



Case Study 1, The Bank

Requirements

The client is a well-known UK bank with three large data centres in South East England and several smaller centres at locations around the UK and the rest of the world. Data processing requirements are continuously expanding and the Environmental Team seek to meet these needs through optimising usage of existing data floors and through building new facilities. The two primary requirements were for a real time monitoring system that would generate alerts to the NOC in failure conditions and an analysis and reporting tool that would give them information on how the centres were performing and what the remaining capacity stands at.

Solution

Heat and power draw are the main factors limiting space utilisation in a data centre. To maximise the use of existing facilities the Team needed detailed figures at both room and cabinet level - and they needed to see how these figures varied over time as different machines came into use.

The initial IDS installation was in a new room using 84 IntelliStrips and one IntelliPoller monitored by IntelliServer and IntelliManager. The IntelliServer was configured to generate regular reports at different times of the day through the week. The team were able to see graphically how power and temperature varied over time and across the floor space. They were then able to optimise distribution of servers and were subsequently able to place additional cabinets in the room.

IntelliData Systems were not the only solution provider to the bank's immediate monitoring needs, but long term, the bank needed to integrate many remote sites into one system. IntelliServer with IntelliManager would provide a manageable global view of all their sites. The bank also needed to extend power and temperature sensing to existing installations, a task IntelliMonitors and IntelliSensors are designed for. As remote sites were added to the system, the bank could foresee a need for remote controlled door access and remote power cycling. Support for these features are built into the IntelliData product.

The environmental team also recognised that their future requirements would not be fixed or predictable. They needed a supplier with the ability to develop new tools as required. The first such requirement was an interface to an application that they themselves had developed to predict the outcome of adding equipment to a data floor. IDS provided the interface and assisted in the scripting required to merge real data from the floor with the projected additions. Since then the bank has introduced blades powered from 3-phase supplies with a monitoring requirement that IntelliData Systems has met with a new range of 3-phase products.

The bank has now made IntelliDataSystems part of their Global Blueprint for Data Centre Management and continue to install IntelliDataSystems monitoring in new data floors and to retrofit the system to existing floors throughout the UK, Europe and the Middle East. There are now well over 2,000 IntelliStrips/IntelliMonitors in one integrated system.

Case Study 2, The Co-Location (co-lo) Corporation

Requirements

The client is a major US-UK provider of network and hosting with many household-name e-commerce clients. They have extensive facilities in London, Europe and the United States where they rent managed space to clients. Typically clients specify and install equipment in cabinets provided by the co-lo.

The initial requirement of the co-lo was to monitor power usage, sorted both by client and by location and to provide remote-controlled power-cycling. The allocation of cabinets to clients is variable and it is important that the monitoring software is readily configurable for changing client requirements and that site management is centralised for the region (e.g. 2 or 3 sites in London controlled from one NOC).

Depending on the co-lo's client needs, power-cycling may or may not be required. The IntelliServer software allows the co-lo to specify in which cabinets servers may be power-cycled.

Although the floor design is hot-aisle/cold-aisle (like the bank) the co-lo uses more compact (60cm wide) racks that are less fully fitted. There is no space at the side of the rack for a zero-U PDU. Like the bank, they have a mixture of installed cabinets that require monitoring and new installations.

Solution

IntelliDataSystems developed the IntelliCompak, a 1U, 10 IEC outlet PDU with intelligent monitoring and power-cycling capability to the co-lo's specification. The initial installation was for 48 IntelliCompaks and eight IntelliMonitors (specifically for powering blade-servers) with a new application oriented user interface (IntelliConsole). The system was designed, installed and operational within 3 months – only possible because the requirements profile matched IntelliDataSystems core business – power distribution and monitoring – and so all necessary hardware and software could be developed in-house. The IntelliData software design based on a core processor (IntelliServer) with a separate, remote user interface (IntelliManager/IntelliConsole) meant that it was possible to develop an application specific "skin" without compromising the established integrity and security of the core processor.

The co-lo are now planning to extend the system within the original data centre and to deploy the system at their other sites in the UK and US.

Case Study 3, Another Financial Institution

The client already had experience of a cabinet level monitoring system, but was dissatisfied with some elements of its performance and frustrated by the difficulty of negotiating with multiple organisations that had supplied different parts of the system. When a new datacentre came on to the drawing board, it was time to look at the alternatives. IntelliData Systems were chosen for the new facility because we were able to demonstrate a number of benefits:

Conformity to Specification. IntelliData Systems standard product met the central needs for real time monitoring and performance analysis.

Track record. The client was able to visit a similar enterprise using similar technology and reassure themselves that IntelliData Systems were able to provide, install and support a solution of the required scale and sophistication.

Single Supplier. IntelliData Systems manufacture both hardware and software in house. The client was able to negotiate adaptations to the system to meet specific needs with a single supplier.

Reduced network overhead. The IntelliData Systems architecture meant that only 10 network connections were required for a datacentre of close to 500 cabinets.

Legacy equipment support. IntelliData Systems were able to read critical data from the existing monitoring installation and integrate it into the new system as part of the global view.

As with Case Study 1, the client's requirements are evolving and IntelliData Systems have developed new products and modified software to meet these needs. The client has since deployed the technology at additional sites in the UK and overseas.