



**UTOPIC**  
software

USE CASE  
OVERVIEW



Self-healing • Imaging • Device Wipe

**Use cases: meeting requirements,  
exceeding expectations  
and managing system lifecycles**



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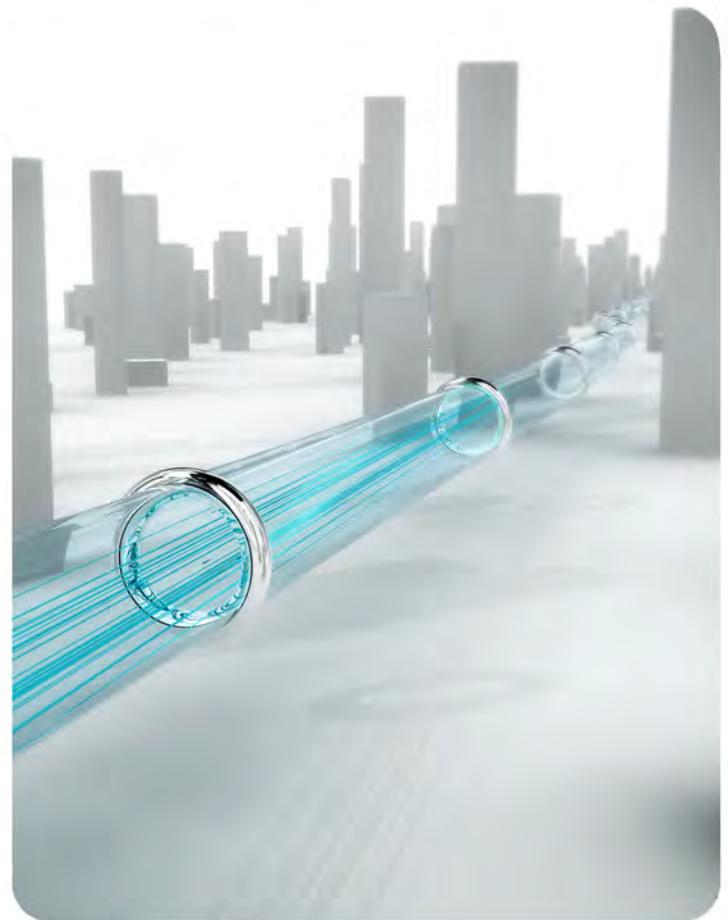
**Manage the complexity of a fluid and changing IT environment through recovery, repair, migration, and imaging**

Persystem Suite provides **multiple and multi-faceted use cases** which drive value for organizations of all sizes and scope. However, there are certain benefits that are enjoyed by industries with unique needs and requirements . Additionally, the solution offer a specialized means to achieve goals by individuals tasked with maintaining IT integrity, availability and responsiveness to overall business needs. This document outlines **how and why Persystem Suite matters**. It provides clarity as to the value behind:

- **Automating PC recovery (self-healing):**
- **Faster and more precise imaging**
- **Configuration restoration**
- **Facilitate complete hard drive sanitization**
- **Compliance support**
- **Managing disaster recovery**

It also offers specific step-by-step instructions on some of the most common use cases addressed by Persystem Suite.

- **Part 1: Value to individual user types**  
(from help desk tech to CIO)
- **Part 2: Overcoming industry-specific challenges**
- **Part 3: How Persystem Works: Use Cases**



 **persystem**  
World's Fastest "Self-Healing"  
Compute Availability Management Solution



## THE MULTIPLE AND MULTI-FACETED USE CASES OF PERSYSTENT SUITE

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## THE MULTIPLE AND MULTI-FACETED USE CASES OF PERYSYSTENT SUITE



Persystent Suite is a dynamic multi-function solution that dramatically improves the compute availability/end-user productivity and system lifecycles of PCs. It does this on several fronts including the unique ability to promptly and thoroughly **"self heal"** PCs (by applying automated corrective action against unauthorized changes), deploy zero-touch bare metal imaging, promote compliance-mandated security through DOD-recommended drive wipe/sanitization (NIST 800-88), and control the fast and accurate means to deploy authorized changes such as system/application updates and patches.

Persystent Suite does the work of 3 different solutions; does it faster, more accurately, without over-complexity, and does it in alignment with current IT best practices. Primarily considered a repair or imaging tool, Persystent's wide array of integrated capabilities and proprietary technological differences make a qualitative and measurable impact for multiple industries and companies of various sizes and scopes. As an investment, it provides all those enterprise-powered capabilities as a single source solution at a price point typically less than a single function alternative currently on the market.

Under the banners of repair/recovery, imaging and disk sanitization, Persystent Suite achieves several key IT goals including

- Automate PC recovery (self-healing)
- Control approved ideal state management
- Facilitate faster imaging
- Manage and maintain configurations
- Support compliance and policy enforcement
- Increase patch/update distribution success
- Manage disaster recovery protocols
- Securely retire/recycle/reassign PC devices

That tells you "what" Persystent does, but let's share the benefits and use cases to give you a deeper sense of why and how Persystent will work for you. From a high level, the solution has a proven track record of

- Reducing service calls and on-site tech visits
- Reducing repeat instances/promoting root cause discovery
- Restoring/maintaining compute integrity
- Improving end-user availability/productivity/satisfaction
- Speeding case resolution times
- Eliminating the need to consistently re-image PCs
- Stabilizing configuration management
- Promoting a more secure environment
- Streamlining change management
- ...and more

When assessing a use case, it is important to understand the **unique values it provides in various scenarios**, who does the solution help, and why the solution matters. And, of course, how the solution is applied. This document will examine of these "use cases."

## Part 1: Value statements by user type

### Who Persistent Helps: *IT help desk*



Support desk is the front lines in keeping end users up and running. The phone rings non-stop with issues big and small revealing hair-on-fire emergencies or tedious time-consuming routine. Many of the resource draining calls are those that involve break fix issues. "My computer is running slow/acting funny," "Application X won't load/failed," "I think my PC has a virus" "My machine froze," or a baker's dozen of other common issues that derail user productivity and require some degree of troubleshooting, intervention and escalation. Many times the easiest path to getting users back up and running is to re-image a machine. The time to do this is monotonous and long. This time and expense is multiplied if the user is offsite and needs to send in the affected box.

Implementing automated corrective action (self-healing) help desk can efficiently and effectively address:

- System won't boot or power up
- System blue or black screen
- System is performing slow
- Application not responding
- Operating system corruption
- Security failure such as malware or virus
- Employee turnover requiring a re-image
- Configuration issues such as drivers, registry, services, process, or windows related
- Any occurrence where a PC requires a re-image due to troubleshooting delays or identifying root cause
- Failed patch or update requiring a roll back

## Bottom Line Benefits

- 1. Simplifies the repair and recovery process.** It's pre-boot automation heals any PC without manual intervention with a single reboot of a device. It eliminates labor intensive fixes and re-imaging. It's not a zero-day rollback—user profiles and data are untouched. Regardless of the corruption to the OS, the self-healing capability can be remotely activated by the help desk and the user is up and running in under a minute..or the time it takes to reboot the PC.
- 2. Resolve user issues in seconds (near real-time):** The initial goal of any help desk interaction is to return the caller/user to productivity as fast as possible. Persystem enables help desk to resolve issues considerably faster regardless of the level of OS corruption or break/fix status. It does this using a proprietary corrective technology that works pre-boot of the OS. Additionally, self-healing is not reliant on a network connection so it can work on or off the network.
- 3. Fix first, troubleshoot later:** Since the user is back up and running almost immediately (as if the problem never happened), help desk can review log files generated by the reporting feature and analyze the root causes that created the original break/fix situation. This approach *creates more time to deal with higher value tasks* and other serious issues.
- 4. No "Day Zero" rollbacks:** Applied against individual machines, defined user groups or entire environment, the solution offers multiple levels of repair to ensure the necessary flexibility for how invasive the repair/recovery must be. Your corporate policies determine what OS registries, applications and files will be *automatically corrected back to an approved ideal state* upon reboot. This way if a repair is required, it doesn't roll back to factory settings (unless you policies dictate). The user receives their recovered system with their files, settings and profiles intact.

### Who Persistent Helps: *System Admin/DeskTop Engineer*

For the System Administrator imaging is a key function of enabling that the right person has the right assets to perform their duties. It starts with an approved/desired image that includes the right access and functionality using the proper policies for their PC. A new hire comes on board; a new device is purchased; the organization is migrating to a new operating system; the latest patch is available; a new or updated application is added to the landscape-- it's not simply turn it on and go. It requires a properly configured and distributed image. Persistent' imaging capabilities are faster than anything currently on the market.



Persistent powerful imaging capabilities: efficiently and effectively address:

- Zero-touch imaging bare metal; end-to-end automation
- Provides increased centralized visibility and control into the change process
- Remove errors and inefficiencies when applying updates, patches and new images.
- Ability to manage multiple images based on your own policies
- Enforce IT change control and prevent unauthorized changes and shadow IT activities
- Promotes remote imaging (off network via USB) for disaster recovery
- Integrates with/leverages drive encryption and compression solutions

### Bottom Line Benefits

- 1. Provides a centralized control, easily repeatable fast process:** Infrastructure change occurs with every new requirement to support the business: patching systems, updating applications, configuration changes, and other required maintenance. Persistent Suites creates an automated means to effectively manage the imaging and update process. You can schedule, test and apply a new snapshot that only records the delta from the previous image--so the process is noticeably faster and more accurate. And, it can done from a centralized dashboard.
- 2. Eliminates redundancy:** Persistent Suite saves only one version of an application for the enterprise. In a organization with thousands of instances of Word or Persistent Saves a single master copy for the image thereby saving tremendous storage space and increasing imaging speed. Additionally, it works using file-level repository, (not sector-based). This means user-specific data, settings and profiles are safe during an imaging update.

3. **Faster, more accurate imaging saves time** The proprietary and automated process removes more than 30 minutes labor per machine. Tested head to head against other options, Persistent Suite completes a round trip image in as little as 200 seconds (16 GB end point, SSD drive) and averages 8 minutes for a rotating drive. That's 75% faster than anything on the market. The **automated task sequencing** allows organizations to automate manual tasks such as change computer name and automatically join the domain, not to mention the independent hardware imaging solution allows organization to leverage the hardware driver database to automatically inject the drivers according to the hardware platform during bare metal builds.
4. **NIST 800-88 compliant device drive wipe** When retired or recycled, hard disks still contain sensitive information, we quickly and seamlessly erase data and sanitize the drive. Persistent Suite sanitizes a 256GB device sanitized in less than 40 minutes: about 10 seconds per gigabyte. Additionally, if a device is lost or stolen, the Sys Admin can even wipe a drive remotely. So the next time the device is turned on, it will no longer be a viable.

#### Who Persistent Helps: Director/Manager of IT



Two issues typically dominate the IT Directors time...ensuring the ongoing integrity of the organization's computing landscape and implementing the vision of how it needs to achieve its business goals. The first is about maintaining control over the a variety of technology points and the latter is ensuring it has the assets (time, budget, resources) to execute the strategies. This means she/he is concerned with everything from compliance to security to change management to usage agendas to user access to device stability to maintaining systems and services. It's a big job that requires the ability to find automations, integrations and complimentary

solutions to maximize effort. Persistent Suites contains several indispensable functions and benefits in a single solution that supports multiple key strategies.

- Proactive process optimization and automation will improve business operations and user satisfaction
- Aligns with multiple compliance requirements (re: demonstrate control , enforce policies)
- Reduce business downtime/Faster more efficient repair/recovery processes
- Reduce support and service desk incidents
- IT resources focused on executing projects and working with strategic vendors on innovation for the environment
- Enables security initiatives with regard to malware/APT removal, policy enforcement and supports risk management protocols

## Bottom Line Benefits

1. **Gets your IT support team out of the "reimaging business.":** Reimaging is a lengthy and **tedious** process. In most cases it takes a user's device out of commission for hours if not days. Without Persysent, the reimaging process typically rolls back to a Day Zero fresh start. This means data is lost, applications removed; authorized and personal settings gone. Persysent Suite provides multiple levels of repair that not only save data, application and settings, it removes problems and performance issues by restoring a desired state in near real time. Consequently, the user is "down" for only minutes, their work is preserved and IT is not wasting time and budget resources.
  - Reduce inbound break/fix service calls by 34%
  - Reduce IT manual intervention by 75% or greater through automated corrective action
  - Recover from malware infections, removes unwanted changes in less than 45 seconds
  - Not self-service...a simple reboot to an approved image solves many issues with no service.
2. **Maintains the continuous reliability:** By **reducing on-site tech visits, operational downtime, service desk case resolution times, repeat instances and configuration management issues**, the devices under the Directors purview maintain a near 100% availability. Not only are the PCs up and running, but they are *operating at optimum capacity* for longer and they are based on your own usage policies and security protocols. This same process promotes easier, faster and consistent disaster recovery and ensure high level asset integrity. Should a device (PC or server) experience an end of life event, you can simply plug in a new hard drive and within minutes have the user up and running with the proper image. In fact, Persysent Suite's unique *Zero-touch Imaging* builds and deploys a bare metal image in less than 20 minutes --that's 70% faster than other commercially available tools!
3. **Eliminate shadow IT fiefdoms, rogue/unsanctioned deployments** Users love to download and deploy applications *they* believe will help them do their job--but do it without the blessing of IT. This creates a variety of configuration and security issues. This opens the floodgates to a variety of competing computing agendas and compliance problems. Persysent Suite manages images on the individual level so IT can always know what is supposed to be on a device. All unauthorized applications get removed.
4. **Do more with less:** Even with reduced headcount, many IT departments have automated or outsourced Level One issues. However, the remainder of incidents still overload help desk/support capacity. This is because, in many cases, IT specialists are asked to wear many hats ranging from hardware management to application evaluation and maintenance to network administration and more. The automations within Persysent Suite removes the burden of constant repair, imaging, troubleshooting, desk side visitations, and update distribution so that the time and effort spent on routine, resource-draining repairs can now be re-assigned. It is like having additional headcount without the additional cost. Your team is now doing more with less.

## Who Persistent Helps: CIO/CTO



There are several issues that keep CTO/CIOs up at night. From fighting the quickening obsolescence of their infrastructure while maintaining secure, stable and scalable systems; to balancing available human and technology resources that ensure maximum integrity, productivity, agility, and integration. And, accomplish it all with one eye on budget and the other on operational success.

One solution won't make CTO/CIO nightmares go away, however Persistent Suite's versatility, proven real-world application and affordability remove some of the barriers and layers of complexity to make the digital landscape more manageable, predictable and

durable. Through the automations ingrained in the repair, recovery and imaging components, CIOs can rest easier that the day-to-day flashpoints won't distract from the accomplishing and supporting core competency strategies including:

- Promotion of best of breed solution that successfully and ably address multiple needs including service management, change management, configuration, infrastructure maintenance and point device repair
- Alignment with overarching business goals/vision
- Support strategies to maintain regulatory compliance
- Providing maximum compute availability-translates into higher productivity and satisfied end users
- Reducing technical debt
- Championing innovation by providing the right/complimentary tools

*"We use Persistent all the time now and we have saved the cost of the software many times over. No other system or software purchase has had a bigger impact on reducing operational costs. "*

Vic Herrera, CTO,  
DTT Surveillance

## Bottom Line Benefits

1.

### Reduce Total Cost of Ownership

IT is often considered a cost center. It supports revenue generation; enables it, but the development and maintenance of the infrastructure always comes with a price tag. The ability to proverbially "do more with less" has become the SOP for most IT departments. It falls on the CTO/CIO to find ways to best manage those costs while still advancing the organization's business agenda. Persistent Suite helps achieve this goal in several ways:

- Extension of the PC lifecycle through automated self-healing not only reduces cost per support incident, but keeps a device (PC and server) healthier for longer.
- Reduction of downtime incidents make end users a more productive, happier
- Implementation of procedural efficiencies in things like scheduled updates are applied faster and with greater accuracy,

- Provides 4 functional features as a single solution for much less than cumulative cost of the four separate functions (repair/recovery, imaging, change management, drive sanitization).

When compute environments and end users are consistently performing at a high level, the total cost of ownership (infrastructure, hardware and software) is significantly reduced. Persysent Suite additionally allows CIO/CTOs to divert significant of man hours to higher value tasks and focus on enabling revenue-generating programs rather than troubleshooting and repair.

2.

**Generate ROI:** Persysent Suite changes the service desk conversation from firefighting break/fix issues to fast, and effective resolution. This alone, creates a measurable return on investment. A conservative-sized enterprise (1000 endpoints) will experience 1 support issue for each endpoint every 100 days: That's 3600 problems. And that's beyond the simple inbound requests like resetting passwords. If each incident takes an hour (average) to diagnose and resolve (at an industry average of \$20 per incident), that's still a significant investment in "fixing" issues that self-healing could automatically resolve (with a single reboot of a device that reapplies a desired image). Persysent Suite resolves more the 80% of the break fix calls in less than a minute. This equates to roughly a \$60,000 per year savings. If the subscription were estimated at \$2/machine/month, that is still a savings of \$36,000 per anum. CIOs must also tak into account, repair recovery is only one of the feature sets. Similar savings can be found through Persysent's other functions (which are included with the annual subscription) including faster imaging, DoD recommended device wipe, improved patch/update success, fast recovery from hard drive failure, and the automations with disaster recovery.

3.

**Aligning strategic goals with end user needs:** The best CTOs understand that design of a computing infrastructure or of a product is a virtuoso activity. And as technology is a moving target, it is important to provide keeping up with technology to more effectively help end users Persysent Suite has demonstrated the ability to increase end-user productivity, improve customer satisfaction, and significantly reduce end-point support costs across an organizations PC environment---and as a SaaS type solution it easily expands and right sizes as needs present.

As important is a means Persysent easily helps **you keep up with innovation**. As new updates and patches become available, Persysent Suite makes is easier to distribute the necessary changes to the end users. How often do these changes require more time and effort because the update fails or the configuration needs tweaking on some workstations, but not others.

4.

**Assessing and Mitigating risk:** Risk for the compute environment comes in all shapes and sizes. The CIO has to worry about the macro effects a potential breach/threat or misconfiguration might cause. The CIO also worries about the compute environment on a personal user level. What are users doing? Are they following policy with regard to authorized usage/downloads? Have innocuous or sanctioned sites been infected with malware, spyware, or adware? Persysent Suite's allows CIO/CTOs to assess and mitigate such risk.

**First, as an enabler security protocols.** If a device is subject to unauthorized changes; be they from outside ATPs, misconfiguration which leaves back doors open, or the alteration of a registry file, the self-healing component can remove the unauthorized change and restore the properly configured image. This reduces downtime, but more importantly, regulates performance to operate within optimal and safe constraints. Persysent also **reduces organizational risk through granular reporting.** It allows your team to keep tabs on the all the assets using Persysent and whether they have a desired image or have exceeded permissible usage. It provides the visibility and necessary logs to review should a repair/restoration be advised. It automatically schedules, distributes and enforces the desired image. This type of demonstrated control is at the heart of several regulatory compliance mandates.

## Part 2: Overcoming Industry Specific Operational Challenges

### Why Persistent Matters

There are several business drivers that apply to the enterprise at large as well as the IT team tasked with maintaining ITSM, configuration management and/or ITIL. They include PC integrity and control of its life-cycle, availability and productivity, regulatory compliance, reducing cost centers such as break/fix issues, end-user satisfaction, process improvement and security. Persistent Suite plays a considerable part in each of these elements. From a bigger picture perspective, they all come down to cost, risk and time.

We often pose the question, why can't computers heal themselves? With Persistent Suite, they can.

There are dozens of these scenarios, but all have one thing in common. The likelihood that the PC needs to be re-imaged in order to return to a optimum state of productivity or a significant amount of time and needed to troubleshoot and manually address the issue.

Persistent Suite changes the IT help desk conversation from chasing hair-on-fire issues to fast, efficient and effective resolution

This includes a file-level approach in contrast to the whole-disk methodology used by traditional imaging solutions. A "single instance" storage strategy is used for operating system files, so only one instance of any unique file is stored from across the infrastructure. This improves speed and saves a tremendous amount of storage space.

Persistent Suite from Utopic Software is an innovative solution that is helping redefine PC repair and recovery. There are other repair and recovery options; there are other imaging solutions and other erasure; however, its unique and proprietary technology offers a fundamental shift in providing a broader scope of automation and functionality above and beyond the traditional imaging product or the "roll back" repair products on the market. The practice of self-healing (automated corrective action) PCs from any level of corruption or compromise with speed, accuracy and security is the next generation of system management.

Applying these use cases, Persistent successfully meets the challenges to

- Reduce support incidents and repeat cases
- Shrink downtime and increase end-user productivity
- Improve and maintain the continuous workstation integrity
- Control security and shadow IT issues
- Meet compliance requirements

However, these use cases and benefits are generally applicable to any organization regardless of industry or market served. In many cases, there are certain needs and operational challenges that affect specific industries in which Persistent creates lasting value.

## Unique uses for targeted markets

**HealthCare**, which includes hospitals, medical facilities, insurance providers, medical equipment developers, labs, pharmaceutical companies, and long and short term care facilities maintain some of the **strictest compliance guidelines**. They not only are responsible for personal information, but are often storehouses to very sensitive and private health information. To this end, the ability to maintain desired configuration and uptime is more than just a security issue, but a health provision matter as well

- Sometimes **uptime/availability can be a life or death situation**. The operating theater relies more and more on various PC-driven solutions. A trauma patient dependent on lab results cannot wait for an invasive troubleshooting (This true scenario is played out in the illustration on the right). They need to maintain availability and productivity as quickly as possible. The ability to execute an on-demand reboot fixes whatever issue was affecting performance in less than a minute. And, when every second counts, this is a key value.
- Information is the lifeline of a health-based organization. Persysent provides disaster recovery and application "criticality" on an enterprise scale for devices and network as per **HIPAA §164.308(a)(7)(ii)(B)**. If any PC suffers catastrophic failure, Persysent can easily and quickly replace the corrupted drive with a repaired and recovered version. Or, IT can simply insert a brand new drive and have the golden image imprint the desired configuration and usage policies in minutes. This is not just for devices that provide direct medical application. They also include the PCs that generate and process billing, maintain records, schedule procedures and appointments, provide correspondence, and a thousand other day-to-day functions.
- Some medical devices, specifically Windows and/or PC-based instruments, need to **reset settings** after each use. These data assessing and collecting devices must return to their desired/ ideal state **prior to next patient application**. This is not solely a security requirement, but also an operational requisite and life cycle expansion best practice. Persysent's ability to reset the desired state in under a minute ensures the productivity and near-immediate availability.



**Education:** Persysent's wide array of integrated capabilities and proprietary technological differences make a **qualitative and measurable impact for schools, colleges, universities and other educational institutions** of various sizes and scopes.

- **Managing computer labs** and classroom devices presents a unique challenge. With as many as 30 or 40 PCs requiring a simultaneous reset



before the next class, it's difficult for an instructor when applications supporting the curricula must be homogenous before their next usage. Too often files and modifications are left for successive classes. This creates an exponential problem that leads to poor performance, unauthorized modifications and inaccurate results. Persysent provides a centralized and simple way to identify multiple devices and **seamlessly apply a *clean slate*** for their next use.

- **Maintain the integrity of multi-user PCs like self-serve kiosks and libraries.** Because most of these independent PCs are under-supervised, they're often open to a variety of abuses including the introduction of unauthorized downloads and files, malware, and other activities that are outside of school usage policies. These abuses often lead to catastrophic hard drive failure, potentially spread virus infections and require intensive repairs. However, IT can schedule that these devices are rebooted daily (applying Persysent's self-healing capability) and **automatically returned to their complaint, desired state.**
- Many schools provide loaner PCs to students and faculty. All too often, the loaner is lost or stolen. If a student **reports a school-owned PC lost or stolen**, the Sys Admin (using Persysent's secure wipe functionality) can **wipe a drive remotely**. So the next time the device is turned on, it will no longer be a viable.

**Financial Services:** In the banking and investment industries, improper control and management of PCs can be a **source of major operational risks**, which directly translate into financial losses. Although Persysent is not a traditional security solution, it provides a measure of verifiable control that banks, credit unions, investment organizations, need to facilitate risk management policies and enable the PC operating environment to run smoothly over the course of its lifecycle.

- Persysent **significantly reduces the compliance burden (PCI/DSS, HITRUST, FERC, GLBA, FISMA)** by automatically recognizing and reverting changes in registry, application configuration and other system setting settings when they fall outside the pre-defined "desired ideal state." Instead of simply red-flagging issues for an engineer to discover later the system applies prescribed steps (based on your unique policies) to revert configuration changes back to a safe and controlled status.

**Government:** Utopic has worked with many government agencies on the **local, state and federal level**. Some require advanced clearance to satisfy classified or protected infrastructures. Persyent consistently meets government application standards.

- **Ensure hard drive sanitization with NIST 800-88 compliant wipe** When retired or recycled, hard disks still contain sensitive information, Persyent quickly and seamlessly erases data and sanitizes the drive. Simple deletion or partitioning does not align with DoD recommendations. Persyent fully sanitizes a 256GB device in less than 40 minutes: about 10 seconds per gigabyte.
- **Automating the imaging process with zero-touch capability** Budgets are tight and highly scrutinized for any public-serving institution. This often results in an aging IT environment. Oftentimes operating systems are several versions old before they are approved to update. This leaves hundreds and sometimes thousands of PCs in need of a new, compliant base image before they are put back in circulation. Persyent's automations establish a proprietary zero-touch protocol to provide government entities a cost-effective and efficient way to ensure the OS is current, allows for further updates and contains the unique policies.
  - Takes a file-level approach, in contrast to the whole-disk methodology used by traditional imaging solutions. A "single instance" storage strategy is used for operating system files, so only one instance of any unique file is stored across the infrastructure. Additionally, a file-level approach allows user settings and other files to be stored in accordance with policy.
  - Allows administrators to deploy a single image across many different PC hardware platforms with SysPrep, which reduces deployment time and image storage needs.
  - Automates SID change, computer name change, OU, and join domain functions.
  - Compressed and encrypted.
  - Inherits updates and patches from leading third-party patch management and software distribution tools.



**MSPs :** As a managed service provider of any kind, the ultimate compliment is to be considered a "trusted advisor" by your client. Part of the trusted advisor's job description is not only to improve performance, but to do so at the maximum level for minimal costs. Persyent Suite, and its multi-tiered capabilities and bundled functions, provide a unique means to expand wallet share, provide significant differentiation and offer clientele

- **Simulate additional headcount without the additional cost:** The automations within Persyent Suite removes the burden of constant repair, imaging, troubleshooting, desk side visitations, and update distribution so that the time and effort spent on routine, resource-draining repairs can now be re-assigned to higher-priority tasks that support your client's mission. Overall, your labor costs go down and your client doesn't get a big bill at the end of the month--or you don't "eat" those overages.

- **Escape break/fix mode and re-imaging loop:** A client user calls with a performance limiting issue. For many MSPs this starts a time-eating support cycle which typically results in user-downtime and eventual need to reimage the user's PC. Persystem's ability to support on-demand reboots helps resolve user issues in under a minute. This gets the user back to productivity almost immediately and provides the support desk with the necessary data to understand the root issue. The ability to maintain the integrity and availability of your clients compute environment pays dividends. Break/Fix issues are addressed and resolved quickly. Persystem also provides advantages with several other key aspects of ITSM including imaging, disaster recovery and change management.
- **Clients migrating to new and updated platforms like Windows 10/ In-Place PC Refresh:** As many client are looking to migrate the majority of their PCs to the latest operating system, Persystem applies its proprietary automated imaging capability to configure the necessary changes and distribute the updated and approved base image to every machine. This process also addresses **patching systems, updating applications, user profiles and setting, and other required maintenance**. Whether you are updating 1 or 100s of PCs, the imaging capabilities of Persystem are faster and more accurate than anything else on the market.

**SMBs :** Companies, regardless of industry, who have less than 150 PCs often have to choose between overpaying for expensive enterprise solutions or getting less value because a low cost alternative doesn't align with the need of the organization. Persystem Suite provides 4 functional features as a single solution for much less than cumulative cost of the 4 separate functions. The solution is not only affordable, but has the **power, flexibility and automations** to drive ROI and neatly align with ITSM and configuration/change management needs regardless of size or scope.



- **Affordable for any sized organization:** Persystem Suite offers feature-rich, enterprise-powered capabilities as a **single centralized source solution** (repair/recovery, imaging, change management, drive sanitization) **at a price point typically less than a single function alternative currently on the market**. Not only does Persystem Suite's **budget friendliness** look good on the balance sheet, but its automations reduce the cost of per service instance.
- **Remove shadow IT:** One of the more prolific issues affecting small businesses is the lack of IT enforcement placed on users. Either, usage is relaxed or IT are simply up to their eyeballs in higher priority emergencies. **Users love to download and deploy applications on their own** -- without the blessing of IT. This creates a variety of configuration, malware and security issues. This opens the floodgates to a variety of competing computing agendas and performance problems. Persystem Suite **manages images on the individual level** so IT can always know what is supposed to be on a device. All unauthorized applications get removed.

## Part 3: How Persystent Works: Specific Use Cases

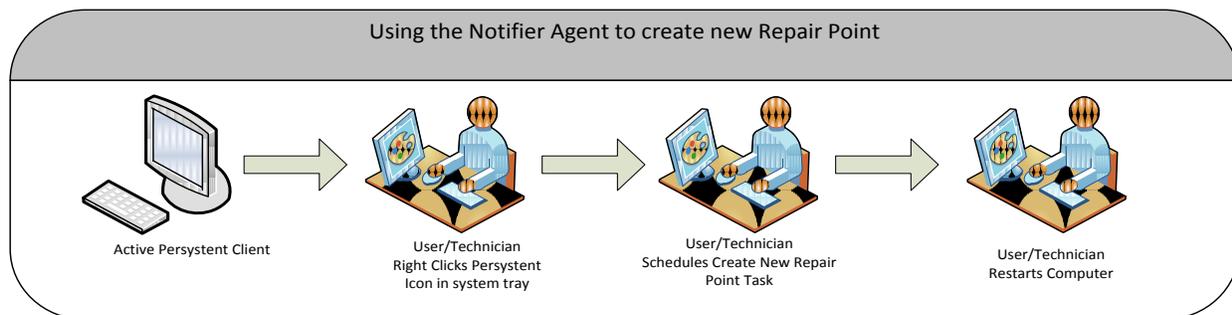
### USE CASE 1: Create New Repair Point Using Notifier Agent on the Client

#### Pre-Requisites

- Computer must have Persystent Agent installed.
- Computer must have Microsoft .NET Framework 3.5 installed.
- Computer must have Persystent hidden partition.
- Following settings must be set in Post Boot Policy on the WebUI.
  - “Notifier Agent” must be enabled.
  - “Create New Repair Point” task must be assigned.

#### Procedures

- User/Technician Right Clicks Persystent icon in system tray
- User/Technician Schedules a Create New Repair Point
- User/Technician Restarts Computer



### USE CASE 2: Re-Image Machine with Base Image – Remove All Files and Profiles From Previous User (CD/DVD Method)

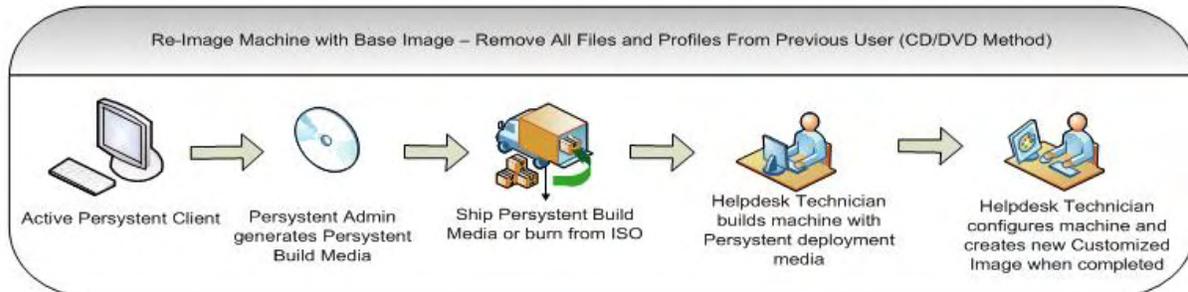
#### Pre-Requisites

- Base Image must exist on Persystent server
- Must have appropriate hardware and blank media to burn Persystent deployment media

#### Procedures

- Persystent Admin generates build media with the Remote Deployment Utility
- Remote deployment media shipped to site
- ISO file could also be distributed over the network for each site to access and burn on their own
- Helpdesk Technician will insert Persystent deployment media and boot machine to the CD/DVD
- Helpdesk Technician will select the “Install new image” on machine option, and select the appropriate image

- Machine will be automatically joined to the domain during the rebuild process
- Helpdesk Technician completes configuration of new machine adding applications and patches as necessary Helpdesk Technician will create new Customized Image for machine when configuration is completed



### USE CASE 3: Hard Drive Recovery using Network (NON-PXE) Boot Recovery Method

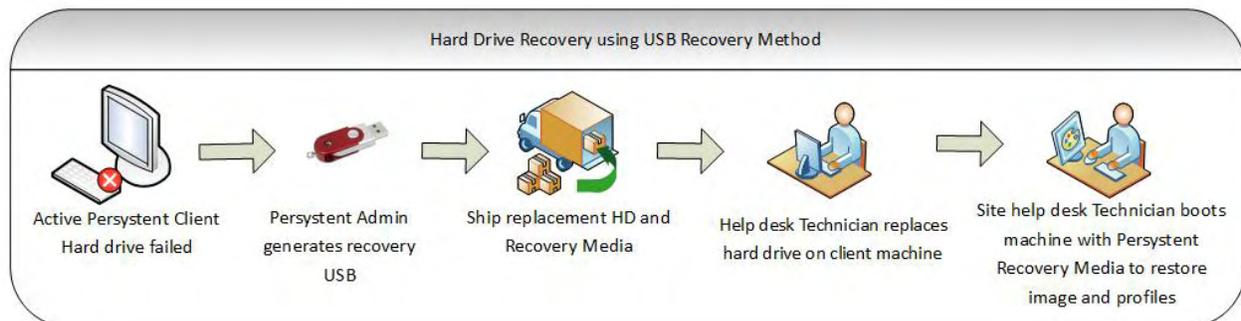
#### Pre-Requisites

- Computer must have Snapshot Image created and uploaded to its Management Server
- Backups of necessary profiles have been performed and those profile backups have been uploaded to Management Server
- Machine has not changed MAC address (MAC change will be covered in another section)

#### Procedures

- Helpdesk technician diagnoses failed hard drive on client machine.
- Replacement Hard Drive Ordered
- Persysnt Administrator logs into Persysnt server and generates recovery USB ISO Files.
- Recovery media can include image only or image and profiles if they have been backed up
- ISO file(s) are burned to USB media and shipped to client site with replacement hard drive
- Helpdesk Tech replaces hard drive on client machine
- Helpdesk Tech reboots machine using Persysnt recovery USB and answers a few simple questions

Machine rebuilds itself with no further user intervention, restoring last known image and any backed up profiles



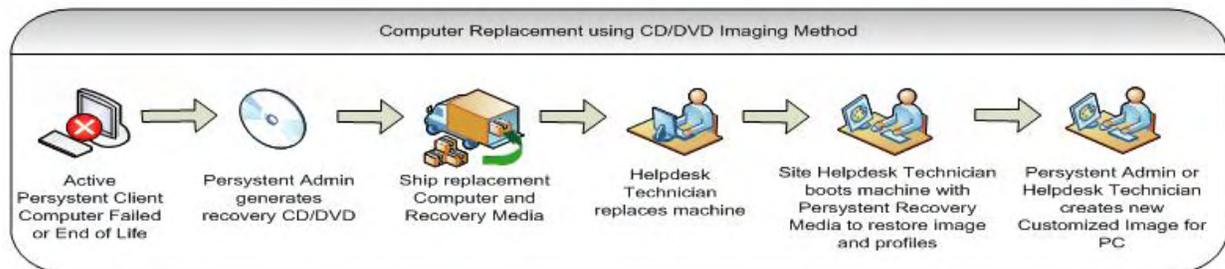
## USE CASE 4: Computer Replacement using CD/DVD Imaging Method

### Pre-Requisites

- Computer must have Customized Image created and uploaded to its Management Server
- Backups of necessary profiles have been performed and those profile backups have been uploaded to Management Server
- Machine should ideally be same hardware platform
- If hardware platform is too different, the image can fail. In this case, the Helpdesk Technician would have to reimage the machine with the corporate sysprep image and install applications. Persysent could restore user profiles once the machine has been brought back to the desired state and a new customized image has been created.
- Must have appropriate hardware and blank media to burn Persysent deployment media

### Procedures

- Helpdesk Technician diagnoses failed client machine
- Persysent admin generates recovery CD/DVD for client machine
- Replacement machine and recovery media are dispatched to user location
- Persysent admin logs into Persysent Management console and changes MAC address for client machine to match new PC MAC address
- Helpdesk Technician replaces machine at user's location
- Helpdesk Technician inserts Recovery Media into new machine and boots to the media
- Machine rebuilds itself with no further user intervention, restoring last known image and any profiles that have been backed up
- Persysent Admin MUST schedule new customized image for machine in order to incorporate the hardware change(s) into the new Customized state for the machine



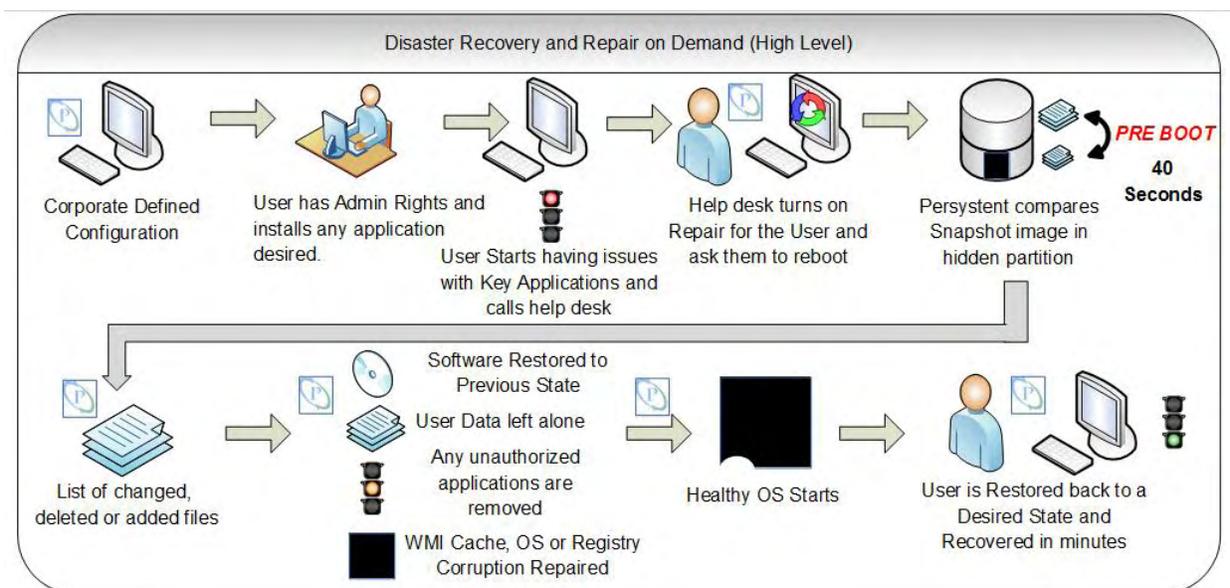
## USE CASE 5: Disaster Recovery and Repair (High Level)

### Pre-Requisites

- Computer must have Persistent Agent installed.
- Computer must have Microsoft .NET Framework 3.5 installed.
- Computer must have Persistent hidden partition.

### High Level Repair

- Repairs any operating system or application files that are either modified or deleted back to the repair point state.
- Deletes any new files/folders that are added in operating system or application folders.
- User profiles are deleted so that new user profiles will be created when a user logs on.
- Any new files/folders created at the root of C:\ will be deleted.



**Note:** In all 3 repair level, Persystem will always repair the registry files (except for the keys that are excluded in filters). Repair levels can be changed at any time by changing policy. Also, you can exclude files/folders from repair by using the “Repair Exempt” filter on the Persystem WebUI. The most common files/folders that you would exclude are Virus Definition Files

## USE CASE 6: Disaster Recovery and Repair on Demand (Low Level)

### Pre-Requisites

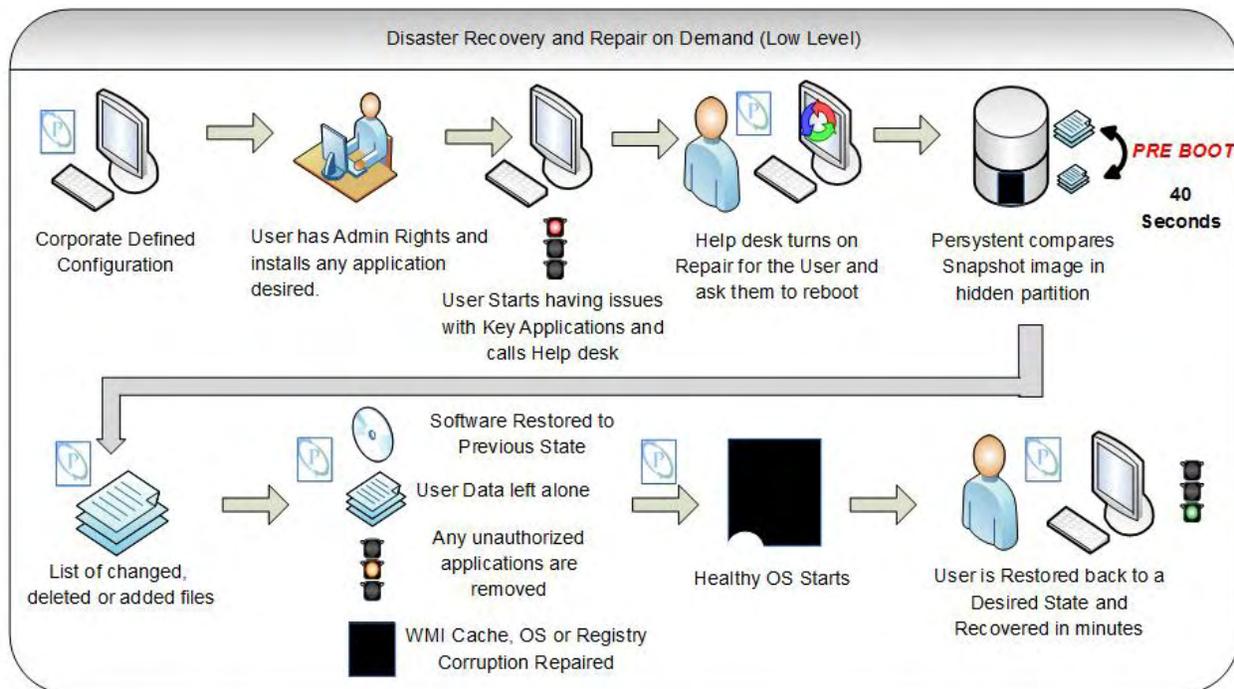
- Computer must have Persistent Agent installed.
- Computer must have Microsoft .NET Framework 3.5 installed.
- Computer must have Persistent hidden partition.

### Procedures

- User/Technician Right Clicks Persistent icon in system tray
- User/Technician Schedules a Create New Repair Point
- User/Technician Restarts Computer

### Low Level Repair

- Repairs any operating system or application files that are either modified or deleted back to the repair point state.
- Deletes any new files/folders that are added in operating system and application folders.
- User profiles are left intact. All change in the user's profile are preserved and not repaired.
- Any new files/folders created at the root of C:\ will be left intact.

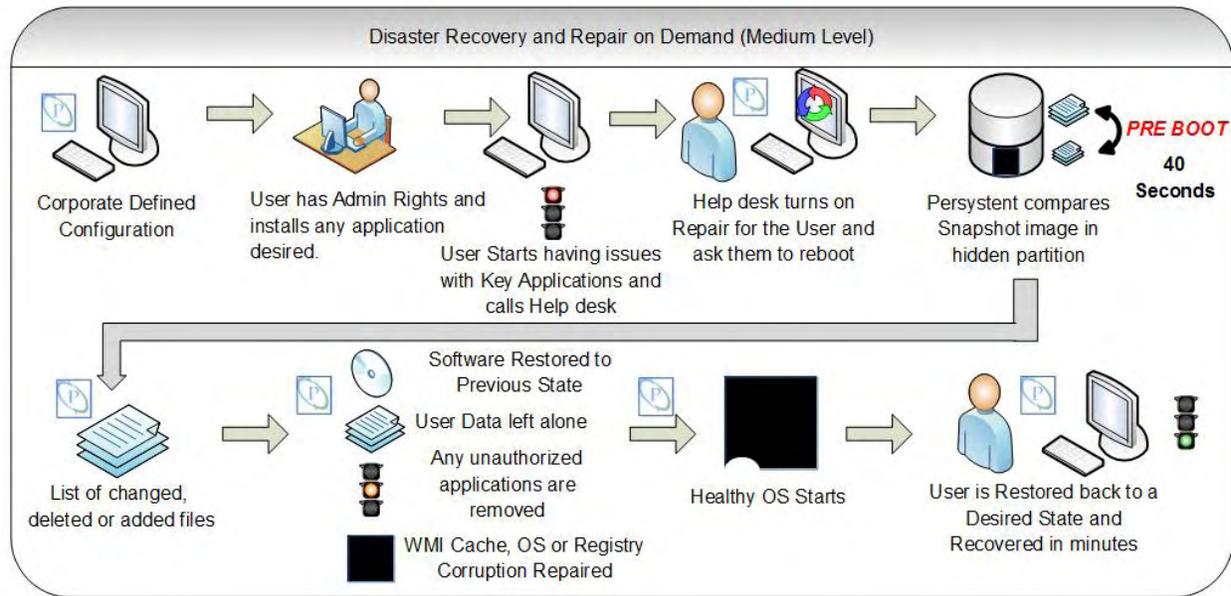


**Note:** In all 3 repair levels, Persistent will always repair the registry files (except for the keys that are excluded in filters). Repair levels can be changed at any time by changing policy. Also, you can exclude files/folders from repair by using the "Repair Exempt" filter on the Persistent WebUI. The most common files/folders that you would exclude are Virus Definition Files.

## USE CASE 7: Disaster Recovery And Repair on Demand (Medium Level)

### Medium Level Repair

- Repairs any operating system and application files that are either modified or deleted back to the repair point state.
- Deletes any new files/folders that are added in operating system or application folders.
- User profiles are left intact. All change in the user's profile are preserved and not repaired.
- Any new files/folders created at the root of C:\ are deleted.



**Note:** In all 3 repair levels, Persysnt will always repair the registry files (except for the keys that are excluded in filters). Repair levels can be changed at any time by changing policy. Also, you can exclude files/folders from repair by using the "Repair Exempt" filter on the Persysnt WebUI. The most common files/folders that you would exclude are Virus Definition Files

## USE CASE 8: Installing Base Images on New Hardware – Remote Deployment (USB)

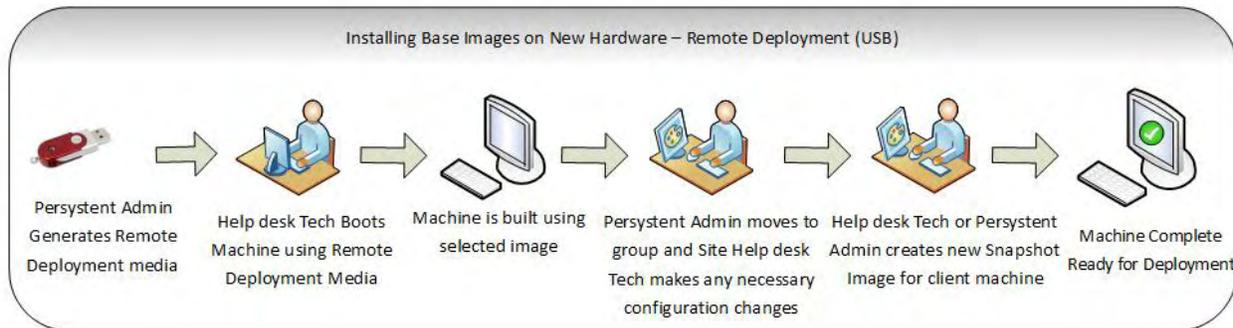
### Pre-Requisites

- Base Images to be used for deployment media must exist on server
- Client computer must connect to Persysnt server after initial image is deployed

### Procedures

- Persysnt Admin generates Remote Deployment build media
- Helpdesk Technician boots machine using Persysnt Deployment media, selects image through Remote Deployment wizard
- Machine is built using selected image

- Persistent Administrator will move newly built computer from the “Unregistered Computers” group to the appropriate Persistent management group
- Helpdesk Technician can make any configuration changes needed
- Helpdesk Technician or Persistent Admin can create new Customized Image for machine
- Deploy completed machine to end user



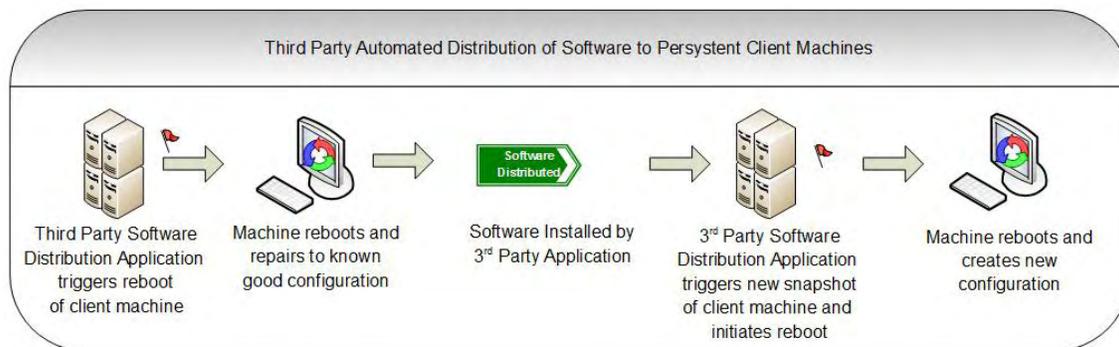
### USE CASE 9: Third Party Automated Distribution of Software to Persistent Client Machines

#### Pre-Requisites

- Client machine has been successfully built or inherited as a Persistent Client and has an existing Backed up image
- Client must have the appropriate Cleanup and Capture tasks assigned in Pre-Boot policy (tasks are part of default installation)
- Software distribution software must be configured to execute Persistent pre- and post- distribution triggers

#### Procedures

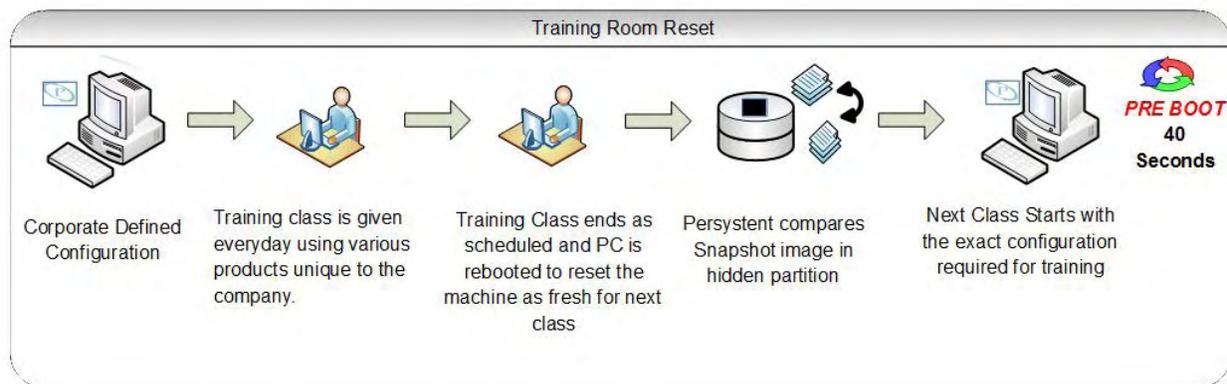
- Third Party application (SCCM or CA) is configured to trigger the “Cleanup” task and reboot machine once that trigger has been set
- Machine will reboot and return to known good configuration- will temporarily disable repair policies
- When software distribution is completed, third party application triggers the “Capture” task and reboots the machine after the trigger has been set
- Upon reboot, machine automatically creates new Updated Snapshot Image and re-enable repair policies



## USE CASE 10: Training Room Reset (High Level Repair)

### High Level Repair

- Repairs any operating system or application files that are either modified or deleted back to the repair point state.
- Deletes any new files/folders that are added in operating system or application folders.
- User profiles are deleted so that new user profiles will be created when a user logs on.
- Any new files/folders created at the root of C:\ will be deleted.



**Note:** In all 3 repair level, **Persyistent will always repair the registry files** (except for the keys that are excluded in filters). Repair levels can be changed at any time by changing policy. Also, you can exclude files/folders from repair by using the "Repair Exempt" filter on the Persyistent WebUI. The most common files/folders that you would exclude are Virus Definition Files

## USE CASE 11: WSUS or SCCM Distribution of Software/Patches to Persyistent Client Machines

### Pre-Requisites

- Client machine has been successfully built or inherited as a Persyistent Client and have an existing Customized image
- Client must have the appropriate Cleanup and Capture tasks assigned in Pre-Boot policy (tasks are part of default installation)
- Patch Services must be enabled in the Persyistent Pre Boot policy for the appropriate application(s) (WSUS or SCCM or Both)
- Client machines must be registered unique WSUS or SCCM Clients

### Procedures

- System administrator authorizes a patch to be sent with WSUS or SCCM

- Persistent Proxy Service installed on client machine will pause patch installation services and force a reboot of the client machine in order to return it to known good configuration. Uses Low Level Repair (Configurable)
- WSUS or SCCM will then install any patches or software as needed, reboots during patch installation are allowed
- When patch/software distribution is completed, Persistent Service detects completion of patch processes and will trigger the “Capture” task and reboot the machine after the trigger has been set
- Upon reboot, machine will automatically create new Snapshot Image. Machine has snapshot of current updates or software

