

# Wrangling Your Enterprise Macintosh Herd

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## Windows<sup>®</sup>IT Pro

### What's inside

- More than half of businesses own and use at least one Mac, even if Windows is the platform of choice.
- There are general approaches IT organizations can take when managing Macs.
- Apple and third-party vendors offer low-cost tools that help IT manage Macs.
- Parallels unleashes the power of Mac management via SCCM.

*Sponsored by:*

**Mel Beckman**, President, Beckman Software Engineering  
**Yury Averkiev**, Program Manager, Enterprise Solutions, Parallels, Inc.  
**Carlos Capó**, Account and Channel Executive, Parallels, Inc.



## Overview

Whether an organization has one Mac or 1,000, there needs to be management of those systems in the enterprise. Managing Macs can be difficult and bring additional work into an IT organization, especially when the business system of choice is Windows.

Apple offers a number of Mac management tools that IT organizations can use to manage Macs, regardless of the environment. Macs can be managed with the native Microsoft System Center Configuration Manager (SCCM), although the functionality is rudimentary.

Parallels, Inc. offers Parallels Mac Management for System Center Configuration Manager, which allows organizations to extend the native Microsoft SCCM functionality to manage Mac computers the same way they manage PCs.

## Context

Mel Beckman, who has worked with and written about Macs for more than 20 years, shared strategies with managing Macs in predominantly Windows enterprises. Yury Averkiev and Carlos Capó discussed how Parallels helps IT administrators manage Macs with Microsoft SCCM.

## Key Takeaways

**More than half of businesses own and use at least one Mac, even if Windows is the platform of choice.**

Windows may be the business system of choice, but 50-70% of enterprises have at least one company-owned Mac. End-user preference often drives Mac purchases and use in the business. In some cases, users just prefer the simpler user interface and consistency between releases.

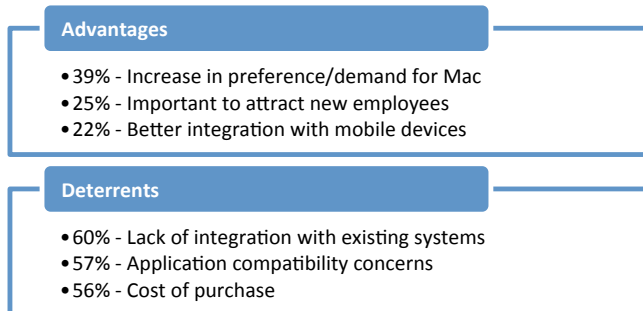
Creative users, such as graphic designers, prefer Macs because the Windows user interface—and especially the Windows 8 UI—gets in the way of the work they need to do. The Windows desktop does not scale well on Retina screens, which creative users are also more likely to use.

When it comes to managing Macs, even though the cost of purchase is high, the total cost of ownership on mid-and high-end Macs is surprisingly lower than Windows systems. Also, Macs, while not immune to malware, have less malware to deal with, which can impact the TCO as well.

**I believe Macs are going to stay in the enterprise, just because the value proposition is good.**

Mel Beckman

A recent Parallels survey of more than 700 IT professionals looked at the advantages participants saw in having Macs in their IT ecosystems, as well as the key deterrents.



### There are general approaches IT organizations can take when managing Macs.

When it comes to devising a Mac support strategy, there are three approaches IT organizations can take: self-management, café management, and total control, with pros and cons of each.

Strategy	Pros	Cons
<b>Self-management:</b> Mac users manage their systems	<ul style="list-style-type: none"> <li>• Low IT labor requirements</li> <li>• No IT hands-on</li> <li>• User needs met sooner</li> </ul>	<ul style="list-style-type: none"> <li>• End-user skills required</li> <li>• No policy enforcement</li> <li>• Users can disable security and malware protection</li> </ul>
<b>"Café" management:</b> Portal-based control and management of Macs	<ul style="list-style-type: none"> <li>• IT oversight</li> <li>• Some policy enforcement</li> <li>• Little IT hands-on</li> <li>• Expert guidance via training and documentation</li> </ul>	<ul style="list-style-type: none"> <li>• IT still relies on some end-user skills</li> <li>• Incomplete policy and compliance controls</li> <li>• Higher IT workload</li> <li>• Some delay meeting user needs</li> </ul>
<b>Total control:</b> IT takes ownership of system management	<ul style="list-style-type: none"> <li>• Assured security and policy enforcement</li> <li>• Full compliance guarantee</li> <li>• Fewest end-user skills</li> </ul>	<ul style="list-style-type: none"> <li>• Heaviest IT workload</li> <li>• User needs delayed most</li> </ul>

Regardless of the level of control an IT organization takes, businesses should require Mac OS 10.7 as the minimum version. Mac OS 10.6 and earlier versions are deprecated, and are not appropriate for the enterprise. The good news for IT organizations is that, unlike Windows, Mac users tend to upgrade quickly, and most business users are already at 10.7 or higher, especially since migration and upgrade costs are low or free.

Mac management activities are similar to Windows PC management tasks. Key management activities include:

- **Asset inventory.** This includes hardware and software discovery and license management.
- **OS installs, application deployment, and updates.** Multiple images will be required for the various Macs in an organization. Applications and updates need to be installed after system refreshes are complete, regardless of whether the user does the installation or IT pushes out the installation to the system.
- **Backup.** Just as with a PC, data on a Mac needs to be backed up. Data is typically backed up from central shares, and IT needs to ensure a periodic backup of user preferences occurs.
- **Security and authentication.** To meet business needs, business systems need to maintain a certain level of security, including centralized user authentication and full disk encryption key management.

### Apple and third-party vendors offer low-cost tools that help IT manage Macs.

Macs don't provide the management capabilities that IT needs out of the box. Apple and third-party vendors provide a number of tools that can be used to manage Macs in the business environment.

Some of Apple's tools include:

- **Mac OS X Server.** Provides hardware and software discovery, comprehensive OS image deployment, and fine-grained management of user preferences. Profile Manager, a component of OS X server, allows IT organizations to push user and device profiles. It also controls features and which applications are enabled, and has remote management, including lock and wipe. Mac OS X Server is a \$20 desktop OS add-on that replaces the high-priced Xserve.
- **Remote client administration tools.** Apple Remote Desktop offers VNC-like access at \$75 for unlimited users, as well as asset hardware and software inventory. Secure Shell (SSH) can be used for batch command-line administration.

- **Security tools.** Apple offers full-disk encryption through their FileVault utility. For malware protection, File Quarantine, XProtect, and Gatekeeper are included in the Mac OS X Server.
- **NetBoot, NetInstall, and NetRestore.** Used for refreshing machines, these three tools are both graphical and CLI-based.
- **Remote batch scripting tools.** The base Mac OS includes native command line tools through bash; the most widely used scripting language. Apple also offers a free product at the Mac App Store, Xcode, which is a turnkey developer's toolkit that includes a number of tools that are useful for Mac system management.
- **Software deployment tools.** PackageMaker, pkgbuild, and product build are graphical and command line tools used for making installer files, and use OS X Server to push these files to client Mac systems. Disk Utility creates archive files, which can be distributed for user-drive installations. Pkgutil and pkgmaker command line tools are client-side tools for administering these installation packages.

Beckman shared open source and freeware third-party tools that can be used for Mac management. While open source utilities are free, IT administrators should keep in mind the costs of developing on these tools and supporting them. Support isn't always available; there may be an active community of open source users and developers who can help troubleshoot tool issues, but some community support is virtually non-existent.

#### Free Third-Party Mac Management Tools

- [Munki](#) (open source)
- [Simian](#) (open source)
- [Cauliflower Vest](#) (open source)
- [DeployStudio](#) (freeware)

#### Parallels unleashes the power of Mac management via SCCM.

Microsoft SCCM provides direct but limited administration of Macs, requiring significant manual intervention and additional work on the part of the IT administration. Managing Macs with native SCCM requires a Public Key Infrastructure, with every client needing a digital certification. The installation and enrollment of the Mac client is manual; it cannot be pushed out.

Parallels brings more control over large Mac deployments to IT administrations. Parallels Mac Management for Microsoft SCCM improves upon the functionality for Mac features.

IT administrators  
were asking for  
ways and tools to  
easily deploy,  
manage, and  
secure large  
installations of  
Windows on Mac.

Carlos Capó



	Parallels Mac Management for Microsoft SCCM	SCCM 2012 R2
Discovery and enrollment	<ul style="list-style-type: none"> <li>• Manual enrollment</li> <li>• Network discovery and automatic enrollment</li> </ul>	<ul style="list-style-type: none"> <li>• Manual enrollment</li> </ul>
Inventory	<ul style="list-style-type: none"> <li>• Hardware and software inventory</li> <li>• Collect AppleCare warranty status</li> </ul>	<ul style="list-style-type: none"> <li>• Hardware and software inventory</li> </ul>
Compliance	<ul style="list-style-type: none"> <li>• Push scripts as SCCM Configuration items</li> <li>• Deploy Mac OS X Configuration Profiles</li> <li>• Easy to use OS X Configuration Profile editor</li> <li>• Enable FileVault 2 encryption</li> <li>• Escrow and retrieve FileVault 2 personal keys</li> </ul>	<ul style="list-style-type: none"> <li>• Push scripts as SCCM Configuration items</li> </ul>
Software and patch deployment	<ul style="list-style-type: none"> <li>• Deploy software via SCCM Application Deployment</li> <li>• Deploy software via SCCM Package Deployment</li> <li>• Self-Service Application Portal for Macs</li> <li>• Silent and interactive deployment modes</li> </ul>	<ul style="list-style-type: none"> <li>• Deploy software via SCCM Application Deployment</li> </ul>
Mac OS X image deployment	<ul style="list-style-type: none"> <li>• Deploy Mac OS X images via SCCM</li> </ul>	N/A
Remote assistance	<ul style="list-style-type: none"> <li>• Remote Assistance via VNC</li> <li>• Remote Assistance via SSH</li> </ul>	N/A
Configuration	<ul style="list-style-type: none"> <li>• Works without PKI infrastructure</li> </ul>	N/A

**Parallels Mac Management** allows you to manage Macs through SCCM the same way you manage your corporate Windows PCs.

Yury Averkiev

## Additional Information

- Parallels Mac Management for SCCM is a Best of TechEd North America 2014 winner.
- For more information on Parallels, visit [www.parallels.com/products/mac-management](http://www.parallels.com/products/mac-management); call (425) 282-6448; or email [usentsales@parallels.com](mailto:usentsales@parallels.com).

## Biographies

### Mel Beckman

President, Beckman Software Engineering

Mel Beckman has built two regional Internet service providers and is currently president of Beckman Software Engineering, a technical consultancy specializing in large-scale, high-bandwidth networks. His past clients include Apple Computer, the City and County of Santa Barbara, DuPont Displays, IBM, Loral Federal Systems, United Airlines, the US Department of Agriculture, and the US Department of Energy. Mel has presented seminars on computer programming and network technology throughout the United States, Europe, and Asia.

### Yury Averkiev

Program Manager, Enterprise Solutions, Parallels, Inc.

Yury Averkiev has nearly 20 years of experience in facilitating IT Product Management and Software Development initiatives, delivering efficient and reliable IT solutions and building/leading teams in high-pressure environments.

He joined Parallels in 1998.

### Carlos Capó

Account and Channel Executive, Parallels, Inc.

Carlos Capó is an account and channel executive for Parallels. Carlos helped develop the desktop virtualization channel sales strategy for the Americas including the United States, Canada and Latin America.