Debugging, logging and errors

The Exponential counterparts of the Symfony profiler, Laravel Telescope and Debugbar, Django Debug Toolbar and framework loggers - debug output and the Exp debug bar, template path comments, eZDebug and eZLog, the log…

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This page is for developers who rely on a profiler toolbar and a PSR-3 logger. Exponential has its own debug output, turned into a pinned **debug bar**, its own logging calls, and an administration page that reads the logs (Debugging and logs).

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Debug output and the debug bar

INI

```ini
# settings/override/site.ini.append.php, or the dev variant of it (development only)
[DebugSettings]
DebugOutput=enabled

[TemplateSettings]
ShowTemplatePathComments=enabled
```

The debug bar shows queries, templates used, settings, timings and caches for the page, and has controls for the debug settings and the caches (Exp debug bar). It can be shown to your own address only. Template path comments print which file wrote which markup (Template path comments). Never enable debug output on a production siteaccess for everyone; it shows internals. Put it in the `dev` variant of your settings (Environments and secrets).

Writing debug and log lines

PHP

```php
eZDebug::writeNotice( 'Imported 12 items', __METHOD__ );
eZDebug::writeWarning( 'Item 42 had no title', __METHOD__ );
eZDebug::writeError( 'Feed could not be read: ' . $message, __METHOD__ );
eZLog::write( 'archive sent for object ' . (int)$objectID, 'expdemo.log' );
```

Warnings and errors go to `var/log/warning.log` and `var/log/error.log` whatever the debug setting; `eZLog::write()` writes a log of your own in the log directory. These are not PSR-3 loggers; if you use Monolog in your extension, it writes its own files. Never log passwords, keys, tokens or personal data.

The log files

File	Holds
`var/log/error.log`, `warning.log`	errors and warnings
`var/log/security.log`	security events
`var/log/csp.log`	Content Security Policy reports
`var/log/requestrules.log`	the `log` action of request rules
your own `*.log`	what your code writes

Setup > Logs shows them with a digest of repeated messages (Log viewer); logs rotate (Log rotation); request logs record requests with timings (Request logs). Security-relevant actions belong in the audit trail (Audit trail). In a multisite installation the log paths can differ per site (Multi-site log and cache paths).

From an error page to the log line

Error pages carry a reference; search the logs for it to find the full message (Finding an error by its reference). The first page for any problem is When something goes wrong.

Debugging under Velocity

- Workers keep classes and settings in memory: after a change, `./console exp:velocity deploy` (or `restart`), or you are debugging old code.
- Compare with PHP's built-in server engine (`--engine=php`), which runs each request fresh, when you suspect state kept between requests (Velocity engines).
- Never wrap `eZExecution::cleanExit()` in `catch ( Exception $e )`: under Velocity it ends the request with an exception.

Compared with other frameworks

Framework	Tool	Exponential
Symfony	web profiler, Monolog	debug bar, `eZDebug`, `eZLog`, **Setup > Logs**
Laravel	Debugbar, Telescope, `Log::`	the same
Django	Debug Toolbar, `logging`	the same
Rails	logs, byebug	the same; Xdebug works as in any PHP project
Spring	Actuator, SLF4J	**Setup > System information**, request logs

Related pages

- Debug bar guide
- Debug output improvements
- Template errors and debugging
- Free documentation: this page is free to copy, translate and improve under the GNU FDL 1.3.

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