

Administración avanzada del sistema operativo GNU/Linux

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Introducción

Los sistemas GNU/Linux han llegado a un grado de madurez importante que los hace válidos para integrarlos en cualquier ambiente de trabajo, desde el escritorio del PC personal hasta el servidor de una gran empresa, y los centros de datos distribuidos en modelos de computación *cloud*. El objetivo principal de este curso es introducirnos en el mundo de la administración de los sistemas GNU/Linux y su uso en entornos *cloud*. Aprenderemos cómo proporcionar desde GNU/Linux los servicios necesarios a diferentes ambientes de usuarios y máquinas. El campo de la administración de sistemas es enorme, hay muchas tareas, muchos problemas por tratar, hay que tener grandes conocimientos de hardware y software, y no está de más aplicar un poco de psicología para tratar con los usuarios finales de los sistemas.

El curso no pretende abordar una distribución GNU/Linux particular, pero se han escogido principalmente un par de casos de uso representativos: Debian y Fedora. Respecto al campo de la administración, esta se intentará gestionar desde el nivel más bajo posible, normalmente la línea de comandos y los ficheros de configuración. Se comentarán, en su caso, herramientas de nivel más alto, pero hay que tener cuidado con estas últimas, ya que suelen ser fuertemente dependientes de la distribución utilizada e incluso de la versión de esta; además, estas herramientas suelen variar mucho entre versiones. La administración de bajo nivel suele ser mucho más dura, pero sabemos dónde estamos actuando, dónde podemos ver los resultados y, además, nos aporta muchos conocimientos extra sobre las diferentes tecnologías utilizadas.

La primera edición de estos materiales fue realizada a finales de 2003, y por ello se han ido desarrollando cinco ediciones, que se han trabajado sobre las diferentes versiones de las distribuciones Debian y Fedora disponibles hasta la fecha actual. De estas distribuciones cabe señalar que, esencialmente, no han cambiado en los aspectos básicos de administración (con algunas excepciones y abriendo nuevas posibilidades) pero sí han incluido nuevas opciones, módulos, versiones del núcleo, formas de configuración, etc. La distribución Debian es un paradigma dentro del movimiento Open Source, por no pertenecer a ninguna empresa y estar confeccionada solo por las aportaciones de los voluntarios distribuidos por todo el mundo. Debian, además, integra exclusivamente software libre (pueden añadirse otros aparte). Por otra parte, Fedora es la distribución que cuenta, además de su comunidad, con el soporte de una de las empresas más solventes del panorama comercial (Red Hat) que, quizás por ello, sea la que brinde más soporte a nivel empresarial (mediante servicios de pago). En Debian el soporte depende de los voluntarios y del conocimiento compartido de los usuarios.

Como la administración de sistemas es un campo muy amplio, este manual solo pretende introducirnos en este apasionante (y cómo no, también a veces frustrante) mundo. Veremos algunas de las tareas típicas y cómo tratar los diferentes problemas; si bien la administración es un campo que se aprende día a día, con el esfuerzo continuo. Y desde aquí advertimos de que este manual es un trabajo abierto, que con sus aciertos y los más que probables errores, se puede ver complementado con los comentarios de sus (sufridores) usuarios, de modo que son bienvenidos los comentarios y las sugerencias de cualquier tipo para la mejora de los materiales.

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