



**State of Alaska Cyber Security &  
Critical Infrastructure  
Cyber Advisory**

**August 7, 2015**

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**ADVISORY NUMBER:  
SA2015-091**

**DATE(S) ISSUED:  
08/07/2015**

**SUBJECT:  
Multiple Vulnerabilities in PHP Could Allow Arbitrary Code Execution**

**OVERVIEW:**  
Multiple vulnerabilities have been discovered in PHP which could allow an attacker to 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 these issues may allow remote attackers to execute arbitrary code in the context of a webserver.

**THREAT INTELLIGENCE**  
There are currently no reports of these vulnerabilities being exploited in the wild. There are known proof-of-concept exploits for this vulnerability.

**SYSTEMS AFFECTED:**

- PHP 5.4 prior to 5.4.44
- PHP 5.5 prior to 5.5.28
- PHP 5.6 prior to 5.6.12

**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: Low

**TECHNICAL SUMMARY:**

PHP has released updates that address multiple vulnerabilities that could allow for arbitrary code execution in the context of a webserver. These vulnerabilities include:

- Bug 70068 - A use-after-free vulnerability exists in the unserialization of ArrayObject items.
- Bug 70166 - A use-after-free vulnerability exists in the unserialization of the SPLArrayObject.
- Bug 70168 - A use-after-free vulnerability exists in the unserialization of SplObjectStorage.
- Bug 70169 - A use-after-free vulnerability exists in the unserialization of SplDoublyLinkedList.

Another bug fixed in PHP Phar may be found below:

- Bug 70019 - A vulnerability exists that allows extraction of archived files into the upper level directory.

#### **RECOMMENDATIONS:**

We recommend the following actions be taken:

- Upgrade to the latest version of PHP 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:

<http://php.net/ChangeLog-5.php#5.4.44>

<http://php.net/ChangeLog-5.php#5.5.28>

<http://php.net/ChangeLog-5.php#5.6.12>