If you find Xdebug useful, please consider **supporting the project**.

Step Debugging

Xdebug's step debugger allows you to interactively walk through your code to debug control flow and examine data structures.

Introduction

Xdebug interacts with IDEs to provide step debugging functionality, and therefore you also need to configure an IDE that knows how to talk to Xdebug with the open **DBGp** protocol.

This protocol is supported by nearly every PHP IDE (including Visual Studio Code and PhpStorm), and also by text-based editors. There is also a simple **Command Line Debug Client** available as part of the Xdebug project, but it is strongly recommended that you use an IDE for debugging. (An **overview of third party clients** is available further down this page.)

Configuring Step Debugging

In your `php.ini`, `99-xdebug.ini`, or other distribution specific PHP ini file, change (or set) the **xdebug.mode** setting to `debug`. Please refer to **Configure PHP** in the documentation to find out which PHP ini file to modify.

In set-ups where PHP/Xdebug and your IDE all run on the same host, this is all you need to configure on the PHP and Xdebug side. (Skip to **Activating the Debugger** if that's the case.)

If PHP/Xdebug run on a different machine, virtual host, or in a Docker container, you need to tell Xdebug where to make the debugging connection **to**, as it is Xdebug that initiates the communication to the IDE, and not the other way around.

If PHP/Xdebug run on a different machine in the same sub-net, and you run your browser on the same host as your IDE, then you set the **xdebug.discover_client_host** setting to `1`. Xdebug will then use the HTTP headers to find out the IP address of the host that initiated the debugging request, and use that IP address to connect to. This is a common way of set-up if you are sharing a development server among you and your team mates.

In more complex set-ups you need to configure the host and port that Xdebug connects to yourself. With **xdebug.client_host** you can select the IP or hostname of the machine that runs your IDE, and with **xdebug.client_port** the TCP port. Make sure that the host running PHP/Xdebug can connect to your IDE with the configured IP address and port, and that there is no firewall or other software blocking an incoming connection.

Activating Step Debugging

In the default configuration, the debugger activates if a "trigger" is present, although it's possible to instruct the debugger to always initiate a debugging session by setting **xdebug.start_with_request** to `yes`.

Which trigger to use depends on whether you're debugging a PHP application through **a browser**, or on the **command line**, such as when running unit tests.

Command Line

To signal the debugger to initiate connections, Xdebug will look whether the `XDEBUG_SESSION` environment variable is present.

The value of the variable does not matter unless you have set up a trigger value with **xdebug.trigger_value**.

On Unix like platforms, you can set it like:

```
export XDEBUG_SESSION=1
```

On Windows, you set the environment like:

```
set XDEBUG_SESSION=1
```

When you now run a php script with `php myscript.php` or `vendor/bin/phpunit` Xdebug will initiate a debugging session and connect to your IDE.

Please refer to the **Troubleshooting** section if it does not seem like Xdebug is activating.

Web Application

The recommended way to initiate a debugging session is by configuring your IDE to accept incoming debugging connections, and then use a browser extension which sets the right trigger cookie.

Browser Extension Initiation

The extensions are:

- **Xdebug Helper for Firefox** (**source**).
- **Xdebug Helper for Chrome** (**source**).
- **XDebugToggle for Safari** (**source**).

Each extension adds an icon to your browser where you can select which functionality you want to trigger. Xdebug will continue to start debugging for every request as long as the debug toggle has been enabled.

Manual Initiation

Alternatively, you can signal Xdebug to initiate debugging for a **single** request by adding `XDEBUG_SESSION=session_name` as additional `GET` (or `POST`) parameter. You can pick any value for `session_name` , unless **xdebug.trigger_value** is set.

For debugging **multiple** subsequent requests, Xdebug supports debugging sessions managed by a cookie.

Set the `XDEBUG_SESSION_START=session_name` `GET` (or `POST`) HTTP parameter.

Xdebug will set the `XDEBUG_SESSION` cookie. As long as the cookie is present, debugging will be initiated for every HTTP request (including favicons and images if they go through PHP).

Before Xdebug 3.1, the time-out of the cookie is one hour. Starting with Xdebug 3.1, the cookie has no time-out configured.

If you set the `XDEBUG_SESSION_STOP` `GET` (or `POST`) HTTP parameter, Xdebug removes the cookie.

HTTP Cookie

Xdebug will initiate a debug session in the presence of the `XDEBUG_SESSION` HTTP cookie. You can pick any value for the cookie, unless **xdebug.trigger_value** is set, in which case the value needs to match the value/one of the values from **xdebug.trigger_value**.

A typical header looks like:

```
Cookie: XDEBUG_SESSION=start
```

Alternative Ways of Triggering the Debugger

There are other ways how debugger activation can be triggered.

By Calling xdebug_break()

Calling **xdebug_break()** will trigger a debugging connection as long as **xdebug.start_with_request** is set to `trigger` and no debugger session is active yet. If a debugger session is already active, it will simply act as if a breakpoint was set through your IDE.

Upon an Error Situation

If you set **xdebug.start_upon_error** to `yes` then Xdebug will trigger a debugging connection when a PHP Notice or Warning appears, or when a **Throwable** (Error or Exception) is thrown.

Troubleshooting

You can troubleshoot Xdebug's attempts at initiating debugging connections by configuring a log file through **xdebug.log**. When the connection is successfully established the log will also contain the communication between Xdebug and IDE.

The log file will contain to which IP addresses it is attempting to connect and at which ports, which should be a great help debugging why it sometimes doesn't work. A "remote log file" is also required when reporting a bug in Xdebug's step debugger.

There are several logging levels which can be configured through **xdebug.log_level**.

The **xdebug.log** setting requires as argument a full path to a file, to which the user that PHP/Xdebug runs as can write to. It is advisable to use something like `/tmp/xdebug.log`.

Be aware: On many Linux distributions that run services through Systemd, the actual file path could be different, such as:

```
/tmp/systemd-private-80b2a71a8b9843c0b7c21b0d357e59cc-apache2.service-CN4RBr/x
```

Debugging Clients

This is an incomplete list of third-party clients, both free and commercial. Please refer to the original authors of these tools for documentation and support:

- **Eclipse plugin** (IDE).
- **KDevelop** (IDE: Linux (KDE); Open Source).
- ActiveState's **Komodo** (IDE: Windows, Linux, Mac; Commercial).
- **NetBeans** (IDE: Windows, Linux, Mac OS X and Solaris).
- Devsense's **PHP Tools for Visual Studio** (Plugin; Commercial).
- JetBrains' **PhpStorm** (IDE; Commercial).
- **SublimeTextXdebug** (Plugin for Sublime Text 2 and 3, Open Source).
- **VIM plugin** (Plugin; Open Source).
- **VS Code plugin** (Plugin; Open Source).

The simple command line client `dbgpClient` for debugging is available on the **download page**.

Implementation Details

This section documents some implementation details, that are mostly useful for authors of debugging clients that interact with Xdebug.

DBGp: context_names

Xdebug's implementation of the **DBGp protocol's** `context_names` command does not depend on the stack level. The returned value is always the same during each debugger session, and hence, can be safely cached.

Custom DBGp commands

The DBGp protocol allows for debugger engine specific commands, prefixed with the `xcmd_` prefix. Xdebug includes a few of these, and they're documented here.

DBGp: xcmd_profiler_name_get

If Xdebug's profiler is currently active (See: **Profiling**), this command returns the name of the file that is being used to write the profiling information to.

DBGp: xcmd_get_executable_lines

This command returns which lines in an active stack frame can have a working breakpoint. These are the lines which have an `EXT_STMT` opcode on them. This commands accepts a `-d` option, which indicates the stack depth, with `0` being the top leve stack frame.

The command returns the information in the following XML format:

```
<?xml version="1.0" encoding="iso-8859-1"?>
<response
  xmlns="urn:debugger_protocol_v1"
  xmlns:xdebug="https://xdebug.org/dbgp/xdebug"
  command="xcmd_get_executable_lines"
  transaction_id="10">
        <xdebug:lines>
                <xdebug:line lineno="2"></xdebug:line>
                <xdebug:line lineno="3"></xdebug:line>
                <xdebug:line lineno="4"></xdebug:line>
                <xdebug:line lineno="6"></xdebug:line>
                <xdebug:line lineno="8"></xdebug:line>
        </xdebug:lines>
</response>
```

Related Content

Debugging Symfony Console Commands

This video explains how to debug Symfony Console Commands on the CLI with PhpStorm

Laravel Sail with PhpStorm

This video shows how to enable and set-up Xdebug within the Laravel Sail Docker environment.

Setting up Apache, PHP, VS Code, and Xdebug in 10 minutes

This video shows you how to install Apache, PHP, VS Code, and Xdebug on Ubuntu 21.10, to get a PHP development set-up, all within 10 minutes.

Short Closures and Conditional Breakpoints

This short video shows how useful Xdebug is with short closures, and also introduce some basic conditional breakpoints.

Step Debugging Unit Tests with PhpStorm on Linux

This video explains how to install Xdebug on the Linux command line through PECL, and then shows how to find and fix bugs when running unit tests with PHPUnit.

Step Debugging with Docker and PhpStorm

This video explains in a few minutes how to set-up debugging with PHP and Xdebug running in Docker and PhpStorm.

Step Debugging with Docker and VS Code

This video explains how to dockerify the Symfony Demo Application, and then setup debugging with Xdebug and VS Code.

Related Settings and Functions

- string **xdebug.client_discovery_header** = ""
- string **xdebug.client_host** = localhost
- integer **xdebug.client_port** = 9003
- string **xdebug.cloud_id** =
- integer **xdebug.connect_timeout_ms** = 200
- boolean **xdebug.discover_client_host** = false
- string **xdebug.idekey** = *complex*
- string **xdebug.log** =
- integer **xdebug.log_level** = 7
- string **xdebug.mode** = develop
- string **xdebug.start_upon_error** = default
- string **xdebug.start_with_request** = default
- string **xdebug.trigger_value** = ""

- **xdebug_break**() : bool
- **xdebug_connect_to_client**() : bool
- **xdebug_info**() : mixed

- **xdebug_is_debugger_active**() : bool
- **xdebug_notify**() : bool

Settings

---

string xdebug.client_discovery_header = ""

If **xdebug.client_discovery_header** is configured to be a non-empty string, then the value is used as key in the `$_SERVER` superglobal array to determine which header to use to find the IP address or hostname to use for 'connecting back to'. This setting is only used in combination with **xdebug.discover_client_host** and is otherwise ignored.

For example, if **xdebug.client_discovery_header** is set to `HTTP_FORWARD_HOST`, then Xdebug will check `$_SERVER['HTTP_FORWARD_HOST']` before the `$_SERVER['HTTP_X_FORWARDED_FOR']` and `$_SERVER['REMOTE_ADDR']` variables.

> **Warning:** PHP automatically prepends `HTTP_`, and converts `-` to `_`, for received HTTP header names. The `THIS-IS-MY-HOST` HTTP header is converted into `$_SERVER['HTTP_THIS_IS_MY_HOST']`. Therefore, the **xdebug.client_discovery_header** needs to be set to `HTTP_THIS_IS_MY_HOST` to match this.

---

string xdebug.client_host = localhost

Configures the IP address or hostname where Xdebug will attempt to connect to when initiating a debugging connection. This address should be the address of the machine where your IDE or debugging client is listening for incoming debugging connections.

On non-Windows platforms, it is also possible to configure a **Unix domain socket** which is supported by only a select view debugging clients. In that case, instead of the hostname or IP address, use `unix:///path/to/sock`.

If **xdebug.discover_client_host** is enabled then Xdebug will only use the value of this setting in case Xdebug can not connect to an IDE using the information it obtained from HTTP headers. In that case, the value of this setting acts as a fallback only.

> **Note:** This setting can additionally be configured through the `XDEBUG_CONFIG` **environment variable**.

---

integer xdebug.client_port = 9003

The port to which Xdebug tries to connect on the remote host. Port `9003` is the default for both Xdebug and the **Command Line Debug Client**. As many clients use this port number, it is best to leave this setting unchanged.

> **Note:** This setting can additionally be configured through the `XDEBUG_CONFIG` **environment variable**.

---

string xdebug.cloud_id =

With this setting you configure Xdebug for use with **Xdebug Cloud**. It needs to match one of the tokens from your **profile page**.

Your IDE needs to be configured with the same token for Xdebug and your IDE to communicate through Xdebug Cloud.

In PhpStorm you can find this setting under:
`File | Settings | PHP | Debug | Xdebug Cloud` for Windows and Linux
`PhpStorm | Preferences | PHP | Debug | Xdebug Cloud` for macOS

---

integer xdebug.connect_timeout_ms = 200

The amount of time in milliseconds that Xdebug will wait for on an IDE to acknowledge an incoming debugging connection. The default value of 200 ms should in most cases be enough. In case you often get dropped debugging requests, perhaps because you have a high latency network, or a development box far away from your IDE, or have a slow firewall, then you can should increase this value.

Please note that increasing this value might mean that your requests seem to 'hang' in case Xdebug tries to establish a connection, but your IDE is not listening.

---

boolean xdebug.discover_client_host = false

If enabled, Xdebug will first try to connect to the client that made the HTTP request. It checks the `$_SERVER['HTTP_X_FORWARDED_FOR']` and `$_SERVER['REMOTE_ADDR']` variables to find out which hostname or IP address to use.

If **xdebug.client_discovery_header** is configured, then the `$_SERVER` variable with that configured name will be checked before `HTTP_X_FORWARDED_FOR` and `REMOTE_ADDR`.

If Xdebug can not connect to a debugging client as found in one of the HTTP headers, it will fall back to the hostname or IP address as configured by the **xdebug.client_host** setting.

This setting does not apply for debugging through the CLI, as the `$_SERVER` header variables are not available there.

> **Note:** This setting can additionally be configured through the `XDEBUG_CONFIG` **environment variable**.

> **Warning:** Please note that there is no filter available, and anybody who can connect to the webserver will then be able to start a debugging session, even if their address does not match **xdebug.client_host**.

---

string xdebug.idekey = *complex*

Controls which IDE Key Xdebug should pass on to the debugging client or proxy. The IDE Key is only important for use with the **DBGp Proxy Tool**, although some IDEs are incorrectly picky as to what its value is.

The default is based on the `DBGP_IDEKEY` environment setting. If it is not present, the default falls back to an empty string.

If this setting is set to a non-empty string, it selects its value over `DBGP_IDEKEY` environment variable as default value.

The internal IDE Key also gets updated through debugging session management and overrides the value of this setting as is explained in the **Step Debugging** documentation.

> **Note:** This setting can additionally be configured through the `XDEBUG_CONFIG` **environment variable**.

---

string xdebug.log = #

Configures Xdebug's log file.

Xdebug will log to this file all file creations issues, **Step Debugging** connection attempts, failures, and debug communication.

Enable this functionality by setting the value to a absolute path. Make sure that the system user that PHP runs at (such as `www-data` if you are running with Apache) can create and write to the file.

The file is opened in append-mode, and will therefore not be overwritten by default. There is no concurrency protection available.

The log file will include any attempt that Xdebug makes to connect to an IDE:

```
[2693358] Log opened at 2020-09-02 07:19:09.616195
[2693358] [Step Debug] INFO: Connecting to configured address/port: localhost:
[2693358] [Step Debug] ERR: Could not connect to debugging client. Tried: loca
[2693358] [Profiler] ERR: File '/foo/cachegrind.out.2693358' could not be open
[2693358] [Profiler] WARN: /foo: No such file or directory
[2693358] [Tracing] ERR: File '/foo/trace.1485761369' could not be opened.
[2693358] [Tracing] WARN: /foo: No such file or directory
[2693358] Log closed at 2020-09-02 07:19:09.617510
```

It includes the opening time (`2020-09-02 07:19:09.616195`), the IP/Hostname and port Xdebug is trying to connect to (`localhost:9003`), and whether it succeeded (`Connected to client`). The number in brackets (`[2693358]`) is the Process ID.

It includes:

`[2693358]`
: process ID in brackets

`2020-09-02 07:19:09.616195`
: opening time

For **Step Debugging**:

```
INFO: Connecting to configured address/port: localhost:9003.
ERR: Could not connect to debugging client. Tried: localhost:9003 (through xde
```

For **Profiling**:

```
ERR: File '/foo/cachegrind.out.2693358' could not be opened.
WARN: /foo: No such file or directory
```

For **Function Trace**:

```
ERR: File '/foo/trace.1485761369' could not be opened.
WARN: /foo: No such file or directory
```

All warnings and errors are described on the **Description of errors** page, with detailed instructions on how to resolve the problem, if possible. All errors are always logged through PHP's internal logging mechanism (configured with **error_log** in `php.ini`). All warnings and errors also show up in the diagnostics log that you can view by calling **xdebug_info()**.

Step Debugger Communication

The debugging log can also log the communication between Xdebug and an IDE. This communication is in XML, and starts with the `<init` XML element:

```
<init
    xmlns="urn:debugger_protocol_v1" xmlns:xdebug="https://xdebug.org/dbgp/xdel
    fileuri="file:///home/httpd/www.xdebug.org/html/router.php"
    language="PHP" xdebug:language_version="7.4.11-dev"

    protocol_version="1.0" appid="2693358" idekey="XDEBUG_ECLIPSE">
        <engine version="3.0.0-dev"><![CDATA[Xdebug]]></engine>
        <author><![CDATA[Derick Rethans]]></author>
        <url><![CDATA[https://xdebug.org]]></url>
        <copyright><![CDATA[Copyright (c) 2002-2020 by Derick Rethans]]></copy
</init>
```

The `fileuri` attribute lists the entry point of your application, which can be useful to compare to `breakpoint_set` commands to see if path mappings are set-up correctly.

Beyond the `<init` element, you will find the configuration of **features**:

```
<- feature_set -i 4 -n extended_properties -v 1
-> <response
       xmlns="urn:debugger_protocol_v1" xmlns:xdebug="https://xdebug.org/dbgp/
       command="feature_set" transaction_id="4" feature="extended_properties"
   </response>
```

And **continuation commands**:

```
<- step_into -i 9
-> <response
       xmlns="urn:debugger_protocol_v1" xmlns:xdebug="https://xdebug.org/dbgp/:
       command="step_into" transaction_id="9"
       status="break" reason="ok">
           <xdebug:message filename="file:///home/httpd/www.xdebug.org/html/rou
           </xdebug:message>
   </response>
```

You can read about **DBGP - A common debugger protocol specification** at its dedicated documation page.

The **xdebug.log_level** setting controls how much information is logged.

> **Warning:** Many Linux distributions now use systemd, which implements **private tmp** directories. This means that when PHP is run through a web server or as PHP-FPM, the `/tmp` directory is prefixed with something akin to:

```
/tmp/systemd-private-ea3cfa882b4e478993e1994033fc5feb-apache.service-FfWZRg
```

> **Note:** This setting can additionally be configured through the `XDEBUG_CONFIG` **environment variable**.

---

integer xdebug.log_level = 7

Configures which logging messages should be added to the log file.

The log file is configured with the **xdebug.log** setting.

The following levels are supported:

Level	Name	Example
0	Criticals	Errors in the configuration
1	Errors	Connection errors
3	Warnings	Connection warnings
5	Communication	Protocol messages
7	Information	Information while connecting

10	Debug	Breakpoint resolving information

Criticals, errors, and warnings always show up in the diagnostics log that you can view by calling **xdebug_info()**.

Criticals and errors are additionally logged through PHP's internal logging mechanism (configured with **error_log** in `php.ini`).

> **Note:** This setting can additionally be configured through the `XDEBUG_CONFIG` **environment variable**.

---

string xdebug.mode = develop #

This setting controls which Xdebug features are enabled.

> **Note:** This setting can only be set in `php.ini` or files like `99-xdebug.ini` that are read when a PHP process starts (directly, or through php-fpm), but not in `.htaccess` and `.user.ini` files, which are read per-request.

The following values are accepted:

`off`
: Nothing is enabled. Xdebug does no work besides checking whether functionality is enabled. Use this setting if you want close to 0 overhead.

`develop`
: Enables Development Helpers including the overloaded var_dump().

`coverage`
: Enables Code Coverage Analysis to generate code coverage reports, mainly in combination with PHPUnit.

`debug`
: Enables Step Debugging. This can be used to step through your code while it is running, and analyse values of variables.

`gcstats`
: Enables Garbage Collection Statistics to collect statistics about PHP's Garbage Collection Mechanism.

`profile`
: Enables Profiling, with which you can analyse performance bottlenecks with tools like KCacheGrind.

`trace`
: Enables the Function Trace feature, which allows you record every function call, including arguments, variable assignment, and return value that is made during a request to a file.

You can enable multiple modes at the same time by comma separating their identifiers as value to **xdebug.mode**: `xdebug.mode=develop,trace`.

XDEBUG_MODE environment variable

You can also set Xdebug's mode by setting the `XDEBUG_MODE` environment variable on the command-line; this will take precedence over the **xdebug.mode** setting, but will not change the value of the **xdebug.mode** setting.

> **Warning:** Some web servers have a configuration option to prevent environment variables from being propagated to PHP and Xdebug.
>
> For example, PHP-FPM has a `clear_env` configuration setting that is `on` by default, which you will need to turn `off` if you want to use `XDEBUG_MODE`.
>
> Make sure that your web server does not clean the environment, or specifically allows the `XDEBUG_MODE` environment variable to be passed on.

---

string xdebug.start_upon_error = default

Step Debugging can be activated when a PHP Notice or Warning is emitted, or when a **Throwable** (Exception/Error) is thrown, depending on the value of this setting:

`yes`

Initialise a debugging session when a PHP Notice or Warning is emitted, or when a Throwable is thrown.

`no`

`default`

Do not start a debugging session upon an error situation.

This setting is independent of **xdebug.start_with_request**, and therefore it is not necessary to set **xdebug.start_with_request** `=trigger`.

---

string xdebug.start_with_request = default

A **Function Trace**, **Garbage Collection Statistics**, **Profiling**, or **Step Debugging** can be activated at the start of a PHP request. Whether this happens depends on the value of this setting:

`yes`

The functionality starts when the PHP request starts, and before any PHP code is run.

For example **xdebug.mode**= `trace` and **xdebug.start_with_request**= `yes` starts a **Function Trace** for the whole request.

`no`

The functionality does not get activated when the request starts.

You can still start a **Function Trace** with **xdebug_start_trace()**, **Step Debugging** with **xdebug_break()**, or **Garbage Collection Statistics** with **xdebug_start_gcstats()**.

`trigger`

The functionality only gets activated when a specific trigger is present when the request starts.

The name of the trigger is `XDEBUG_TRIGGER`, and Xdebug checks for its presence in either `$_ENV` (environment variable), `$_GET` or `$_POST` variable, or `$_COOKIE` (HTTP cookie name).

There is a legacy fallback to a functionality specific trigger name: `XDEBUG_PROFILE` (for **Profiling**), `XDEBUG_TRACE` (for a **Function Trace**), and `XDEBUG_SESSION` (for **Step Debugging**).

There is another legacy trigger. If you set the `XDEBUG_CONFIG` environment variable to any value, then Xdebug will also get activated.

Debug session management for **Step Debugging** is also available through `XDEBUG_SESSION_START`.

With **xdebug.trigger_value** you can control which specific trigger value will activate the trigger. If **xdebug.trigger_value** is set to an empty string, **any** value will be accepted.

`default`

The `default` value depends on **xdebug.mode**:

- **debug**: `trigger`
- **gcstats**: `no`

- **profile**: `yes`
- **trace**: `trigger`

---

string xdebug.trigger_value = "" #

This setting can be used when **xdebug.start_with_request** is set to `trigger`, which is the default for **Step Debugging** and **Function Trace**.

In `trigger` mode, Xdebug will only start its functionality when the `XDEBUG_TRIGGER` is set in the environment, or when the `XDEBUG_TRIGGER` GET, POST, or COOKIE variable is set.

The legacy names `XDEBUG_SESSION` (for **Step Debugging**), `XDEBUG_PROFILE` (for **Profiling**), and `XDEBUG_TRACE` (for **Function Trace**) can also be used instead of `XDEBUG_TRIGGER`.

Normally, Xdebug does not look at which value is actually used. If this setting is set to a non-empty string, then Xdebug will only trigger if the value matches the value of this setting.

With the following settings:

```
xdebug.mode=profile
xdebug.start_with_request=trigger
xdebug.trigger_value=StartProfileForMe
```

Xdebug's profiler will only start when either the environment variable `XDEBUG_TRIGGER` is set to `StartProfileForMe`, the GET or POST variable `XDEBUG_TRIGGER` is set to `StartProfileForMe`, or when the cookie `XDEBUG_TRIGGER` has the value `StartProfileForMe`.

From Xdebug 3.1, it is possible to configure multiple values by using a comma separated list. In that case, Xdebug will trigger if the supplied value matches any of the entries that are configured through this setting:

```
xdebug.trigger_value=StartDebuggerForMe,StartDebuggerForYou
```

See also:

xdebug.start_with_request#trigger

For how the triggering mechanism works, and which environment and server variables Xdebug acts on.

Functions

---

xdebug_break() : bool

Emits a breakpoint to the debug client

This function makes the debugger break on the line it is called from, as if a normal file/line breakpoint was set on this line through the debugger protocol.

If no debugging session is active yet, and **xdebug.start_upon_request** is set to `trigger`, then Xdebug will attempt to start a new debugging session first.

The function returns `true` if a debugging session is (now) active, and the breakpoint was succesfully set. It returns `false` if a debugging session was not active and could not be activated.

---

xdebug_connect_to_client() : bool

Instructs Xdebug to establish a debugging session

Introduced in version 3.1

This functions instructs Xdebug to try to establish a connection to a debugging client.

Normally, Xdebug tries to start a debugging session at the start of the request. If a debugging client is not listening at that point, then Xdebug does not try to re-establish a connection during the remainder of the request.

In the situation where one long running PHP process handles multiple tasks, perhaps from a queue, calling **xdebug_connect_to_client()** can then be used to re-try to establish a connection for a specific worker job.

---

xdebug_info(string $category = null) : mixed

Show and retrieve diagnostic information

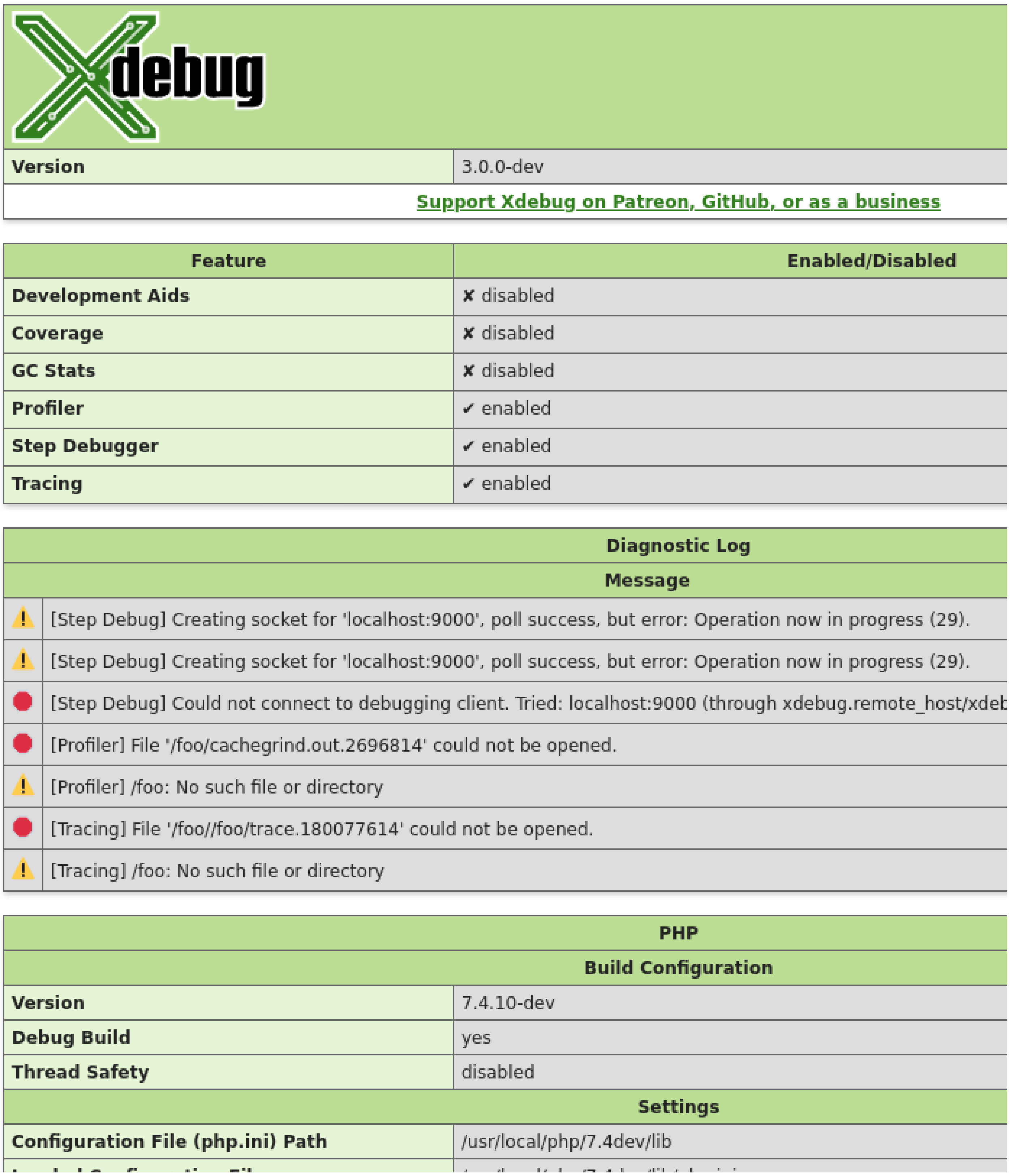
This function presents APIs to retrieve information about Xdebug itself. Which information gets returned, or displayed, depends on which arguments, or none at all, are given.

`$category =`

Without arguments, this function returns an HTML page which shows diagnostic information. It is analogous to PHP's **phpinfo()** function.

The HTML output includes which mode is active, what the settings are, and diagnostic information in case there are problems with debugging connections, opening of files, etc.

Each warning and error in the diagnostics log also links through to the **Description of errors** documentation page.



Version	3.0.0-dev
	Support Xdebug on Patreon, GitHub, or as a business

Feature	Enabled/Disabled
Development Aids	✘ disabled
Coverage	✘ disabled
GC Stats	✘ disabled
Profiler	✔ enabled
Step Debugger	✔ enabled
Tracing	✔ enabled

Diagnostic Log	
	Message
⚠	[Step Debug] Creating socket for 'localhost:9000', poll success, but error: Operation now in progress (29).
⚠	[Step Debug] Creating socket for 'localhost:9000', poll success, but error: Operation now in progress (29).
●	[Step Debug] Could not connect to debugging client. Tried: localhost:9000 (through xdebug.remote_host/xdeb
●	[Profiler] File '/foo/cachegrind.out.2696814' could not be opened.
⚠	[Profiler] /foo: No such file or directory
●	[Tracing] File '/foo//foo/trace.180077614' could not be opened.
⚠	[Tracing] /foo: No such file or directory

PHP	
Build Configuration	
Version	7.4.10-dev
Debug Build	yes
Thread Safety	disabled
Settings	
Configuration File (php.ini) Path	/usr/local/php/7.4dev/lib

`$category = 'mode'` *(New in Xdebug 3.1)*

The function returns an array of all the enabled modes, whether through **xdebug.mode** or the `XDEBUG_MODE` environment variable.

Example:

```
<?php
var_dump( xdebug_info( 'mode' ) );
?>
```

Returns:

```
array(3) {
  [0] =>
  string(5) "debug"
  [1] =>
  string(7) "develop"
  [2] =>
  string(5) "trace"
}
```

`$category = 'extension-flags'` *(New in Xdebug 3.1)*

The function returns an array of all the compile flags that were enabled when running `./configure` as part of Xdebug's compilation process.

The only flag that is available, is the `compression` flag. If this flag is enabled, then the **xdebug.use_compression** setting is available, and enabled by default.

Profiling and **Function Trace** will create GZip compressed files if the **xdebug.use_compression** setting is turned on (the default).

Example:

```
<?php
var_dump( xdebug_info( 'extension-flags' ) );
?>
```

Returns:

```
array(1) {
  [0] =>
  string(11) "compression"
}
```

xdebug_is_debugger_active() : bool

Returns whether a debugging session is active

Returns `true` if a debugging session through DBGp is currently active with a client attached; `false`, if not.

---

xdebug_notify(mixed $data) : bool

Sends data to a debugging client

Introduced in version 3.1

This function sends the contents of the `$data` variable over the debugging protocol to a client.

If the step debugger mode is not active, or if there is no active debugging session, this function returns `false`, otherwise `true` is returned.

A debugging client needs specific support to handle these notifications.