

## **GROUP 1**

### **TASK A: EXTRACT USEFUL INFORMATION FROM CVE DESCRIPTIONS**

Given the following CVE descriptions, fill the related form with the required information.

#### **EXAMPLE:**

#### **CVE DESCRIPTION**

*The ironic-api service in OpenStack Ironic before 4\_2\_5 (Liberty) and 5\_x before 5\_1\_2 (Mitaka) allows remote attackers to obtain sensitive information about a registered node by leveraging knowledge of the MAC address of a network card belonging to that node and sending a crafted POST request to the v1/drivers/\$DRIVER\_NAME/vendor\_passthru resource*

<b>Name of the software affected by the vulnerability</b>	OpenStack Ironic
<b>Versions of the Software affected by the vulnerability</b>	5_x
<b>Versions before which the software is affected by the vulnerability</b>	5_1_2
<b>Vulnerability name</b>	(in this case the name of the vulnerability does not appear in the description)
<b>Type of Attacker who could exploit the vulnerability</b>	Remote Attackers
<b>Source of the vulnerability</b>	Leveraging knowledge of the address and sending POST request
<b>Effects of the vulnerability</b>	Obtain sensitive information
<b>Vulnerability Category</b>	Information Disclosure and/or Arbitrary File Read
<b>Time taken to extract the required information</b>	1m 42s

## **Categories of Vulnerabilities**

<b>Category</b>	<b>Description</b>
Authentication bypass or Improper Authorization	An exploitation of this issue might allow an attacker to bypass the required authentication. Or the application does not perform properly the authentication check, when an user attempts to access a resource without the necessary permissions.
Cross-Site Scripting or HTML Injection	An exploitation of this issue might allow an attacker to execute arbitrary script code in the web browser of the site visitor and steal his cookie-based authentication credentials.
Denial Of Service (DoS)	An exploitation of this issue might allow an attacker to crash the affected application, denying any further access.
Directory Traversal	An exploitation of this issue might allow an attacker to gain read access to arbitrary file content on the affected system.
Local File Include, Remote File Include and Arbitrary File Upload	An exploitation of this issue might allow an attacker to include arbitrary remote files containing malicious code. The code could then be executed on the affected system with the webserver process privileges.
Information Disclosure and/or Arbitrary File Read	An exploitation of this issue might allow an attacker to get access to arbitrary files on the affected system.
Buffer/Stack/Heap/ Integer Overflow, Format String and Off-by-One	Input data are copied to an insufficiently sized memory buffer. An exploitation of this issue might allow an attacker to execute arbitrary code in the context of the affected application or cause denial of service conditions.
Remote Code Execution	An exploitation of this issue might allow an attacker to execute arbitrary code within the context of the affected application, potentially allowing an unauthorized access or a privilege escalation.
SQL Injection	The vulnerable application does not properly sanitize user supplied input data before using them in a SQL query. An exploitation of this issue might allow an attacker to compromise, access and modify data on the affected system with the database user process privileges.
Unspecified Vulnerability	A successful exploitation of this issue might allow an authenticated attacker to affect confidentiality or integrity or availability or all of them.

## **CVE DESCRIPTION #1 (CVE-2015-5174)**

***Directory traversal vulnerability in path-0 in Apache Tomcat 6\_x before 6\_0\_45, 7\_x before 7\_0\_65, and 8\_x before 8\_0\_27 allows remote authenticated users to bypass intended SecurityManager restrictions and list a parent directory via a /.. (slash dot dot) in a pathname used by a web application in a getResource, getResourceAsStream, or getResourcePaths call, as demonstrated by the \$CATALINA\_BASE/webapps directory.***

<b>Name of the software affected by the vulnerability</b>	Apache Tomcat
<b>Versions of the Software affected by the vulnerability</b>	6_x, 7_x and 8_x
<b>Versions before which the software is affected by the vulnerability</b>	6_0_45, 7_0_65, 8_0_27
<b>Vulnerability name</b>	Directory traversal vulnerability in path-0
<b>Type of Attacker who could exploit the vulnerability</b>	(in this case the type of attacker does not appear in the description)
<b>Source of the vulnerability</b>	\$CATALINA_BASE/webapps directory
<b>Effects of the vulnerability</b>	It allows remote authenticated users to bypass intended SecurityManager restrictions and list a parent directory via a /... in a pathname used by a web applicatuon in a getResource, getResourceAsStream, or getResourcePaths call, as demonstrated by tge \$CATALINA_BASE/webapps directory.
<b>Vulnerability Category</b>	Directory Traversal
<b>Time taken to extract the required information</b>	5m 10s

## **CVE DESCRIPTION #2 (CVE-2016-6289)**

***Integer overflow in the virtual\_file\_ex function in path-0 in PHP before 5\_5\_38, 5\_6\_x before 5\_6\_24, and 7\_x before 7\_0\_9 allows remote attackers to cause a denial of service (stack-based buffer overflow) or possibly have unspecified other impact via a crafted extract operation on a ZIP archive.***

<b>Name of the software affected by the vulnerability</b>	PHP
<b>Versions of the Software affected by the vulnerability</b>	5_6_x, 7_x
<b>Versions before which the software is affected by the vulnerability</b>	5_5_38, 5_6_24, 7_0_9
<b>Vulnerability name</b>	(in this case the vulnerability name does not appear in the description)
<b>Type of Attacker who could exploit the vulnerability</b>	Remote attackers
<b>Source of the vulnerability</b>	Integer overflow in the virtual_file_ex function in path-0
<b>Effects of the vulnerability</b>	It cause a denial of service (stack-based buffer overflow) or possibly have unspecified other impact via a crafted extract operation on a ZIP archive
<b>Vulnerability Category</b>	Buffer/Stack/Heap Integer Overflow, Format String and Off-by-one
<b>Time taken to extract the required information</b>	4m 50s

## **CVE DESCRIPTION #3 (CVE-2016-4072)**

*The Phar extension in PHP before 5\_5\_34, 5\_6\_x before 5\_6\_20, and 7\_x before 7\_0\_5 allows remote attackers to execute arbitrary code via a crafted filename, as demonstrated by mishandling of \0 characters by the phar\_analyze\_path function in path-0*

<b>Name of the software affected by the vulnerability</b>	PHP
<b>Versions of the Software affected by the vulnerability</b>	5_6_X, 7_X
<b>Versions before which the software is affected by the vulnerability</b>	5_5_34, 5_6_20, 7_0_5
<b>Vulnerability name</b>	Phar extension
<b>Type of Attacker who could exploit the vulnerability</b>	Remote attackers
<b>Source of the vulnerability</b>	phar_analyze_path function in path-0
<b>Effects of the vulnerability</b>	It execute arbitrary code via a crafted filename, as demonstrated by mishandling of \0 characters
<b>Vulnerability Category</b>	Remote Code Execution
<b>Time taken to extract the required information</b>	6m 10

## **CVE DESCRIPTION #4 (CVE-2016-2108)**

***The path-0 implementation in OpenSSL before 1\_0\_1o and 1\_0\_2 before 1\_0\_2c allows remote attackers to execute arbitrary code or cause a denial of service (buffer underflow and memory corruption) via an ANY field in crafted serialized data, aka the "negative zero" issue.***

<b>Name of the software affected by the vulnerability</b>	OpenSSL
<b>Versions of the Software affected by the vulnerability</b>	1_0_2
<b>Versions before which the software is affected by the vulnerability</b>	1_0_1o, 1_0_2c
<b>Vulnerability name</b>	"Negative zero" issue
<b>Type of Attacker who could exploit the vulnerability</b>	Remote attackers
<b>Source of the vulnerability</b>	The path-0 implementation
<b>Effects of the vulnerability</b>	It execute arbitrary code or cause a denial of service (buffer underflow and memory corruption) via an ANY field in crafted serialized data
<b>Vulnerability Category</b>	Buffer/Stack/Heap Integer Overflow, Format String and Off-by-one
<b>Time taken to extract the required information</b>	3m 10s

## **CVE DESCRIPTION #5 (CVE-2016-7128)**

*The exif\_process\_IFD\_in\_TIFF function in path-0 in PHP before 5\_6\_25 and 7\_x before 7\_0\_10 mishandles the case of a thumbnail offset that exceeds the file size, which allows remote attackers to obtain sensitive information from process memory via a crafted TIFF image.*

<b>Name of the software affected by the vulnerability</b>	PHP
<b>Versions of the Software affected by the vulnerability</b>	7_x
<b>Versions before which the software is affected by the vulnerability</b>	5_6_25, 7_0_10
<b>Vulnerability name</b>	Not found
<b>Type of Attacker who could exploit the vulnerability</b>	Remote attackers
<b>Source of the vulnerability</b>	The exif_process_IFD_in_TIFF function in path-0
<b>Effects of the vulnerability</b>	It allows to obtain sensitive information from process memory via a crafted TIFF image
<b>Vulnerability Category</b>	Unspecified Vulnerability
<b>Time taken to extract the required information</b>	4m 20s