



Agent versus Agent-less Power Management

Verdiem Surveyor is a highly effective enterprise power management solution that enables organizations to centrally manage and reduce PC energy consumption within their IT infrastructure. Implementing Surveyor in an organization can yield 30 to 60% in energy savings without adversely impacting end users, while simultaneously improving IT operational efficiency.

A key component of Surveyor’s power management solution is the use of a powerful client agent for PCs & Macs. A smart client agent:

- Enforces power profiles
- Monitors power usage and user activity
- Provides advanced Wake on LAN functionality

This technical brief describes common enterprise requirements and the functionality an agent-based power management solution provides to meet these requirements.

Enterprise Requirement	Surveyor Agent	Agent-less
Enterprise Hardened	Installed on millions of end devices, analyzed, and approved for deployment by discerning enterprise organizations globally.	At first glance, agent-less is attractive because it appears simple and rapid. Basic inspection reveals major weaknesses in security, performance, scalability, and capability.
Ease of Installation	Lightweight and fast installer supports all industry standard software deployment tools. Simple upgrade process with option to auto-update client agent from server. No pre-configuration required on clients.	Requires pre-configuration of each client operating system including privileged account access, launching services, firewall exceptions, remote registry access, and file system permissions.
Device Access Security	Sophisticated agent invokes minimum privileges required to perform operations. No special accounts needed to instrument agent, providing maximum security.	Requires highly privileged network-based control of various remote computer services that much be enabled in the OS. Disables security features such as UAC to extend capabilities. Unnecessarily introduces security risks and configuration management of endpoints.

Enterprise Requirement	Surveyor Agent	Agent-less
Network Security	All communication is outbound to server. No client-side ports must be opened in firewall, providing for ease of installation and greater security. Agent supports SSL-encrypted communications for sensitive environments.	Requires open inbound network connections with high privileged remote administration and remote execution capabilities. Various ports must be opened to each client, increasing risk of intrusion and installation complexity.
Active Power Management	Full flexibility to schedule and locally enforce power policies based on user activity or schedule. Policies enforced without requiring persistent network connection, providing a better user experience and less management overhead.	Inflexible, state-based scheduling requires active network connectivity to server. Schedule not persistent on client-side; changes must re-traverse network, increasing network traffic and reducing reliability.
Monitoring & Measurement	Client agent monitors and collects usage information locally, intelligently reconciling with server, resulting in less network traffic and mobile device compatibility.	Regular polling from network required to capture current power state. Questionable scalability with many endpoints polled regularly. Mobile device (off-network) polling capabilities not known.
Data Protection	Sophisticated capabilities to prevent power state changes if threat of data loss occurs. Allows customer-specific configuration of protected applications to be identified and remedied.	No known ability to protect power transitions based on rules for sensitive applications.
User Experience	Extends native operating system capabilities, with improved user experience features such as Wake on WAN, Surveyor Idle Timer, Power State Transition Manager, and client health reporting, providing more savings with enhanced IT control.	Capabilities not natively offered by operating system require running scripts with remote control from network. This mimics basic agent installation, without the sophistication of the Surveyor Agent.
Handling Sleep Disorders	Agent intelligence to detect and remedy common disorders such as insomnia and narcolepsy. Allows for better savings, ensuring all machines enter sleep when expected.	No guarantee that machines will enter sleep when expected, reducing potential savings and wasting invested effort.
Runtime Efficiency	Client agent is compact and efficient, written in C++ and compiled to operate in native language. Requires minimal system resources, maintaining end-user experience and transparency.	Each action or poll must initiate network-based user session, load management framework, and perform actions using inefficient languages. May consume excessive system resources, affecting users and other applications.