# SAP SCM MOBILE

## BENCHMARKS

User performance metrics for 2025

GO-LIVE PREPAREDNESS

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# About Benchmarks

User experience benchmarks are based on *continuous monitoring of transactions between mobile devices and SAP mobile host applications* within live Fortune 1000 enterprise warehouses and manufacturing facilities spanning the past 5 years.

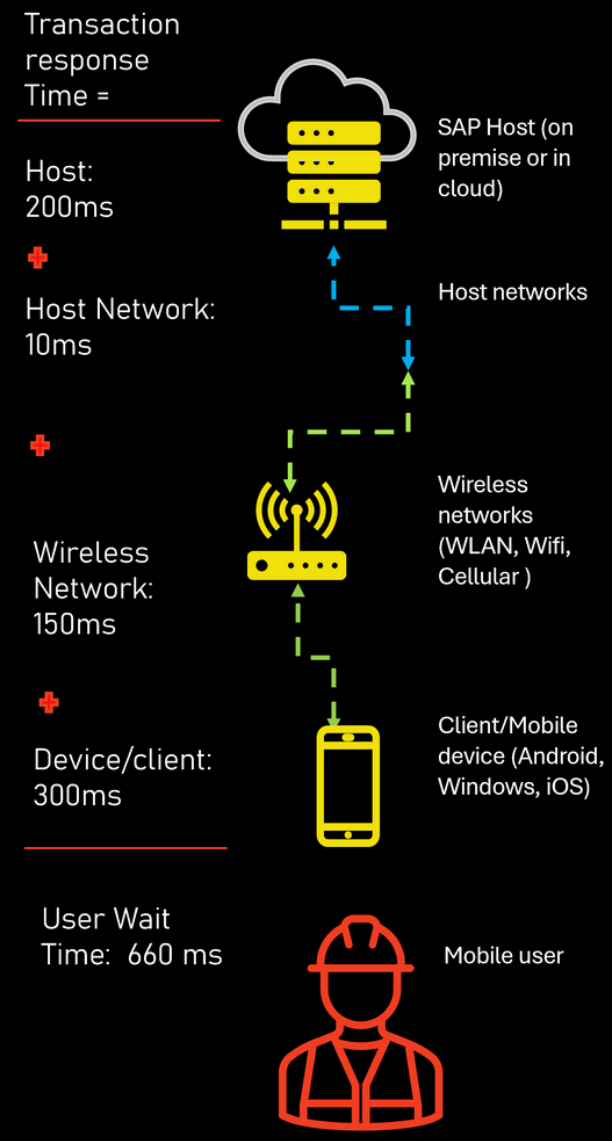
Latency is the primary benchmark. *It is comprised of the total subsystem response times to complete a single request and response between the user's device and the host application.*

Each metric, right, is defined and measured by independent software monitoring tools within the SAP RF Framework. Importantly, the monitoring is *unbiased*, independent of the SAP host or the mobile device perspective.

This analysis includes a range of mobile computer form-factors and models, OS, client software as well as various RF networks such as WLAN, Wi-Fi, and cellular. SAP EWM is hosted in the customer's data center, or a cloud data center, such as GCP.

Relevant and continuous measurement of the user experience is the basis for mapping an improvement strategy or validating success of a current system configuration for a competitive edge.

## BASIS FOR USER EXPERIENCE METRICS

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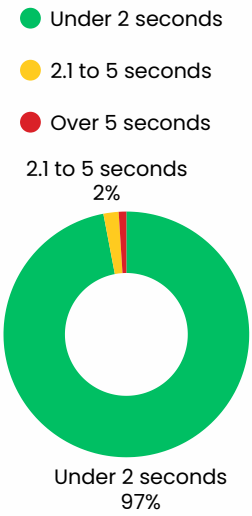
# Benchmark One

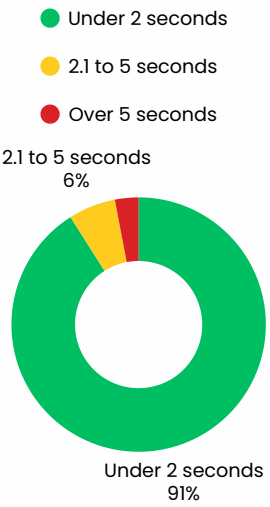
## Mobile-User Wait Time

The end-to-end travel and processing time of a request sent from the mobile device to receive a response from the SAP host over wired and wireless networks. A common use case is a picking function in a distribution center using a mobile computer with a barcode scanner. Longer wait times, both intermittent and consistent, result in a poor user experience with the SAP application.

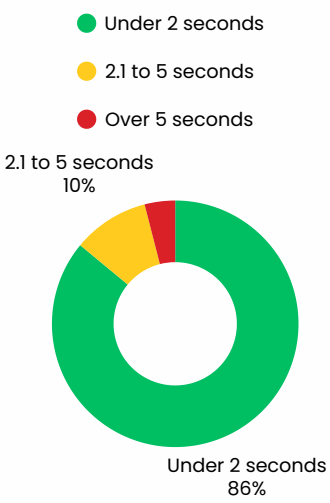
### *Fast*



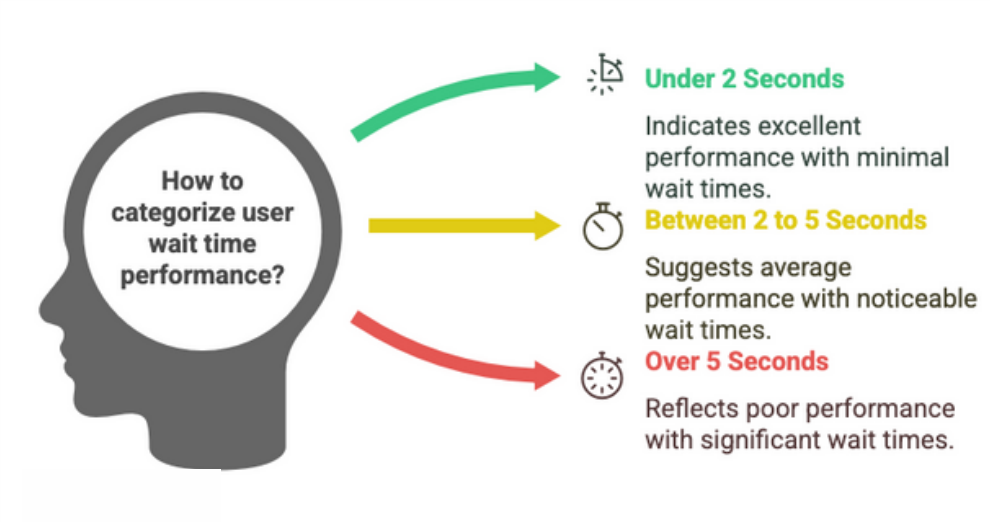

### *Above Average*




### *Average*




Categories based on over 780 million measured transactions.

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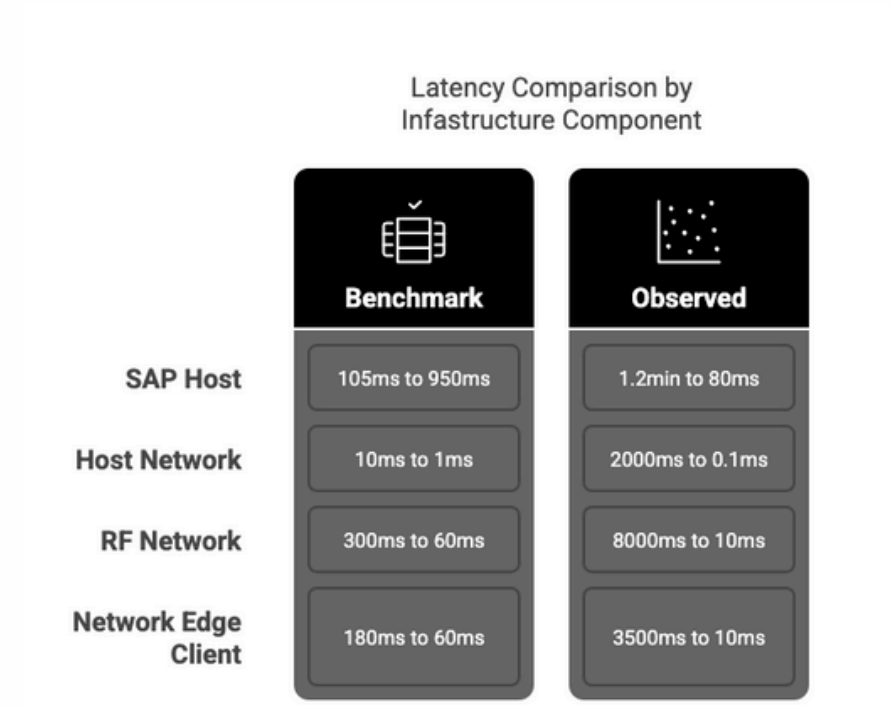
# Benchmark Two

## Latency by Infrastructure Component

This benchmark evaluates latency across key infrastructure components, highlighting opportunities to optimize performance. The data reveals significant variability in response times, suggesting potential bottlenecks or inefficiencies that may impact system performance.




### 📌 Pro Tips

**Take Action!**

- Measure then conduct root-cause analysis on the highest-latency components. Learn how.
- Test optimizations (e.g., network tuning, hardware adjustments) to minimize outliers. Monitor trends post-optimization to ensure sustained improvements.

By addressing these areas, performance can be streamlined, ensuring smoother operations across the infrastructure.

## SAFEGUARD AGAINST DOWNTIME

1. **Identify High Variability**
   The wide ranges in latency indicate inconsistent performance, which may require targeted investigation—especially in components with extreme outliers.
2. **Prioritize Optimization**
   Components with the highest maximum latency (e.g., RF Network and Network Edge Client) should be reviewed for potential improvements in configuration or resource allocation.
3. **Compare Benchmarks vs. Observed**
   Discrepancies between benchmarked and observed values suggest real-world conditions may differ from expectations, necessitating deeper analysis into environmental or operational factors.
4. **Focus on Stability**
   Narrowing latency ranges (e.g., reducing spikes in the SAP Host or Host Network) could enhance reliability and user experience.

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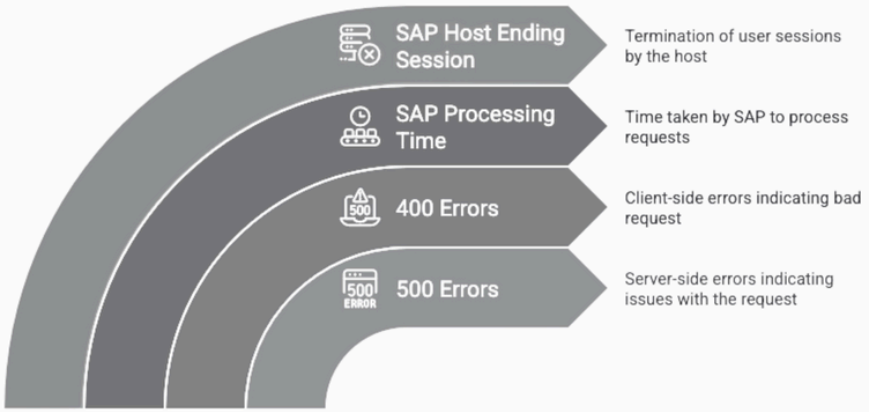
# Benchmark Three

## Common Application Errors

This analysis outlines key host-related errors impacting the SAP Mobile Application, leading to disruptions in user sessions and processing delays. Addressing these issues can improve stability and user experience.




### 📌 Pro Tips

**Take Action!**

- Audit patterns in 500/400 errors and session terminations.
- Enhance client-side validation to minimize bad requests.
- Optimize SAP backend performance through query tuning or infrastructure scaling.
- Adjust session management settings to prevent premature timeouts.

By proactively addressing these error sources, mobile application reliability and responsiveness can be significantly improved.

### 📥Additonal references

How To Avoid An SAP Mobile Crash: 3 Keys to a Successful Go-Live

Get In The Fast Lane: Find and Fix Mobile Connections That Slow You Down - Video

Observability and Problem Capture To Solve Mobile User Frustrations - Mobile Systems Intelligence Podcast

## TRACK AND RESOLVE

- **500 Errors:** Frequent session terminations suggest instability in host-server communication.
  - Investigate server resource constraints, timeouts, or backend failures to prevent abrupt disconnections.
- **400 Errors**: Client-side errors indicate malformed or invalid requests.
  - Validate input handling in the mobile app and ensure proper API request formatting to reduce these incidents.
- **SAP Processing Time Delays**: Prolonged request processing may signal backend inefficiencies.
  - Optimize database queries, server load balancing, or SAP workload distribution to improve response times.
- **SAP Host Ending Sessions**: Unplanned session closures could stem from authentication issues, server overload, or misconfigured session management.
  - Review session timeout settings and server health monitoring.

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