

Application Performance Management FAQs Product Documentation



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Features

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What programming languages does APM support?

APM supports Java, PHP, Go, Python, and C++, with more to come.

What frameworks does APM support?

APM supports Tomcat, Spring Boot, gRPC, and Dubbo. If you use other frameworks, you can collect and report data with other open-source SDKs and view it in APM.

Can APM monitor clusters at other cloud vendors?

APM supports hybrid deployment. As long as the agent can access the public network, it can report service information at the public network reporting address provided by APM. In this way, you can monitor applications deployed in clusters at other cloud vendors.

How does distributed tracing work?

It generates a trace ID for each request, passes through the entire call process, and then forms a complete call trace based on trace IDs.

Will the probe intrude business code?

APM's probe does not intrude business code. For different languages, you need to install the corresponding agent or import the corresponding plugin to start monitoring your service.

How do I access a Java application in APM?

You only need to download and install the Java agent in your service runtime environment. Then, configure the reporting token, reporting address, and application name to start monitoring.

How do I access a Go application in APM?

Install the instrumentation plugin in your Go project and download the agent. Then, configure the reporting token, reporting address, and application name to start monitoring.

How do I access a PHP application in APM?

You only need to download and install the PHP agent in your service runtime environment. Then, configure the reporting token, reporting address, and application name to start monitoring.

What are the differences between access methods?

Access via the probe (agent) is non-intrusive to the code and only requires modifying the configuration file.

For certain programming languages, no probe is currently available in the open-source ecosystem, which makes access via the SDK necessary. Specifically, you need to import the SDK, instrument remote calls, and modify the reporting configuration.

If you use SkyWalking or other open-source products, you only need to modify the configuration to report monitoring data, with no further component Ops needed.

Is APM compatible with the OpenTracing protocol?

Yes. You can directly report monitoring data through the agent if you have custom OpenTracing instrumentation.

Is the APM agent installed on a node or in a container?

Either will do.

What is trace storage?

It refers to each request trace stored in APM.

How long is the trace retention period in APM?

It is 3 days by default during the trial and can be 3, 7, 15, or 30 days after billing officially starts.

Usage

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How do I migrate from SkyWalking to APM?

APM is compatible with the SkyWalking protocol, so you only need to replace the reporting token and address of SkyWalking to start monitoring in APM.

What should I do if no data is displayed in the application list and tracing server but the resource management section shows that Go application data is reported?

You need to configure the `span.kind` tag in the code and specify `server` or `client` in `Value`.

`span.kind` differentiates the server from the client, which is required when the topology is drawn. If it is not configured, the topology data in the application list will be empty.

Key	Value
component	grpc
traceID	
net.peer.ip	
service.instance	
tapm.app.id	
span.kind	server

Why are some services grayed out in the APM topology when data is successfully reported?

From the service provider's perspective, a service will be grayed out if it is inactive, that is, it doesn't receive requests in the specified time range.

Why is there only trace data but no metric data?

Most probably, it is due to the `span.kind`. APM scrapes `span.kind` of the **client**, **server**, **consumer**, and **producer** types only. Make sure that your `span.kind` is one of them.

How does APM calculate the average error rate?

Average error rate = total number of error spans/total number of requests.

The average error rate is calculated by span. An error will be marked if any span is in the error status, which can be `error` or `status.code` in APM.

Key	Value
status.code	2
error	true
event	error
error.kind	io.grpc.StatusRuntimeException

Note:

APM will support the custom calculation of errors in the future.

What should I do if APM's private network address is unpingable during reporting over the private network?

1. Check whether the server and APM business system are in the same region.
2. Check whether the server address and port are pingable, and if not, [submit a ticket](#) for assistance.

Apdex Threshold

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What is Apdex?

Application Performance Index (Apdex) was developed by an alliance of companies to specify a uniform way for reporting and measuring the performance of applications. It averages your application score in the range of 0–1, indicating where the digital experience offered to your users falls in the satisfaction range. 0 indicates that no user is satisfied, while 1 indicates that all users are satisfied. This helps you better understand the user sanctification of your application.

What is the rule of Apdex threshold calculation?

The metric has three response counts for an application:

Satisfied: The response time is less than or equal to the Apdex threshold, indicating that the user will not be affected by the response time and will be efficient in operations.

Tolerating: The response time is greater than the Apdex threshold and less than or equal to four times the threshold, indicating that the user will perceive but can tolerate the response time.

Frustrated: The response time is greater than four times the Apdex threshold.

What is the formula of Apdex threshold calculation?

$$\text{Apdex} = (\text{number of satisfied users} + \text{number of tolerating users}/2) / \text{total number of samples}$$

The metric is in the range of 0–1, subject to the response time of the application. 1 indicates that all users are satisfied with the application performance, 0 indicates that no user is satisfied, and 0.5 indicates that all users are tolerating.