Adaptiva OneSite™ is the fastest and most automatic way to perform Windows 10 operating system deployment (OSD) across the enterprise in a Microsoft System Center Configuration Manager (ConfigMgr) environment.
The OSD Challenge

Even with the power of ConfigMgr, migrating thousands or hundreds of thousands of systems to Windows 10 presents serious challenges:

- **Traditional solutions are slow, costly, and labor-intensive**, such as those requiring a massive server infrastructure (PXE, SMP, DP) and armies of high-paid contractors.
- **Large OS files can compromise the WAN**, so bandwidth throttling and off-hours scheduling are often used to slow delivery to a safe crawl.
- **Network configuration tasks can paralyze deployment** as system administrators wait months or years for global setup of IP helpers and DHCP scope options.

A Game-Changing OSD Breakthrough

Adaptiva’s disruptive networking and peer-to-peer technologies power a surge of speed and automation advances that render traditional Windows deployment methods all but obsolete. With OneSite, companies can:

- **Slash Windows 10 OSD costs** by deploying Windows 10 without the addition of new servers
- **Safely speed WAN delivery** with the only solution that requires no throttling and no scheduling for after-hours
- **Deploy Windows 10 instantly** with a solution that requires no new network configurations, permissions, or settings
- **Do more, faster, with existing staff** by deploying the most powerful automation technology ever developed for high-volume, zero-touch OSD

OneSite’s groundbreaking Windows 10 deployment technology won the coveted Gold 2016 New Product Award from the American Business Association (Stevies), adding to a long line of awards for innovation. The solution is trusted by many of the world’s largest enterprises to accelerate and automate high-volume, zero-touch Windows 10 OSD.

"Rapid OSD has become a crucial part of our OSD solution."

Jason Snook
Flexera
Intelligence

OneSite utilizes untapped resources in ways you never imagined possible. It radically reduces Windows 10 deployment costs and ensures deployment success by intelligently reducing infrastructure complexity.

Serverless Windows 10 OSD
OneSite dramatically reduces the cost and complexity of Windows 10 OSD with ConfigMgr by replacing servers with intelligence. Everything that requires a server with native ConfigMgr—distribution points, PXE points, state migration points—is handled by the enterprise-class peer-to-peer client network. OneSite creates almost-limitless storage using Zero Footprint Caching, which takes no disk space from end users. All Windows OSD content is orchestrated by a self-forming, self-managing Virtual SAN that administrators never need to think about.

Peer-to-peer PXE
PXE points can speed OS deployments but typically require costly servers to implement. With OneSite, any Windows system can become a PXE server, responding to client requests and serving images from the Virtual SAN at each operating location.

Unlike competing peer-to-peer solutions, OneSite requires no separate PXE server, no PXE web service, and no PXE client agent to install and license on clients on every single subnet. The result is much faster installation and fewer components to troubleshoot. If OneSite is running, PXE is automatically available everywhere with a simple checkbox selection. One machine on each network segment is automatically elected to serve PXE. Administrators can control which machines are candidates, including and excluding collections as desired.

Adaptiva leverages the full power of the PXE specification to deliver images from multiple peer systems simultaneously. For example, if ten systems are being re-imaged at once, each one can get its OS files from a different source peer computer. This OSD Load Balancer ensures that no single system is overloaded during OSD, and boosts performance dramatically. OneSite also allows performance-enhancing customizations, such as changing the TFTP block size to maximize PXE performance in your environment.

Adaptiva takes these advances one step further, by delivering the world’s only programmable PXE engine for ConfigMgr. You can apply special logic and actions to your Windows 10 rollout in OneSite’s

"We can trigger off an OS deployment any site and we know we’ve got the operating system on a few machines at each site, and machines can just be built without a distribution point or a PXE server on site."

James Pitcher
Skanska
powerful visual Workflow Designer without programming. Easily conduct customized pre-imaging and pre-upgrade checks, insert build logic during the process, or have security and compliance processing done on the system post-migration. The workflows can optionally integrate with PowerShell as well, if desired.

**Virtual State Migration Points**

A user can easily store gigabytes of settings and data, also known as state, on their computer. When the system is migrated to Windows 10, they expect it all to be there in the new OS. This means that administrators must save and restore state as part of the Windows 10 migration. Sending large amounts of state data over the WAN twice, once to save and once to restore, is impractically slow and bandwidth-intensive. Traditionally, this need has been addressed in ConfigMgr with server infrastructure, by installing local servers at every office to use as state migration points (SMPs).

Adaptiva offers a new option by creating a virtual state migration point (V-SMP) in the Virtual SAN already located at each office. The V-SMP offers all the functionality of a dedicated server without taking storage from end users or impacting their performance. OneSite also has built-in redundancy, maintaining multiple copies of the saved state data during each migration. V-SMP integrates directly into SCCM task sequences, making it easy and safe for administrators to migrate Windows 10 systems without the need to deploy and maintain a server infrastructure.

**Automation**

Adaptiva is changing the face of enterprise systems management by automating nearly every step in the Windows OSD process. OneSite dramatically improves the per-person productivity of IT professionals, and takes away the biggest Windows 10 OSD headaches.

**Task Sequence AutoPush**

OneSite saves tremendous bandwidth by transferring files only once to each office—instead of once for each system that needs them—with a feature called WANOnce. To ensure the best possible OSD performance, Windows 10 images and ancillary files must be delivered and stored locally on the LAN at each office prior to migration. The process of moving content to a site ahead of migration time is called pre-staging, pre-caching, or content push.

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I don’t have to do anything to update and sync OSD content worldwide. OneSite pretty much takes care of all of it for me.

Microsoft Technical Solutions Executive
Global Enterprise Technology Provider
Windows 10 OSD requires organizing a lot of content: the Windows 10 image, drivers, applications, and all other files referenced in the ConfigMgr task sequence. OneSite automatically analyzes the task sequence and identifies all the content needed without any administrator effort. OSD content is easily treated as a single logical unit, even if it is hundreds of files in stored different places.

OneSite’s Task Sequence AutoPush effortlessly assembles and delivers all the content you need for bare metal installs, as well as Windows 10 in-place upgrades. Plus, OneSite reports when all the content you need is present at an office so you know you are ready to start migrating.

**Intellistage**
Adaptiva automates the process of selecting the best target system at an office to receive OSD content by considering factors such as chassis (laptop, desktop, workstation, server), OS (server, client), uptime, and resources (memory, CPU, HD) to determine the best suited peer for pre-staging. Alternative peer-to-peer technologies force administrators to spend countless hours manually picking the pre-stage target at each office, even if that means hundreds or thousands of offices. With OneSite, administrators have the option of picking the specific peer system at an office to cache OSD content, but most prefer to let OneSite intelligently automate the selection process.

Pre-staging Windows 10 OSD content on only one system would be unreliable as the system could go offline for any reason at any time. That’s why OneSite automatically makes additional copies of the content on other peer systems in the Virtual SAN at that office. By default, it will store three copies, but the number is configurable by administrators. Not only does OneSite create these additional instances of OSD content, but it maintains them. So if one of them goes away, then another is created to ensure the count is maintained. It’s all automatic, and it’s something that other peer-to-peer OSD solutions on the market don’t offer.

**LiveFlow™**
Windows 10 OSD source content can easily be 25GB or more, so it can take a long time to pre-stage over the WAN as a background delivery that gives all business traffic the right of way. While you are pre-staging Windows 10 deployment content, many other ConfigMgr content deliveries may take place in the course of daily business. This is especially true in global enterprises with hundreds of locations. Unfortunately, ConfigMgr and other solutions don’t let you view details of all those Windows 10 OSD transfers and deliveries while they are in progress.
OneSite, however, lets administrators view and control global content deliveries in real time. In a simple dashboard view, administrators can:

- **View OSD pre-staging transfers in progress**, including source, target, data percent sent, time remaining, average speed, and current speed.
- **Control your OSD content transfers**: pause, change priority, or cancel all transfers of a particular piece of content or into a specific office, individually or as a group. Pausing is instant, and paused content later resumes exactly where it left off.
- **Override the delivery priority of OSD content** in real time by elevating its priority, and letting OneSite automatically pause lower priority transfers already in progress. Paused transfers resume as soon as higher priority content is delivered. OneSite gives you 256 levels of prioritization for content deliveries, providing an unrivaled level of granularity and control.
- **See which offices are OSD-ready**, verifying that they have all needed content pre-staged at a location, by specifying an office and a task sequence.

With OneSite, you can see all transfers between hundreds or thousands of offices worldwide, in real time, and control them instantly. Visibility is a crucial capability that every company should put on their “must have” checklist for Windows 10 OSD technology.

**AutoSync**

Windows 10 OSD task sequences will be updated over time with new packages, applications, application updates, drivers, Windows service branch updates, etc. After the OSD content is pre-staged at offices around the world, it will need to be updated regularly. With the new rapid release cycle of Windows 10, administrators would find it painfully time-consuming to track all the changes and manually schedule content deliveries to every relevant office each time there is an update.

OneSite solves this problem. Whenever any of the files referenced in a task sequence change, it detects the change and automatically updates the files at all offices that need them. No longer do administrators have to schedule and track hundreds of jobs to keep their OSD content current!

When a file is changed, OneSite makes the transfer extra-efficient. Instead of re-sending the file, it creates a differential file using a proprietary, state-of-the-art differential compression algorithm. Only the changed bits are sent, to speed delivery while protecting the network.
Speed

You probably already know that OneSite is the world’s fastest content distribution engine for ConfigMgr. You may not know that Adaptiva also offers the most powerful tools for shrinking timelines for enterprise-scale Windows 10 OSD projects.

The World’s Fastest WAN-safe OS Delivery
OneSite’s content delivery technology is legendary in the ConfigMgr community because it is the only solution that requires no throttling. It’s just one in a long list of Adaptiva-only engineering advances that speed your content to its destination safely:

No throttling: Unlike TCP-based protocols, OneSite entirely eliminates the need to throttle systems content, even on slow/poor WAN links, and even in the scenario where multiple downloads are requested at once.

No scheduling: Better than reactive solutions, OneSite proactively protects the WAN by predicting network traffic in milliseconds in real time, and carefully filling the tiny gaps with content, so it never requires scheduling of delivery for after-hours.

File compression: Only OneSite compresses content on disk by up to 30% to speed the delivery of Windows 10 software over the network.

Differential compression: OneSite uses proprietary state-of-the-art differential compression on OSD files, so when they are updated only the changed bits are sent (instead of all data, often 25GB+).

No re-downloading: OneSite eliminates the need for re-downloading of software by storing more content at each office than other solutions, and optionally maintaining multiple copies for high availability.

Load balancing: OneSite’s OSD Load Balancer can serve content to each migration target from a different imaging source, speeding the process and avoiding impact to peer systems.

Complete High-volume Migration Projects Rapidly
Windows 10 migration speed is about a lot more than just moving files quickly. Migrating an environment with tens or hundreds of thousands of clients is a massive effort that can easily span years. OneSite shrinks deployment timelines to a fraction by:
• Eliminating the time to architect, buy, and deploy hundreds of servers.
• Removing the need for network configuration—IP helpers, DHCP scope options, router permissions, etc.—and the wait time of months or years for global implementation.
• Radically accelerating greenfield deployments of ConfigMgr itself, as well as upgrades to ConfigMgr Current Branch.
• Dramatically boosting the productivity of administrators so migrations can be done sooner, without waiting to hire and train an army of expensive contractors.
• Easing the implementation of PXE across an enterprise, unlike competing technologies that require special servers, client agents, setup, and maintenance.

Proven with Hundreds of Customers Worldwide
OneSite is used by a variety of industries from finance to manufacturing and counts among its customers the world’s largest retailers, top wireless network operators, and leading government agencies. Here are just a sample of some of our satisfied customers:

Finance

Government

Healthcare

Retail

Construction & Manufacturing

Utilities & Mining

The world’s most valuable brands rely on Adaptiva.
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About Adaptiva
Adaptiva is a leading, global provider of IT systems management solutions that advance the power of Microsoft System Center Configuration Manager (ConfigMgr). Founded in 2004 by the lead architect of Microsoft SMS 2003, Adaptiva enables IT professionals to securely speed enterprise-wide software deployments without adding costly servers or throttling network bandwidth. The company’s breakthrough peer-to-peer technology securely distributes software across enterprises faster than any other systems management solution available today. Adaptiva’s suite of smart scaling systems management products includes OneSite™ for rapid content distribution and management, Client Health™ for endpoint security, troubleshooting, and remediation, and Green Planet™ for energy-efficient power management and patching. The company’s software is used by Fortune 500 companies and deployed on millions of devices in over 100 countries. Learn more at www.adaptiva.com.