EXECUTIVE OVERVIEW

When it is time to decide whether or not to stay on a particular version of an operating system, or upgrading to the next minor release, enterprise organizations must factor in a number of variables: business objectives, perceived advantages of the new functionality, the pros and cons of how it will affect their IT environment, and more.

Surprisingly, cost is not always a criterion for such an important decision for the simple reason that most organizations don’t know the true total cost of an upgrade, or they may not be aware of alternatives they may have if they choose not to upgrade. The Red Hat Extended Update Support (EUS) Life Cycle Add-On — one of Red Hat’s comprehensive Red Hat Enterprise Linux Life Cycle Management Add-On solutions — is a proven way for organizations to continue to maintain the flexibility of choice and control they have over their IT environments, yet it can also provide an extremely cost-effective alternative to an upgrade to a Red Hat Enterprise Linux minor release.

This paper presents an approach to assessing the total costs most organizations face when upgrading their operating system and present the potential cost savings and ROI that can be achieved with the Red Hat Enterprise Linux EUS Add-On solution.

CONTINUING THE LEGACY OF COST SAVINGS WITH RED HAT ENTERPRISE LINUX

In a recent research report, IDC Research demonstrated that organizations that have standardized on Red Hat Enterprise Linux recover up-front subscription costs through more efficient operations, higher ratios of servers and users per administrator, and a significantly lower annual downtime — all in comparison to organizations that maintain a Linux server infrastructure that is either mixed or primarily non-paid.¹

¹ Full details of Support Services are provided as part of the Subscription Agreement.
More specifically, IDC highlighted seven areas in three categories where these cost savings occur.

1. **IT Staff Productivity**
   - Less server administration
   - Less helpdesk responses required
   - Less server deployment time

2. **Infrastructure**
   - Less hardware required
   - Fewer management tools required

3. **User Productivity**
   - Less downtime
   - Fewer calls to the helpdesk

Source: IDC Research, *Understanding Linux Deployment Strategies: The Business Case for Standardizing on Red Hat Enterprise Linux*

Application and hardware platform upgrades represent an additional opportunity for companies to maximize these cost savings. Yet many organizations may have different life cycles for different applications, with some optimized for performance and others for stability. Red Hat Enterprise Linux’s regular life cycle provides features and optimizations to keep applications and hardware platforms performing at their peak. Yet some organizations choose to skip minor release updates for those applications where maintaining the status quo is paramount. However, this decision can leave those applications vulnerable to security concerns or other potential issues.

Red Hat provides the Extended Update Support Life Cycle Add-On to give organizations a way to protect the status quo and maintain the most stable and secure environment possible. The EUS Add-On can also be an effective way to reduce the costs normally associated with upgrading their OS. For example, if an organization successfully aligns its OS upgrades with planned application or hardware upgrades – enabling them to upgrade when the time is right for them – it can effectively eliminate the cost of an independent upgrade from their OS life cycle. A detailed example using Red Hat Enterprise Linux is given in the following section.

**Adding up the Total Cost of an OS Upgrade**

Think quick: What is the total operational cost of performing an upgrade in your environment?

Many organizations today simply don’t know the answer. When you consider moving applications, middleware an operating system they can be surprised at how high it can be. Factoring in often-overlooked variables such as administrator time, system downtime, testing, and change management efforts across the stack drives up the costs of each change in a system.

Consider the case of a typical organization that has approximately 50 servers running Red Hat Enterprise Linux. In this example, we would assume there would be two full-time IT administrators, each at an annual salary of $86,000 who would require three weeks to implement the new upgrade. In this case, the man hours associated with their time would be $10,000.

Then, by factoring in User Acceptance Training (UAT) and other change management efforts required to prepare the datacenter, facilitate project management processes, and prepare users, the organization would need an additional $2,500. Finally, to arrive at a total cost, the company must consider the costs related to system downtime, lost revenue, and other missed-opportunity costs, which in this case is conservatively calculated to be $8,000 during the three-week upgrade process.
When all of these factors are considered, it adds up to $20,500 per minor release upgrade, which then triples to become $61,500 over the life of three minor release upgrades.

THE REAL COSTS OF AN OPERATING SYSTEM UPGRADE

<table>
<thead>
<tr>
<th>Total Cost of an Operating System Upgrade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per Upgrade:</td>
</tr>
<tr>
<td>IT Administrator Time</td>
</tr>
<tr>
<td>Change Management Efforts</td>
</tr>
<tr>
<td>System Downtime and Missed Opportunity Cost</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Total Cost (three minor release upgrades)</td>
</tr>
</tbody>
</table>

If the organization was already leaning toward staying on its current version of Red Hat Enterprise Linux, understanding this total cost can be illuminating, and often can be the final straw in the decision to stay on its current version of Red Hat Enterprise Linux for as long as possible. Fortunately, by choosing the Red Hat Enterprise Linux EUS Life Cycle Add-On, this same organization can achieve significant cost savings by choosing when it upgrades — while still gaining access to the preferred functionality and maintaining the flexibility and control over its IT assets when it upgrades — while still gaining access to the preferred functionality and maintaining the flexibility and control over its IT assets.

Minimize Upgrade Costs with Red Hat Enterprise Linux EUS Life Cycle

Consider that in a traditional Red Hat Enterprise Linux release timeframe, during any 18-24 month period, there would be approximately four minor releases. For example, these minor releases would occur in semi-regular intervals approximately every six months. (e.g., over a 24-month timeframe, Red Hat Enterprise Linux releases might include 6.0, 6.1, 6.2, 6.3, and 6.4).

But in the use case above, the organization may decide that they want to skip the upgrade process for many of the minor releases as they come out, which they can easily do with the Red Hat Enterprise Linux EUS Life Cycle Add-On to upgrade from 6.0 to 6.4. In this example, the EUS Life Cycle Add-On really provides a win-win scenario — by upgrading to 6.4, the organization manages to save the time, effort, and cost of the upgrade process, but they would still gain access to the critical updates, bug fixes, and other functionality they require to run their IT environment and their business.

Let’s take a closer look at the numbers. By purchasing a three-year EUS Life Cycle Add-On subscription, the organization would spend an estimated $31,500. But with the Red Hat Enterprise Linux EUS Life Cycle Add-On, this organization would achieve a significant cost savings of $29,500, which translates into a remarkably fast ROI of just 1.5 years.
In this example, the EUS Life Cycle Add-On provides an independent overlapping life cycle for Red Hat Enterprise Linux minor releases in parallel to the single, incrementally maintained Red Hat Enterprise Linux stream of releases. As a result, active EUS subscribers receive critical impact security fixes and urgent priority defect fixes — while still achieving significant cost savings in the process.

**EXECUTIVE SUMMARY**

For many organizations, trying to determine whether or not to upgrade their OS can be a complex decision. On one hand, they may prefer to stay on their current version to best meet their current needs as well as to minimize significant upgrade costs related to the upgrade. But then again, choosing to upgrade raises many questions too, especially related to the risk of missing out on bug fixes, security releases, and other critical updates.

Life cycle programs for operating systems deliver a perfect solution for IT departments looking to minimize costs while still having access to the critical functionality and support they require. Red Hat’s two Life Cycle Management Add-On solutions for Red Hat Enterprise Linux — Extended Update Support (EUS) and Extended Life Cycle Support ELS — gives enterprise organizations maximum flexibility over their operating system, so they can continue to run their IT environments and businesses in the way that works for them.