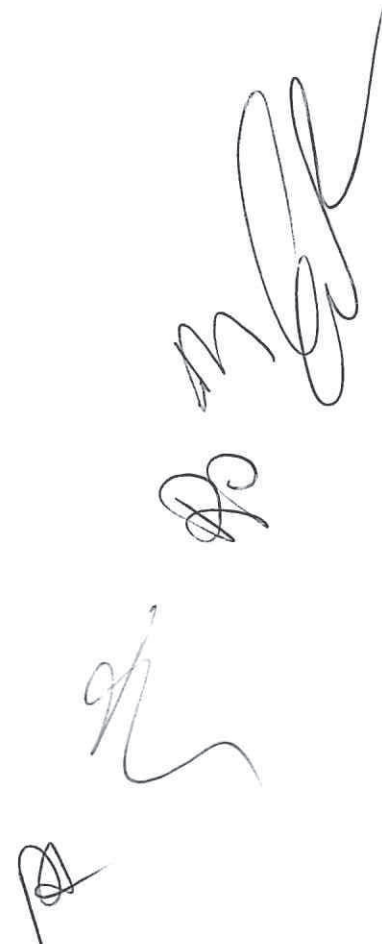


A

1. Definire e indicare un possibile Piano di Continuità Operativa ICT
2. La firma digitale: principi di funzionamento e modalità di utilizzo nell'ambito della Pubblica Amministrazione
3. Quali sono i principali Organi dell'Ateneo?

When httpd starts, it binds to some port and address on the local machine and waits for incoming requests. By default, it listens to all addresses on the machine. However, it may need to be told to listen on specific ports, or only on selected addresses, or a combination of both. This is often combined with the Virtual Host feature, which determines how httpd responds to different IP addresses, hostnames and ports.

The Listen directive tells the server to accept incoming requests only on the specified port(s) or address-and-port combinations. If only a port number is specified in the Listen directive, the server listens to the given port on all interfaces. If an IP address is given as well as a port, the server will listen on the given port and interface. Multiple Listen directives may be used to specify a number of addresses and ports to listen on. The server will respond to requests from any of the listed addresses and ports.

The image shows several handwritten signatures and initials in black ink, arranged vertically on the right side of the page. From top to bottom, there is a large, stylized signature, followed by a smaller signature, then a signature that appears to be 'gi', and finally a small initial 'A' at the bottom.

B

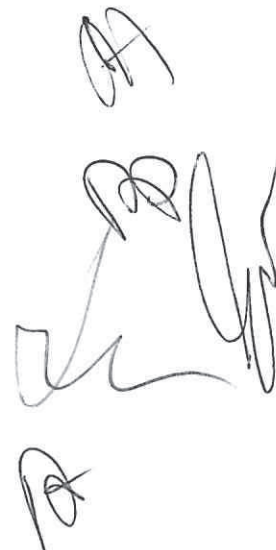
Descrivere strumenti e strategie per del *Disaster Recovery* nell'ambito del *Piano di Continuità Operativa Generale dell'Organizzazione*

1. Descrivere il funzionamento della Posta Elettronica Certificata (PEC) e indicarne il suo valore legale
2. Quali sono gli Organi di un Dipartimento?

Directives placed in the main configuration files apply to the entire server. If you wish to change the configuration for only a part of the server, you can scope your directives by placing them in <Directory>, <DirectoryMatch>, <Files>, <FilesMatch>, <Location>, and <LocationMatch> sections. These sections limit the application of the directives which they enclose to particular filesystem locations or URLs. They can also be nested, allowing for very fine grained configuration.

httpd has the capability to serve many different websites simultaneously. This is called Virtual Hosting. Directives can also be scoped by placing them inside <VirtualHost> sections, so that they will only apply to requests for a particular website.

Although most directives can be placed in any of these sections, some directives do not make sense in some contexts. For example, directives controlling process creation can only be placed in the main server context. To find which directives can be placed in which sections, check the Context of the directive. For further information, we provide details on How Directory, Location and Files sections work.

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C

Il piano del *Disaster Recovery* nell'ambito del Codice dell'Amministrazione Digitale (CAD)

1. Qual è il significato di Open Data e descrivere differenza tra dato aperto e dato pubblico
2. Quale è la durata in carica dei principali Organi dell'Ateneo?

apachectl is a front end to the Apache HyperText Transfer Protocol (HTTP) server. It is designed to help the administrator control the functioning of the Apache httpd daemon.

The apachectl script can operate in two modes. First, it can act as a simple front-end to the httpd command that simply sets any necessary environment variables and then invokes httpd, passing through any command line arguments. Second, apachectl can act as a SysV init script, taking simple one-word arguments like start, restart, and stop, and translating them into appropriate signals to httpd.

If your Apache installation uses non-standard paths, you will need to edit the apachectl script to set the appropriate paths to the httpd binary. You can also specify any necessary httpd command line arguments. See the comments in the script for details.

The apachectl script returns a 0 exit value on success, and >0 if an error occurs. For more details, view the comments in the script.

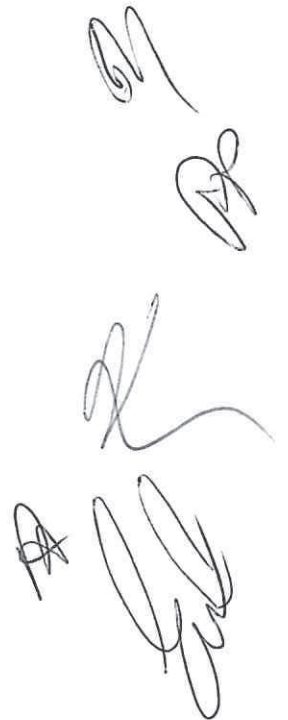
Handwritten signatures and initials in the bottom right corner of the page. There are four distinct marks: a stylized 'M' at the top, a signature below it, another signature below that, and a signature at the bottom.

D

1. Descrivere l'aggiunta di un oggetto in una Active Directory e la gestione delle *Group Policy Object*
2. Il Sistema pubblico per la gestione delle identità digitali (SPID): descrizione e livelli di autenticazione
3. Principale funzione del Senato Accademico

The single biggest hardware issue affecting webserver performance is RAM. A webserver should never ever have to swap, as swapping increases the latency of each request beyond a point that users consider "fast enough". This causes users to hit stop and reload, further increasing the load. You can, and should, control the `MaxRequestWorkers` setting so that your server does not spawn so many children that it starts swapping. The procedure for doing this is simple: determine the size of your average Apache process, by looking at your process list via a tool such as `top`, and divide this into your total available memory, leaving some room for other processes.

Beyond that the rest is mundane: get a fast enough CPU, a fast enough network card, and fast enough disks, where "fast enough" is something that needs to be determined by experimentation.

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E

1. *Group Policy Object* locali e loro distribuzione in una Active Directory
2. Cosa s'intende per formato aperto e quali sue principali caratteristiche
3. Principale funzione del Consiglio di Amministrazione

The Online Certificate Status Protocol (OCSP) is a mechanism for determining whether or not a server certificate has been revoked, and OCSP Stapling is a special form of this in which the server, such as httpd and mod_ssl, maintains current OCSP responses for its certificates and sends them to clients which communicate with the server. Most certificates contain the address of an OCSP responder maintained by the issuing Certificate Authority, and mod_ssl can communicate with that responder to obtain a signed response that can be sent to clients communicating with the server.

Because the client can obtain the certificate revocation status from the server, without requiring an extra connection from the client to the Certificate Authority, OCSP Stapling is the preferred way for the revocation status to be obtained. Other benefits of eliminating the communication between clients and the Certificate Authority are that the client browsing history is not exposed to the Certificate Authority and obtaining status is more reliable by not depending on potentially heavily loaded Certificate Authority servers.

A vertical column of four handwritten signatures in black ink, located in the bottom right corner of the page. The signatures are stylized and appear to be initials or names.

F

1. Progettare e gestire un laboratorio virtuale *la didattica* con architettura *client-server*
2. Indicare la differenza tra firma elettronica e firma digitale
3. In quali Organi del Dipartimento sono presenti rappresentanti del personale tecnico amministrativo?

`mod_rewrite` provides a way to modify incoming URL requests, dynamically, based on regular expression rules. This allows you to map arbitrary URLs onto your internal URL structure in any way you like.

It supports an unlimited number of rules and an unlimited number of attached rule conditions for each rule to provide a really flexible and powerful URL manipulation mechanism. The URL manipulations can depend on various tests: server variables, environment variables, HTTP headers, time stamps, external database lookups, and various other external programs or handlers, can be used to achieve granular URL matching.

Rewrite rules can operate on the full URLs, including the path-info and query string portions, and may be used in per-server context (`httpd.conf`), per-virtualhost context (`<VirtualHost>` blocks), or per-directory context (`.htaccess` files and `<Directory>` blocks). The rewritten result can lead to further rules, internal sub-processing, external request redirection, or proxy passthrough, depending on what flags you attach to the rules.

A handwritten signature in black ink, consisting of several stylized, overlapping loops and lines, positioned in the bottom right corner of the page.

G

1. Descrivere la funzione e gli oggetti dell'Active Directory nell'organizzazione logica e fisica di una rete informatica
2. Descrivere i concetti di riservatezza, integrità e non ripudio dei dati
3. In quali Organi dell'Ateneo sono presenti rappresentanti del personale tecnico amministrativo?

IP-based virtual hosts use the IP address of the connection to determine the correct virtual host to serve. Therefore you need to have a separate IP address for each host.

With name-based virtual hosting, the server relies on the client to report the hostname as part of the HTTP headers. Using this technique, many different hosts can share the same IP address.

Name-based virtual hosting is usually simpler, since you need only configure your DNS server to map each hostname to the correct IP address and then configure the Apache HTTP Server to recognize the different hostnames. Name-based virtual hosting also eases the demand for scarce IP addresses. Therefore you should use name-based virtual hosting unless you are using equipment that explicitly demands IP-based hosting. Historical reasons for IP-based virtual hosting based on client support are no longer applicable to a general-purpose web server.

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H

1. Indicare la differenza tra cifratura simmetrica e asimmetrica nella codifica e decodifica dei messaggi nell'ambito della sicurezza informatica
2. In riferimento al *General Data Protection Regulation* (EU GDPR, art. 32), indicare le principali misure tecniche e organizzative idonee a garantire la sicurezza nel trattamento dei dati personali
3. Composizione del Consiglio di Dipartimento

A virtual host is defined by two pieces of information: its IP address, and the contents of the Host: header in the HTTP request. The dynamic mass virtual hosting technique used here is based on automatically inserting this information into the pathname of the file that is used to satisfy the request. This can be most easily done by using `mod_vhost_alias` with Apache httpd. Alternatively, `mod_rewrite` can be used.

Both of these modules are disabled by default; you must enable one of them when configuring and building Apache httpd if you want to use this technique.

A couple of things need to be determined from the request in order to make the dynamic virtual host look like a normal one. The most important is the server name, which is used by the server to generate self-referential URLs etc. It is configured with the `ServerName` directive, and it is available to CGIs via the `SERVER_NAME` environment variable. The actual value used at run time is controlled by the `UseCanonicalName` setting. With `UseCanonicalName Off`, the server name is taken from the contents of the Host: header in the request. With `UseCanonicalName DNS`, it is taken from a reverse DNS lookup of the virtual host's IP address. The former setting is used for name-based dynamic virtual hosting, and the latter is used for IP-based hosting. If httpd cannot work out the server name because there is no Host: header, or the DNS lookup fails, then the value configured with `ServerName` is used instead.

The image shows several handwritten marks in the bottom right corner. At the top is a small, stylized signature or initial. Below it is a larger, more complex signature. To the right of this is another signature, and below that is a large, bold signature. At the bottom right is a long, horizontal signature.