GCVE-BCP-04 - Recommendations and Best Practices for ID Allocation

Contents

0.1 Recommendations and Best Practices for ID Allocation

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0.1.1 Introduction

This document describes the best practices and recommendations for ID allocation and GCVE identifier format.

0.1.2 GCVE Identifier Format

The GCVE identifier typically follows a traditional four-part format:

GCVE-<GNA-ID>-<YEAR>-<UNIQUE-ID>

This format is recommended because it is consistent with models used in other vulnerability identification systems.

However, GNAs retain the flexibility to use alternative formats, especially if they already maintain their own identifier schemes.

0.1.2.1 Format Breakdown

Field	Description
GCVE	Prefix indicating a Global CVE ID
GNA ID	Unique identifier for the GCVE Numbering Authority
YEAR	The year of disclosure or allocation
UNIQUE ID	A GNA-assigned identifier that must be unique for vulnerability allocated at the GNA

If a GNA chooses to use an alternative format, it must still follow this general prefix structure:

GCVE-<GNA-ID>-<GNA-VALUE>

The GNA-VALUE should be composed of valid 7-bit characters, excluding unprintable control codes and spaces.

The following regular expression can be used to validate a GCVE Identifier: ^GCVE-[0-9]+-[\x22 -\x7E]+$.

When defining a generic GNA value, GNAs should keep in mind the following considerations:

- The practicality and readability of the identifier (even if technically valid).
- Facilitating sharing and improving the visibility of the identifier.

The GCVE standard allows a certain level of flexibility in how information is conveyed, but it is strongly recommended to maintain a reasonable degree of readability.

0.1.2.1.1 Examples of valid identifiers

- GCVE-0-2024-13987
- GCVE-1337-2025-000000000000000000000000000000000000000000000000000101111101111

- GCVE-65535-2021-XX-[222]_XX{1}
- GCVE-65535-2021-XX-[222]_XX{1}/1/1/1
- GCVE-65535-2021-XX-[222]_XX{1}\1/1\1
- GCVE-65535-GHSA-jc7w-c686-c4v9
- GCVE-65535-jc7w-c686-c4v9
- GCVE-65535-ababcbbe.onion-1
- GCVE-65535-Ivanti/Avalanche-1

The GNA ID 65535 is reserved as a test GNA ID, as defined in the GCVE directory.

0.1.2.2 Identifier Length

The maximum length for a GCVE identifier is **255 bytes**. This ensures compatibility and reliable handling across different software systems.

The reference implementation, Vulnerability-Lookup, supports longer identifiers, but keeping identifiers within 255 bytes facilitates integration across diverse toolsets. Nevertheless, it is recommended to keep identifiers within **255 bytes (including the prefix)**. - If your regular expression engine supports positive lookahead assertions (most do), `^(?=.{8,255}$)GCVE-[0-9]+-[\x22-\x7E]+$` also accounts for a maximum length of 255 bytes. For strict POSIX compliance (no lookahead assertions), `^GCVE-[0-9]+-[\x22-\x7E]{1,247}$` will be mostly accurate with reasonable performance and readability.

0.1.3 Allocation of GCVE Identifiers

A GCVE Identifier must uniquely identify a vulnerability within the scope of a GNA.

GCVE Identifiers are **not limited** to newly discovered vulnerabilities. They may also be used to:

- extend the description of an existing vulnerability (e.g., adding metadata),

- reference a patch or remediation,

- establish a parent/child relationship with another vulnerability (e.g., a fork or variant).

The GCVE model is designed to support **multiple identifiers for the same vulnerability**, providing complementary information or alternative perspectives.

For example, this may occur when:

- vendors disagree on a vulnerability classification,

- independent discoveries are made in parallel,

- additional context is provided by different GNAs.

There is **no single authoritative identifier** for a given vulnerability. Instead, GCVE enables multiple viewpoints, fostering a more decentralized and transparent ecosystem.

We recommend that GNAs include cross-references whenever possible. This applies both to:

- other GCVE identifiers (from the same or different GNAs),

- identifiers from other vulnerability systems.

This cross-referencing supports stronger interoperability and helps build a richer, interconnected knowledge base covering scenarios such as parallel or independent vulnerability discoveries.