

How to Determine Password Strength

- [Overview](#)
- [Length and complexity](#)
- [Categories](#)
- [Combinations](#)
- [Additional documentation](#)

Overview

This document describes how cPanel & WHM determine password strength. This document also explains how to create passwords of different strengths so that you can meet various minimum password strength requirements.



Notes:

- We **strongly** recommend that you use the *Password Generator* feature whenever it is available. For more information, read our [Password and Security](#) documentation.
- This document uses characters found on the ANSI standard US keyboard. Results for other languages and keyboard configurations may vary.

Length and complexity

Two factors determine a password's strength: length and complexity. A password's length is determined by the number of characters in the password. For example, the password `asdf1234` has a length of eight characters. Most cPanel & WHM passwords require a minimum password length. An increase in password length usually increases the password's strength.

When you combine letters, numbers, and symbols in a password you increase the password's complexity. A higher complexity yields a higher password strength. For example, the password `cpanelisgreat` has a password strength of 25 while `cP4n3LIsgR3aT` has a password strength of 100. When you repeat the same character, use dictionary based words, or use consecutive letters or numbers, you do not increase password strength. For example, `12345678` has a password strength of 1 while `18273645` has a password strength of 86.

Categories

Four categories exist for the possible characters in a password.

Description	Example
Lowercase letter (a — z)	a
Capital letter (A — Z)	A
Number (0-9)	1
Symbol (!@#\$%^&*()~`-_=+{[]}\:;'"<,.>/?)	\$

Notes:

- Some symbols yield a higher strength valuation than others.
- Symbols are also known as special characters.

Combinations

The following table provides some example passwords of different lengths and complexities. For brevity, this table does not include all potential character combinations.



Warning:

Do **not** use the examples provided verbatim. Use of these examples could create a security risk.

Description	Example	Strength	Length	Lowercase (a — z)	Capital (A — Z)	Number (1-9)	Symbol
-------------	---------	----------	--------	-------------------	-----------------	--------------	--------

Repeating character	aa, aaa, aaaa ll, lll, llll	1	2 —				
Consecutive characters	12345678 abcdefgh	1	2 —				
Combination lowercase and capital letter	aA	10	2	✓	✓		
Combination lowercase letter and number	a1	18	2	✓		✓	
Combination capital letter and number	A1	18	2		✓	✓	
Combination lowercase letter and symbol	a#	20	2	✓			✓
Combination capital letter and symbol	A#	20	2		✓		✓
Combination number and symbol	1#	26	2			✓	✓
Combination lowercase letter, number, and symbol	a#1	34	3	✓		✓	✓
Combination capital letter, number, and symbol	A#1	34	3		✓	✓	✓
Example combination	12345luggage	54	12	✓		✓	
Example combination	A1b2c3%	74	7	✓	✓	✓	✓
Example combination	cP4n3LI5Gr3aT	100	11	✓	✓	✓	✓
Example combination	A1b2c3%?	100	8	✓	✓	✓	✓



Note:

You can use the *Get Password Strength* feature to test the strength of any password. For more information, read our [WHM API 1 Functions - get_password_strength](#) documentation.

Additional documentation

- [How to Determine Password Strength](#)
- [How to Reset a cPanel Account Password](#)
- [How to Reset a cPanel Subaccount Password](#)
- [Subaccount Initial Password Guide](#)
- [Basic Security Concepts](#)