

## CWE - CWE-227: CWE CATEGORY: 7PK

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### CWE CATEGORY: 7PK - API Abuse








Category ID: 227

[Vulnerability Mapping](#): PROHIBITED This CWE ID must not be used to map to real-world vulnerabilities

#### ▼ Summary

This category represents one of the phyla in the Seven Pernicious Kingdoms vulnerability classification. It includes weaknesses that involve the software using an API in a manner contrary to its intended use. According to the authors of the Seven Pernicious Kingdoms, "An API is a contract between a caller and a callee. The most common forms of API misuse occurs when the caller does not honor its end of this contract. For example, if a program does not call `chdir()` after calling `chroot()`, it violates the contract that specifies how to change the active root directory in a secure fashion. Another good example of library abuse is expecting the callee to return trustworthy DNS information to the caller. In this case, the caller misuses the callee API by making certain assumptions about its behavior (that the return value can be used for authentication purposes). One can also violate the caller-callee contract from the other side. For example, if a coder subclasses `SecureRandom` and returns a non-random value, the contract is violated."

#### ▼ Membership

Nature	Type
MemberOf	 View - a subset of CWE entries that provides a way of examining CWE content. The two main view structures are Slices (flat lists) and
MemberOf	 Category - a CWE entry that contains a set of other entries that share a common characteristic.
HasMember	 Base - a weakness that is still mostly independent of a resource or technology, but with sufficient details to provide specific methods
HasMember	 Variant - a weakness that is linked to a certain type of product, typically involving a specific language or technology. More specific than
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HasMember	<b>C</b> Category - a CWE entry that contains a set of other entries that share a common characteristic.
HasMember	<b>E</b> Base - a weakness that is still mostly independent of a resource or technology, but with sufficient details to provide specific methods
HasMember	<b>V</b> Variant - a weakness that is linked to a certain type of product, typically involving a specific language or technology. More specific th

▼ Vulnerability Mapping Notes

Usage: PROHIBITED  (this CWE ID must not be used to map to real-world vulnerabilities)
Reason: Category
Rationale:  This entry is a Category. Using categories for mapping has been discouraged since 2019. Categories are informal organizational groupings of weaknesses that can help CWE users with data aggregation, navigation, and browsing. However, they are not weaknesses in themselves.
Comments:  See member weaknesses of this category.

▼ References

▼ Content History

▼ Submissions		
Submission Date	Submitter	Organization
2006-07-19 (CWE Draft 3, 2006-07-19)	7 Pernicious Kingdoms	
▶ Modifications		
Modification Date	Modifier	Organization
2008-07-01	Eric Dalci	Cigital
	updated Time_of_Introduction	
2008-09-08	CWE Content Team	MITRE
	updated Description, Relationships, Taxonomy_Mappings	
2009-05-27	CWE Content Team	MITRE
	updated Name, Relationships	

▼ Submissions		
2010-02-16	CWE Content Team	MITRE
	updated Relationships, Taxonomy_Mappings	
2010-12-13	CWE Content Team	MITRE
	updated Description	
2011-03-29	CWE Content Team	MITRE
	updated Description, Name	
2011-06-01	CWE Content Team	MITRE
	updated Common_Consequences	
2011-06-27	CWE Content Team	MITRE
	updated Common_Consequences	
2012-05-11	CWE Content Team	MITRE
	updated Relationships	
2012-10-30	CWE Content Team	MITRE
	updated Observed_Examples, Potential_Mitigations	
2013-07-17	CWE Content Team	MITRE
	updated Relationships	
2014-07-30	CWE Content Team	MITRE
	updated Relationships	
2017-01-19	CWE Content Team	MITRE
	updated Relationships	
2017-05-03	CWE Content Team	MITRE
	updated Observed_Examples, Related_Attack_Patterns	
2017-11-08	CWE Content Team	MITRE
	updated Alternate_Terms, Common_Consequences, Description, Name, Observed_Examples, Potential_Mitigations, References, Related_Attack_Patterns, Relationships, Taxonomy_Mappings, Time_of_Introduction, Type	
2019-01-03	CWE Content Team	MITRE
	updated Relationships	
2020-02-24	CWE Content Team	MITRE
	updated Description, References, Relationships	
2023-04-27	CWE Content Team	MITRE
	updated Mapping_Notes	
2023-06-29	CWE Content Team	MITRE
	updated Mapping_Notes	
► Previous Entry Names		
Change Date	Previous Entry Name	
2008-04-11	API Abuse	
2009-05-27	Failure to Fulfill API Contract (aka 'API Abuse')	
2011-03-29	Failure to Fulfill API Contract ('API Abuse')	
2017-11-08	Improper Fulfillment of API Contract ('API Abuse')	

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Source: <https://cwe.mitre.org/data/definitions/227.html>