



Figure 1: Distillation process from the Community to Red Hat Enterprise Linux

Red Hat Enterprise Linux Products

The Red Hat Enterprise Linux family has been designed to cover the full spectrum of corporate operating environments in a simple and consistent manner. The family is comprised of four products, two designed for server systems, two designed for client systems. There is a high level of commonality across the products, thereby ensuring that application support, user environments, and management tools are consistent. The products are primarily differentiated by the level of system architecture support, system size, and service offerings.

Red Hat Enterprise Linux supports multiple hardware architectures including:

- Intel x86-compatible (32-bit)
- Intel Itanium2 (64-bit)
- Advanced Micro Devices AMD64 (64-bit) and Intel EM64T
- IBM POWER series (eServer iSeries and eServer pSeries)
- IBM Mainframe (eServer zSeries and S/390)

Perhaps the most important feature of Red Hat's multi-architecture development process is that all implementations are built from identical source code. The primary benefit of this commonality is that all the products are completely compatible, regardless of architecture. This assists ISVs in supporting their applications on multiple architectures and also simplifies system administration and product support.



The individual members of the Enterprise Linux family remains unchanged from version 3:

- High-end server: Red Hat Enterprise Linux AS
- Entry/mid-level server: Red Hat Enterprise Linux ES
- High-end client: Red Hat Enterprise Linux WS
- General purpose client: Red Hat Desktop

An important feature of the family is that it is cleanly subsetting. That is, all the features of a low-end product are also available in a high-end product. Therefore, upgrades from one family member to another do not result in the loss of features, and server products can be deployed in client environments.

The following sections outline the major features of each Red Hat Enterprise Linux family member.

Red Hat Enterprise Linux AS

Red Hat Enterprise Linux AS (“advanced server”) is the top-of-the-line enterprise Linux solution, designed for large departmental and datacenter server deployments. Red Hat Enterprise Linux AS is the only family member that supports IBM POWER and zSeries/S-390 systems and is available with Standard and Premium Edition support. Red Hat Enterprise Linux AS is best suited for systems with more than 2 CPUs or more than 16 GB of main memory.

Typical Red Hat Enterprise Linux AS deployments would be used to support:

- Medium to large-scale databases and database applications
- Large web and application servers
- Corporate applications such as CRM, ERP, and SCM

Red Hat Enterprise Linux ES

Red Hat Enterprise Linux ES (“entry/mid server”) provides an entry-level and mid-range server operating system for the Intel x86, EM64T, Itanium2, and AMD64 markets. It supports 1-2 CPU systems with up to 16 GB of memory and is suitable for a wide range of applications—ranging from the edge-of-network to medium scale departmental deployments. It includes the same capabilities as Red Hat Enterprise Linux AS and is differentiated by its support for smaller systems and lower price. Enterprise Linux ES is available with Basic Edition and Standard Edition support.

Typical Red Hat Enterprise Linux ES deployments are used to support:

- Corporate web infrastructures
- Edge-of-network applications (DHCP, DNS, firewalls, etc.)
- Mail and file/print serving
- Small-medium database and departmental applications

Red Hat Enterprise Linux WS

Red Hat Enterprise Linux WS (“workstation”) is the high-end desktop/client



member of the Red Hat Enterprise Linux family.

Red Hat Enterprise Linux WS supports 1-2 CPU 32-bit and 64-bit Intel and AMD systems (x86, EM64T, Itanium2, and AMD64), and is ideal for “power user,” software development, and technical applications such as virtualization/rendering (CAD/CAM, EDA, etc.). It includes a full suite of desktop productivity applications for tasks such as document creation, email, instant messaging, and web browsing.

While Red Hat Enterprise Linux WS is based on the same software core as the server products, it does not include a number of network server applications (such as DNS and DHCP). Therefore it is suitable only for use in client environments. Enterprise Linux WS is available with Basic Edition and Standard Edition support.

HPC with Red Hat Enterprise Linux WS

Red Hat Enterprise Linux WS is usually the most cost effective Enterprise Linux product for use in High Performance Computing (HPC) environments. In these environments it is deployed in a headless workstation mode without a monitor, keyboard or mouse. A few common HPC-related packages are included in the Enterprise Linux family such as PVM and LAM.

Red Hat Desktop

Red Hat Desktop is the high-volume desktop/client member of the Red Hat Enterprise Linux family. It supports 32-bit Intel x86 and 64-bit Intel EM64T and AMD64 systems with one CPU and up to 4 GB of main memory. It provides the same software functionality as Red Hat Enterprise Linux WS but for smaller systems and at a lower price point. Red Hat Desktop is provided in multi-unit packages bundled with a Red Hat Network (RHN) Proxy or Satellite Server. The RHN server is used to efficiently perform desktop management functions such as the installation of updates and security patches.