

Disponibilidad de un Sistema :

- Porcentaje del Tiempo que el Sistema está disponible
- Porcentaje de éxito en obtener lo que se requiere

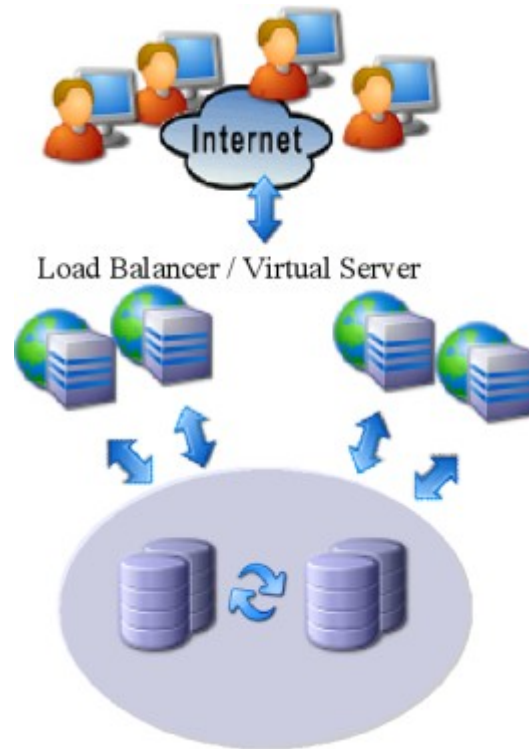


Baja Disponibilidad



Alta Disponibilidad

Si un servidor se satura ... balance de carga



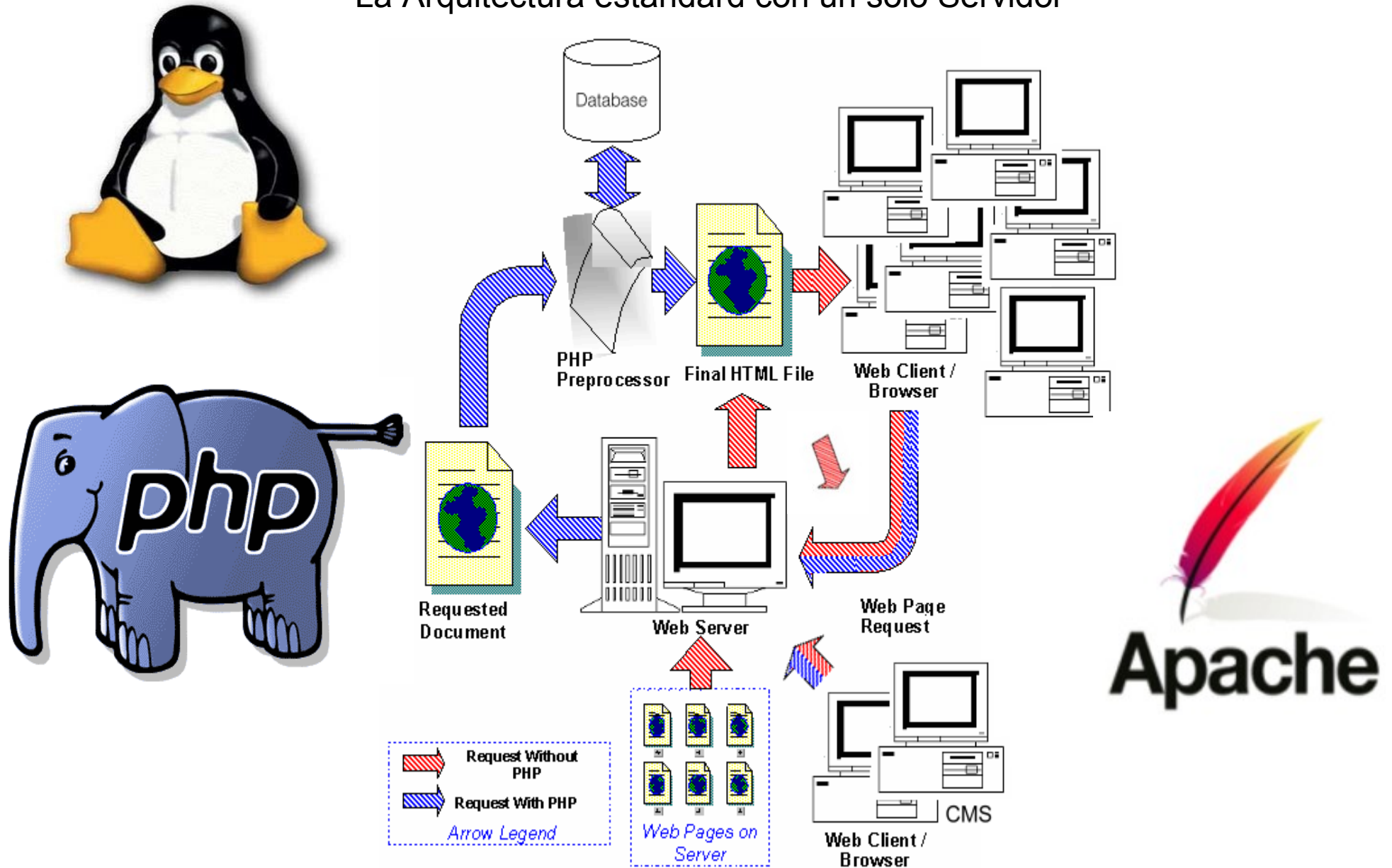
Fuente: http://www.ocklin.de/session_management_cluster.html

Cluster ... si falla el hardware .. el sistema continua



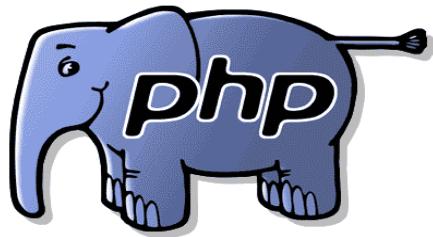
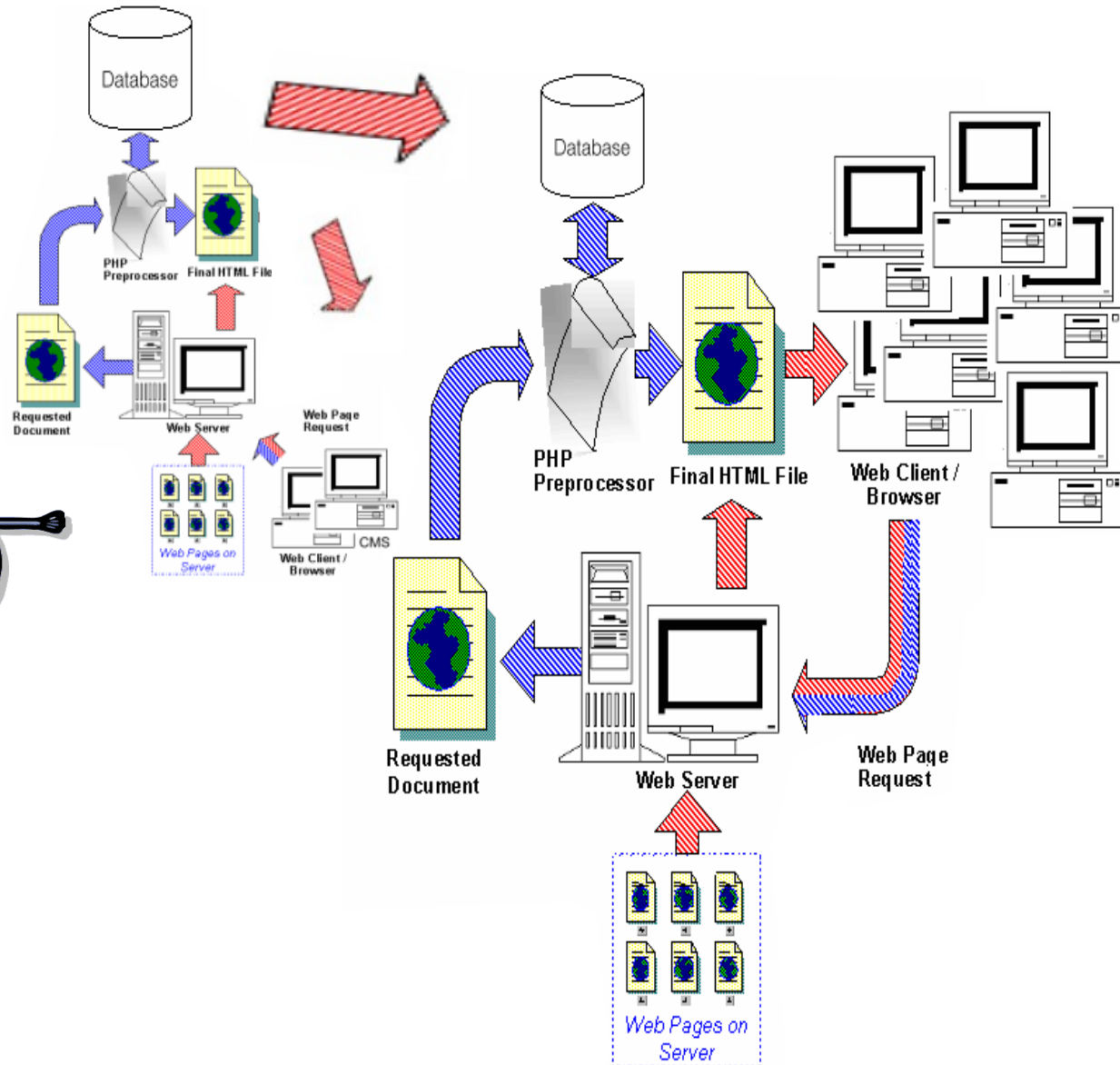
Fuente: http://www.imech.tu-chemnitz.de/mpf/mpf_athlon_cluster.html

La Arquitectura estandar con un solo Servidor

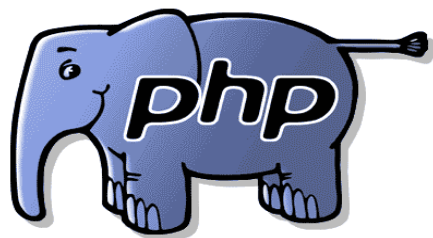
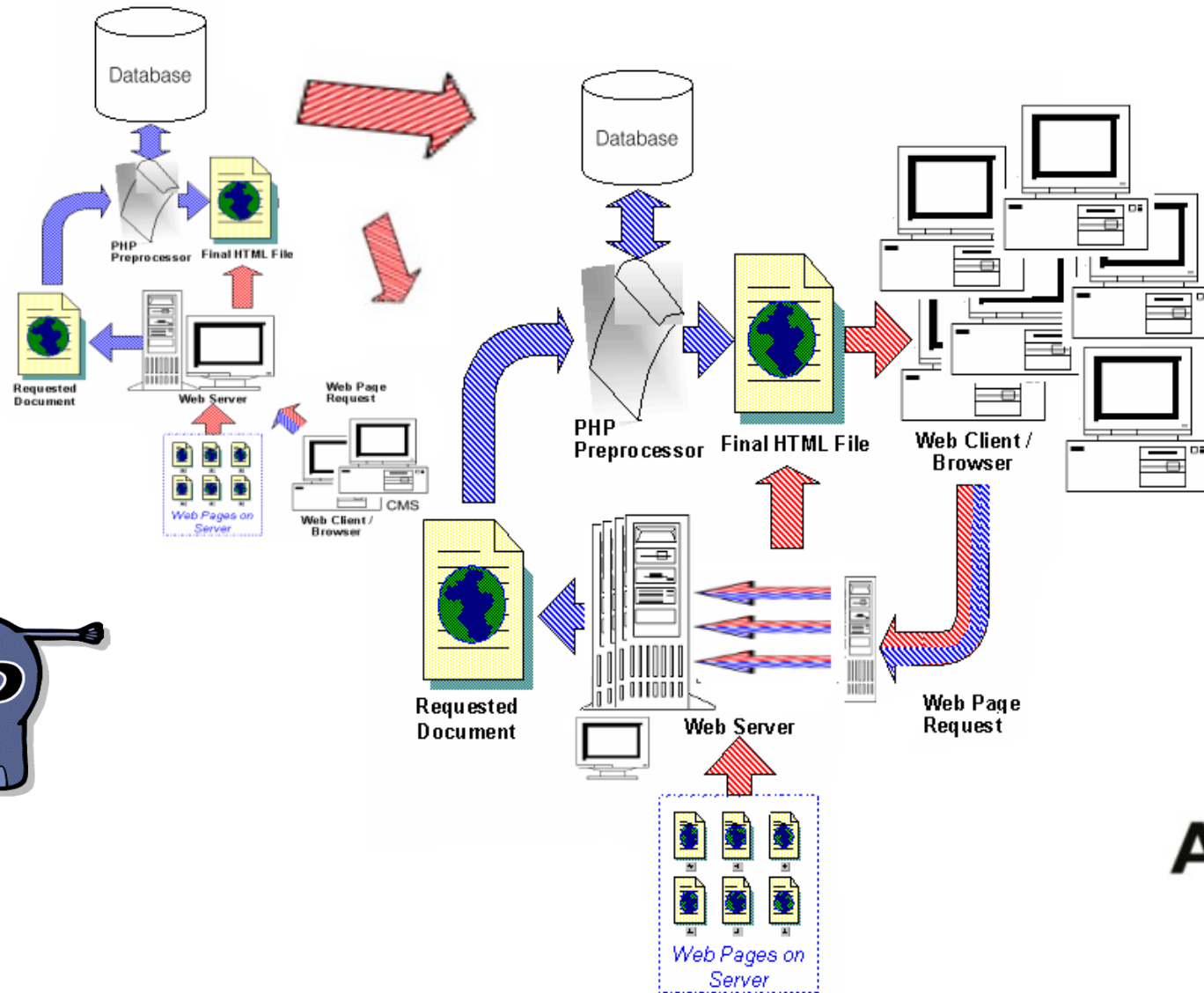


Fuente Original: http://www.onlamp.com/pub/a/php/2001/02/22/php_foundations.html

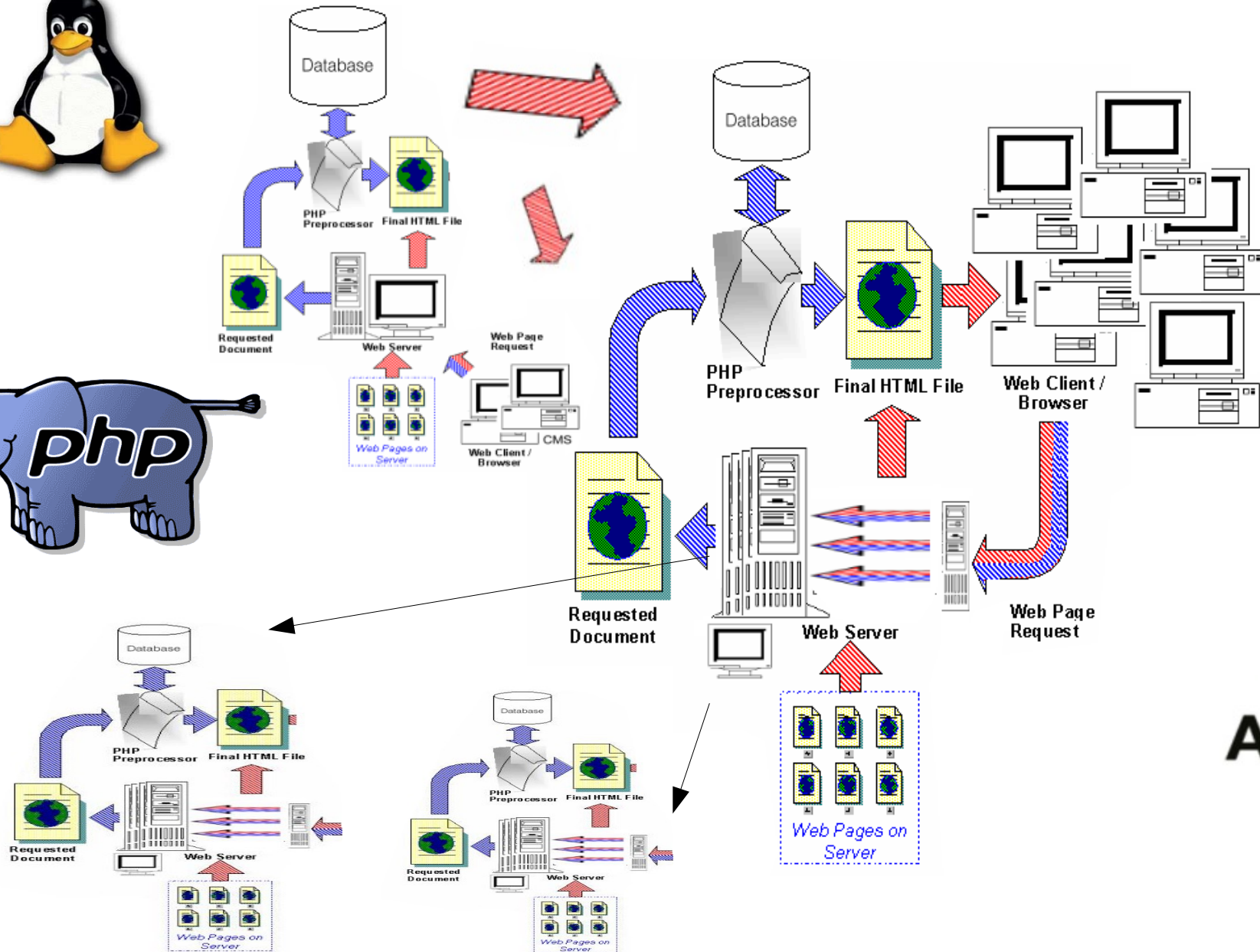
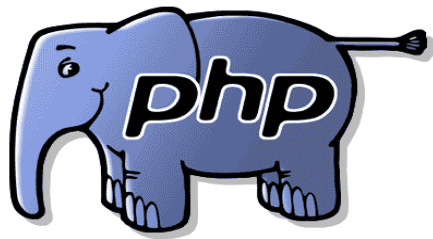
La Arquitectura mejorada con dos Servidores

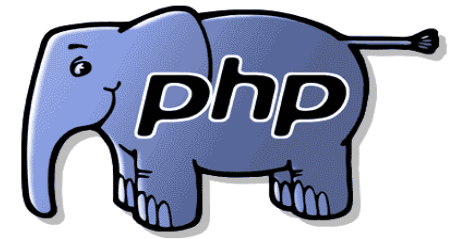


Una mejor Arquitectura con Servidores Crecientes y Balance de Carga



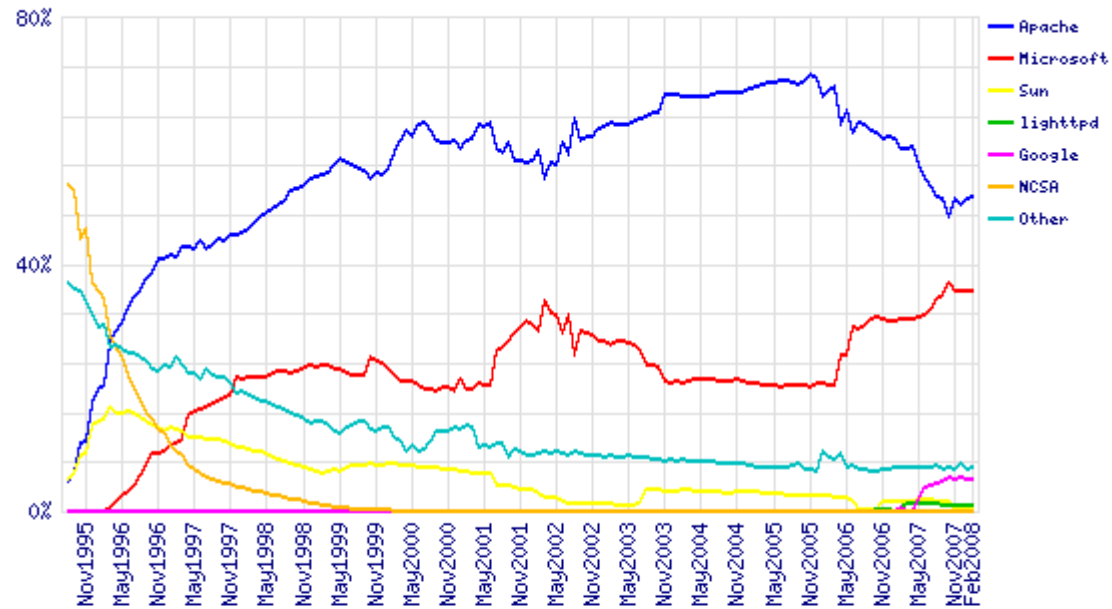
Alta Disponibilidad: Servidores Crecientes, Balance de Carga y Redundancia





Presencia de Apache y PHP

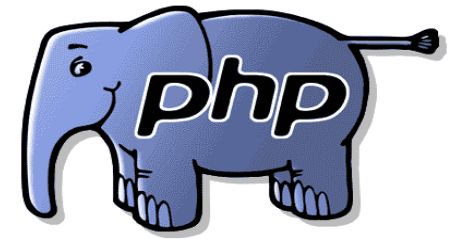
Market Share for Top Servers Across All Domains August 1995 - February 2008



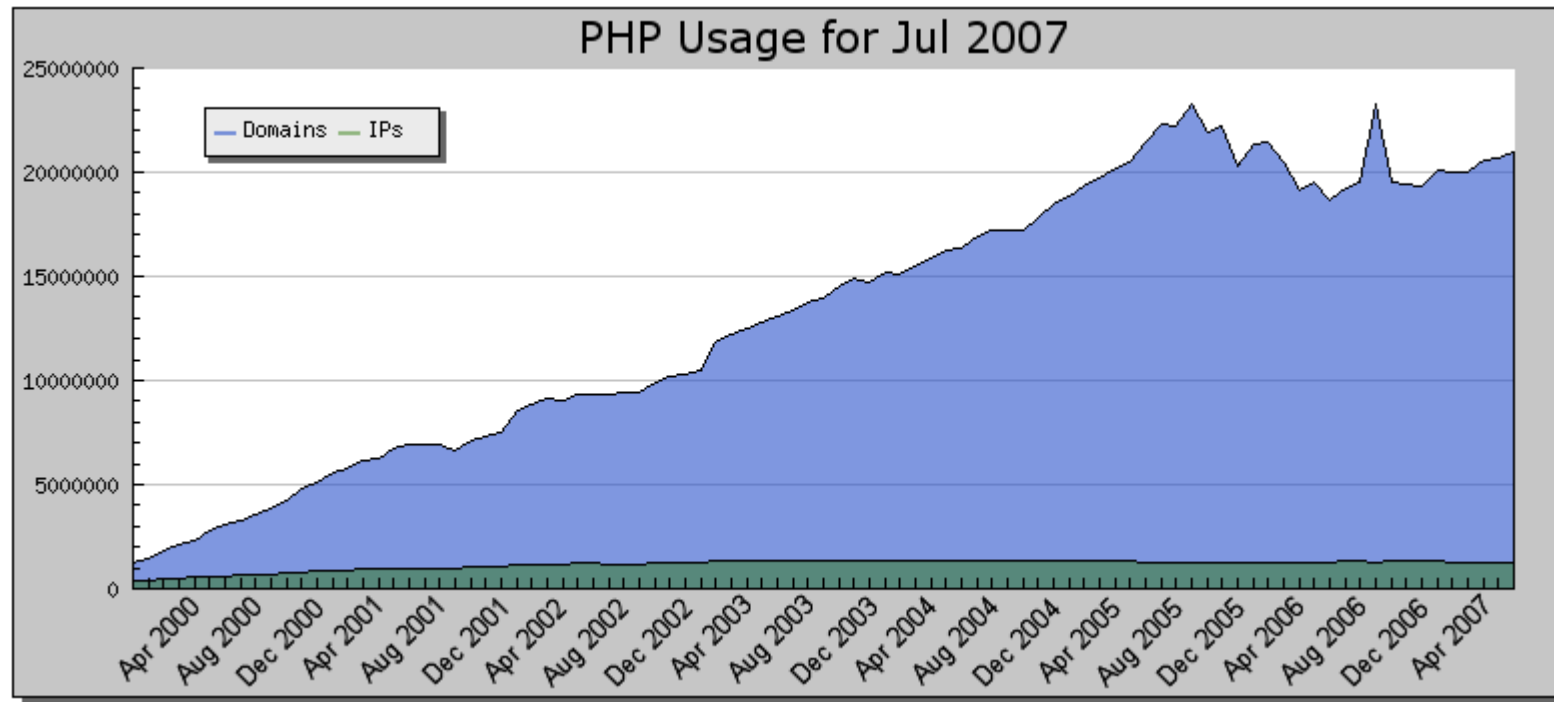
Top Developers

Developer	January 2008	Percent	February 2008	Percent	Change
Apache	78,735,581	50.61%	80,580,183	50.93%	0.33
Microsoft	55,709,926	35.81%	56,265,527	35.56%	-0.24
Google	8,290,471	5.33%	8,169,930	5.16%	-0.16
lighttpd	1,536,981	0.99%	1,565,536	0.99%	0.00
Sun	557,673	0.36%	547,510	0.35%	-0.01

Fuente: <http://news.netcraft.com/>

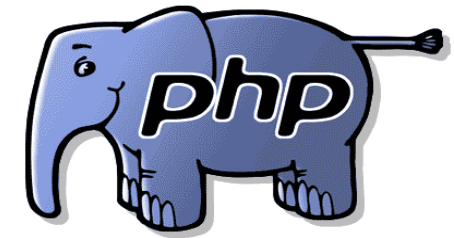


Presencia de Apache y PHP



Yahoo ... usa PHP
<http://developer.yahoo.com/php/>

Fuente: <http://www.php.net/usage.php>



Lenguajes de Programación

Position Mar 2008	Position Mar 2007	Delta in Position	Programming Language	Ratings Mar 2008	Delta Mar 2007	Status
1	1	=	Java	20.651%	+2.61%	A
2	2	=	C	15.593%	-0.04%	A
3	5	↑↑	(Visual) Basic	10.795%	+2.65%	A
4	4	=	PHP	10.138%	+0.68%	A
5	3	↓↓	C++	9.776%	-1.33%	A
6	6	=	Perl	5.781%	-0.64%	A
7	7	=	Python	4.593%	+0.70%	A
8	9	↑	C#	4.143%	+0.78%	A
9	12	↑↑↑	Delphi	2.697%	+0.94%	A
10	10	=	Ruby	2.661%	-0.11%	A

Fuente: <http://www.tiobe.com>



Consideraciones Apache

Cache en httpd.conf

```
LoadModule expires_module modules/mod_expires.so
```

```
<IfModule mod_expires.c>  
ExpiresActive On  
ExpiresDefault "access plus 1 seconds"  
ExpiresByType text/html "access plus 1 week"  
ExpiresByType image/gif "access plus 3 days"  
ExpiresByType image/jpeg "access plus 3 days"  
ExpiresByType image/png "access plus 3 days"  
ExpiresByType text/css "access plus 3 days"  
ExpiresByType text/javascript "access plus 3 days"  
ExpiresByType application/x-javascript "access plus 3 days"  
ExpiresByType text/xml "access plus 900 seconds"  
</IfModule>
```



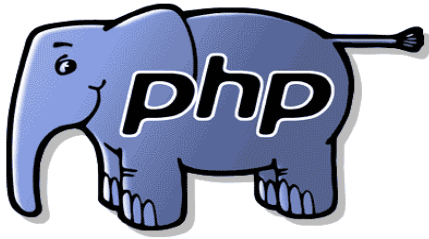
Consideraciones Apache

Control de Procesos en httpd.conf

```
<IfModule prefork.c>
StartServers      8
MinSpareServers  5
MaxSpareServers  20
ServerLimit      512
MaxClients       512
MaxRequestsPerChild 4000
</IfModule>

LoadModule status_module modules/mod_status.so
ExtendedStatus On
ServerSignature On

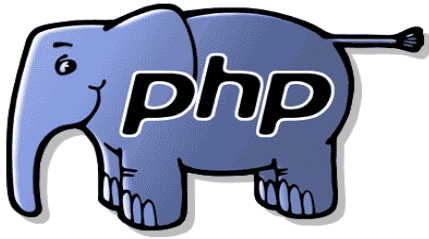
<Location /server-status>
    SetHandler server-status
    Order deny,allow
    Allow from all
</Location>
```

Consideraciones PHP

Compresión de HTML

```
<?php
$content=file_get_contents("http://www.yahoo.com");
$search = array(
    '\>[\^S ]+/'s, //strip whitespaces after tags, except space
    '/[\^S ]+\</'s, //strip whitespaces before tags, except space
    '/(\s)+/'s     //shorten multiple whitespace sequences
);
$replace = array(
    '>',
    '<',
    '\\1'
);
$content = preg_replace($search, $replace, $content);
$content = str_replace("> <", "><", $content);
$content = str_replace(array("\r\n", "\r", "\n", "\t"), ' ', $content);
echo $content;
?>
```



Consideraciones PHP

Cache con PHP

```
<?php
$seconds=30; $fcache="test.html";
if (file_exists( $fcache ))
{
$difftime=time()-filemtime($fcache);
if ($difftime<$seconds)
{ ob_start("ob_gzhandler"); readfile($fcache); die(); } else ob_start();
} else ob_start();
for ($k=0;$k<10;$k++) { sleep(1); echo $k; }
$cache = ob_get_clean();
$h=fopen( $fcache , "w" ); fwrite($h,$cache); fclose($h);
ob_start("ob_gzhandler");
echo $cache;
?>
```