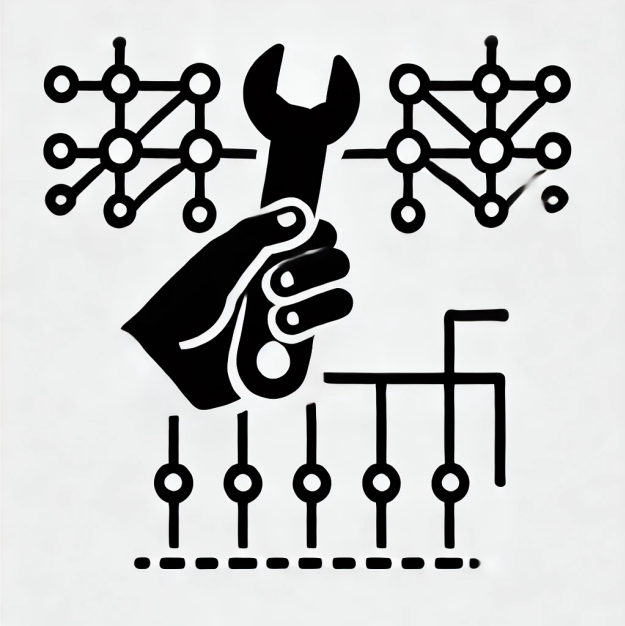
Access Network experiencing issues causing degradation of application performance.



- QbD configuration and analysis performed
- If issue is determined to be with the access network, the application could request service improvements with the network operator by calling APIs such as:
  - QualityOnDemand API
  - NetworkAccessManagement API