



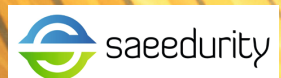
# ecos

## **ECOS SECURE BOOT OS**

**Converting a PC to a Performant Thin Client**

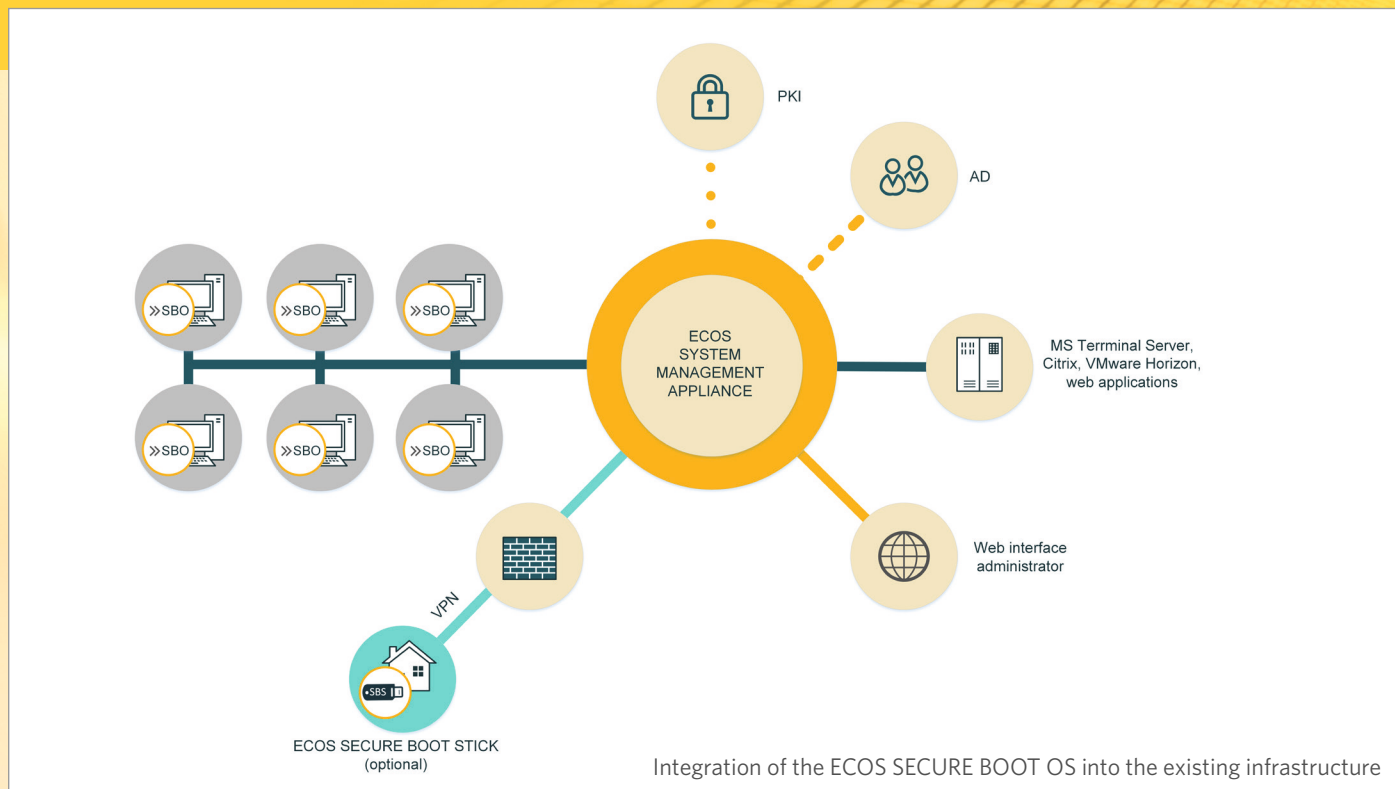
- **Increased Security**
- **Extended PC Lifecycle**
- **Ecofriendly**

ECOS Exclusive Partner for GCC Region



# Converting a Simple PC to a Performant Thin Client

The requirements of new software and operating system versions on hardware increase continuously. Thus, PCs must often be replaced after 3 to maximal 5 years. A viable alternative is the conversion into a terminal server or virtual desktop infrastructure (VDI). Thanks to ECOS SECURE BOOT OS, PCs can be repurposed into performant thin clients in order to extend their lifecycle and subsequently ease the IT budget.



## Smart Functionality

ECOS SECURE BOOT OS replaces the existing operating system with a lean, particularly secure and performant ECOS Secure Linux operating system. All applications required for the access to a terminal server or a virtual desktop infrastructure are already included.

## Efficient Rollout Process

The conversion of a workstation computer into a performant thin client is almost entirely automatic. The computer gets the required image through a PXE boot from a central server. After further confirmation, the hard disk is formatted and ECOS Secure Linux installed with all required applications. For the conversion into a thin client, the devices to be rolled out must just be released with their MAC addresses. The process can be performed by the central management, the affiliated Active Directory or another directory service.

## Maximal Compatibility

ECOS SECURE BOOT OS contains drivers for all popular PCs from Pentium III to the latest generation of devices. Devices with activated UEFI Secure Boot can also be used in combination with the ECOS solution. The integrated graphics card drivers support the use of more than one monitor screen on the same PC and thus offer the comfort of the familiar workplace environment.

On the application side, the stick contains all clients required for an access to Microsoft Terminal Server, Citrix XenApp and XenDesktop, VMware Horizon, as well as the Firefox browser for access to web applications.

## Secure against Attacks and Spying

ECOS SECURE BOOT OS is based on the same technology than the 12 years proven ECOS SECURE BOOT STICK®. It offers numerous security mechanisms to protect a PC against potential

attacks and spying attempts. Thus, the specially hardened ECOS Secure Linux only contains those parts of an operating system that are imperatively required to operate the PC as thin client. As a protection against manipulation and malware, firmware and applications are stored on a write-protected and encrypted partition. Besides, all components are digitally signed and validate each other in a chain of trust process. Any attempt to compromise the file system or foist an infected client will result in an immediate shutdown of the computer.

ECOS SECURE BOOT OS additionally supports the authentication standard IEEE802.1x to ensure that only legitimized clients will be able to connect to the infrastructure. The required certificates can be issued by the CA integrated into the ECOS system management or by coupling an already existing PKI. The cascading of numerous security measures makes ECOS SECURE BOOT OS a highly secure operating system and thus replaces local virus scanners and other measures.

### Central Management

The ECOS SYSTEM MANAGEMENT APPLIANCE allows to administrate and update all end devices centrally. It is thus possible to define very granularly on a user, group or role level who is authorized to access which specific destination system, entitled to store data locally from within a session or print documents. Upcoming updates of the operating system and the applications are rolled out by the local update server of the system management appliance. Updates can be released by the administrator for particular users, groups or all users. To integrate the management appliance easily into an existing infrastructure, it is possible to couple it with Active Directory and other directory services and thus allow a synchronization of users and rights. Additionally, the system includes a smart report editor which

### Easing IT budgets and protecting the environment

- Use PCs up to three times longer
- Compatible with all popular PCs, even older ones

### Increase the user efficiency

- Fast boot procedure
- Updates automatically in the background
- Error-proof

### Simplify your administration

- Central Management
- Smart reports
- Less efforts on user support

### Integration into the infrastructure

- Access to Microsoft Terminal Server, Citrix,
- VMware Horizon and web applications
- Coupling with AD and other directory services
- Efficient rollout process

### Increased security

- Encapsulated operating system environment
- Resistant against malware and manipulation
- Certificate-based authentication

offers the possibility to create individual or preset evaluations. ECOS SYSTEM MANAGEMENT APPLIANCE is a virtual appliance and operable under VMware, Microsoft Hyper-V, Citrix XenServer, Oracle VM Virtualbox or Linux KVM.

### Easy and Fast

Thanks to the lean ECOS SECURE BOOT OS, the computer boots up particularly fast and is immediately ready for use. The user can select the desired system or application in a user-friendly interface, which will then direct him to his familiar work environment. The user interface has been reduced to the essential, so the system proves to be easy to use and error-proof. The required updates take entirely place in the background without

# The Smart Thin Client Solution

disturbing the user. The long wait for the PC to boot up or the sheer endless processing of pending patches finally belong to the past.

## Economic Consideration

ECOS SECURE BOOT OS allows companies to significantly ease their IT budgets. Contributing factors are the up to three times longer lifecycle of the PC, the saving of further endpoint security measures as well as the reduction of support efforts thanks to a lean operating system. From the user perspective, the solution increases the productivity at work significantly thanks to the fast booting and the background updates.

## Green IT Well Thought-Out

Besides the performance, the lower power consumption of new devices is a popular argument when it comes to replace old computers. However, the resources required by the manufacturing of a new PC are often overlooked. As studies show, new devices with electrical savings of 10% have to be operated for at least 80 years to compensate the manufacturing effort. Extending instead the lifecycle of a PC thus constitutes a clearly more effective contribution to an ecological use of global resources.

## Mobile Use and Home Office as an Option

The installation of the ECOS SYSTEM MANAGEMENT APPLIANCE and ECOS SECURE BOOT OS can be enhanced by the ECOS SECURE BOOT STICK. Private PCs can thus be used at home or on the road in a potentially insecure environment and still meet the highest security requirements.

## Performance Features

- + Installation with automatized PXE boot process
- + Hardened ECOS Secure Linux operating system
- + Drivers for PCs from Pentium III on or AMD Athlon
- + UEFI Secure Boot support
- + Multi-monitor support
- + Applications:
  - RDP client, Citrix Receiver, VMware Horizon, VNC, TeamViewer, Firefox, w or w/o Java support
- + Supported destination systems:
  - Microsoft Terminal Server (2000, 2008, 2008 R2, 2012, 2016, RDS, remote desktop sharing), Citrix (XenApp and XenDesktop), VMware Horizon (RDP, PCoIP, BLAST) or web servers
- + Certificate-based IEEE802.1X authentication
- + User profiles for access to various applications or servers
- + Use of local resources after release by admin
  - Ext. USB storage devices
  - Local/network printers
- + Write-protected partition for firmware and applications
- + 256 BIT AES encryption of firmware, applications and user parameters
- + Digitally signed boot loader/s, firmware and applications
  - signature verification in chain of trust procedure
- + Remote firmware updating
- + Software in English and German (pre-configurable)
- + Central management
  - Access rights on user, group and role level
  - Synchronization with AD or other directory services
  - Own CA or coupling with existing PKI
  - Smart reports
- + Integrated DHCP and TFTP server for PXE installation

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