Product Security Advisory WIBU-230704-01

Vulnerability Title

Heap Buffer Overflow Vulnerability in CodeMeter Runtime

Affected products

<table>
<thead>
<tr>
<th>Product name</th>
<th>Affected versions</th>
<th>Fixed Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CodeMeter Runtime</td>
<td>&lt;7.60c All platforms</td>
<td>&gt;=7.60c 7.21g</td>
</tr>
</tbody>
</table>

Vulnerability description

In CodeMeter Runtime versions up to 7.60b, there is a heap buffer overflow vulnerability which can potentially lead to a remote code execution. Currently, no PoC is known to us. To exploit the heap overflow, additional protection mechanisms need to be broken. Remote access is only possible if CodeMeter is configured as a server. If CodeMeter is not configured as a server, the adversary would need to log in to the machine where the CodeMeter Runtime is running or trick the user into sending a malicious request to CodeMeter. This might result in an escalation of privilege.

- CVE: CVE-2023-3935
- Network Server (base)
  - CVSS v3.1 base score: 9.0 (Critical)
- Network Server (temporal)
  - CVSS v3.1 base score: 7.8 (High)
- No Network Server (base)
  - CVSS v3.1 base score: 8.1 (High)
- No Network Server (temporal)
  - CVSS v3.1 base score: 7.1 (High)

- CWEs:  
  - CWE-122: Heap-based Buffer Overflow
  - CWE-20: Improper Input Validation

Remediation

- Installation of runtime version 7.60c or later
Mitigations for affected versions

If possible, run CodeMeter as client only. Otherwise restrict access to server to required clients only by implementing an access list.

CodeMeter API is a privileged API, so please consider the corresponding recommendations when using privileged APIs, e.g. https://cwe.mitre.org/data/definitions/648.html, so that your application isn’t affected by CWE-648 (Incorrect use of privileged APIs) or other related weaknesses.

General security best practices can help to protect systems from local and network attacks.

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Document History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>2023-08-16</td>
<td>First version, TLP: CLEAR</td>
</tr>
<tr>
<td>3.1</td>
<td>2023-10-19</td>
<td>CWE-648 was listed in the wrong section of the security advisory, so it was moved to the “Mitigations” section. CodeMeter Runtime is not affected by CWE-648.</td>
</tr>
</tbody>
</table>