

## Virtualization server [ EsxPi ]

Virtualization is a framework or methodology for dividing computer resources into several computing environments by applying one or more approaches or technologies mainly partitioning hardware and software, computing time sharing or computing simulation.

VMWare products are a long-standing leader in virtualization with the most sophisticated virtualization system, as well as all support systems designed to manage, migrate and operate virtual servers. EsxPi consists of a modified image of an ESXi server supporting the ARM platform. EsxPi is efficient and economical, because the average consumption of all running mini virtual servers together is up to 5W per hour. It is suitable for test environments.

### **The main advantages of virtualization technologies include:**

- Efficient use of computing resources
- Reduced infrastructure and software costs
- Increased system flexibility and response
- Incompatible applications may run on the same computer
- Increase application availability and ensure business continuity
- Easier backup options
- Improving infrastructure manageability

### **Supported operating systems EsxPi v1:**

- Alpine
- CentOS
- Debian
- Fedora
- FreeBSD
- Photon
- Red Hat
- Open SuSe
- Ubuntu

### **Hardware of the model EsxPi v1:**

- Efficient SBC based on ARM platform is dedicated to running the temperature sensor
  - 4Core CPU (BCM2711) 1.5GHz 64bit
  - 8GB LPDDR4-3200 SDRAM
  - Gigabit Ethernet (10/100/1000) RJ45 port
  - 2x USB 3.0 a 2x USB 2.0 ports
  - 128 GB SSD storage
- Certified EPS switch-mode network power supply source
  - AC/DC power source 110/230V => 5V/3A (15W)
- Polystyrene box of high density with:
  - the width of 150mm
  - the height of 50mm
  - the depth of 130mm
- Components tested within the frame of CE and FCC



Picture 1: EsxPi compare size with mobile phone

| Virtual machine ▲ | Status   | Used space | Guest OS                              |
|-------------------|----------|------------|---------------------------------------|
| Alpine_3          | ✓ Normal | 1.01 GB    | Other 4.x or later Linux (64-bit)     |
| CentOS_7          | ✓ Normal | 264.49 KB  | CentOS 7 (64-bit)                     |
| CentOS_Stream     | ✓ Normal | 264.49 KB  | CentOS 8 (64-bit)                     |
| Debian_10         | ✓ Normal | 5 GB       | Debian GNU/Linux 10 (64-bit)          |
| Fedora_33         | ✓ Normal | 10 GB      | Other 4.x or later Linux (64-bit)     |
| FreeBSD_13        | ✓ Normal | 1.94 GB    | FreeBSD 12 or later versions (64-bit) |
| OpenSuSe_15       | ✓ Normal | 10 GB      | SUSE openSUSE (64-bit)                |
| Photon_4          | ✓ Normal | 264.49 KB  | VMware Photon OS (64-bit)             |
| RedHat_7          | ✓ Normal | 10 GB      | Red Hat Enterprise Linux 7 (64-bit)   |
| Ubuntu_18         | ✓ Normal | 5 GB       | Ubuntu Linux (64-bit)                 |
| Ubuntu_20         | ✓ Normal | 10 GB      | Ubuntu Linux (64-bit)                 |

Picture 2: List installed operating systems

<http://esxpi.doit.sk>