



Calculating the CVSS Score

VULNERABILITY MANAGEMENT

CVSS Score

- How is the Base Score calculated?

CVSS Base Score

10.0 (CVSS2#AV:N/AC:L/Au:N/C:C/I:C/A:C)

$Exploitability = 20 \times AccessVector \times AccessComplexity \times Authentication$

$Impact = 10.41 \times (1 - (1 - ConfImpact) \times (1 - IntegImpact) \times (1 - AvailImpact))$

$$f(Impact) = \begin{cases} 0, & \text{if } Impact = 0 \\ 1.176, & \text{otherwise} \end{cases}$$

$BaseScore = roundTo1Decimal(((0.6 \times Impact) + (0.4 \times Exploitability) - 1.5) \times f(Impact))$



Exploitability Score

CVSS Base Score

10.0 (CVSS2#AV:N/AC:L/Au:N/C:C/I:C/A:C)

Exploitability = 20 × AccessVector × AccessComplexity × Authentication

Exploitability = 20 × Network × Low × None

Exploitability = 20 × 1.000 × 0.710 × 0.704

Exploitability = 9.9968 => 10.0



Impact Score

CVSS Base Score

10.0 (CVSS2#AV:N/AC:L/Au:N/C:C/I:C/A:C)

$Impact = 10.41 \times (1 - (1 - ConfImpact) \times (1 - IntegImpact) \times (1 - AvailImpact))$

Impact = $10.41 \times (1 - (1 - Complete) \times (1 - Complete) \times (1 - Complete))$

Impact = $10.41 \times (1 - (1 - 0.660) \times (1 - 0.660) \times (1 - 0.660))$

Impact = 10.0



Base Score

CVSS Base Score

10.0 (CVSS2#AV:N/AC:L/Au:N/C:C/I:C/A:C)

$BaseScore = roundTo1Decimal(((0.6 \times Impact) + (0.4 \times Exploitability) - 1.5) \times f(Impact))$

$$f(Impact) = \begin{cases} 0, & \text{if } Impact = 0 \\ 1.176, & \text{otherwise} \end{cases}$$

$$\begin{aligned} \text{BaseScore} = & (((0.6 \times \text{Impact}) + \\ & (0.4 \times \text{Exploitability}) \\ & - 1.5 \times f(\text{Impact})) \end{aligned}$$

$$\begin{aligned} \text{BaseScore} = & (((0.6 \times 10.0) + \\ & (0.4 \times 10.0) \\ & - 1.5) \times 1.176) \end{aligned}$$

$$\text{BaseScore} = 9.996 \Rightarrow 10.0$$



Why is a Base Score important?

CVSS Base Score

10.0 (CVSS2#AV:N/AC:L/Au:N/C:C/I:C/A:C)

- Numerical ratings are used by the vulnerability software to categorize vulnerabilities

CVSS Base Score	Risk Category
< 4.0	Low
> 4.0 and < 6.0	Medium
> 6.0 and < 10.0	High
10.0	Critical

- Risk factor: Critical

