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**DATE(S) ISSUED:**

02/23/2015

**SUBJECT:**

Vulnerability in PHP Could Allow Remote Code Execution

**EXECUTIVE SUMMARY:**

A vulnerability has been discovered in PHP which could allow an attacker to remotely disclose source code and potentially execute arbitrary code. PHP is a programming language originally designed for use in web-based applications with HTML content. PHP supports a wide variety of platforms and is used by numerous web-based software applications.

Successfully exploiting this issue may allow remote attackers to execute arbitrary code in the context of a webserver. Failed attempts will likely result in denial-of-service conditions.

**THREAT INTELLIGENCE:**

There are currently no reports of these vulnerabilities being exploited in the wild. There are known exploits for these vulnerabilities.

**SYSTEM AFFECTED:**

- PHP 5.4.x prior to 5.4.38
- PHP 5.5.x prior to 5.5.22
- PHP 5.6.x prior to 5.6.6

**RISK:**

**Government:**

- Large and medium government entities: **High**
- Small government entities: **High**

**Businesses:**

- Large and medium business entities: **High**
- Small business entities: **High**

**Home users: N/A**

**TECHNICAL SUMMARY:**

A use-after-free vulnerability has been discovered that could result in remote code execution. This vulnerability is due to a use-after-free error in the 'DateTime/DateTimeZone/DateInterval/DatePeriod' object of the '\_wakeup()' magic method. This occurs because of improper handling of duplicate keys within the serialized properties of an object. An attacker may exploit this issue using a specially crafted input passed to the 'unserialize()' method.

The PHP '\_wakeup()' Function Use After Free Remote Code Execution Vulnerability exists in PHP versions 5.6 - 5.6.6, 5.5 - 5.5.22, and 5.4 - 5.4.38.

Successfully exploiting this issue may allow remote attackers to execute arbitrary code in the context of a webserver. Failed attempts will likely result in denial-of-service conditions.

**RECOMMENDATIONS:**

The following actions should be taken:

- Verify no unauthorized modifications occurred to the system before installing patches.
- Apply appropriate fixes or patches provided by the PHP Group to vulnerable systems immediately after appropriate testing.
- Apply the principle of Least Privilege to all systems and services.
- Remind users not to visit websites or follow links provided by unknown or untrusted sources.
- Do not open email attachments from unknown or untrusted sources.
- Limit user account privileges to only those required.

**REFERENCES:****PHP:**

<https://bugs.php.net/bug.php?id=68942>

**GitHub:**

<https://github.com/80vul/phpcodz/blob/master/research/pch-020.md>

**CVE:**

<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2015-0273>

**SecurityFocus:**

<http://www.securityfocus.com/bid/72701>

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