News

Local Merchants Increasingly Using Social Networks

In a survey of more than 8,500 U.S. small and local business owners, MerchantCircle found that local merchants are gravitating toward simple, low-cost online marketing methods such as Facebook and other social media, primarily because they have limited time and money for marketing. However, local merchants still have yet to tap into new marketing services such as mobile marketing and group buying. More than 50% of local merchants spend less than $2,500 yearly on marketing, and 60% don't plan to increase budgets this year. About a quarter of merchants cite high costs as their primary complaint with online marketing. About 70% of merchants report they use Facebook for marketing, up from 50% a year ago. Google is used by 66% of local merchants for marketing. Twitter, meanwhile, is being used by nearly 40% of local merchants, up from 32% a year ago.

Majority Of Web Browsers Are Vulnerable

Experts at the security risk and compliance management firm Qualys recently revealed that about 80% of all Web browsers used by consumers are vulnerable to attack. Qualys based its findings on data collected from its BrowserCheck service, a Web-based vulnerability scanner that checks browsers and browser plug-ins. Plug-ins are an even bigger risk, with Qualys finding that about 30% of browser plug-ins are never patched. Con-sumers do seem to keep their browsers (not plug-ins) fairly up-to-date, largely thanks to the tendency of most browsers to update automatically. As of January, just a quarter of all BrowserCheck scans turned up an unpatched browser.

Study Looks At How Brain Reacts To Cell Phone Use

The National Institutes of Health recently revealed brain scan data that blames cellular phone usage for increased brain activity within close proximity of the cell phone antenna. Although the researchers could not determine if the increased activity has any implications for a person's long-term health, the study represents one of the first to link weak radio-frequency signals from cell phones to changes in brain activity. Having proven that the brain is sensitive to cellular signals, the team's next goal is to determine what, if any, health-related consequences there are for repeated brain stimulation over the course of a decade or more.

Intel To Hire 4,000 New Employees

Intel CEO Paul Otellini plans to hire 4,000 "permanent, highly skilled employees," according to a recent speech during President Barack Obama's visit to Intel's plant. The microprocessor manufacturer will budget $6 billion to $8 billion for national factory upgrades in the next few years. This commitment would create between 6,000 and 8,000 construction jobs in the United States and ultimately create 1,000 high-wage positions. In addition, Intel will begin construction on a new $5 billion production facility called Fab 42 that will be initially devoted to developing 14nm silicon process technology.

PHYSICAL INFRASTRUCTURE

SIX QUICK TIPS

Find The Best Data Center Temp

Find The Right "Cool" Factor For Optimal Performance & Efficiency

by Sixto Ortiz, Jr.

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KEEPING A DATA CENTER COOL is a critical facet of overall data center operations. Without proper cooling, expensive computing and networking equipment can run inefficiently, expend extra energy, and potentially suffer shortened life spans or even sudden catastrophic failures. But, there is another side to this coin: Excessive cooling means a data center is spending too much energy—and money—keeping equipment at temperatures below manufacturer recommendations or industry guidelines. Thus, taking the time to determine the best temperature for a data center is a worthy practice that can pay huge dividends in terms of equipment operations and energy cost savings.

Find The Right Balance

In many ways, determining the optimal temperature for a data center is a balancing act of sorts. On one side, there is the need to maintain equipment running at the required temperature for optimal operation. On the other side, there is the need to ensure the overall data center runs in the most energy-efficient manner.

Energy savings opportunities can be compelling: Martin Ramirez, a senior account manager at Rackmount Solutions (www.rackmountsolutions.net), says organizations can save up to 4% in energy costs for every degree of upward change in the data center temperature set point. In fact, Ramirez says, there is no reason why data center temperatures can't be safely moved up to 78 degrees Fahrenheit.

An important point to keep in mind is determining exactly what temperature should be monitored. Dave Kelley, director of application engineering at Emerson Network Power's Liebert Precision Cooling (www.emersonnetworkpower.com), says personnel should focus on monitoring the temperature of the air that enters the server from the cold aisle. This temperature, per ASHRAE guidelines, ranges from 64.4 to 80.6 F.

There are two key items to consider when deciding what the optimal temperature of air entering the racks ought to be, Kelley says: efficiency and equipment energy usage. From an efficiency standpoint, the higher the temperature, the more efficient the cooling equipment will operate. But, as the temperature gets closer to 80 F, IT equipment energy usage increases because fan speeds must ramp up to keep equipment cool. When these fans increase speeds at higher temperatures, any energy savings captured from cooling system operations could be offset by increased equipment operation.

Consider Your Unique Conditions

While it is true that most data centers have much of the same equipment in common, there are always going to be differences that make each situation unique. So, data center administrators should carefully consider their own situations when determining their optimal operating temperatures rather than relying solely on industry standards, common best practices, or even conventional wisdom.

The key concept to keep in mind is that there is no standardized temperature for all facilities, says Randy Ortiz, director of data center design and engineering at Internap (www.internap.com). There are many variations across data centers—such as type, size, load, configuration, or location—and all of these influence the optimal operating temperature. So, even though there are ASHRAE guidelines in place for low- and high-end data center temperatures, data center operators have the flexibility to adjust temperatures as needed, Ortiz says.

Don't Forget Airflow Considerations

Data center operators should also understand that airflow is another key component, especially in those data centers operating in hot/cold aisle configurations. The proper management of airflow in the data center may even allow personnel to operate the facility at higher temperatures, enabling the delivery of energy savings from more efficient cooling system operations.

When speaking about airflow in the data center, isolation is a critical principle. Operators should isolate cold air supplied by cooling units from the exhaust air leaving devices, says Brent Goren, data center consultant with Eaton's Wright Line business (www.eaton.com). The principle is simple: Keeping the cold air supply away from exhaust air prevents "heat contamination" of that cool air and enables better temperature control and cooling efficiency, Goren says.

Operators should also ensure the cooling system is calibrated to equipment requirements. This means matching the volumetric airflow rate from the cooling units to the demand air from the IT devices, he adds. Too much cooling air delivered into the data center means wasted air that is returned to the cooling units (bypass airflow), while delivering too little air means devices have to meet their airflow demands via exhaust heat recirculation.

Don't Sacrifice Availability For Efficiency

In their quest to achieve efficiency and cost savings, data center administrators must not neglect the fact that at the end of the day, equipment availability is the measuring stick by which data center performance will be judged.

Administrators should consider that operating close to the maximum ASHRAE temperature of 80.6 F leaves less time to act if a failure in the cooling system occurs, Kelley says. In other words, if the equipment is already warm to begin with, a cooling system failure means there won't be much time before the equipment temperature starts to approach or exceed its manufacturer-recommended temperature limits. Depending on factors such as load, type of failure, or time to cooling system recovery, if the air temperature entering servers gets close to 90 F, there is a significant risk that servers will shut down, Kelley says.

Another factor to consider is that operating near the 80.6 F temperature limit can cause more mixing of hot and cold aisle air streams, potentially creating higher temperatures that can affect equipment, Kelley adds. Administrators should be sure to implement containment techniques so that the airstreams are kept separate.

Best Tip:

Monitor For Success

The "set it and forget it" mindset can be a recipe for disaster in the data center, says John Consoli, a senior vice president with FieldView Solutions (www.fieldviewsolutions.com). In order to achieve the optimal temperature, personnel should monitor and manage a variety of temperatures, including server inlet, supply air, return air, delta-T, and ambient. Thermal management, especially when operating at higher temperatures, is critical and cannot be achieved without the proper monitoring and management systems in place. "You can't manage what you can't measure," Consoli says.

Most Practical Tip:

Consider Equipment Age

Even though current industry practices are trending to "hot" data centers operating at 80 F or even higher, administrators must consider equipment age when optimizing for temperature, says Bob Mobach, practice director for data center infrastructure at Logicalis (www.logicalis.com). Optimal older equipment temperatures should be in the 70 to 75 F range, while modern equipment can be run closer to 79 F. Operating at 75 F is optimal because that temperature is easily obtainable with a high level of free cooling throughout the country and is also safe for most legacy and modern equipment, Mobach says.

BONUS TIPS

Create the right mindset. Tom Weber, senior project manager and principal for Align Communications (www.align.com), says administrators should change the mindset that the entire data center should be cold. Hot aisles, for example, should be hot, since this allows for the hottest air to be delivered back to the air conditioning units, enabling more efficient operation.

Check the warranty. The IT equipment warranty temperature specifications should be well understood and may drive the desired temperature setting, says Randy Ortiz, director of data center design and engineering at Internap (www.internap.com).