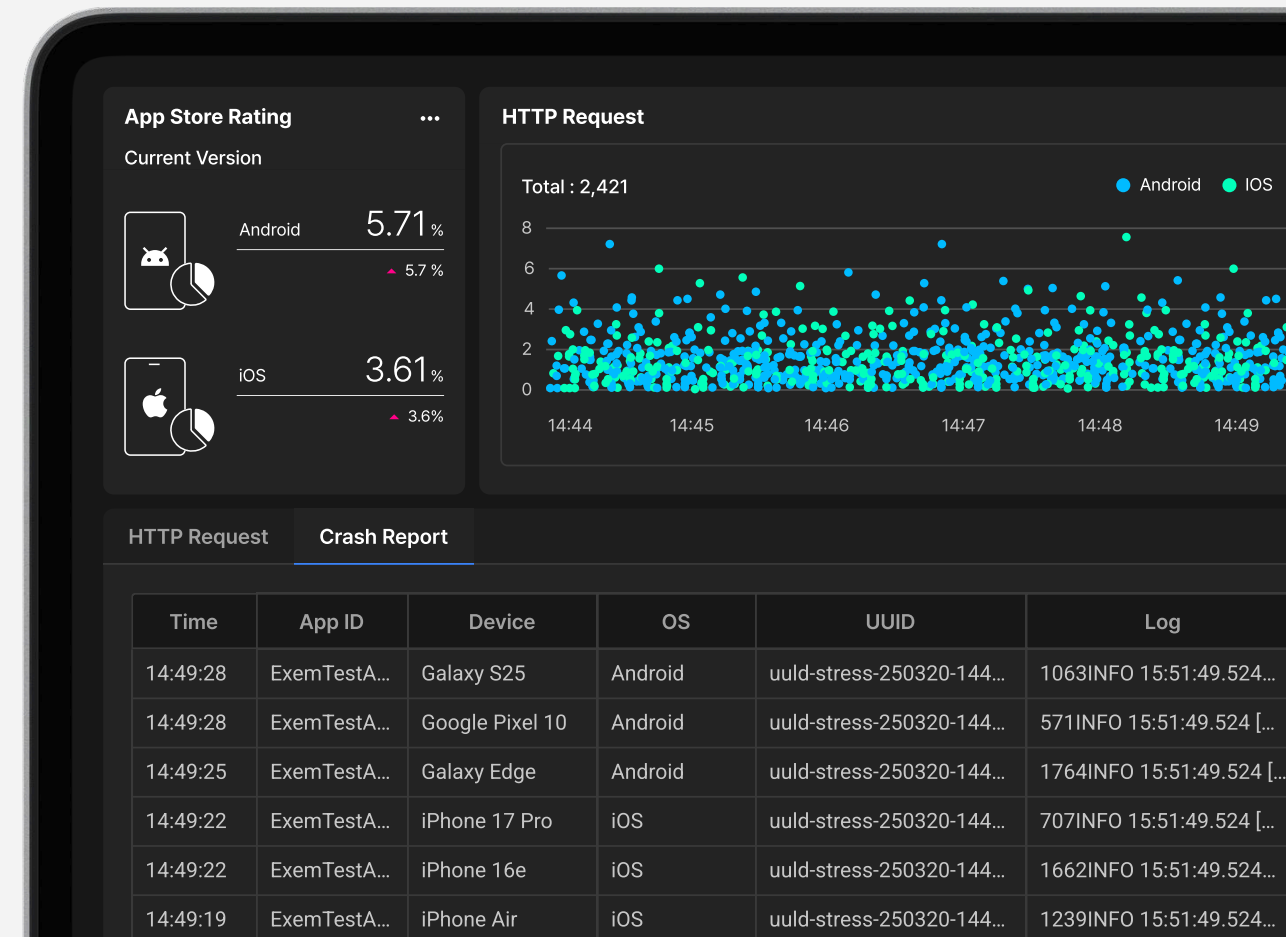




# Why InterMax for Mobile Stands Out

## E2E Performance Management Across the Entire Application Service Path

As businesses increasingly adopt contactless services across various sectors, smartphone mobile apps are at the center. App service incidents cause customer inconvenience, leading directly to customer churn. Therefore, regardless of different OS versions, app versions, carriers, or number of apps, you must monitor app services stably in a unified view, quickly identify delayed tiers and issues, and resolve them.



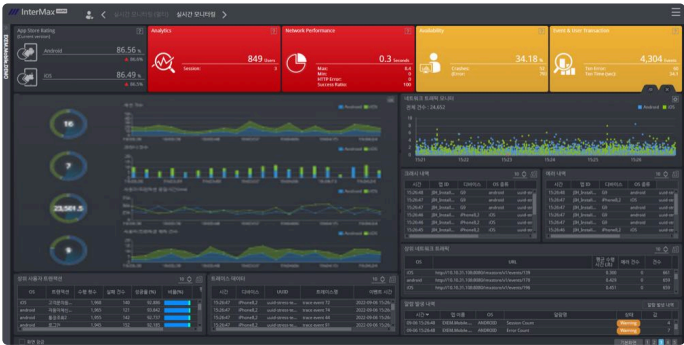
## Unified Mobile App Monitoring

View real time status at a glance from single apps to multiple apps and hybrid apps. Separate Android/iOS metrics to check response times and error rates by app in real time, compare multiple apps in one screen to quickly identify anomalies. Drill down to detailed screens as needed to immediately trace issue causes.

### 1 Single App Real time Monitoring

Assess single app status by Android/iOS

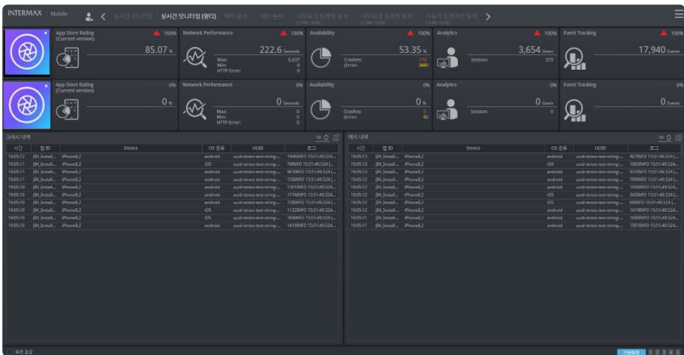
- Android/iOS metrics for real time monitoring: response time, error rate, active users
- Navigate directly to root cause screen when thresholds exceeded via alerts
- Track status changes from release perspective



### 2 Multi & Hybrid App Real time Monitoring

Monitor diverse hybrid apps simultaneously

- Compare key metrics across multiple apps
- Drill down to Single app detail screen with one click
- Real time reflection of script integration metrics for hybrid (Native↔WebView) apps



## Error Diagnosis and Precision Analysis

View app crashes, webview loading delays, user transaction failures. Segment and track causes by device, OS, version, and network. Narrow down problem areas precisely through breadcrumb, loading bottleneck, and transaction flow analysis.

### 1 App Crash and Error Analysis

Narrow down crash causes precisely by device, OS, and app version

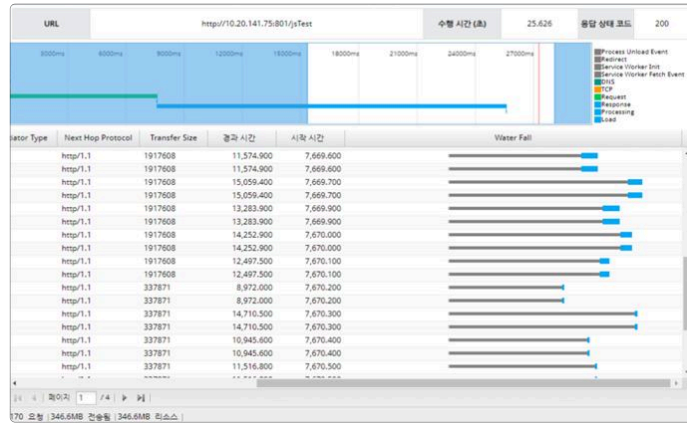
- Analyze crash rate trends by device/OS/version
- Identify impact scope through real time correlation with key performance metrics
- Developer view: rapid reproduction with breadcrumb + stack/logs (iOS symbolication)



## 2 Browser Loading Time Monitoring

Webview performance analysis that pinpoints bottlenecks by URL and resource

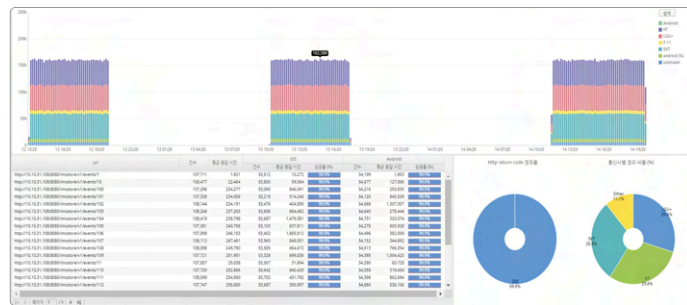
- Identify bottleneck segments by page loading stage (script/image, etc.)
- Focus analysis on specific resources using Exclude Filtering
- Immediate integration with related screens: RTM network list, user behavior analysis



## 3 User Transaction Analysis (Flow & Success Rate)

Track the entire user journey from start to success/failure

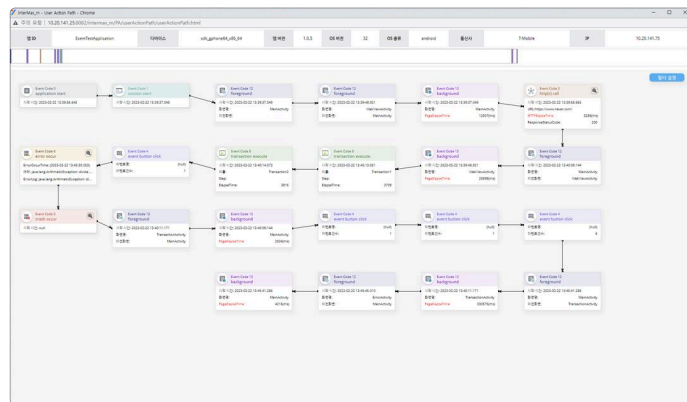
- Visualize response time, success rate, and failure causes by transaction stages
- Narrow down problem segments through user attribute based statistics (region/OS/app version, etc.)
- Identify network impact through carrier specific segmentation



## 4 User Transaction Analysis (Data & Traffic Deep Dive)

In depth diagnosis combining user data and network traffic

- Compare user event/action paths with dwell and drop off points
- Cross analyze traffic, latency, error rates by carrier, device, network type
- Reproduce before/after context of issue transactions via timeline



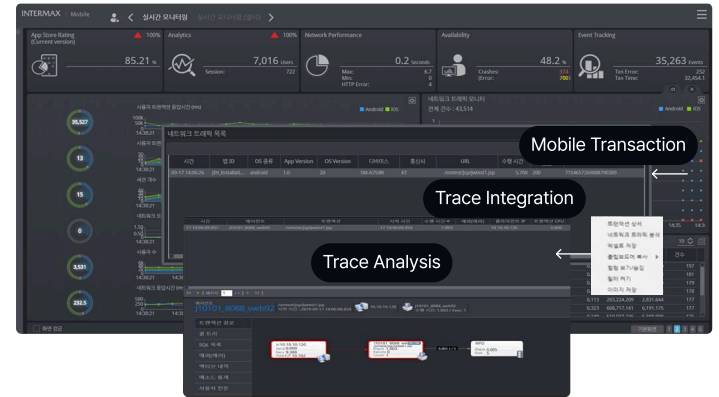
## InterMax(APM) Integration

### 1 APM Integration, Detailed Trace Analysis

E2E call tracking connecting Mobile-WEB-WAS-DB in one thread

- Verify detailed Call Traces for delayed transactions through APM integration
- Instantly identify bottleneck points via mobile device ↔ WEB ↔ WAS ↔ DB call relationship diagrams
- Rapidly reach root causes based on transaction identifiers (tid)

Trace transactions originating from mobile through server tiers to uncover delay causes. Connect mobile ↔ WEB ↔ WAS ↔ DB call flows through APM integration and quickly identify bottleneck tiers and root causes based on transaction identifiers (tid).



## Platform Specs

### Proxy Server (External Network)

OS: Linux Kernel 2.x / 2.x x86 64bit (CentOS 7+, Rocky Linux 8+ supported)  
CPU: 4Core (recommended) / 2Core (minimum)  
RAM: 6GB (recommended) / 3GB (minimum)  
DISK: Minimum 50GB, calculated per customer  
JAVA: 11

### Supported Device OS

Android  
iOS

### Browser (PC)

Optimized for Chrome 73+, Edge 79+  
Resolution: 1920 X 1080 (FHD)

### Collection Server

OS: Linux Kernel 2.x / 2.x x86 64bit (CentOS 7+, Rocky Linux 8+ supported)  
DB: ClickHouse 24.1  
CPU: 16Core (recommended) / 8Core (minimum) – varies by mpm\_process module count  
RAM: 32GB (recommended) / 16GB (minimum) – varies by mpm\_process module count  
DISK: Varies by monitored APP count (minimum 200GB+, SSD required), calculated per customer  
JAVA: 11

# Architecture

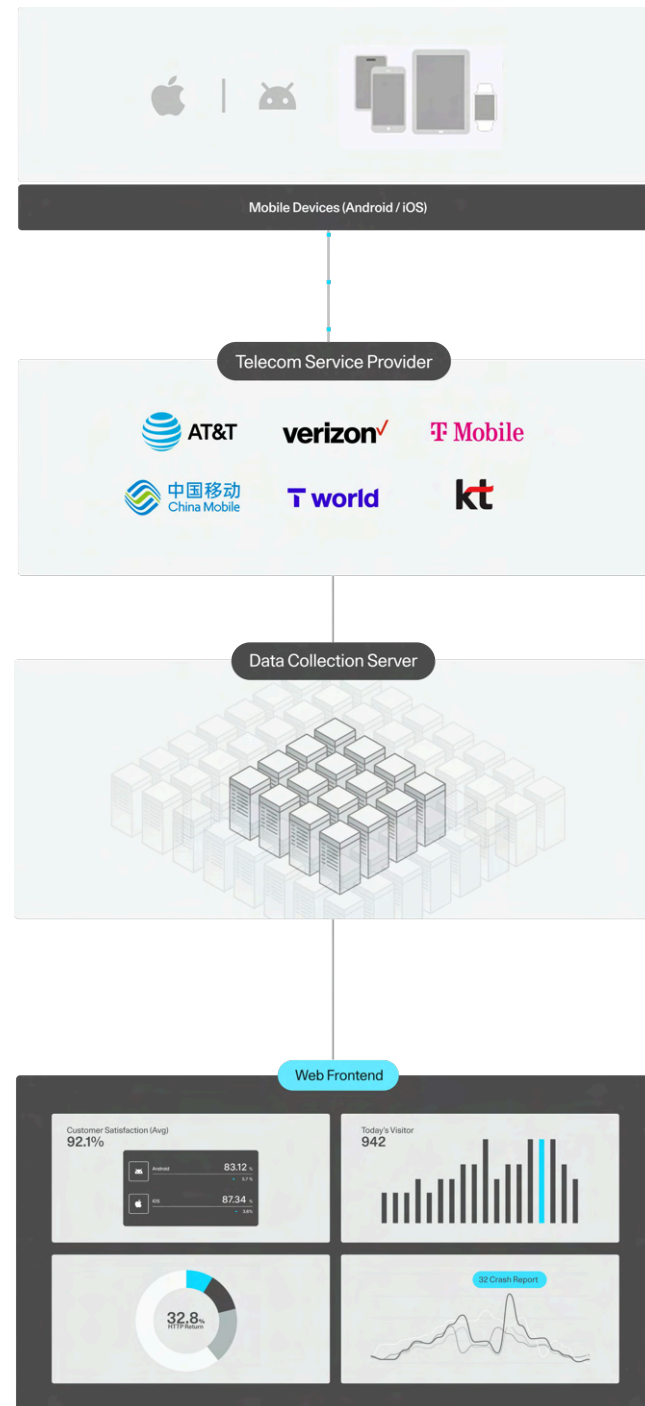
## 1 Data Collection

### Diverse Operating Devices

- Unified monitoring for Android/iOS native and hybrid apps
- Simple application through SDK provided API calls
- Full hybrid app support via Native/Script SDK communication

### Diverse Carrier Environments

- Network traffic analysis by carrier
- HTTP/HTTPS send/receive page processing speed measurement
- Identify bottleneck locations by network segment



## 2 Data Storage & Processing Layer

### Data Collection & Storage

- Crash occurrence trends and error analysis by device/OS/app version
- Store and manage transaction performance data

### Data Analysis & Integration

- Analyze entire flow from transaction start to normal/abnormal completion
- Track Mobile-WEB-WAS-DB through integration

## 3 Presentation

- Real time monitoring of multiple mobile apps
- Developer perspective detailed error analysis
- Alert triggering based on thresholds with analysis screen integration
- Multi faceted customer behavior analysis through monitoring target additions

Data Everywhere,  
Make it Matter