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Rocky Enterprise Linux 9.2 Manual Pages on command 'pam_unix.8'

\$ man pam_unix.8

PAM_UNIX(8) Linux-PAM Manual PAM_UNIX(8)

NAME

pam_unix - Module for traditional password authentication

SYNOPSIS

pam_unix.so [...]

DESCRIPTION

This is the standard Unix authentication module. It uses standard calls from the system's libraries to retrieve and set account information as well as authentication. Usually this is obtained from the `/etc/passwd` and the `/etc/shadow` file as well if shadow is enabled. The account component performs the task of establishing the status of the user's account and password based on the following shadow elements: `expire`, `last_change`, `max_change`, `min_change`, `warn_change`. In the case of the latter, it may offer advice to the user on changing their password or, through the `PAM_AUTHTOKEN_REQD` return, delay giving service to the user until they have established a new password. The entries listed above are documented in the `shadow(5)` manual page. Should the user's record not contain one or more of these entries, the corresponding shadow check is not performed.

The authentication component performs the task of checking the users credentials (password). The default action of this module is to not permit the user access to a service if their official password is blank.

A helper binary, `unix_chkpwd(8)`, is provided to check the user's password when it is stored in a read protected database. This binary is very simple and will only check the password of the user invoking it. It is called transparently on behalf of the user by the authenticating component of this module. In this way it is possible for applications like

xlock(1) to work without being setuid-root. The module, by default, will temporarily turn off SIGCHLD handling for the duration of execution of the helper binary. This is generally the right thing to do, as many applications are not prepared to handle this signal from a child they didn't know was fork()d. The noreap module argument can be used to suppress this temporary shielding and may be needed for use with certain applications.

The maximum length of a password supported by the pam_unix module via the helper binary is PAM_MAX_RESP_SIZE - currently 512 bytes. The rest of the password provided by the conversation function to the module will be ignored.

The password component of this module performs the task of updating the user's password.

The default encryption hash is taken from the ENCRYPT_METHOD variable from /etc/login.defs

The session component of this module logs when a user logs in or leave the system.

Remaining arguments, supported by others functions of this module, are silently ignored.

Other arguments are logged as errors through syslog(3).

OPTIONS

debug

Turns on debugging via syslog(3).

audit

A little more extreme than debug.

quiet

Turns off informational messages namely messages about session open and close via syslog(3).

nullok

The default action of this module is to not permit the user access to a service if their official password is blank. The nullok argument overrides this default.

nullresetok

Allow users to authenticate with blank password if password reset is enforced even if nullok is not set. If password reset is not required and nullok is not set the authentication with blank password will be denied.

try_first_pass

Before prompting the user for their password, the module first tries the previous stacked module's password in case that satisfies this module as well.

use_first_pass

The argument use_first_pass forces the module to use a previous stacked modules

password and will never prompt the user - if no password is available or the password is not appropriate, the user will be denied access.

nodelay

This argument can be used to discourage the authentication component from requesting a delay should the authentication as a whole fail. The default action is for the module to request a delay-on-failure of the order of two second.

use_authtok

When password changing enforce the module to set the new password to the one provided by a previously stacked password module (this is used in the example of the stacking of the pam_cracklib module documented below).

authtok_type=type

This argument can be used to modify the password prompt when changing passwords to include the type of the password. Empty by default.

nis

NIS RPC is used for setting new passwords.

remember=n

The last n passwords for each user are saved in /etc/security/opasswd in order to force password change history and keep the user from alternating between the same password too frequently. The MD5 password hash algorithm is used for storing the old passwords. Instead of this option the pam_pwhistory module should be used.

shadow

Try to maintain a shadow based system.

md5

When a user changes their password next, encrypt it with the MD5 algorithm.

bigcrypt

When a user changes their password next, encrypt it with the DEC C2 algorithm.

sha256

When a user changes their password next, encrypt it with the SHA256 algorithm. The SHA256 algorithm must be supported by the crypt(3) function.

sha512

When a user changes their password next, encrypt it with the SHA512 algorithm. The SHA512 algorithm must be supported by the crypt(3) function.

blowfish

When a user changes their password next, encrypt it with the blowfish algorithm. The blowfish algorithm must be supported by the crypt(3) function.

gost_ycrypt

When a user changes their password next, encrypt it with the gost-ycrypt algorithm.

The gost-ycrypt algorithm must be supported by the crypt(3) function.

ycrypt

When a user changes their password next, encrypt it with the ycrypt algorithm. The

ycrypt algorithm must be supported by the crypt(3) function.

rounds=n

Set the optional number of rounds of the SHA256, SHA512, blowfish, gost-ycrypt, and ycrypt password hashing algorithms to n.

broken_shadow

Ignore errors reading shadow information for users in the account management module.

minlen=n

Set a minimum password length of n characters. The default value is 6. The maximum for DES crypt-based passwords is 8 characters.

obscure

Enable some extra checks on password strength. These checks are based on the "obscure" checks in the original shadow package. The behavior is similar to the pam_cracklib module, but for non-dictionary-based checks. The following checks are implemented:

Palindrome

Verifies that the new password is not a palindrome of (i.e., the reverse of) the previous one.

Case Change Only

Verifies that the new password isn't the same as the old one with a change of case.

Similar

Verifies that the new password isn't too much like the previous one.

Simple

Is the new password too simple? This is based on the length of the password and the number of different types of characters (alpha, numeric, etc.) used.

Rotated

Is the new password a rotated version of the old password? (E.g., "billy" and

"illyb")

no_pass_expiry

When set ignore password expiration as defined by the shadow entry of the user. The option has an effect only in case pam_unix was not used for the authentication or it returned authentication failure meaning that other authentication source or method succeeded. The example can be public key authentication in sshd. The module will return PAM_SUCCESS instead of eventual PAM_NEW_AUTHTOK_REQD or PAM_AUTHTOK_EXPIRED.

Invalid arguments are logged with syslog(3).

MODULE TYPES PROVIDED

All module types (account, auth, password and session) are provided.

RETURN VALUES

PAM_IGNORE

Ignore this module.

EXAMPLES

An example usage for /etc/pam.d/login would be:

```
# Authenticate the user
auth    required pam_unix.so

# Ensure users account and password are still active
account required pam_unix.so

# Change the user's password, but at first check the strength
# with pam_cracklib(8)
password required pam_cracklib.so retry=3 minlen=6 difok=3
password required pam_unix.so use_authtok nullok yescrypt

session required pam_unix.so
```

SEE ALSO

login.defs(5), pam.conf(5), pam.d(5), pam(7)

AUTHOR

pam_unix was written by various people.