

# The Canonical Livepatch Service

The Canonical Livepatch Service lets you apply critical kernel security fixes to your Ubuntu LTS systems without rebooting.

Available to Ubuntu Advantage customers, the Canonical Livepatch Service reduces planned or unplanned downtime while maintaining compliance and security.

## Product Overview

The Canonical Livepatch Service delivers live kernel patching to Ubuntu LTS<sup>1</sup> systems without the need to reboot. Ensuring the security and efficiency of an Ubuntu system has never been easier.

Available to Ubuntu Advantage customers, you can perform patching without interrupting your mission-critical workloads and in-memory databases, saving the cost of downtime and increasing service availability.

Ubuntu Advantage gives the world's largest enterprises the assurance they need to run mission-critical workloads such as enterprise databases, virtual/cloud hosts or infrastructural services on Ubuntu.

The Canonical Livepatch Service is also available for personal use for free up to a maximum of three machines.

### Canonical Livepatch On-prem Service

The **On-prem service** gives you all the benefits of the Canonical Livepatch, but enables full control of rollouts of patches and easier tracking of the state of registered machines. The On-prem service is available as a site-wide subscription initially deployed by Canonical to the cloud of your choice.

## Key benefits

### Avoid unplanned maintenance

Kernel security updates represent a deeply impactful form of maintenance. Security vulnerabilities mean any delay in patching them increases the risk of exposure. However, kernel updates usually require a reboot, triggering other consequences usually reserved to be addressed in a planned maintenance window. With Canonical Kernel Livepatch, many security updates will not carry the reboot penalty, which increases predictability in operations.

### Maximise service availability

Mission-critical workloads like enterprise databases, virtual/cloud hosts or infrastructure services can't afford downtime. The Canonical Livepatch Service applies kernel fixes in microseconds, without restarting your Ubuntu LTS system. Fewer reboots means improved service availability.

### Maintain security and compliance

When a security loophole is identified in the Linux kernel, patching is the only way to reduce your exposure from malicious attack. Finding a downtime window to address security vulnerabilities can be challenging, particularly for large-scale and production deployments. The Canonical Livepatch Service applies security critical Linux kernel patches without rebooting, keeping your Ubuntu LTS systems secure and compliant.

### Control rollout of patches

The On-prem Livepatch service allows you to define rollout policy and remain in full control of which machines will get updated and when. To keep your machines up-to-date, the on-prem service regularly syncs with Canonical Livepatch and obtains the latest patches. However, the on-prem server allows you to set the policy for staged releases and apply a new patch to a controlled subset of machines across the data center and after validation, apply the patch to a wider set of machines in as many stages as needed.

### Contain machines within datacenter

Enabling the Canonical Livepatch client on machines requires access to the external Canonical Livepatch service to fetch the patches. However, with the Canonical Livepatch On-prem service, the machines are contained within the data center as the patches are fetched from the internal service only.

### Track deploys with reports

On-prem Livepatch provides the means to track deploys across the machines. Reports include number of patched machines per patch, number of failed patches, etc. Note that deployment does not include software to visualize reports.

# System requirements

## Ubuntu and kernel requirements

Canonical Livepatch Service is available for:

Ubuntu Version	Architecture	Build	Kernel Version
18.04 LTS (Bionic)	64-bit (x86_64 or amd64)	generic	4.15
16.04 LTS (Xenial)	64-bit (x86_64 or amd64)	generic	4.4
14.04 LTS (Trusty)	64-bit (x86_64 or amd64)	HWE	4.4

Canonical Livepatches work on Ubuntu Servers and Desktops, on physical machines, virtual machines and in the cloud.

## Deployment requirements

Requirements to deploy Canonical Livepatch depend on the use case, and can range from storing patches on local storage in one service to proper HA solution with using replicated object storage behind the service for patches.

## FAQs

### What is the Canonical Livepatch Service?

- The Canonical Livepatch service updates your Ubuntu LTS systems with the highest and most critical security vulnerabilities, without requiring a reboot in order to take effect.

### Who is entitled to the Canonical Livepatch Service?

- Every system covered by an Ubuntu Advantage support contract is entitled to use the Canonical Livepatch Service at no additional cost, starting at UA Essential for \$75/year for virtual machines or \$225/year for physical machines.
- Personal users of Ubuntu can subscribe up to three machines (laptop, server or cloud) free of charge.

### How can I deploy Canonical Livepatch On-prem Service?

- Contact us and we'll schedule the deployment of the service on a cloud of your choice.

### How many servers can Canonical Livepatch On-prem handle?

- One server can handle thousands of clients, however if availability is a concern, you'll need a highly available setup.

### I already have purchased UA. Can I use Canonical Livepatch On-prem service?

- Use of the on-prem service is not included in the price of UA and requires a separate (site-wide) service subscription. Contact us for details.

### How do I enable Canonical Livepatch Service?

- First install the canonical-livepatch daemon:  
`sudo snap install canonical-livepatch`

And then you need to enable it:

```
sudo canonical-livepatch enable'
```

This command will first ask you if this system is covered under an Ubuntu Advantage support contract with Canonical, and if so, you'll be directed to the [Canonical Livepatch portal](#) where you'll provision your credentials, then paste them into the dialog.

- For further information on enabling the Canonical Livepatch Service please read the documentation.

### How does this service compare to Oracle Ksplice, RHEL Livepatching and SUSE Livepatching?

- While the concepts are largely the same, the technical implementations and the commercial terms are very different. Oracle Ksplice uses its own technology which is not upstream. RHEL and SUSE currently use their own homegrown kpatch and kgraft implementations, respectively.
  - Oracle Ksplice is available for Oracle Linux and RHEL servers with an Oracle Linux Premier Support license (\$2299/node/year)
  - RHEL Livepatching requires a Red Hat Enterprise Linux Server Premium Subscription of \$1299/node/year
  - SUSE Livepatching is available as an add-on to SUSE Linux Enterprise Server 12 Priority Support subscription at \$1,499/node/year

## More on Ubuntu Advantage

Ubuntu Advantage is the commercial support package from Canonical. As well as connecting you to the world's leading experts on Ubuntu-based physical, virtual and cloud-based systems, Ubuntu Advantage customers enjoy access to Landscape, our award-winning systems management tool.

Landscape lets you run desktop, server and public cloud deployments, or build and manage private OpenStack clouds from a single interface. It is easy to set up, easy to use and requires no special hardware.

It features:

- Management at scale
- Deploy or rollback security updates
- Compliance reports
- Role-based access
- Informative monitoring
- The Canonical Livepatch Service

To purchase Ubuntu Advantage visit [buy.ubuntu.com](https://buy.ubuntu.com)

## Get started with Livepatch

To get your authorisation code, visit the [Canonical Livepatch portal](#).

To purchase Livepatch, including our on-prem service, through the Ubuntu Advantage support subscription, please contact our team below:

(UK) +44 203 656 5291

(US) +1 737 2040291

or email [sales@canonical.com](mailto:sales@canonical.com)

<sup>1</sup>: Ubuntu 14.04 LTS systems must use the Hardware Enablement kernel.