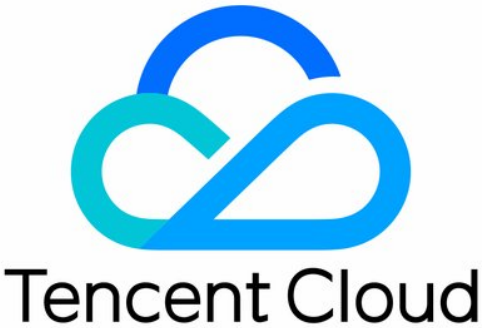
Application Performance Management Parameter Information

Product Documentation



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Parameter Information
Components and Frameworks Supported by OpenTelemetry Scheme

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Java Versions and Frameworks Supported by the OpenTelemetry Java Agent Enhanced Edition

Supported Java Versions

Tencent Cloud OpenTelemetry Java Agent Enhanced Edition supports Java versions 8 and above, with Java 8, Java 11, Java 17, and other LTS versions recommended.

Supported Dependencies and Frameworks

Tencent Cloud OpenTelemetry Java Agent Enhanced Edition performs automatic Event Tracking on commonly used open-source components and frameworks, including Servlet, Spring Web MVC, Apache Dubbo, etc. For a detailed list, see List of Dependencies and Frameworks Supported by OpenTelemetry Java Agent.
In addition, Tencent Cloud OpenTelemetry Java Agent Enhanced Edition also enhances Event Tracking for XXL-JOB 2.2.0+ and Apache Thrift 0.9.3+.

Supported Application Servers

Tencent Cloud OpenTelemetry Java Agent Enhanced Edition supports commonly used application servers. For a detailed list, see List of Application Servers Supported by OpenTelemetry Java Agent.

Components and Frameworks Supported by OpenTelemetry-Go Scheme

Supported Go Versions

The official Go versions supported are currently 1.21 and 1.22. For lower versions, connecting is theoretically possible, but the community does not maintain full compatibility. For details, see the community Compatibility Description.

Supported Dependencies and Frameworks

For commonly used Go-related dependency libraries and frameworks, the OpenTelemetry-Python Scheme offers an SDK-based reporting solution. For a detailed list, see the Complete List provided by the community.

Components and Frameworks Supported by OpenTelemetry-Python Scheme

Supported Python Versions

3.6+

Supported Dependencies and Frameworks

The OpenTelemetry-Python Scheme provides automatic Event Tracking for commonly used Python-related dependency libraries and frameworks, including Flask, Django, FastAPI, MySQL Connector, etc., enabling link information reporting without needing to modify the code. For other dependency libraries and frameworks that support automatic Event Tracking, see the Complete List provided by the community.

Components and Frameworks Supported by OpenTelemetry-JavaScript Scheme

Supported Node.js Versions

Node.JS v14+

Supported Dependencies and Frameworks

The OpenTelemetry-JavaScript Scheme provides automatic Event Tracking for commonly used Node.js dependency libraries and frameworks, enabling link information reporting without needing to modify the code. For other dependency libraries and frameworks that support automatic Event Tracking, see the Complete List provided by the community.

Frameworks and Components Supported by SkyWalking

Frameworks Supported by Java Agent

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This document lists the Java frameworks and components supported by APM.

Component	Project
HTTP Server	Tomcat 7 Tomcat 8 Tomcat 9 Spring Boot Web 4.x Spring MVC 3.x, 4.x 5.x with servlet 3.x Nutz Web Framework 1.x Struts2 MVC 2.3.x -> 2.5.x Resin 3 Resin 4 Jetty Server 9 Spring WebFlux 5.x Undertow 1.3.0.Final -> 2.0.27.Final RESTEasy 3.1.0.Final -> 3.7.0.Final Play Framework 2.6.x -> 2.8.x Light4J Microservices Framework 1.6.x -> 2.x Netty SocketIO 1.x
HTTP Client	Feign 9.x Netflix Spring Cloud Feign 1.1.x -> 2.x Okhttp 2.x -> 3.x -> 4.x Apache httpcomponent HttpClient 2.0 -> 3.1, 4.2, 4.3, 5.0, 5.1 Spring RestTemplete 4.x Jetty Client 9 Apache httpcomponent AsyncClient 4.x AsyncHttpClient 2.1+ JRE HttpURLConnection
HTTP Gateway	Spring Cloud Gateway 2.0.2.RELEASE -> 3.x
JDBC	Mysql Driver 5.x, 6.x, 8.x Oracle Driver H2 Driver 1.3.x -> 1.4.x ShardingSphere 3.0.0, 4.0.0, 4.0.1, 4.1.0, 4.1.1, 5.0.0-beta PostgreSQL Driver 8.x, 9.x, 42.x

	Mariadb Driver 2.x, 1.8 InfluxDB 2.5 -> 2.17 Mssql-Jtds 1.x Mssql-jdbc 6.x -> 8.x ClickHouse-jdbc 0.3.x Apache-Kylin-Jdbc 2.6.x -> 3.x -> 4.x
RPC Frameworks	Dubbo 2.5.4 -> 2.6.0 Dubbox 2.8.4 Apache Dubbo 2.7.x -> 3.x Motan 0.2.x -> 1.1.0 gRPC 1.x Apache ServiceComb Java Chassis 0.1 -> 0.5,1.x SOFARPC 5.4.0 Armeria 0.63.0 -> 0.98.0 Apache Avro 1.7.0 - 1.8.x Finagle 6.44.0 -> 20.1.0 Brpc-Java 2.3.7 -> 2.5.3 Thrift 0.10.0 -> 0.12.0 Apache CXF 3.x JSONRPC4J 1.2.0 -> 1.6
MQ	RocketMQ 4.x Kafka 0.11.0.0 -> 2.8.0 Spring-Kafka Spring Kafka Consumer 1.3.x -> 2.3.x ActiveMQ 5.10.0 -> 5.15.4 RabbitMQ 5.x Pulsar 2.2.x -> 2.9.x
NoSQL-Redis	Jedis 2.x Redisson Easy Java Redis client 3.5.2+ Lettuce 5.x
NoSQL-MongoDB	MongoDB Java Driver 2.13-2.14, 3.4.0-3.12.7, 4.0.0-4.1.0
NoSQL-Memcached Client	Spymemcached 2.x Xmemcached 2.x
NoSQL-Elasticsearch	transport-client 5.2.x-5.6.x transport-client 6.7.1-6.8.4 transport-client 7.0.0-7.5.2 rest-high-level-client 6.7.1-6.8.4 rest-high-level-client 7.0.0-7.5.2
NoSQL-Solr	SolrJ 7.x
NoSQL-Cassandra 3.x	cassandra-java-driver 3.7.0-3.7.2

NoSQL-HBase	hbase-client HTable 1.0.0-2.4.2
NoSQL-Neo4j	Neo4j-java 4.x
Service Discovery	Netflix Eureka
Distributed Coordination	Zookeeper 3.4.x (Optional[2] & Except 3.4.4)
Spring Ecosystem	Spring Bean annotations 3.x and 4.x Spring Core Async SuccessCallback /FailureCallback /ListenableFutureCallback 4.x Spring Transaction 4.x and 5.x
Hystrix	1.4.20 -> 1.5.18
Sentinel	1.7.0 -> 1.8.1
Scheduler	Elastic Job 2.x Apache ShardingSphere-Elasticjob 3.x Spring @Scheduled 3.1+ Quartz Scheduler 2.x XXL Job 2.x
Canal	1.0.25 -> 1.1.2
JSON	GSON 2.8.x Fastjson 1.2.x Jackson 2.x
Vert.x Ecosystem	Vert.x Eventbus 3.2+ Vert.x Web 3.x
Thread Schedule Framework	pring @Async 4.x and 5.x Quasar 0.7.x JRE Callable and Runnable
Cache	Ehcache 2.x GuavaCache 18.x -> 23.x
Kotlin	Coroutine 1.0.1 -> 1.3.x
GraphQL	Graphql 8.0 -> 15.x
Pool	Apache Commons DBCP 2.x Alibaba Druid 1.x HikariCP 3.x -> 4.x
Logging Framework	log4j 2.x

	log4j2 1.2.x logback 1.2.x
ORM	MyBatis 3.4.x -> 3.5.x

Frameworks Supported by Python Agent

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This document lists the Python frameworks and components supported by APM.

Project	Python Version - Lib Version	Plugin Name
AIOHTTP	Python >=3.10 - NOT SUPPORTED YET; Python >=3.6 - ['3.7.4'];	`sw_aiohttp`
Celery	Python >=3.6 - ['5.1'];	`sw_celery`
Django	Python >=3.6 - ['3.2'];	`sw_django`
Elasticsearch	Python >=3.6 - ['7.13', '7.14', '7.15'];	`sw_elasticsearch`
Hug	Python >=3.10 - ['2.5', '2.6']; Python >=3.6 - ['2.4.1', '2.5', '2.6'];	`sw_falcon`
Flask	Python >=3.6 - ['1.1', '2.0'];	`sw_flask`
http.server	Python >=3.6 - ['*'];	`sw_http_server`
Werkzeug	Python >=3.6 - ['1.0.1', '2.0'];	`sw_http_server`
kafka-python	Python >=3.6 - ['2.0'];	`sw_kafka`
psycopg-binary	Python >=3.6 - ['3.0'];	`sw_psycopg`
psycopg2-binary	Python >=3.10 - NOT SUPPORTED YET; Python >=3.6 - ['2.9'];	`sw_psycopg2`
PyMongo	Python >=3.6 - ['3.11'];	`sw_pymongo`
PyMySQL	Python >=3.6 - ['1.0'];	`sw_pymysql`
Pyramid	Python >=3.6 - ['1.10', '2.0'];	`sw_pyramid`
Pika	Python >=3.6 - ['1.2'];	`sw_rabbitmq`
Redis	Python >=3.6 - ['3.5'];	`sw_redis`
Requests	Python >=3.6 - ['2.26', '2.25'];	`sw_requests`
Sanic	Python >=3.10 - NOT SUPPORTED YET; Python >=3.7 - ['20.12']; Python >=3.6 - ['20.12'];	`sw_sanic`

Tornado	Python >=3.6 - ['6.0', '6.1'];	`sw_tornado`
urllib3	Python >=3.6 - ['1.26', '1.25'];	`sw_urllib3`
urllib.request	Python >=3.6 - ['*'];	`sw_urllib_request`

Note:

The Celery server running "celery-A..." needs to run with the HTTP protocol, because Celery uses multiprocessing by default, which is incompatible with the current gRPC protocol implementation in SkyWalking.

Agent Version Information

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This document presents the version information of Tencent Cloud's self-developed APM agent and provides a download address. For details on agents or SDKs provided by the open-source community, including OpenTelemetry, Skywalking, Jaeger, etc., see the corresponding open-source community documentation.

Tencent Cloud OpenTelemetry Java Agent Enhanced Edition

Tencent Cloud OpenTelemetry Java Agent Enhanced Edition is based on the openTelemetry-java-instrumentation from the open-source community and developed further under Apache License 2.0. It includes a reference to the OpenTelemetry License within the agent packet. Building on the open-source agent, the Tencent Cloud OpenTelemetry Java Agent Enhanced Edition has made significant improvements in areas such as Event Tracking density, advanced diagnosis, performance protection, and enterprise-level capabilities. In addition, the Tencent Cloud OpenTelemetry Java Agent Enhanced Edition also adheres to the OpenTelemetry protocol standards. When the automatic Event Tracking does not meet user scenarios, you can see OpenTelemetry official documentation for customizing business Event Tracking.

Versions	Release Notes	Release Date	VPC Private Network Download Address	
1.16-20240328 (Latest Version) Download Probe	Optimize agent stability in high-load scenarios.	March 28, 2024	Singapore	`https://tencentcloud-otel-java-agent-s`
			Hong Kong (China)	`https://tencentcloud-otel-java-agent-h`
1.16-20240305 Download Probe	1. Support for thread pool, connection pool metric reporting. 2. Analyze the root cause of CPU/memory high load issues through flame graphs.	March 5, 2024	Singapore	`https://tencentcloud-otel-java-agent-s`
			Hong Kong (China)	`https://tencentcloud-otel-java-agent-h`

Agent Support Cycle

To continuously enhance the product capabilities and stability of Tencent Cloud OpenTelemetry Java Agent Enhanced Edition, support new versions of open-source components, and promptly fix agent defects and security vulnerabilities, APM will continuously iterate the agent, regularly releasing new versions. It is recommended to follow the release cadence and update the agent version timely.
Each officially released Tencent Cloud OpenTelemetry Java Agent Enhanced Edition, from the release date, has a fixed support period of 6 months. Starting from the 4th month, APM will notify you in the console that the agent is nearing expiration. From the 6th month, APM will notify you in the console that the agent has expired. After the agent expires, it will not affect the use of APM; if you need technical support for the agent, it is recommended to upgrade the agent version first. For upgrading, see Upgrading Agent Version.

Other Agents

Besides Tencent Cloud OpenTelemetry Java Agent Enhanced Edition, other agents are provided by the open-source community, including the OpenTelemetry community, and Skywalking community. See the connect guide for agent installation.
For applications deployed on TKE, the Tencent Cloud Observability team provides an Operator scheme: tencent-opentelemetry-operator. Built upon the community opentelemetry-operator, it enables agent auto-injection, facilitating applications to connect APM quickly. Currently, tencent-opentelemetry-operator supports the following agent versions:

Language	Agent Versions
Python	0.41b0
Node.js	0.44.0
.Net	1.2.0

Use Limits for Free Mode

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To help users better experience product features while reducing costs, APM provides a free mode. You can enable free mode for specific business systems to enjoy permanent free usage of the APM product. Once free mode is enabled, charging for the selected business system will **immediately stop**, and the applications accessing this business system will **incur no fees** and will not consume any quotas from prepaid packages. Charging for the business system will only resume under your specified billing mode once you proactively disable the free mode.

Use Limits

In free mode, APM provides limited features. To access the full features of APM, you need to disable free mode. Be aware of the following use limits:
Linkage data is not saved. Both the **Distributed Tracing** and **Trace details** features will be affected.
Metric data is retained for a fixed period of **3 days**. APM uses separate data sources to store metric data for free and paid modes. When a business system **switches between free mode and paid mode, historical metric data will no longer be queried**.
For Spans with the call role `Internal`, no metric data is generated. You can see Link Tracing Field Description for more details about Span call roles. In most scenarios, users only need to focus on the metrics generated under the `Server`, `Client`, `Consumer`, and `Producer` roles. Therefore, this limit has minimal impact on the normal use of APM.
Alarming features are not supported.

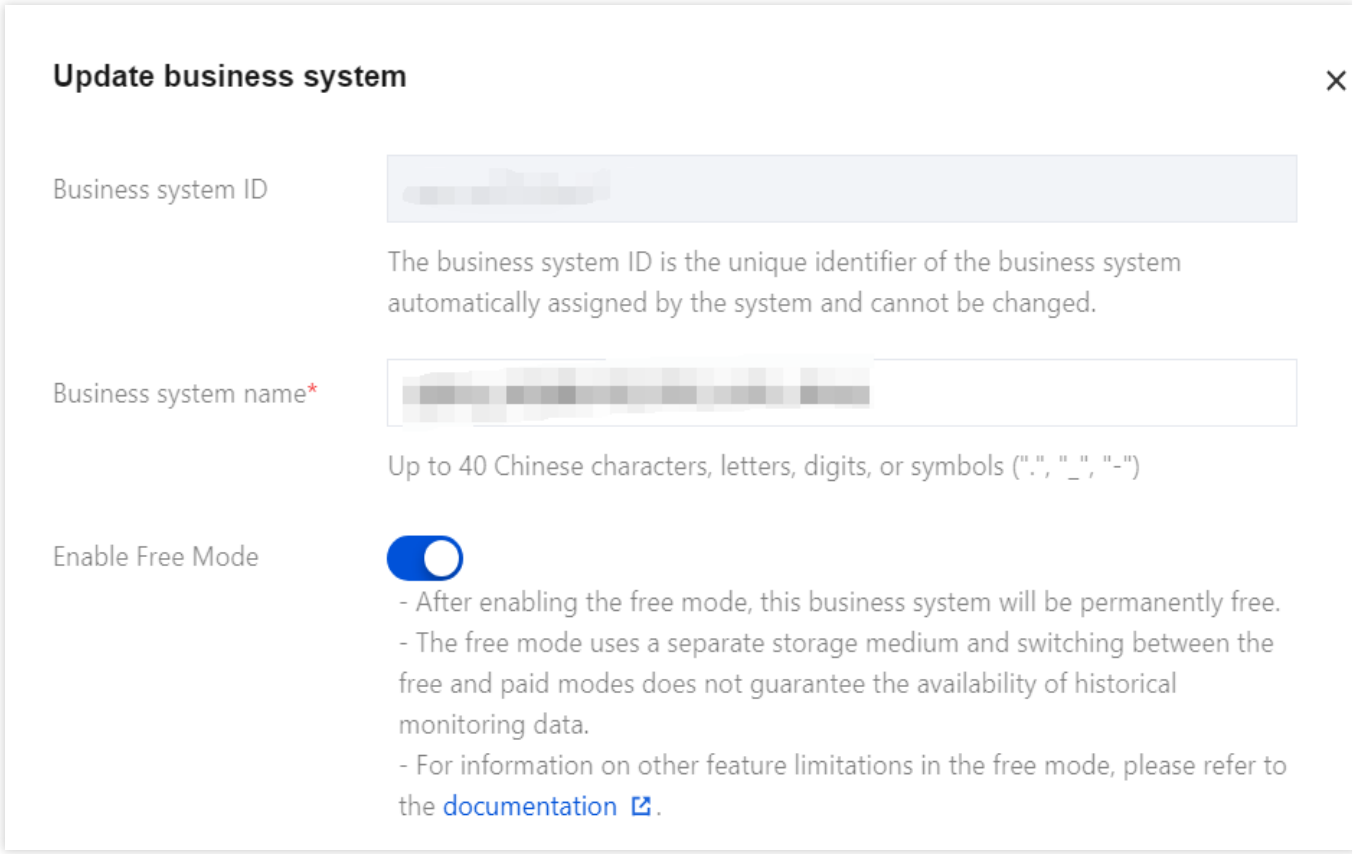
Features Supported in Free Mode

In addition to the use limits mentioned above, all other APM features can be used normally in free mode. These include application performance overview, application topology, JVM monitoring, API monitoring, database call analysis, MQ call analysis, error analysis, and advanced diagnostic capabilities such as application performance profiling.

How to Enable Free Mode?

1. Log in to the TCOP console.
2. Go to **APM > Resource management > System Management**, find the business system to enable free mode, and click **Modify configuration**.

3. In the **Update business system** dialog box, turn on the **Enable Free Mode** switch, and click **OK**.



Once the operation is completed, the business system will enter Free Mode, and all charging associated with the system will stop immediately. In free mode, application access operates in the same manner as in the normal mode. Switching between free mode and paid mode takes effect instantly without requiring re-access of the application. Free mode is configured at the business system level, allowing both free mode and paid mode business systems to coexist under the same account.