Kaifa captures new markets with innovative smart metering solutions

Measuring up to customer demands by partnering with IBM and AMT-SYBEX

Overview

The need
Kaifa wanted to capture new markets by offering its clients more than just smart electricity meters. It wanted to create an end-to-end smart metering solution, and needed help to expand its offering.

The solution
Kaifa entered into a three-way partnership with IBM and AMT-SYBEX, building an innovative and efficient smart metering solution based on Affinity Meterflow® and IBM® Informix® software.

The benefit
All three parties gain access into new markets with a solution that merges proven hardware, software and expertise – helping utilities and their end-customers gain greater control and visibility of energy usage.

As a key subsidiary of Greatwall Technology, an affiliate of China Electronics Corporation, Shenzhen Kaifa Technology Co., Ltd. (Kaifa) focuses on the research, design and manufacture of advanced electronic products including metering systems, payment terminals, digital home products and disk drives. The company employs 10,000 people at locations across mainland China, Hong Kong, Singapore, Italy, the United Kingdom, Thailand, the United States and Australia, and achieved sales of USD 3.0 billion in 2012.

Innovating for success

Kaifa knows that in today's fast-moving global markets, to keep still is to get left behind. So when the company identified an opportunity to capture additional market share, it wanted to act quickly.

Jackie Yan, Senior Manager of the metering division at Kaifa elaborates: "Previously, our metering division focused on delivering various metering devices to energy companies and other utilities. We realized that by moving up the value chain and supplying end-to-end smart metering solutions, we could make our customers' lives easier by creating a one-stop solution that would eliminate arguments between the system provider and meter providers if communication problems were found in the field – and this would also enable us to win new business."

Before Kaifa could make these ambitious plans a reality, it needed to work out an efficient way to handle the huge amounts of data that would be generated by the smart meters. The company decided to seek outside meter data management (MDM) solution expertise, as Jackie Yan explains:

"While the hardware aspect of the solution presented no challenges for us, tackling the big data problem faced by many of our clients was outside our skill-set. Rather than investing time and resources in developing an MDM solution ourselves, we decided that the best – and fastest – option was to form an alliance with industry specialists.

Solution components

Software
- IBM® Informix® TimeSeries
- IBM WebSphere® Application Server
- Affinity Meterflow®
- Kaifa Head End System

IBM Business Partner
- AMT-SYBEX

Making connections

Kaifa entered into a mutually beneficial three-way partnership with IBM and AMT-SYBEX, combining the best technology and expertise of each party for maximum success. Kaifa worked with AMT-SYBEX to build an innovative smart metering solution based on the Head-End System from Kaifa and the Affinity Meterflow meter data management application from AMT-SYBEX.

The Kaifa Head-End System provides metering network management, remote control, data collection and security. Its protocol adapter supports multi-vendor meter types and various protocol extensions.

Affinity Meterflow offers a single integrated platform for rapidly processing data from both traditional and smart meters. It incorporates powerful IBM Informix TimeSeries software, which is designed to import and store time-stamped data much more efficiently than traditional relational databases, and make data available for real-time queries.

"Choosing Affinity Meterflow and the Informix technology will allow us to integrate meter data with upstream customer and billing platforms on a vast scale," comments Jackie Yan. "It combines what we see as our partners' greatest strengths: IBM's ability to develop scalable platforms that can handle massive volumes of data efficiently, and AMT-SYBEX's industry-specific expertise in managing data-flows and data analysis."

Measurable results prove convincing

A benchmarking exercise conducted by IBM and AMT-SYBEX demonstrated that the Informix TimeSeries engine enables Affinity Meterflow to offer linear scalability for up to 100 million meters. In a test scenario which simulated 10 million meters sending data every 30 minutes, the solution was able to process a full day's data within just 96 minutes.

"The benchmarking exercise played a key role in our decision to work with IBM and AMT-SYBEX," says Jackie Yan. "It provided real, demonstrable results that prove that IBM is at the forefront of the battle with big data, and that AMT-SYBEX were putting this expertise to work within a practical, industry-tailored solution."

Taking first flight

Kaifa combined Affinity Meterflow with IBM WebSphere® Application Server software as the middleware layer to create a truly end-to-end MDM system solution that links with Kaifa's smart meter and Head-end systems. It embarked on a pilot project to deploy approximately 500 smart meters at one of its own factory sites, which includes residential facilities for the company's employees, and worked closely with IBM and AMT-SYBEX for knowledge transfer.

"The pilot program will be used as a showcase to demonstrate to utilities and energy companies just how the solution can be applied to smart meters with Device Language Messaging Specification [DLMS] protocol, Head-End systems in power-line communications [PLC] and GPRS communication networks," says Jackie Yan. "It has also proved an invaluable opportunity for us to hone and refine the solution. Thorough testing is always a key priority for us, as we want to be confident that we never let our customers down – and so far, the ultra-reliable software from IBM and AMT-SYBEX has remained stable, no matter what we have thrown at it!"

Reaching new customers

With established client-bases in a number of different countries, Kaifa, AMT-SYBEX and IBM will all help each other access new markets, utilizing their in-country and industry expertise to launch Kaifa's new end-to-end smart metering solution around the world.

Jackie Yan comments: "The strongest relationships are those that are beneficial for everyone involved. For example, AMT-SYBEX has a long history of serving the utilities sector in the UK, which is a market where we would like to gain market-share. In return, AMT-SYBEX can benefit from Kaifa selling Affinity Meterflow to clients around the world. Equally, from IBM's perspective, Kaifa is a compelling reference for the use of Informix software in the utilities industry."

By uniting tried and tested technology from Kaifa, IBM and AMT-SYBEX and harnessing the three companies' specialist knowledge, the solution promises to be an appealing prospect for utilities companies around the world, as Jackie Yan concludes:

"We are confident that the Kaifa advanced metering infrastructure solution will help utilities and their customers gain greater control and visibility of their energy usage – and we are sure this will give them a competitive advantage. With IBM and AMT-SYBEX supporting us, we can expand our offering to maintain our position as a key global player within the smart metering arena."

About AMT-SYBEX

AMT-SYBEX creates enterprise software and delivers associated services to the infrastructure and energy industries. Since 1990, the company has delivered world-class enterprise asset management, mobile, network and data-flow management solutions to a broad client-base within the UK and worldwide.

To learn more about products, services and solutions from AMT-SYBEX, please visit: www.amt-sybex.com

For more information

To learn more about IBM solutions, contact your IBM sales representative or IBM Business Partner, or visit us at: **ibm.com**/informix/smart-meter

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>
> — Jackie Yan, Senior Manager of the metering division, Kaifa

IBM

1. Source: www-01.ibm.com/software/success/cssdb.nsf/CS/STRD-8EUGVT

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