

15. Proxmox

Proxmox .

: Proxmox ISO

Proxmox ISO .

<https://www.proxmox.com/en/downloads/proxmox-virtual-environment/iso>

1. ISO Install Proxmox VE (Graphical) .



Proxmox VE 8.3 (iso release 1) - <https://www.proxmox.com/>

Install Proxmox VE (Graphical)
Install Proxmox VE (Terminal UI)
Advanced Options

enter: select, arrow keys: navigate, e: edit entry, esc: back

Graphical(GUI) .

2. EULA .



Proxmox VE Installer

END USER LICENSE AGREEMENT (EULA)

END USER LICENSE AGREEMENT (EULA) FOR PROXMOX VIRTUAL ENVIRONMENT (PROXMOX VE)

By using Proxmox VE software you agree that you accept this EULA, and that you have read and understand the terms and conditions. This also applies for individuals acting on behalf of entities. This EULA does not provide any rights to Support Subscriptions Services as software maintenance, updates and support. Please review the Support Subscriptions Agreements for these terms and conditions. The EULA applies to any version of Proxmox VE and any related update, source code and structure (the Programs), regardless of the delivery mechanism.

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3. Limitation of Liability. To the maximum extent permitted under applicable law, under no circumstances will Proxmox, its affiliates, any Proxmox authorized distributor, or the licensor

Abort

Previous

I agree

3. Proxmox OS가 Target Harddisk , Next .



Proxmox VE Installer

Proxmox Virtual Environment (PVE)

The Proxmox Installer automatically partitions your hard disk. It installs all required packages and makes the system bootable from the hard disk. All existing partitions and data will be lost.

Press the Next button to continue the installation.

- **Please verify the installation target**
The displayed hard disk will be used for the installation.
Warning: All existing partitions and data will be lost.
- **Automatic hardware detection**
The installer automatically configures your hardware.
- **Graphical user interface**
Final configuration will be done on the graphical user interface, via a web browser.

1

Target Harddisk /dev/sda (100.00GiB, QEMU HARDDISK)

Options

Abort

Previous

Next

2

4. Country Time zone .



Proxmox VE Installer

Location and Time Zone selection

The Proxmox Installer automatically makes location-based optimizations, like choosing the nearest mirror to download files from. Also make sure to select the correct time zone and keyboard layout.

Press the Next button to continue the installation.

- **Country:** The selected country is used to choose nearby mirror servers. This will speed up downloads and make updates more reliable.
- **Time Zone:** Automatically adjust daylight saving time.
- **Keyboard Layout:** Choose your keyboard layout.

Country	South Korea
Time zone	Asia/Seoul
Keyboard Layout	U.S. English

5. Email . Email Proxmox



Proxmox VE Installer

Administration Password and Email Address

Proxmox Virtual Environment is a full featured, highly secure GNU/Linux system, based on Debian.

In this step, please provide the *root* password.

- **Password:** Please use a strong password. It should be at least 8 characters long, and contain a combination of letters, numbers, and symbols.
- **Email:** Enter a valid email address. Your Proxmox VE server will send important alert notifications to this email account (such as backup failures, high availability events, etc.).

Press the Next button to continue the installation.

Password	••••••••
Confirm	••••••••
Email	proxmox@hostway.co.kr

6. NIC, Hostname, IP, DNS



Proxmox VE Installer

Management Network Configuration

Please verify the displayed network configuration. You will need a valid network configuration to access the management interface after installing.

After you have finished, press the Next button. You will be shown a list of the options that you chose during the previous steps.

- **IP address (CIDR):** Set the main IP address and netmask for your server in CIDR notation.
- **Gateway:** IP address of your gateway or firewall.
- **DNS Server:** IP address of your DNS server.

Management Interface: ens18 -

Hostname (FQDN): pve-node01.hostway.co.kr

IP Address (CIDR): .133 / 24

Gateway: .1

DNS Server:

Abort Previous Next

Management Interface: Proxmox , API ,
NIC . NIC

Hostname (FQDN): Hostname + domain .

ex) hostname: pve-node01 / domain: hostway.co.kr , pve-
node01.hostway.co.kr

IP Address (CIDR): Proxmox Node IP Prefix, Gateway, DNS

7. Summary , Install OS



Proxmox VE Installer

Summary

Please confirm the displayed information. Once you press the **Install** button, the installer will begin to partition your drive(s) and extract the required files.

Option	Value
Filesystem:	ext4
Disk(s):	/dev/sda
Country:	South Korea
Timezone:	Asia/Seoul
Keymap:	en-us
Email:	support@hostway.co.kr
Management Interface:	ens18
Hostname:	pve-node01
IP CIDR:	172.16.16.133/24
Gateway:	172.16.16.1
DNS:	8.8.8.8

☒ Automatically reboot after successful installation

Abort

Previous

Install

8. , Proxmox VE GNU/Linux (,
Default .)

GNU GRUB version 2.06-13+pmx2

```
*Proxmox VE GNU/Linux
Advanced options for Proxmox VE GNU/Linux
Memory test (memtest86+x64.bin)
Memory test (memtest86+x64.bin, serial console)
```

Use the ↑ and ↓ keys to select which entry is highlighted.
Press enter to boot the selected OS, 'e' to edit the commands before booting or 'c'
for a command-line.
The highlighted entry will be executed automatically in 5s.

9. shell, ssh,

```
.....
Welcome to the Proxmox Virtual Environment. Please use your web browser to
configure this server - connect to:

https://172.16.16.133:8006/
.....

Hint: Num Lock on
pve-node01 login:
```

ssh: 22 port(default)

web console & API: 8006 port

open), (default

05. Proxmox Authenitcation

Proxmox Authenitcation

(VM, ,)

(API) ()

Proxmox VE Linux PAM(Linux), Proxmox VE(Web)
, LDAP, Microsoft Active Directory, OpenID Connect

: [Hostway Proxmox](#)
: Proxmox@hostway.co.kr

04. Proxmox Clustering

Proxmox Clstering

Proxmox Virtual Environment
(32)

Proxmox (**pmxcfs**)

Proxmox VE Proxmox가
[Proxmox](#) ([pmxcfs](#))

Proxmox (“pmxcfs”)
, corosync
Proxmox VE

RAM . 128MiB 가 .
가 .

-
- VM ID
- 가
- Corosync
-

/

/

가

Proxmox VE

Live Migration

가 가

- VM 가 ,
- PCI USB

- Proxmox VE
- ()
- Proxmox VE

- 가 CPU 가
- VM CPU

KVM

Linux

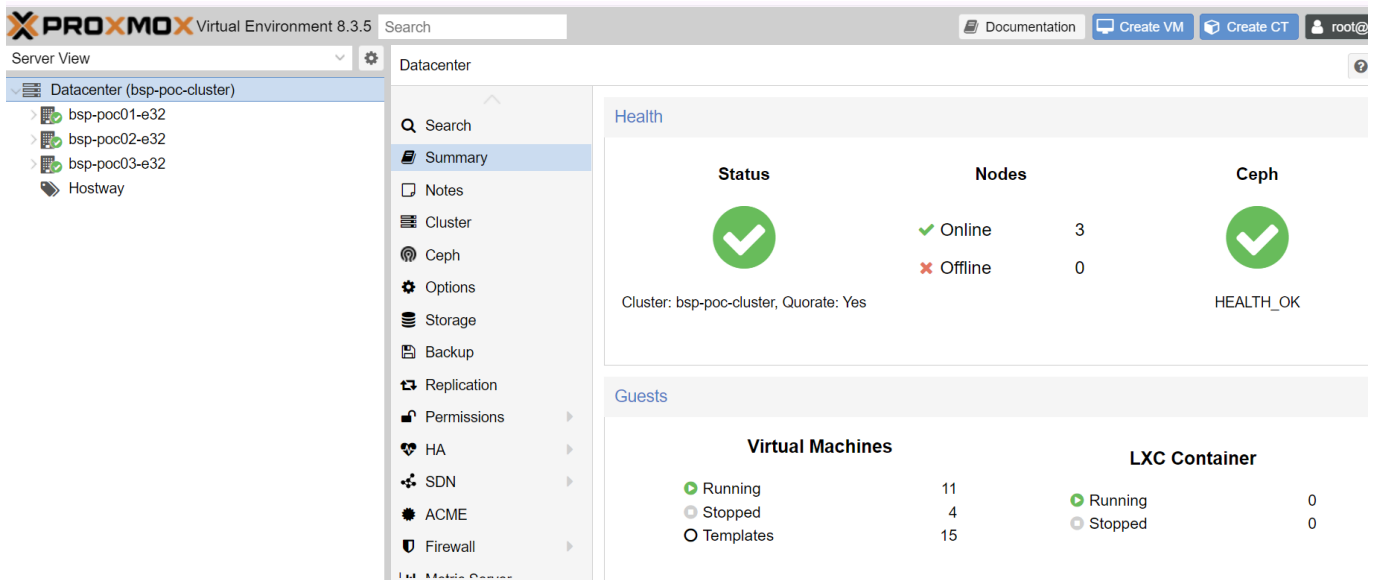
. GUI

VM

가

: [Hostway Proxmox](https://hostway.proxmox.com/)
: Proxmox@hostway.co.kr

03. Proxmox Management



Proxmox VE (GUI)

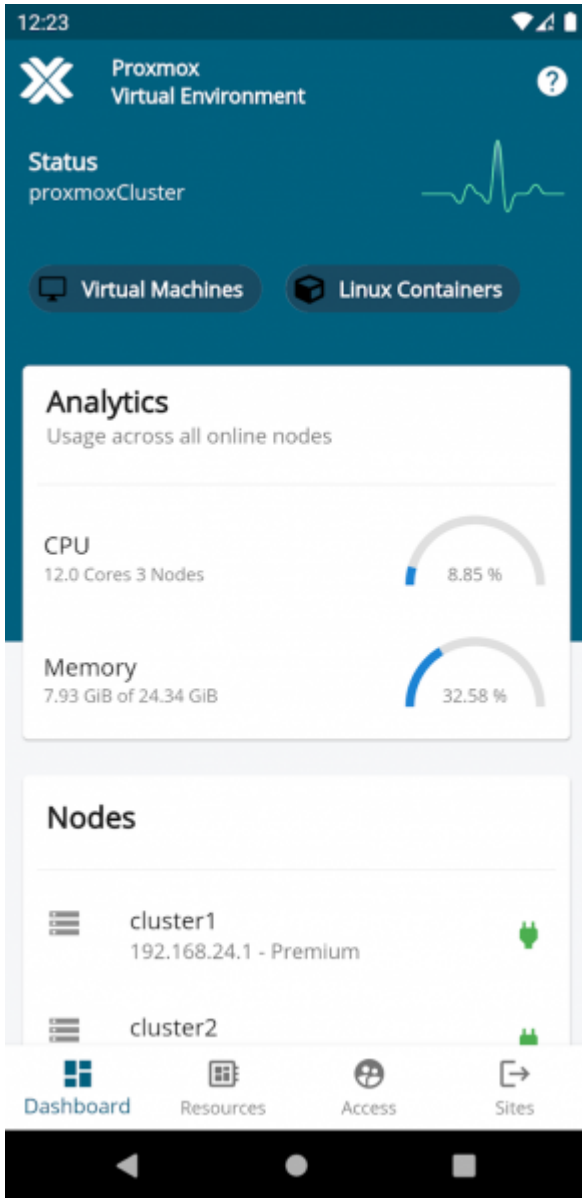
가

ExtJS JavaScript

HA

가

Proxmox Virtual Environment



[Android](#)

[HTML5](#)

[Proxmox VE](#)

. Proxmox VE Android

Flutter

, Proxmox VE

, VM

. Proxmox VE HTML5

Proxmox VE

, SPICE

HTML5

. VM

.

(CLI)

Unix

Windows Powershell

Proxmox

VE 가

UNIX man

가

.

.

REST API

Proxmox VE RESTful API . JSON
 , API JSON .
가
 .

: [Hostway Proxmox](#)
 : Proxmox@hostway.co.kr

02. Proxmox Virtualization



PROXMOX

가상화 플랫폼으로, KVM
및 LXC를 기반으로 가상 머신
과 컨테이너를 통합 관리할 수
있는 **오픈소스 솔루션**입
니다.

오픈소스 소프트웨어

Debian GNU/Linux 배포판을 기반으로 하며,
벤더의 종속성을 줄임

서버 및 컴퓨팅 리소스 통합

Proxmox VE를 통해 분산된 서버의 자원
을 통합하여 낭비를 줄이고 효율적으로
할당 가능

API 및 GUI를 통한 관리 편의성

Web Console을 통해 관리가 간편하며 API를 통
해 반복 작업을 자동화 가능

인프라 유지 비용 절감

고집적 서버로 클러스터 구성 시 공간 및
전력 비용을 절감하여 운영 비용을 낮출
수 있음

유연한 스토리지 모델

Linux 에서 사용 가능한 모든 스토리지 기술

네트워크 확장성

Linux 에서 지원되는 네트워크 기술 및 하이브리
드 구성 용이함

고가용성 클러스터링

단일 노드부터 대규모 클러스터 노드 세트
로 구성 (최대 32Node)

통합 백업 및 복원

통합 백업 도구를 활용하여 일관된 스냅샷
을 생성 (PBS)

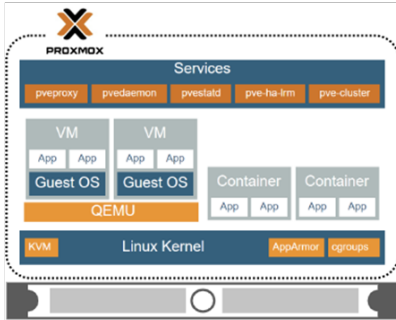
Proxmox Virtual Environment Debian

Type1 Hypervisor

가 가 (가 KVM(가
) LXC) 가 , , .

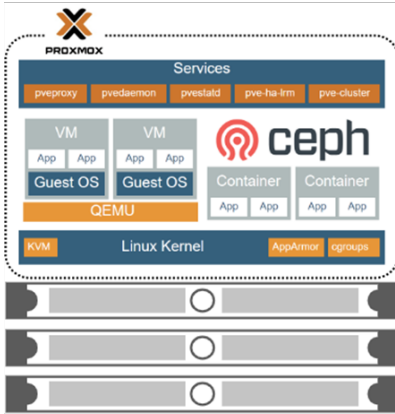
Proxmox 단일 모델

호스트의 로컬 Disk를 활용에 구성



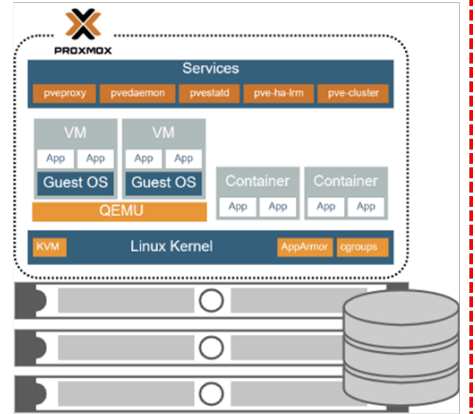
Proxmox HCI 모델

각 호스트의 로컬 Disk를 Ceph를 이용하여 구성



Proxmox Shared Storage 모델

별도 스토리지를 이용하여 공유디스크로 구성



: [Hostway Proxmox](#)

: Proxmox@hostway.co.kr

01. Proxmox Roadmap

Proxmox Version

2025-03 8.3.3 .

Proxmox Roadmap

[Roadmap](#)

□ Major

- : 2
- :
- 가, ,
- ,

□ Minor

- : 6
- :
-

: [Hostway Proxmox](https://hostway.com/proxmox)
: Proxmox@hostway.co.kr

00. Proxmox

Proxmox Virtual Environmemt ?

Proxmox Virtual Environment Debian Type1 Hypervisor
.
(가 LXC) 가 (가 KVM(가
가 , ,
.

Proxmox Virtual Environmemt

. Proxmox
, ,
가 .
,
Proxmox 가
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Proxmox Virtual Environmemt

Proxmox Virtual Environment(VE) Proxmox Server Solutions
GmbH(“Proxmox”) . Proxmox ,

Proxmox

NPO

Proxmox

: [Hostway Proxmox](#)
: Proxmox@hostway.co.kr