# webbrowser.open() allows leading dashes in URLs

MITRE | NVD | CVE.ORG | JSON API | Print: PDF

## Summary

| | |
|---|---|
| **CVE** | CVE-2026-4519 |
| **State** | PUBLISHED |
| **Assigner** | PSF |
| **Source Priority** | CVE Program / NVD first with legacy fallback |
| **Published** | 2026-03-20 15:16:24 UTC |
| **Updated** | 2026-04-16 14:53:22 UTC |
| **Description** | The webbrowser.open() API would accept leading dashes in the URL which could be handled as command line options for |

## Risk And Classification

**Primary CVSS:** v4.0 7 HIGH from cna@python.org

CVSS:4.0/AV:L/AC:L/AT:P/PR:N/UI:A/VC:H/VI:H/VA:N/SC:N/SI:N/SA:N/E:X/CR:X/IR:X/AR:X/MAV:X/MAC:X/MAT:X/MPR:X/MUI:X/MVC:X/MVI:X/MVA:X/MSC:X/MSI:X/MSA:X/S:X/AU:X/R:X/V:X/RE:X/U:X

**EPSS:** 0.000330000 probability, percentile 0.093440000 (date 2026-04-07)

**Problem Types:** CWE-20 | CWE-20 CWE-20 Improper Input Validation

| Version | Source | Type | Score | Severity | Vector |
|---|---|---|---|---|---|
| 4.0 | cna@python.org | Secondary | 7 | HIGH | CVSS:4.0/AV:L/AC:L/AT:P/PR:N/UI:A/VC:H/VI:H/VA:N/SC:N/SI:N/SA:N/E:X/C... |
| 4.0 | CNA | CVSS | 7 | HIGH | CVSS:4.0/AV:L/AC:L/AT:P/PR:N/UI:A/VC:H/VI:H/VA:N/SC:N/SI:N/SA:N |
| 3.1 | nvd@nist.gov | Primary | 3.3 | LOW | CVSS:3.1/AV:L/AC:L/PR:N/UI:R/S:U/C:N/I:L/A:N |

## CVSS v4.0 Breakdown

Attack Vector

Local

Attack Complexity

Low

Attack Requirements

Present

Privileges Required

None

User Interaction

Active

Confidentiality

Confidentiality

High

Integrity

High

Availability

None

Sub Conf.

None

Sub Integrity

None

Sub Availability

None

CVSS:4.0/AV:L/AC:L/AT:P/PR:N/UI:A/VC:H/VI:H/VA:N/SC:N/SI:N/SA:N/E:X/CR:X/IR:X/AR:X/MAV:X/MAC:X/MAT:X/MPR:X/MUI:X/MVC:X/MVI:X/MVA:X/MSC:X/MSI:X/MSA:X/S:X/AU:X/R:X/V:X/RE:X/U:X

## CVSS v3.1 Breakdown

Attack Vector

Local

Attack Complexity

Low

Privileges Required

None

User Interaction

Required

Scope

Unchanged

Confidentiality

None

Integrity

Low

Availability

None

CVSS:3.1/AV:L/AC:L/PR:N/UI:R/S:U/C:N/I:L/A:N

## NVD Known Affected Configurations (CPE 2.3)

| Type | Vendor | Product | Version | Update | Edition | Language |
|---|---|---|---|---|---|---|
| Application | Python | Python | All | All | All | All |

## Vendor Declared Affected Products

| Source | Vendor | Product | Version | Platforms |
|---|---|---|---|---|
| CNA | Python Software Foundation | CPython | affected 3.13.13 python | Not specified |
| CNA | Python Software Foundation | CPython | affected 3.14.0 3.14.4 python | Not specified |

| | | | | |
|---|---|---|---|---|
| CNA | Python Software Foundation | CPython | affected 3.14.0 3.14.4 python | Not specified |
| CNA | Python Software Foundation | CPython | affected 3.15.0a1 3.15.0a8 python | Not specified |

## References

| Reference | Source | Link |
|---|---|---|
| github.com/python/cpython/commit/cbba6119391112aba9c5aebf7b94aea447922c48 | cna@python.org | github.c |
| github.com/python/cpython/commit/591ed890270c5697b013bf637029fb3e6cd2d73e | cna@python.org | github.c |
| github.com/python/cpython/commit/89bfb8e5ed3c7caa241028f1a4eac5f6275a46a4 | cna@python.org | github.c |
| github.com/python/cpython/commit/ceac1efc66516ac387eef2c9a0ce671895b44f03 | cna@python.org | github.c |
| github.com/python/cpython/commit/43fe06b96f6a6cf5cfd5bdab20b8649374956866 | cna@python.org | github.c |
| github.com/python/cpython/commit/96fc5048605863c7b6fd6289643feb0e97edd96c | cna@python.org | github.c |
| github.com/python/cpython/commit/cc023511238ad93ecc8796157c6f9139a2bb2932 | cna@python.org | github.c |
| github.com/python/cpython/commit/9669a912a0e329c094e992204d6bdb8787024d76 | cna@python.org | github.c |
| github.com/python/cpython/commit/82a24a4442312bdcfc4c799885e8b3e00990f02b | cna@python.org | github.c |
| github.com/python/cpython/commit/3681d47a440865aead912a054d4599087b4270dd | cna@python.org | github.c |
| github.com/python/cpython/commit/ad4d5ba32af4d80b0dfa2ba9d8203bfb219e60a5 | cna@python.org | github.c |
| www.openwall.com/lists/oss-security/2026/03/20/1 | af854a3a-2127-422b-91ae-364da2661108 | www.op |
| mail.python.org/archives/list/security-announce@python.org/thread/AY5NDSS433J... | cna@python.org | mail.pyt |
| github.com/python/cpython/issues/143930 | cna@python.org | github.c |
| github.com/python/cpython/pull/143931 | cna@python.org | github.c |
| github.com/python/cpython/commit/594b5a05dc9913880ac92eded440defbf32a28d1 | cna@python.org | github.c |
| CVE Program record | CVE.ORG | www.cv |
| NVD vulnerability detail | NVD | nvd.nist |

## Vendor Comments And Credit

Discovery Credit

**CNA:** Seth Larson (en)

**CNA:** Gregory P. Smith (en)

**CNA:** an7y (en)

There are currently no legacy QID mappings associated with this CVE.

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