Baseline Audit Report

Sample Customer

Audit Period:
February 28, 2023 - April 03, 2023

Overview:

WakeSMART is a product designed to provide organizations with a secure, reliable, and elegant method of managing in-house and remote computers for the purposes of device asset, and energy efficiency and energy savings management.

WakeSMART was installed on computers at Customer starting February 28, 2023, eventually peaking at 17836 computers reporting in to the WakeSMART server. During the audit period, Customer IT personnel were asked to make sure WakeSMART was getting installed onto machines via a central 'push' method. No other tasks were required of IT. Customer end users did not experience any disruption to their work.

Details:

Below are some graphs and charts demonstrating the usage and resultant energy states for the computers being managed by WakeSMART.

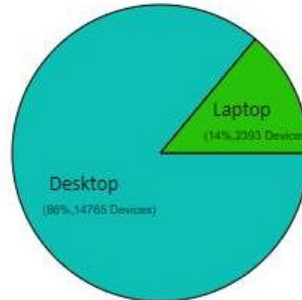 Customer computers being managed by WakeSMART checked in with the server during the audit as shown:

Devices vs. Time
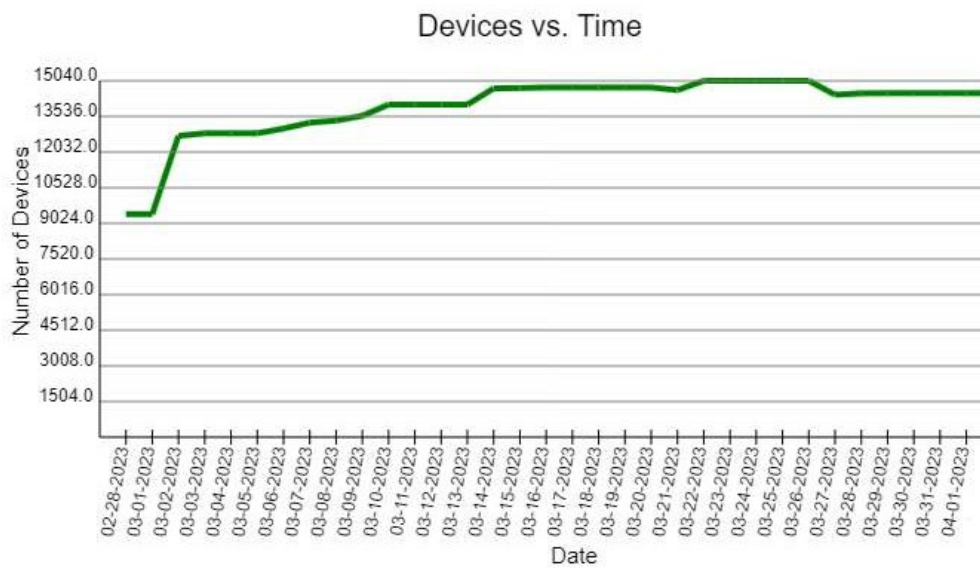
The dips in the graph show weekends, when about 16,130 of the devices were on and checking in with the server.

Devices by Type and OS

Devices by OS

Windows
(100%)
(17158 Devices)

Devices by Type
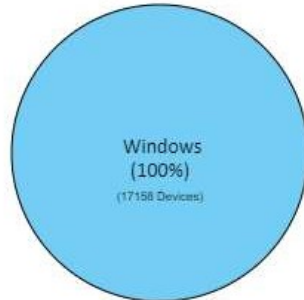
Laptop
(14%,2393 Devices)

Desktop
(86%,14765 Devices)

As can be seen in the previous pie charts, the sample device environment consists of 94.0% Windows devices, 0.0% Mac devices, 0.0% Bert devices, and 0.0% Chromebooks, running on 14,765 desktops and 2,393 laptops.

Device States vs. Time

% of Day

Date

User Active ■ All On ■ CPU On ■ All Asleep ■ All Off ■ Unknown □
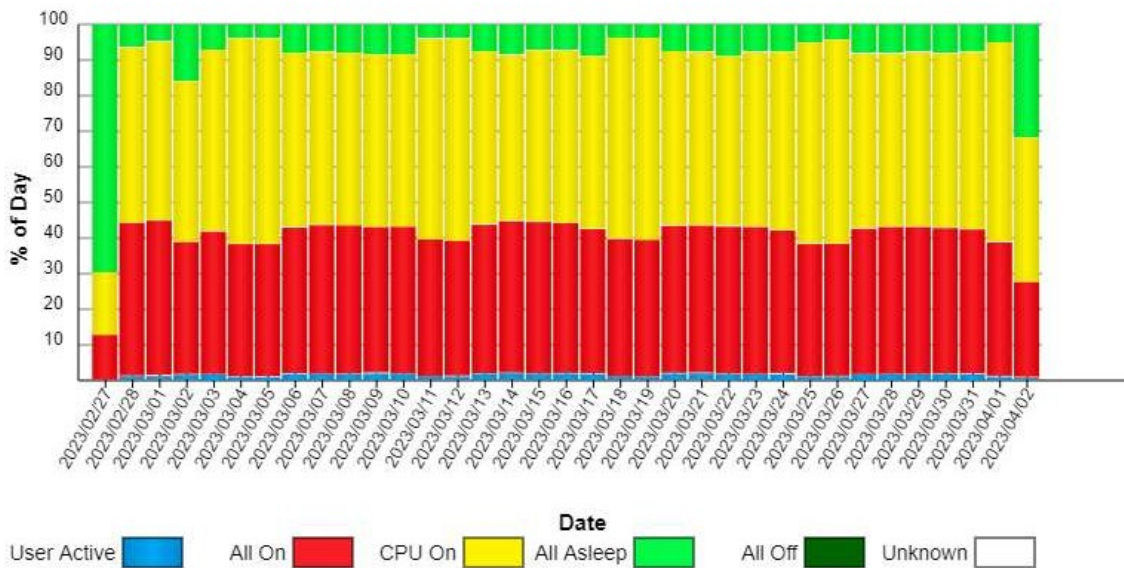
In the Device States bar chart, above, the red and yellow areas indicate savings opportunities where we could drive the display or CPU into a low power state because the device is not being used. However, during the times where there are large user activity bars those in blue, this would be 'expected usage times' and would not have policies to drive CPUs into low power states. The magnitude of the red and yellow bars are a quick visual indicator of savings potential. The difference between the CPU ON states and Display ON states are also an indication of savings potential meaning that the CPU is on, but the Display is asleep. For example, on weekends, 63.9% of displays are on with 96.5% of CPUs on – meaning that 32.6% of CPUs are needlessly on.

Additional Findings:

Customer   installed WakeSMART onto 2521 laptops. The Battery Health report shows that the battery charge capacity for most of the devices is good, in the 90% and higher range. However, a few of the laptops have battery charge capacities that are dropping or in a critical state as shown below:

Battery Charge Capacity Status
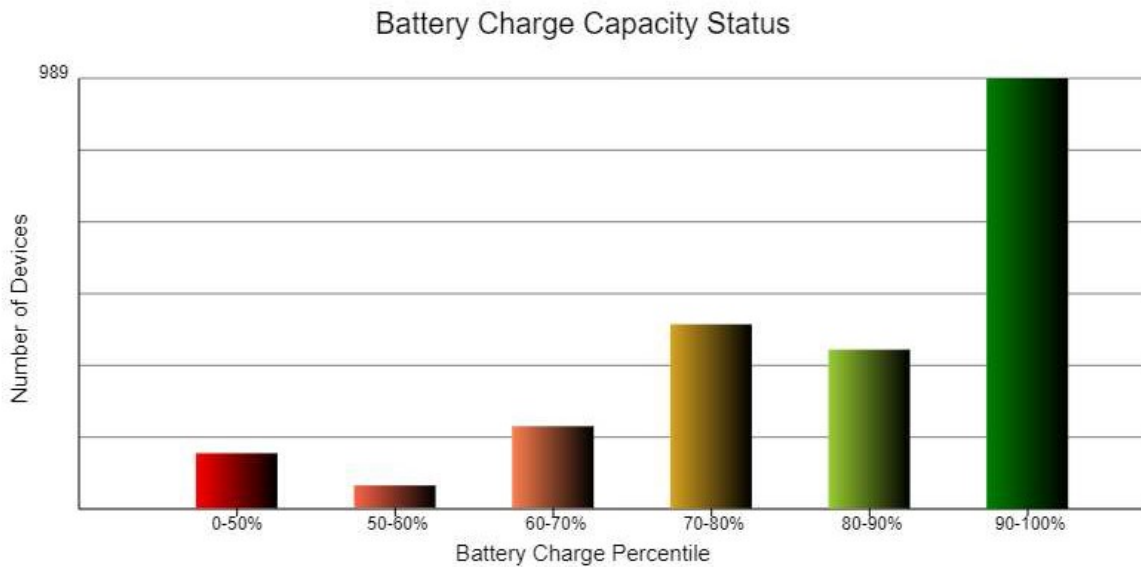
Baseline:

The behavior of users and computer resources prior to making power management changes is typically referred to as the baseline period and data gathered during this period is called the baseline data. WakeSMART gathers many pieces of baseline data from each computer, so that energy consumption values, energy savings calculations, and all results provided by WakeSMART are accurately reflect cost and energy savings. These savings can be quickly and unobtrusively realized through the user of the WakeSMART technology. One of the key metrics used is the annualized average energy consumption per device. This metric, because it is annualized, allows comparison of energy consumption across different machines and different time periods.

Factors taken into consideration in calculating the Baseline:

In order to keep the data conforming to full weeks, only the last 28 days of data were used for the analysis, during which time 7,077 devices had a defined baseline. The analysis period, then was February 28, 2023 through April 03, 2023.

Customer   peaked at 17836 computers connecting up to the server. The computer population made up of 15315 desktops, 2521 laptops, 0 chromebooks, and 0 Bert devices which reported up data for 34 days. However, baseline and savings calculations are determined using baseline values calculated for each computer. For the period of this report, 7,077 computers had a defined baseline. All subsequent numbers presented in this report related to baseline

consumption or expected savings rates are based completely on the data from these baseline computers.

Baseline Energy Consumption Rate:

Following the capture and analysis of the data from the audit, WakeSMART has determined that, prior to incorporating WakeSMART policies, the average device at Customer consumes about 584.1kWh in energy per year based on a sample set of 7,077 devices. This is called the Baseline Consumption Rate.

Results:

Based upon the time-in-state data gathered from the monitored computers, WakeSMART can be expected to save Customer approximately 210.27 kWh per PC per year, with reasonable power management policies applied. This would result in approximately 4,205,453.35 savings if all 20,000 of the licenses were used on machines, as shown in the following chart:

Annualized Savings Summary

	Per PC	All Licenses (20,000)
Baseline Consumption Rates:	584.09 kWh	11,681,800.0 kWh
WakeSMART Policy Rates	373.82 kWh	7,476,400.0 kWh
Energy Savings:	210.27 kWh	4,205,400.0 kWh
Percentage Savings Rate:	36.0%	36.0%
Average Energy Rate:	0.11 $/kWh	0.11 $/kWh
Energy Savings:	$23.13	$462,600.0

* Annualized consumption and savings numbers based on data from Feb 28,2023 to Apr 03,2023

Summary:

Incorporation of WakeSMART to centrally manage power policies on devices at Customer   will result in savings of about 36.0%, which totals approximately 4,205,453.35 kWh per year.

In addition to the energy savings, which pay for the solution in a matter of months, the product provides the ability to centrally manage the machines, to manage battery health and life for portable devices, and the ability to wake devices to insure a more reliable software upgrade and anti-virus definition update process.