

# FortiTelemetry

Deep insights into application performance behaviors





#### **Key Features**

- End-to-end user experience monitoring
- FortiGate-integrated, agent-based synthetic telemetry
- Built-in telemetry profiles for business SaaS applications
- Automated measurements for application-level and network-level metrics
- Application Experience Score and Application Failure Rate calculations
- Suitable for SD-WAN/ SD-Branch sites, data centers, head offices, and any sites with a FortiGate
- Suitable for data centers, head offices, and SD-WAN/SD-Branch sites
- Measures underlay and overlay networks

### **Built-in telemetry profiles for business SaaS applications**

With Software as a Service (SaaS) becoming as ubiquitous as essential utility and the recent transformative trends of AI as a Service (AlaaS), critical information about cloud-based application availability and performance is becoming more important in ensuring satisfactory user experiences.

FortiTelemetry, Fortinet's end-to-end user application telemetry monitoring, helps enterprises of any size improve SaaS application experience based on a comprehensive set of application-level and network-level performance metrics. FortiTelemetry includes on-premise FortiGate-integrated telemetry agents that continuously emulate, monitor, and detect performance metrics across SaaS applications.

FortiTelemetry collects real-time telemetry information from Top 10 Business SaaS applications using emulated user browsing activities to calculate different scores and network path information, so customers can understand each application and network behavior easily. With its built-in FortiGate Security Fabric integration, FortiTelemetry provides easy-to-implement powerful SaaS application visibility across your network and helps you identify bottlenecks for improved user productivity.

## **Metric Highlights**

#### **Key Benefits**

- Site-specific, 24×7 user experience SaaS measurements
- Deep insights into application performance behaviors
- Quick root cause analysis of poor SaaS application performance
- Identify site network performance bottlenecks
- Improved SaaS user experience

A key differentiator of FortiTelemetry lies in its ability to look inside each application session to collect real end user telemetry information 24×7 automatically without user interventions or involvements.

Using its hardware- or software-based agents, FortiTelemetry gathers and provides the following SaaS application telemetry metrics:

- Application-level:
  - Application Experience Score (AES)
  - Application Failure Rate (AFR)
  - Time to First Byte (TTFB)
  - Application Total Downloading Time (ATDT)
  - Throughput
- Network-level:
  - Latency
  - Jitter
- Packet loss
- TCP Round Trip Time (RTT)
- 95th percentile DNS resolution time
- 95th percentile TLS handshake time





#### **More Information**

Additional information can be found at: FortiTelemetry documentation site. With its own real-time streaming analytics engine running in the cloud, FortiTelemetry actively measures each SaaS application health, provides intelligent alerting when a threshold is breached, and predicts potential link quality deterioration using its Al algorithms. These application-focused telemetry metrics produce real actionable insights into SaaS applications, over and above traditional application performance monitoring (APM) solutions.





### Agents

FortiTelemetry relies on on-premise telemetry agents, which can be hardware-based or software-based agents. There are two types of telemetry agents available:

- FortiTelemetry 100G Agent A desktop size hardware appliance agent
- FortiTelemetry Windows Agent A software agent running on Windows machine

The telemetry agents simulate real users running the monitored SaaS applications on a web browser. The agents collect raw application-level and network-level statistics, turn them into meaningful telemetry metrics, and stream the metrics to FortiTelemetry Cloud for further analysis and retention.

The telemetry agents are controlled by an on-premise FortiGate, acting as the FortiTelemetry Controller.



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FortiView Applications	Agent	Experience Score 🚽	Failure Rate 🐙	Time to First Byte 👻	Application Total Download Ti	me -
FortiView Web Sites						
FortiView Policies	FTLWIN1145418745	Good	9%	133.73ms	2,002.42ms	
FortiView Sessions	ETLWIN4978938684	Good	10%	138.96ms	1,879.55ms	
FortiTelemetry Applications						
FortiTelemetry Agents						

#### Controller

Any on-premise FortiGate, except for models lower than 7xF/7xG and FG-VM/Cloud, running a compatible FortiOS (7.6.3+) can act as a FortiTelemetry Controller. The FortiGate must be connected to the agents via the same local area network (LAN).

The telemetry controller discovers, authorizes, and manages all agents using the well-known FortiOS Security Profile and Firewall Policy framework.

Profile Applic	ation				
Monitor	🕑 Enabled 🛛 🛛	Disable	d		
Application	Google.Docs				
Interval	300000			ms	
SLA Targets	D				
Application le	evel metrics				
Experience score		•	6		(0 - 10)
Failure rate		•	5		%
Time to first byte		•	200		ms
Application total download  O		•	3000		ms
Application throughput O		•	2		MB/s
Network leve	I metrics				
Latency		•	100		ms
Jitter 💽		0	50		ms
Packet loss		•	5		%
TCP round trip time		•	100		ms
95% DNS resolving time		•	100		ms
95% TLS handshake time		0	200		ms

## Cloud

FortiTelemetry Cloud receives, processes, analyzes, and retains streaming telemetry data sent by the agents. It calculates the Application Experience Score and Application Failure Rate of each application metric set.

FortiTelemetry Cloud provides this additional telemetry analytics to the FortiTelemetry Controller, which consumes and displays them as FortiView Telemetry.

## **Technical Specifications**

Components	Description	Integrations
FortiTelemetry Hardware Agent – FTL-100G	Available in a desktop form factor, FTL-100G is hardware agent, actively emulates SaaS application browsing, collects their relevant telemetry statistics, and pushes them to FortiTelemetry Cloud.	FortiTelemetry Controller, FortiTelemetry Cloud
FortiTelemetry Software Agent – Windows	FTL-Windows is software agent running on a Windows machine (min. four CPUs and 8 GB RAM), actively emulates SaaS application browsing, collects their relevant telemetry statistics, and pushes them to FortiTelemetry Cloud.	FortiTelemetry Controller, FortiTelemetry Cloud
FortiTelemetry Controller	A built-in software component of a FortiGate, FortiTelemetry Controller automatically discovers and authorizes FortiTelemetry Agents via Zero Touch Provisioning, including manages them over a common Layer 2 network.	FortiTelemetry Agent, FortiTelemetry Cloud, FortiGuard
FortiTelemetry Cloud	A collection of cloud-native, big-data streaming infrastructure running on dedicated Fortinet Data Centers globally, FortiTelemetry Cloud receives, analyzes, and stores real-time application telemetry information from FortiTelemetry Agents.	FortiTelemetry Agent, FortiTelemetry Controller, FortiCare

## **Order Information**

FortiTelemetry license is available as part of the SDWAN Underlay Monitoring Services bundle that includes FortiTelemetry Windows Software Agent.

FortiTelemetry 100G Hardware Agent is an appliance that needs to be ordered separately using the following SKUs.

Product	SKU	Description
SDWAN-Underlay Monitoring Services (Base)	FC-10-FGXXX-288-02-DD	SDWAN Underlay and Application Monitoring plus FortiTelemetry user license
FortiTelemetry-100G	FTL-100G 10 x GE RJ45 ports (including 7 x Internal Ports, 2 x WAN Ports, 1 Port), 128 GB SSD onboard storage	
	FC-10-T100G-247-02-DD	FortiCare Premium Support
	FC-10-T100G-284-02-DD	FortiCare Elite Support
	FC-10-T100G-204-02-DD	Upgrade FortiCare Premium to Elite (Require FortiCare Premium)

Visit https://www.fortinet.com/resources/ordering-guides for related ordering guides.

The number of agents that can be supported varies based on the FortiGate model acting as the FortiTelemetry Controller:

- FG-7xF/G to FG-10xF: up to 5 agents
- FG-12xG to 60xF: up to 10 agents
- FG-90xG to FG-100xF: up to 50 agents
- FG-180xF and beyond: up to 100 agents

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