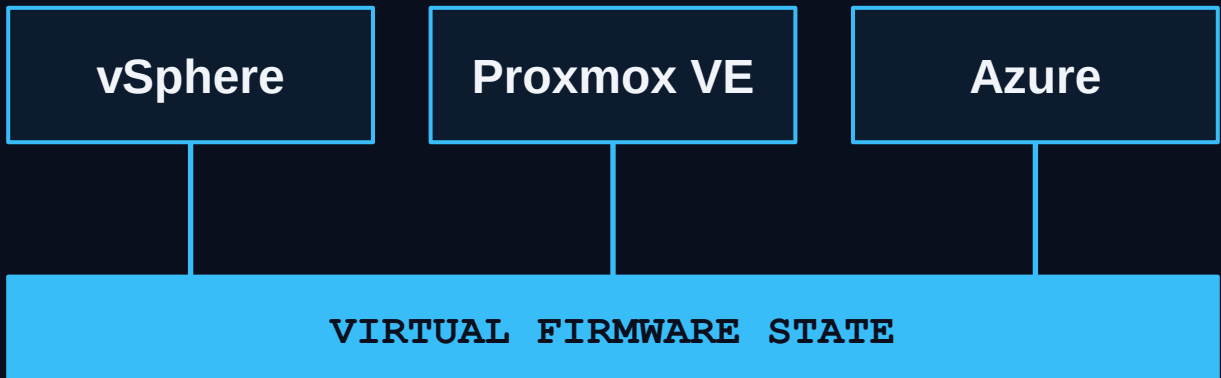


# Who owns your VM's Secure Boot state?

vSphere. Proxmox VE. Azure.



# Secure Boot trust is held in virtual firmware

VSPHERE

**Per-VM NVRAM**

PROXMOX VE

**Per-VM EFI disk**

AZURE

**Virtual firmware, platform-managed**

# The platform seeds it

## VSPHERE

The host sets the certificates at first power-on, in the VM's NVRAM.

## PROXMOX VE

New EFI disks created with pve-edk2-firmware 4.2025.05-1 or later include the 2011 and 2023 certificates.

## AZURE

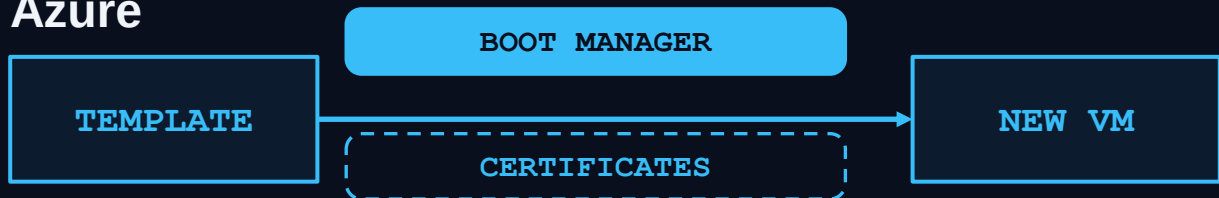
VMs created after March 2024 typically already include the 2023 certificates.

# “Template” means three different things

## vSphere



## Azure



## Proxmox VE



# Three update paths, one state

## VSPHERE

The customer runs the PK update from the hypervisor side. KEK and DB are updated from inside the guest.

## PROXMOX VE

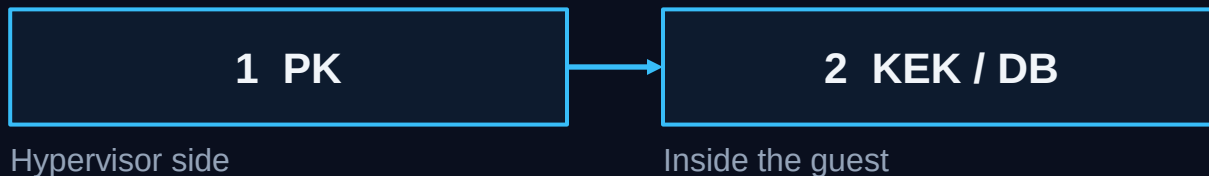
The administrator enrolls the certificates. The change applies at the VM's next start.

## AZURE

The guest initiates the update. The platform applies it to virtual firmware.

# Every documented order couples two owners

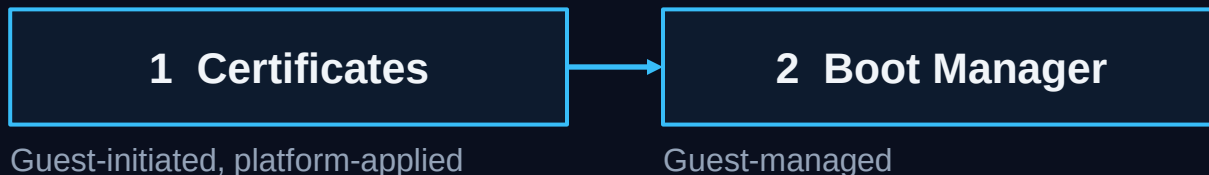
vSphere · when the Windows OEM Devices PK is missing



Proxmox VE · before enrollment



Azure · image redeployed to older VMs



# Three read paths, three scopes

## VSPHERE

`mokutil --pk` or `Get-SecureBootUEFI -Name PK`.

vCenter alarm for an out-of-date PK once vCenter and ESX are both on 9.1.1.0.

## PROXMOX VE

`ms-cert=2023k` in the VM config marks enrolled certificates.  
`2023` or `2023w` may mean partial enrollment.

## AZURE

Linux: `mokutil` or `efi-readvar` for the 2023 DB and KEK.  
Windows page: not stated.

# Where the docs are silent, someone must establish the answer

## NOT STATED

PROXMOX VE

What a template or clone does with EFI disk  
certificate state

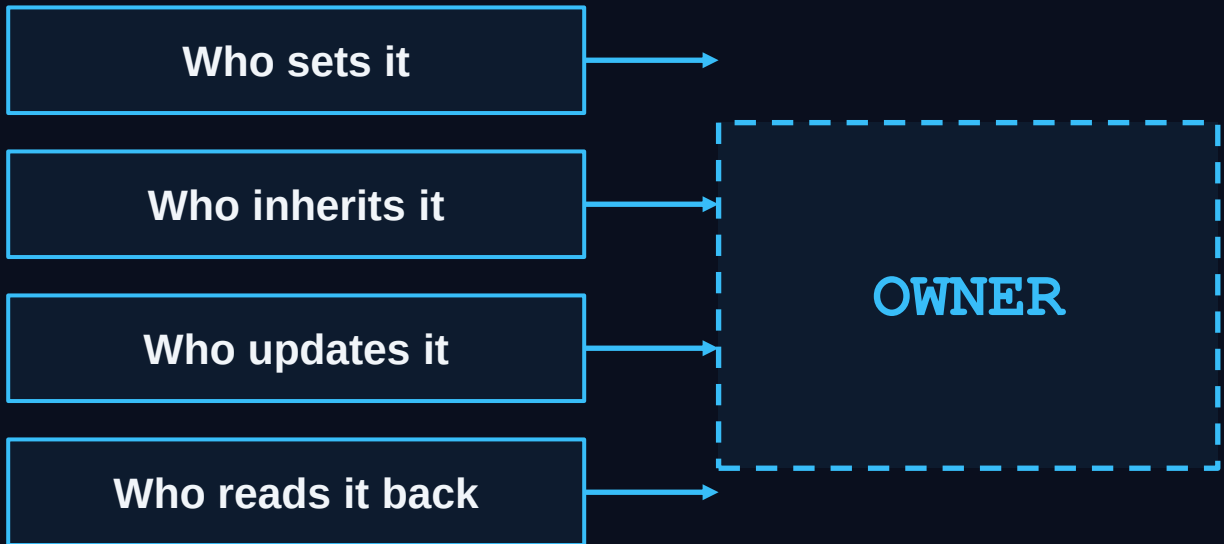
## NOT STATED

VSPHERE, PROXMOX VE, AZURE

What restore from backup does with the state

*Not stated does not mean absent.*

# Name the owner of the state before scheduling the update



[rack2cloud.com](https://rack2cloud.com) | Follow The Architect for more