## Purpose:

To define minimum password complexity requirements based upon assigned password policy levels.

## Standard:

1. Password construction attributes (Table 1) for each password policy level are selected to achieve the specified minimum entropy.
2. Password composition rules require the inclusion of 3 of the 4 following character sets: lowercase letters, uppercase letters, numerals and special characters. Allowable special characters are ~!@#$%^&\*()\_+|`-=\{}[]:”;’<>?,./ and the space character. Passwords may not include words of more than 4 characters, as tested against a dictionary of at least 50,000 words.
3. For all policy levels, the selection of a passphrase of at least 18 characters eliminates the password composition rules and dictionary check. Passphrases are subject to minimal tests to prevent use of common or trivial phrases.
4. Authentication token devices may be offered for use with policy levels P3-P5. When authentication token devices are used in conjunction with a password, the password is not required to comply with password construction attributes or composition rules.

Table 1 – Password Construction Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute**  | **P1**  | **P2**  | **P3**  | **P4**  | **P5**  |
| Minimum entropy bits | 30 | 30 | 30 | 31.5 | 31.5 |
| Minimum length of password  | 8  | 8  | 8  | 9  | 9  |
| Maximum age of password (in days)  | 365  | 365  | 365 | 180 | 180 |
| Password minimum age for reset (in days)  | 1  | 1  | 1  | 1  | 1  |
| Password uniqueness/history (days) | 200 | 200 | 200 | 200 | 200 |
| Failed attempts before lockout | 10 | 10 | 10 | 10 | 10 |
| Lockout duration (minutes) | 30 | 30 | 30 | 30 | 30 |

## References:

SEC-AC-002.01: Authentication Management Standard

NIST Special Publication 800-63 revision 1: Electronic Authentication Guideline