# CWE Detail – CWE-289

## Description

The product performs authentication based on the name of a resource being accessed, or the name of the actor performing the access, but it does not properly check all possible names for that resource or actor.

## Extended Description

N/A

## Threat-Mapped Scoring

Score: 1.8

Priority: P4 - Informational (Low)

## Observed Examples (CVEs)

**•** CVE-2003-0317: Protection mechanism that restricts URL access can be bypassed using URL encoding.

**•** CVE-2004-0847: Bypass of authentication for files using "\" (backslash) or "%5C" (encoded backslash).

## Modes of Introduction

**•** Architecture and Design: COMMISSION: This weakness refers to an incorrect design related to an architectural security tactic.

**•** Implementation: N/A

## Common Consequences

**•** Impact: Bypass Protection Mechanism — Notes:

## Potential Mitigations

**•** Architecture and Design: Avoid making decisions based on names of resources (e.g. files) if those resources can have alternate names. (Effectiveness: N/A)

**•** Implementation: Assume all input is malicious. Use an "accept known good" input validation strategy, i.e., use a list of acceptable inputs that strictly conform to specifications. Reject any input that does not strictly conform to specifications, or transform it into something that does. When performing input validation, consider all potentially relevant properties, including length, type of input, the full range of acceptable values, missing or extra inputs, syntax, consistency across related fields, and conformance to business rules. As an example of business rule logic, "boat" may be syntactically valid because it only contains alphanumeric characters, but it is not valid if the input is only expected to contain colors such as "red" or "blue." Do not rely exclusively on looking for malicious or malformed inputs. This is likely to miss at least one undesirable input, especially if the code's environment changes. This can give attackers enough room to bypass the intended validation. However, denylists can be useful for detecting potential attacks or determining which inputs are so malformed that they should be rejected outright. (Effectiveness: N/A)

**•** Implementation: Inputs should be decoded and canonicalized to the application's current internal representation before being validated (CWE-180). Make sure that the application does not decode the same input twice (CWE-174). Such errors could be used to bypass allowlist validation schemes by introducing dangerous inputs after they have been checked. (Effectiveness: N/A)

## Applicable Platforms

**•** None (Class: Not Language-Specific, Prevalence: Undetermined)

## Notes

**•** Relationship: Overlaps equivalent encodings, canonicalization, authorization, multiple trailing slash, trailing space, mixed case, and other equivalence issues.

**•** Theoretical: Alternate names are useful in data driven manipulation attacks, not just for authentication.