Centralize Massive Property Utility Data Management and Analysis in the Cloud

Solution Name: Utility Sentry
Partner: Webbed Frog Consulting
Website: www.webbedfrog.com
Country or Region: United States

Company Profile
Headquartered in Huntsville, Alabama, Webbed Frog specializes in Office 365 and Azure app development along with website user experience design and development.

Supporting Microsoft Software and Services
- Microsoft Azure SQL Database
- Microsoft Azure App Service
- Universal Windows Apps

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Utility Sentry patent pending technology consolidates utility data from apartment complexes, office buildings, and hotels to provide greater insight into water, electricity, and gas usage. The data is stored in a Microsoft Azure SQL Database, and corporate property groups can use it to reduce operating costs and improve budgeting. They can analyze the utility data for their entire portfolio of properties on a single cloud-based website. Utility Sentry can also generate alerts to have property managers investigate potential issues such as water leaks.

Consolidating hard-to-get utility data
The five largest apartment property groups in the U.S. manage about 775,000 total units spread across hundreds or thousands of properties. With so many locations under management, residential and commercial property groups struggle to consolidate and analyze utility data. Jason Cribbet, founder of Webbed Frog, in conjunction with Guy Monagas of ProTech Contracting out of Charlotte, NC, have developed an app called Utility Sentry to help these groups turn the utility data into useful information that property management companies can use to reduce overall operating costs.

Meter data, which is an important cost item since most property management companies pay for utilities on their tenants' behalf, is traditionally stored onsite at the property. For example, anytime the property group wants to review its water use across properties, someone from headquarters must call each property individually to collect the information. This can make aggregating data across properties frustrating and inaccurate. What if a property manager is out giving an apartment tour? What if the report from the utility company was lost? All of a sudden, corporate has a hodgepodge of meter data collected on different days from different properties.

Utility Sentry solves this dilemma by automatically collecting and consolidating meter data from large, multi-unit properties so that the property group can access and analyze it. Utility Sentry's biggest clients are apartment complexes, but it has office buildings and hotels in it's sights as well. "Corporate no longer has to reach out to each of its properties for utilities information," says Cribbet. "Utility Sentry has completely automated what was a time-consuming manual task."

Making better decisions with better utility data

"Our app grabs meter data on a daily basis and pushes it to an Azure database so that corporate has a centralized location to see how their properties are using utilities as a whole," says Cribbet. "This helps them better plan their budgets and pricing."

In addition to consolidating meter data for analysis, Utility Sentry features push notifications that alert individual properties and their corporate office of unusual activity. The app is programmed with thresholds for specific apartment conditions—for example, the water threshold for an occupied apartment would be higher than a vacant unit—and when those thresholds are exceeded an alert is sent to the tenant or property manager. Since those alerts are very specific, property managers can immediately identity the

cause of the problem and where it is occurring.

"One of the biggest advantages is identifying leaks, particularly leaky toilets. Just one bad seal on a toilet can use hundreds of thousands of gallons of water pretty quickly," says Cribbet. "With the alerts, maintenance know which apartments have problems and get in and fix them quickly."

The alerts are especially useful for vacant apartments. A leak can cause a lot of damage before it is discovered by a routine maintenance check. The alerts could also notify managers that lights have been left on or if squatters are occupying an apartment.

Scaling data collection with Azure

Utility Sentry uses proprietary technology to tap into existing meter-reading systems leveraged by utility companies. The data it collects once a day is specific to individual meters, so property managers can pinpoint to individual units. Once the data is collected, it is consolidated on Azure SQL database. Property groups and managers view and analyze the data using an Azure App Service web site. "Currently, our app contains about 11 million meter-reading records," says Cribbet. "Azure SQL Database gives us the ability to scale the database as we collect more data so that we can provide historical analysis." At

locations where the Internet connection is slow or unreliable, an on-premises database is maintained to collect data locally and synced with the Azure backend when a connection is available.

Cribbet has also developed Universal Windows Apps for Utility Sentry that make updating meter information easier when a unit is replaced. Each utility meter has a unique identification number that Utility Sentry uses to associate the meter to an apartment. When a meter is replaced, that number changes. Before the mobile apps were developed, service people responsible for installing the new meter would have to record the information and go back to their office to use the web app to make updates, which could cause delays and errors. Sometimes they never made the updates. Now, service people can use their smartphones or tablets to access the mobile-ready app and easily update the meter information while they are doing the work. The app makes the process more efficient and ensures service people do not miss any meters.

Looking beyond the current benefits for property managers, Cribbet sees Utility Sentry's value for tenants as well. "We plan to create a service to provide utility data and alerts to individual tenants. They will be able to trend their utility usage and get alerts when their usage increases," says Cribbet. "With Azure it is easy to add this type of service."