

Sodium Extension Installation Guide

Complete Step-by-Step Instructions for PHP Sodium Extension

Overview

This guide provides step-by-step instructions for compiling and installing the Sodium PHP extension, which is mandatory for certain PHP applications that require modern cryptographic functions.

Prerequisites

- XAMPP installed on your system
- Terminal access with sudo privileges
- Internet connection for downloading packages

' Step 1: Install autoconf and build tools

```
sudo apt install autoconf automake build-essential
```

This will install autoconf, automake, gcc compiler, make utility, and other essential build tools.

' Step 2: Run phpize

```
cd /tmp/libsodium-2.0.23  
/opt/lampp/bin/phpize
```

Expected output:

Configuring for:

PHP Api Version: 20220829

Zend Module Api No: 20220829

Zend Extension Api No: 420220829

' Step 3: Configure the build

```
./configure --with-php-config=/opt/lampp/bin/php-config
```

Run the configure script with the correct PHP configuration path.

' Step 4: Compile and install

```
make  
sudo make install
```

Expected output:

Installing shared extensions: /opt/lampp/lib/php/extensions/no-debug-non-zts-20220829/

' Step 5: Enable the extension in php.ini

```
sudo nano /opt/lampp/etc/php.ini  
  
Add: extension=sodium.so
```

Edit the PHP configuration file and add the extension line. Save with CTRL+O, Enter, then CTRL+X.

' Step 6: Restart XAMPP

```
sudo /opt/lampp/lampp restart
```

Restart all XAMPP services to load the new extension.

' Step 7: Verify installation

```
/opt/lampp/bin/php -i | grep sodium
```

Expected output:

sodium support => enabled

If you see this output, the Sodium extension has been successfully installed.

Troubleshooting

Permission denied errors

- Use sudo for commands requiring root privileges
- Check permissions on XAMPP directories

phpize command not found

- Verify XAMPP is properly installed
- Check that /opt/lampp/bin/phpize exists

Compilation errors

- Ensure all build tools are installed
- Check disk space
- Verify libsodium source files are complete

Extension not loading

- Double-check php.ini file path
- Ensure extension line is properly formatted
- Verify sodium.so exists in extensions directory