

Manual de Instalación

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por Walter Pirri

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Tabla de contenidos

| | |
|---|----------|
| Acerca de este manual | i |
| 1. Obteniendo los fuentes | 1 |
| 2. Compilación..... | 2 |
| 2.1. Entorno necesario..... | 2 |
| 2.2. Descomprimiendo los fuentes | 2 |
| 2.3. Compilando | 2 |
| 2.3.1. configure | 2 |
| 2.3.2. Compilando todo | 3 |
| 2.3.3. Compilando el l stener propietario | 3 |
| 2.3.4. Compilando el sistema b sico del monitor..... | 3 |
| 2.3.5. Compilando servers b sicos | 3 |
| 2.3.6. Compilando el cliente | 3 |
| 2.3.7. Compilando los ejemplos | 3 |
| 3. Instalaci n | 5 |
| 3.1. Instalando el monitor transaccional completo | 5 |
| 3.2. Instalando el cliente | 5 |
| 3.3. Instalando los ejemplos | 5 |
| 4. Parametrizaci n..... | 6 |
| 5. Configuraci n del Kernel | 7 |
| A. GNU Free Documentation License..... | 8 |
| A.1. PREAMBLE | 8 |
| A.2. APPLICABILITY AND DEFINITIONS | 8 |
| A.3. VERBATIM COPYING..... | 10 |
| A.4. COPYING IN QUANTITY | 10 |
| A.5. MODIFICATIONS..... | 10 |
| A.6. COMBINING DOCUMENTS..... | 12 |
| A.7. COLLECTIONS OF DOCUMENTS | 12 |
| A.8. AGGREGATION WITH INDEPENDENT WORKS..... | 13 |
| A.9. TRANSLATION | 13 |
| A.10. TERMINATION..... | 13 |
| A.11. FUTURE REVISIONS OF THIS LICENSE..... | 14 |
| A.12. ADDENDUM: How to use this License for your documents..... | 14 |

Acerca de este manual

Este manual está destinado a orientar al administrador del sistema en los pasos necesarios para obtener, compilar, instalar y parametrizar el sistema monitor transaccional GNU-Monitor.

Capítulo 1. Obteniendo los fuentes

El sitio indicado para obtener una versión estable de los archivos fuente del sistema es en los downloads de Source Forge (<http://www.sf.net/projects/gnu-monitor>). Allí se encuentran los módulos del proyecto en tres grupos de archivos separados en sistema (http://sourceforge.net/project/showfiles.php?group_id=65592), documentación (http://sourceforge.net/project/showfiles.php?group_id=65592) y ejemplos (http://sourceforge.net/project/showfiles.php?group_id=65592).

También se encuentra disponible un repositorio CVS (<http://gnu-monitor.cvs.sourceforge.net/gnu-monitor>) donde se puede obtener lo último desarrollado aunque no siempre estable.

Es posible sincronizar con el CVS directamente usando: **cvs -z3 -d:pserver:anonymous@gnu-monitor.cvs.sourceforge.net:/cvsroot/gnu-monitor co nombre-del-modulo.**

Capítulo 2. Compilación

2.1. Entorno necesario

El sistema Gnu-Monitor esta desarrollado para funcionar en plataforma Linux o FreeBSD principalmente y no ha sido probado en otros sistemas operativos.

Es necesario contar con un compilador C++ como puede ser el Gnu C/C++ gcc que es el que usamos para el desarrollo.

2.2. Descomprimiendo los fuentes

Si los fuentes fueron obtenidos por su distribución comprimida será necesario descomprimirlos utilizando: **tar xzvf nombre-del-modulo-n.n.n.tar.gz** que creará el directorio `nombre-del-modulo` donde se descomprimirá los fuentes del sistema monitor, incluidos el listener, el ruteador de transacciones, las librerías para el manejo de colas y los servidores principales, los ejemplos provistos o la documentación del sistema según el modulo que se descomprima.

2.3. Compilando

Antes de compilar será necesario ejecutar el script **configure** que se encuentra en la raiz del módulo system, con los parámetros necesarios según están explicados en el archivo INSTALL.

2.3.1. configure

Para la mayoría de los sistemas que cumplan con el LSB (Linux Standard Base) deberá alcanzar con una configuración como: **./configure --prefix=/usr --sysconfdir=/etc/sysconfig --localstatedir=/var**

2.3.1.1. --prefix=/usr

Este modificador provoca que los programas, headers y librerías se instalen bajo `/usr` en lugar de `/usr/local` como se hace por defecto.

2.3.1.2. --sysconfdir=/etc/sysconfig

Este modificador provoca que los archivos de configuración se instalen en `/etc/sysconfig` en lugar de `$PREFIX/etc` ya que la primera es una ubicación mas razonable.

2.3.1.3. --localstatedir=/var

Este modificador provoca que los archivos de log del sistema monitor se alojen en `/var/log/gmonitor` en lugar de `$PREFIX/var/gmonitor`.

2.3.2. Compilando todo

Para compilar todo el sistema GNU-Monitor (listener, ruteador, colas y servers básicos) solo es necesario ejecutar **make** dentro del directorio `system`.

2.3.3. Compilando el listener propietario

Si se desea compilar únicamente el componente listener del sistema se deberá ejecutar **make build-listener**.

2.3.4. Compilando el sistema básico del monitor

Si lo que se necesita es solamente compilar el sistema básico compuesto por el listener, el ruteador de transacciones y las librerías para el manejo de las colas de los servidores el comando a utilizar es **make build-monitor**.

2.3.5. Compilando servers básicos

Los servers básicos son los que realizan las funciones administrativas del sistema GNU-Monitor y se pueden compilar de manera independiente del resto de los programas utilizando **make build-server**.

2.3.6. Compilando el cliente

El cliente necesario para comunicarse con el sistema GNU-Monitor puede ser compilado utilizando por medio del comando **make build-client**.

2.3.7. Compilando los ejemplos

Dentro del módulo `samples` se encuentran tres ejemplos (por el momento) en los que se puede observar la composición de clientes y servers.

El ejemplo `eco` corresponde a un cliente que solicita un `.eco` al monitor pasándole una cadena de caracteres en el mensaje. Esta función será resuelta por el server `gm_default` que forma parte del servicio básico del sistema. Este ejemplo se compila simplemente ejecutando **make**.

El ejemplo `statups` es un sistema para monitorear el estado de una UPS conectada a través del puerto serie del computador. Se provee un server y un cliente para poder compartir el estado de la UPS en toda la red. Ambos se compilan mediante el comando **make**.

El ejemplo `info` corresponde a un cliente que solicita un `.get_server_list` al monitor para que le devuelva la lista de servers y sus descripciones en formato XML. Esta función será resuelta por el server `gm_config` que forma parte del servicio básico del sistema. Este ejemplo se compila simplemente ejecutando **make**.

Capítulo 3. Instalación

3.1. Instalando el monitor transaccional completo

La instalación del monitor se realiza ejecutando **make install**.

3.2. Instalando el cliente

La instalación del cliente se realiza mediante el comando **install-client**.

3.3. Instalando los ejemplos

Cada ejemplo tiene su propia instalación , para el caso del server tambien sería necesario darlo de alta mediante el aplicativo **gmon_config**.

Capítulo 4. Parametrización

Antes de la compilación y mediante el script **configure**, como se explicó en capitulos anteriores, se parametrizan los diferentes directorios donde se instalarán los programas, librerías y headers del sistema GNU-Monitor.

Luego de la instalación se pueden parametrizar nuevos servers utilizando el menú interactivo **gmon_config** que se explica con mas detalle en el manual del sistema.

Capítulo 5. Configuración del Kernel

En sistemas donde es necesario levantar cierta cantidad de servidores puede llegar a no ser suficiente la cantidad máxima de colas de mensajes permitidas por el sistema operativo. En el linux que se utilizó para desarrollar el Monitor este valor era de 16.

Se calcula que la cantidad de colas necesarias para el funcionamiento del monitor deberá ser por lo menos del doble de las instancias de servidores que se van a levantar y dos mas para el router (gmt), lo que me permitiría con esta configuración correr hasta siete instancias ya sean del mismo o de diferentes servidores.

De ser necesario utilizar **sysctl(8)** para corregir los parámetros del kernel modificando o agregando nuevos tokens (kernel.msgmni corresponde a colas) en el archivo de configuración en /etc/sysctl.conf.

Con semáforos y memoria compartida no hay problema ya que se utiliza solo una instancia de cada uno.

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