

Domanda 1

Spiegare il funzionamento della cifratura a chiave simmetrica e i suoi possibili utilizzi

Domanda 2

Spiegare il funzionamento di un sistema di virtualizzazione a livello applicativo

Domanda 3

Descrivere l'utilizzo dei protocolli di routing

Inglese

Leggere è tradurre la sezione Description nel man page di awk

## DESCRIPTION

The *awk* utility shall execute programs written in the *awk* programming language, which is specialized for textual data manipulation. An *awk* program is a sequence of patterns and corresponding actions. When input is read that matches a pattern, the action associated with that pattern is carried out.

Input shall be interpreted as a sequence of records. By default, a record is a line, less its terminating <newline>, but this can be changed by using the **RS** built-in variable. Each record of input shall be matched in turn against each pattern in the program. For each pattern matched, the associated action shall be executed.

The *awk* utility shall interpret each input record as a sequence of fields where, by default, a field is a string of non-<blank> non-<newline> characters. This default <blank> and <newline> field delimiter can be changed by using the **FS** built-in variable or the **-F sepstring** option. The *awk* utility shall denote the first field in a record \$1, the second \$2, and so on. The symbol \$0 shall refer to the entire record; setting any other field causes the re-evaluation of \$0. Assigning to \$0 shall reset the values of all other fields and the **NF** built-in variable.

## **Busta 2**

Domanda 1

Spiegare il funzionamento della cifratura a chiave pubblica e i suoi possibili utilizzi

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Spiegare il funzionamento di un sistema per la gestione di macchine virtuali

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Descrivere l'utilizzo del protocollo spanning tree

Inglese

Leggere e tradurre la sezione Description nel man page di sed

## **DESCRIPTION**

Sed is a stream editor. A stream editor is used to perform basic text transformations on an input stream (a file or input from a pipeline). While in some ways similar to an editor which permits scripted edits (such as *ed*), *sed* works by making only one pass over the input(s), and is consequently more efficient. But it is *sed*'s ability to filter text in a pipeline which particularly distinguishes it from other types of editors.

Domanda 1

Spiegare il funzionamento dei protocolli di comunicazione sicuri ad esempio HTTPS

Domanda 2

Illustrare a piacimento il funzionamento di un servizio cloud offerto dai provider più famosi (azure, aws, google)

Domanda 3

Descrivere l'utilizzo del protocollo DHCP

Inglese

Leggere e tradurre la sezione Description nel man page di find

## DESCRIPTION

This manual page documents the GNU version of **find**. GNU **find** searches the directory tree rooted at each given starting-point by evaluating the given expression from left to right, according to the rules of precedence (see section OPERATORS), until the outcome is known (the left hand side is false for *and* operations, true for *or*), at which point **find** moves on to the next file name. If no starting-point is specified, `.' is assumed.

If you are using **find** in an environment where security is important (for example if you are using it to search directories that are writable by other users), you should read the `Security Considerations' chapter of the findutils documentation, which is called **Finding Files** and comes with findutils. That document also includes a lot more detail and discussion than this manual page, so you may find it a more useful source of information.

Domanda 1

Spiegare il funzionamento del protocolli di autenticazione a due fattori

Domanda 2

Illustrare i vantaggi di un sistema di virtualizzazione in cloud

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Descrivere il funzionamento del protocollo DNS

Inglese

Leggere e tradurre la sezione Description nel man page di grep

## DESCRIPTION

**grep** searches for *PATTERNS* in each *FILE*. *PATTERNS* is one or more patterns separated by newline characters, and **grep** prints each line that matches a pattern. Typically *PATTERNS* should be quoted when **grep** is used in a shell command.

A *FILE* of “-” stands for standard input. If no *FILE* is given, recursive searches examine the working directory, and nonrecursive searches read standard input.

## Busta 5 - NON ESTRATTA

Domanda 1

Spiegare il funzionamento delle funzioni di hash, ti viene in mente qualche algoritmo famoso

Domanda 2

Illustrare i vantaggi di un sistema di virtualizzazione in-house

Domanda 3

Descrivere il funzionamento del protocollo ARP

Inglese

Leggere e tradurre la sezione Description nel man page di ssh

## DESCRIPTION

**ssh** (SSH client) is a program for logging into a remote machine and for executing commands on a remote machine. It is intended to provide secure encrypted communications between two untrusted hosts over an insecure network. X11 connections, arbitrary TCP ports and UNIX-domain sockets can also be forwarded over the secure channel.

**ssh** connects and logs into the specified *destination*, which may be specified as either [user@]hostname or a URI of the form ssh://[user@]hostname[:port]. The user must prove their identity to the remote machine using one of several methods (see below).

If a *command* is specified, it is executed on the remote host instead of a login shell.