Microsoft Surface

Zero-Touch Deployment:

A cornerstone of modern device management

Table of contents

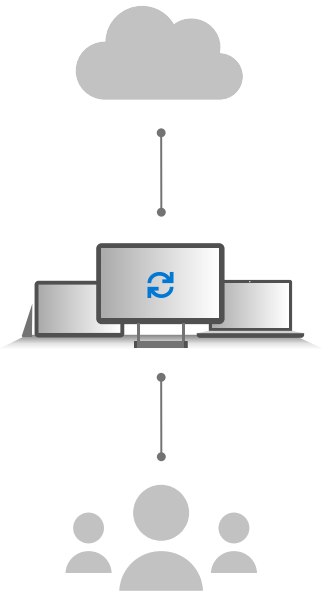
Introduction

Deploying computers across an organization used to be a pretty straightforward process for IT teams, with standardized hardware and software fostering a one-size-fits-all approach to equipping the workforce.

Today's workplace, however, has turned endpoint device deployment into a complex, arduous process. An increasingly mobile workforce now uses a variety of company- or employee-owned devices ranging from tablets to laptops and desktops. In addition, the cloud has expanded the traditional network perimeter, requiring new policies and controls for protecting the flow of data inside and outside the organization.

The task of configuring endpoint devices with the proper applications, profiles, and security settings for each user places heavy demands on already overburdened IT staff, often ratcheting up the total cost of ownership. For companies with hundreds or thousands of users, the time, cost, and productivity impact on the IT department and the overall organization can be massive.

Not incidentally, the delays and disruptions associated with device configurations and deployments also frustrate the users of these systems. They just want to start using their new devices as quickly, easily, and efficiently as possible.
This impact on users is far from a trivial concern. In IDG's 2019 Digital Business study, the top-rated metric among IT managers for successful digital transformation is improving employee productivity through process efficiencies and automation.



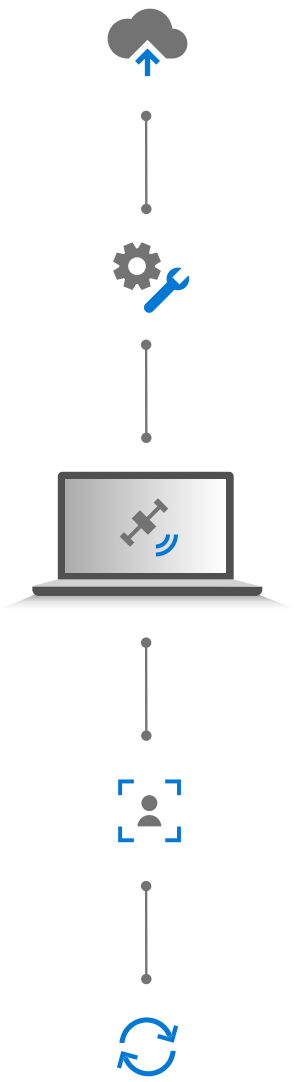
Microsoft has tackled this challenge head-on by bringing process efficiencies and automation to Windows-based device deployments.

By leveraging features built into Windows 10, along with a variety of complementary cloud-based services and capabilities, Microsoft is pioneering a "zero-touch" deployment model.

This approach enables devices to go directly from a Microsoft partner to company employees with the proper policies, settings, and applications preinstalled or ready to automatically load when the user turns on the device.

Zero-touch deployment has already moved from theory to reality for the Microsoft's Surface for Business portfolio, including laptops, tablets, 2-in-1s, and desktops. These Surface devices feature embedded capabilities designed to exploit the power of Windows 10 as well as a variety of Microsoft cloud services to greatly simplify configurations and deployments. The result: **Users can take a factory-sealed device and have it business-ready in a matter of minutes.**

Zero-touch deployment is a critical component of Microsoft's innovative approach to endpoint management across the entire device lifecycle.



Windows 10 Autopilot, the foundation for zero-touch deployment

A foundational element for zero-touch deployment resides in Windows 10 itself. Windows Autopilot is a set of technologies that enables companies and their device suppliers to set up and preconfigure Windows 10 devices, as well as reset, repurpose, and, if necessary, recover them.

If they choose, hardware manufacturers can enable their devices to be Autopilot-ready right out of the factory. IT teams can then work with the hardware vendor and device distributor to set up deployment profiles and application configurations for different types of users depending on their roles within the company, their access rights, their geographies, and other parameters. This is accomplished by allowing the device suppliers to process all Windows Autopilot registrations into the customer organization's Azure Active Directory cloud-based tenant domain. Doing this eliminates the need for the company's IT department to maintain and manually load Gold corporate images, device drivers, and other configuration elements.

Once the device supplier preconfigures a device as required, it can be shipped directly to the user, with no IT involvement required. When the user turns on the device and goes online, Windows Autopilot automatically delivers all of the applications, policies, and settings they need.

The core capabilities of Windows Autopilot work in conjunction with a variety of other Microsoft cloud services to more fully automate the deployment and ongoing management of Windows 10 devices.

Among the most powerful and useful of these services are those bundled within the Microsoft 365 offering, including Azure Active Directory and the mobile device management service Microsoft Intune.

Surface takes modern deployment to a new level

Microsoft has optimized its portfolio of Surface devices to take full advantage of Windows Autopilot as well as the full range of complementary Microsoft 365 services. That's not surprising, since Autopilot itself was designed for and initially tested on Surface devices. Today, every Surface device ships straight from the factory enabled with Autopilot and with a clean, bloat-free Windows 10 image optimized to reduce needless app and advertisement clutter. Microsoft harvests the Device ID of each Surface sold and stores it in the cloud for device management.

Each Surface device also ships with Office Professional Plus preinstalled, which speeds the overall Autopilot experience. Having Office Pro Plus out of the box ensures that users have the licensed enterprise productivity software they need to start working, customized to their needs.

Another critical factor: As the first Windows 10 device vendor to test and enable Autopilot in its products, Microsoft has led the way in building the partner ecosystem needed to deliver zero-touch deployments. These partners—including distributors, cloud solution providers (CSPs), and others—can provide the expertise needed to remove IT deployment barriers and get users up and running faster.

Surface devices can support zero-touch deployment through the following steps:

01

At the time of the Surface device purchase, Microsoft pairs the buyer with a CSP. The CSP obtains an electronic data interchange (EDI) feed from Microsoft that provides the serial numbers of the devices the customer has purchased. The CSP can then feed this data into Microsoft Partner Center, a tool that holds a trust relationship with the customer's tenant domain. Partner Center then enrolls the devices into Windows Autopilot, where they automatically show up as available devices on the customer's tenant. The only action item for the customer is to accept the CSP's request to add devices to their tenant.

02

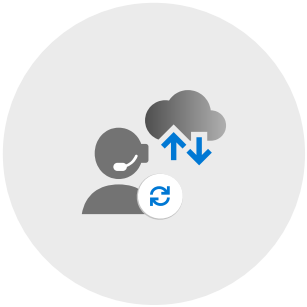
At this point, the organization's IT team can use their Azure Active Directory portal and Intune to access the devices' serial numbers, product types, and other information. With that access, IT admins can create user-role or department profiles and deploy applications, policies, and settings that will load as soon as the devices reach the target employees and are turned on.

03

As soon as an employee turns on their Surface device and enables the network, the device calls back to Microsoft with its Device ID. Microsoft checks the Device ID against all of the devices registered in Autopilot. If the device is registered, the Intune instance on the customer's tenant is automatically notified, and Intune takes over the deployment. This process also ensures that only the devices an organization purchases and authorizes are able to access corporate resources.

04

Intune pushes applications, policies, and settings down to the Surface device, eliminating the need to reimage it. The user can start using the device within minutes, and each application deployed is automatically tied to Azure Active Directory, showing the employee's identity with no further setup required.



05

Once operational, the Surface device enters the full lifecycle management stage, during which it continues to benefit from hands-free modifications and configuration changes by leveraging various Microsoft 365 services and capabilities. For example, the device can be reset to be redeployed with a different profile for a new user, replaced with a new warranty with an identical configuration, or securely retired. At present, Surface is the only Windows 10 device providing an automatic deregister/reregister service for warranty-replaced devices. Other M365 services, including Windows Update for Business, Defender Advanced Threat Detection, and the Microsoft Intelligent Security Graph, ensure that the device is always up-to-date, secure, and fully managed.

Surface devices aren't just the first devices on which Autopilot was initially tested and enabled. They're also the first to enable some of Autopilot's most innovative features, including the hybrid Active Directory join feature that enables a device to join Active Directory and be managed by Intune.

Surface also has pioneered the "white-glove" deployment option, which further accelerates employee access to new devices.

A Microsoft partner or the IT department itself can open a device before it reaches the user, power it up, connect it to the internet, and hit the Windows button five times to put it in white-glove mode. The intermediary can then download all of the apps and settings, reseal the device in its box, and send it to the user fully configured and ready to go—providing a delightful (and faster) first experience for the user.

Going forward, every Surface device will be labeled on the commercial packaging with the product key identification (PKID) and operating system version number. This labeling will help facilitate partner enrollment or customer self-enrollment of the devices into Autopilot.

Driving significant time and cost savings

By leveraging the zero-touch deployment and manageability features of Surface devices, organizations can expect to realize significant operational cost reductions. Forrester Consulting conducted a Total Economic Impact™ study of the cost savings and business benefits associated with Surface devices (see "Maximizing Value with Surface"), including their ability to leverage Windows Autopilot and various Microsoft 365 services.

In its survey of more than 300 organizations that were using both Microsoft Surface devices and Microsoft 365 Enterprise, Forrester found:

- **78% of respondents agreed they had reduced IT time and labor in configuring and deploying Surface devices compared to non-Surface devices.**

- **78% also agreed that Microsoft Surface reduced the IT time and labor needed to manage and update Microsoft 365.**

Forrester was also able to calculate significant time and cost benefits associated with Autopilot-driven Surface device and application provisioning. For a representative composite organization with 1,500 employees:

Autopilot reduced the process of configuring devices by an average of 25 minutes per device.

Application provisioning time was reduced by 2.6 hours per application request.

Device security and customization times were reduced by 2.5 hours per device.

Over the course of Forrester's three-year operational projection, the composite company was projected to realize a risk-adjusted present value of $680,000 directly as a result of the automated device and application provisioning delivered by the Surface and Microsoft 365 combination.

KMD

Many organizations around the world are already realizing Surface deployment benefits of their own. **KMD**, a Danish software and IT services firm, has found that many of its more than 3,500 employees selected Surface Laptop 2 devices when offered a choice of devices. That preference has also worked out well for KMD's IT department thanks to Windows 10, Autopilot, and Microsoft 365.

"With everything in the cloud, getting a [Surface] device up and running takes about 10 minutes," says Anders Damm Christensen, senior head of modern workplace and web experience at KMD. "It used to take 24 hours and involve restoring from a full backup."

Norwegian Air Shuttle

Across the North Sea, **Norwegian Air Shuttle** is also seeing benefits associated with its choice of Surface Pro with LTE Advanced devices. With more than 10,000 employees, Norwegian Air Shuttle is the largest airline in Scandinavia. The Surface Pro with LTE Advanced devices serve as in-cockpit "electronic flight bags (EFBs)" that contain everything from flight information to operating manuals for its pilots.

The airline needs to equip hundreds of planes with EFBs and will be using Windows Autopilot to do so.

"We're taking our EFB provisioning to a new level with the possibilities we see in current Microsoft solutions," says Klaus Olsen, EFB administrator at Norwegian Air Shuttle. "Wherever I send the device, I can be sure that through the Intune portal and Windows Autopilot, it will be set up exactly as we want: all the settings, eSIM profiles and software."

Maximizing value with Surface

Forrester Consulting surveyed more than 300 IT decision-makers, conducted in-depth interviews with two large organizations, and developed a sophisticated Total Economic Impact framework to assess the business value of implementing Microsoft Surface devices in combination with Microsoft 365 Enterprise. Its model included the creation of a composite company with 1,500 employees to estimate the risk-adjusted present value (PV) of this technology pairing over a three-year period.

As part of its study, Forrester asked the survey respondents to identify their key reasons for deploying Microsoft 365 on Surface devices. The top three drivers:

57% **To boost employee productivity by providing tools that improve workflows, communication, and collaboration (cited by 57% of the respondents).**

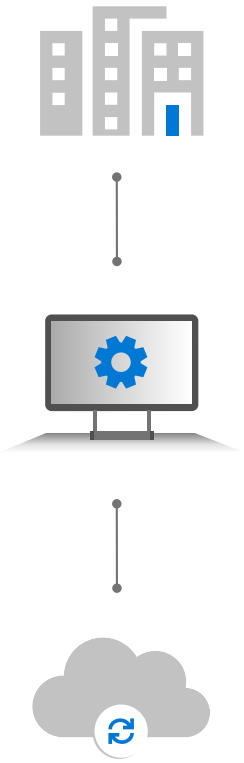
55% **To enhance creativity and teamwork (cited by 55%).**

50% **To automate and streamline device deployment and management activities (cited by 50%).**

Thanks to the many advanced features and capabilities of the Surface devices themselves, there were even larger benefits. For example, Forrester calculated that workers would realize nearly five hours in weekly productivity gains by using Surface devices, resulting in a three-year PV of $9.6 million. This more than doubled the productivity gains seen from using Microsoft 365 Enterprise without Surface devices.

On another front, Surface's mobility features such as eSIM to enable secure work from anywhere, and the ability to run multiple applications side-by-side saved mobile workers more than 4 hours per week and generated a three-year PV of $2.8 million.

Additional Surface features drove significant benefits in a range of areas, including the performance of creative tasks, business decision-making, and security breach remediation, among others. All told, Forrester calculated the composite company would realize a three-year net PV of $11.13 million and a return on investment of 112%.



A path to modern manageability

Although zero-touch device deployment represents an ideal end state, not every organization is ready to jump overnight into this model. One big inhibitor is the need to move away from existing practices and policies, in addition to the challenges associated with managing and upgrading poorly catalogued fleets of already deployed devices.

Fortunately, **Surface can meet organizations wherever they are in this journey.** They can start from a legacy management model using an on-premises Systems Center Configuration Manager (SCCM) deployment; they can be in an Active Directory/Azure Active Directory hybrid scenario of being co-managed between SCCM and Intune; or they can be in a fully cloud-based device management solution using Intune.

Compared to other Windows 10 devices, Surface devices come with many embedded features designed to facilitate zero-touch deployment and management. Of course, Surface is also designed for tight interoperability with other Microsoft services including Azure Active Directory, SCCM, and Intune.

By gradually shifting management functionality from on-premises systems to the cloud, companies can begin to realize the promise of modern device deployment and management, with a co-management model that balances on-premises and cloud services. Ultimately, Microsoft is helping organizations that choose to wipe the slate clean by providing a fully cloud-based device deployment and management model.

Microsoft Surface

Surface leads the zero-touch deployment pack

Any Windows 10 device can take advantage of Windows Autopilot and the cloud-based management capabilities delivered by Microsoft 365. But Surface devices are purpose-built for zero-touch deployment and optimized to provide the most straightforward, friction-free, and powerful interoperability with the diverse collection of Microsoft 365 capabilities.

The use of Surface devices reduces complexities and improves productivity for an organization's IT department as well as its employees. IT professionals love the combination of Microsoft Surface and Microsoft 365 because they are designed together to reduce the cost and complexity of deployment, management, and security. As Microsoft continues to extend the capabilities of cloud-based device configuration, deployment, and management, Surface devices will continue to set the pace among all Windows devices when it comes to capitalizing on new capabilities as they emerge.

To help you design the ideal Surface deployment for your business, find an authorized Microsoft Surface reseller.

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