



The Blue Sky Project*

Garth Hudson was a 29-year-old graduate of Eastern State University (ESU) with a BS degree in management information systems. After graduation he worked for seven years at Bluegrass Systems in Louisville, Kentucky. While at ESU he worked part time for an oceanography professor, Ahmet Green, creating a customized database for a research project he was conducting. Green was recently appointed director of Eastern Oceanography Institute (EOI), and Garth was confident that this prior experience was instrumental in his getting the job as information services (IS) director at the institute. Although he took a significant pay cut, he jumped at the opportunity to return to his alma mater. His job at Bluegrass Systems had been very demanding. The long hours and extensive traveling had created tension in his marriage. He was looking forward to a normal job with reasonable hours. Besides, Jenna, his wife, would be busy pursuing her MBA at Eastern State University. While at Bluegrass, Garth worked on a wide range of IS projects. He was confident that he had the requisite technical expertise to excel at his new job.

Eastern Oceanography Institute was an independently funded research facility aligned with Eastern State University. Approximately 50 full- and part-time staff worked at the institute. They worked on research grants funded by the National Science Foundation (NSF) and the United Nations (UN), as well as research financed by private industry. There were typically 7 to 9 major research projects under way at any one time, as well as 20 to 25 smaller projects. One-third of the institute's scientists had part-time teaching assignments at ESU and used the institute to conduct their own basic research.

FIRST YEAR AT EOI

Garth made a point of introducing himself to the various groups of people upon his arrival at the institute. Still, his contact with the staff was limited. He spent most of his time becoming familiar with EOI's information system, training his staff, responding to unexpected problems, and working on various projects. Garth suffered from food allergies and refrained from informal staff lunches at nearby restaurants. He stopped regularly attending the biweekly staff meetings in order

to devote more time to his work. He only attended the meetings when there was a specific agenda item regarding his operation.

The IS staff at EOI consisted of two full-time assistants, Tom Jackson and Grant Hill. They were supported by five part-time student assistants from the Computer Science Department. Grant Hill was assigned full-time to a large five-year NSF grant aimed at creating a virtual library of oceanographic research. Grant worked out of the project leader's office and had very little interaction with Garth or Tom. Garth's relationship with Tom was awkward from the start. He found out, after the fact, that Tom thought he would get the job as director. They never talked about it, but he sensed tension the first couple of months on the job. One of the problems was that he and Tom were totally different personalities. Tom was gregarious and very talkative. He had a habit of walking around the institute after lunch, talking to different scientists and researchers. Often this led to useful information. Garth, on the other hand, preferred to stay in his office, working on various assignments, and ventured out only when called upon. While Garth felt Tom was not on top of the latest developments, as he was, he respected Tom's work.

Last month the system was corrupted by a virus introduced over the Internet. Garth devoted an entire weekend to restoring the system to operation. A recurring headache was one of the servers, code-named "Poncho," that would occasionally shut down for no apparent reason. Instead of replacing it, he decided to nurse Poncho along until it could be replaced. His work was page 385 frequently interrupted by frantic calls from staff researchers who needed immediate help on a variety of computer-related problems. He was shocked at how computer illiterate some of the researchers were and how he had to guide them through some of the basics of e-mail management and database configuration. He did find time to help Assistant Professor Amanda Johnson on a project. Amanda was the only researcher to respond to Garth's e-mail announcing that the IS staff was available to help on projects. Garth created a virtual project office on the Internet so that Amanda could collaborate with colleagues from institutes in Italy and Thailand on a UN research grant. He looked forward to the day when he could spend more time on fun projects like that.

THE BLUE SKY CONVERSION PROJECT

The "Blue Sky" conversion project began in earnest four months ago. Ahmet Green returned from Washington, D.C., with grim news. The economic downturn was going to lead to a dramatic reduction in funding. He anticipated as much as a 25 percent reduction in annual budget over the next three to five years. This

would lead to staff reductions and cutting of operating costs. One cost-cutting measure was moving IT operations to the “cloud.” Ahmet had first proposed the idea to Garth after attending a meeting with several directors of other institutes who faced similar financial challenges.

The basic strategy was to move all of the institute’s databases, software, and even hardware to a “private cloud.” Staff would use their current PCs to simply access more powerful machines over the Internet. These powerful machines could be partitioned and configured differently according to the needs of research staff, giving each staff member his or her own virtual machine (VM). Staff could also access, use, and share virtual servers over the Internet as needed. Garth worked with the institute’s accountant on a cost/benefit analysis. From their standpoint it made perfect sense. First, the institute would not have to replace or upgrade aging computers and servers. Second, the institute would enjoy significant IT savings, since they would pay for only IT resources actually used. They would not have to make any major IT capital expenditures. Third, cloud computing would provide the scientists greater flexibility by accessing desired resources or software from anywhere at any time. And finally, once the system was up and running, the institute would no longer need the services of at least one full-time IT worker. Ahmet decided to name the project “Blue Sky” to put a positive spin on the conversion.

At first the associate directors balked at the idea. Some had a hard time conceptualizing what cloud computing meant. Others were worried about security and reliability. In the end they reluctantly signed off on the project when given alternative cost-cutting initiatives. Garth assured them that cloud computing was the wave of the future and setting up or accessing virtual machines on the “cloud” was as simple as setting up or accessing their g-mail account.

The conversion project would be completed in stages. The first stage was selecting a provider. The next stage was migrating non-mission critical information to the cloud. The next stages would entail migrating each of the six big grant projects in waves to the cloud. The final stage would focus on the remaining smaller projects. Training would be an integral part of each stage. The institute would maintain a back-up for all the data until six months after complete conversion. After that the cloud service provider would be responsible for backing up the data.

At first Tom was excited about the project. He was savvy enough to realize that this was the future of computing and he was intrigued with how the whole system would work. His feelings soon changed when he started thinking about the potential ramifications for his job. He asked Garth more than once what the

department would look like after the conversion. Garth replied vaguely that they would figure it out once the system was up and running.

A task force was formed, headed by Garth, to select a cloud service provider. Garth was surprised by how many choices there were. Plans and cost structures varied considerably. After much deliberation the committee page 386 narrowed the choices to three. The first two were among the bigger providers in the industry, VMWARE and Microsoft. The third choice was a relatively new company, OpenRange, which offered a cheaper solution. Tom argued that even though the bigger providers would cost more, they were a much safer bet. Garth responded that he had confidence in OpenRange and cutting costs was the primary goal behind the project. In the end, Garth persuaded the committee to choose OpenRange. Not only would cost be significantly cheaper, but OpenRange would help in training the personnel. Garth liked this idea; training was not his strength, and he wasn't looking forward to holding senior scientists' hands through the process.

It took Garth and Tom six weeks to identify noncritical data. Garth worked on the back end while Tom met with staff to identify noncritical information. The motto was when in doubt, leave it out. The actual migration only took a couple of days. Training proved to be more problematic. The staff sent by OpenRange appeared to be straight out of college. While enthusiastic, they were inexperienced in the art of getting older staff to accept and use new technology. Many trainers had the habit of simply doing things for the staff instead of showing them how to do it themselves. It all came to a head when a power outage at the OpenRange storage system shut down and disrupted operations at the institute for 36 hours.

Ahmet held an emergency meeting. Garth reported that the power outage occurred in North East India and that OpenRange was expanding their back-up systems. Several members argued that the institute should switch to one of the bigger providers. When this came up Garth looked at Tom and was relieved when he remained silent. In the end, Ahmet announced that it would be too costly to switch providers and Garth and his staff would have to make the conversion work. Tom stepped forward and volunteered to manage the training. Everyone agreed that the institute should hire three more part-time assistants to help the staff with the transition.

Garth worked behind the scenes, coordinating with his counterparts at OpenRange and planning the conversion of the next segment of the project. Tom worked closely with the OpenRange trainers and refocused their attention on teaching. Resistance was pretty high at first. Tom used his personal contacts within the institute to rally support for the change. He persuaded Garth to change

the conversion schedule to begin with those projects in which the leads were most supportive of the change. Training improved and Tom created some useful training materials, including short videos on how to access the virtual machines.

One problem that occurred early in the process involved a graduate research assistant who mistakenly hit the wrong commands and terminated her virtual machine instead of logging off. This resulted in complete loss of that machine's data in the cloud. Fortunately, the institute had back-up and Tom was able to recover the work. Collaborating with some programmers at OpenRange, Tom wrote a program that triggered a pop-up message on the screen, warning users not to terminate their virtual machine when logging off.

CLOSING OUT THE BLUE SKY PROJECT

It took almost a year to complete the Blue Sky project. After the rocky beginning things went relatively smoothly. Acceptance was slow, but Tom and his staff worked with the staff to demonstrate how the new system would make their work easier. Two student assistants were always on call to address any problem or question. Garth spent most of his time interacting with the OpenRange counterparts and rarely ventured out of his office. He had his student assistants collect information from staff so he could configure the new virtual machines to exactly match staff needs. He put in long hours so that customized databases would work in the new environment. This proved to be a very difficult task and he was quite pleased with his work. Twice OpenRange experienced page 387 momentary power shortages at their server facility, which disrupted work at the institute. Garth was happy to report that OpenRange was breaking ground on an alternative server system in Ukraine.

When the institute conducted a retrospective (project review) on the Blue Sky project, some still questioned the choice of OpenRange as a cloud service provider but praised Tom's work on helping the staff make the transition. Despite the criticism over the choice of OpenRange, Garth felt good about the project. The system was up and running and the staff was beginning to enjoy the flexibility it provided. Besides, the institute would achieve real savings from the new system.

Soon after the retrospective, Garth was surprised when Ahmet walked into his office and closed the door. Ahmet began by thanking Garth for his work on the project. He then cleared his throat and said, "You know, Garth, one of the consequences of Blue Sky is reducing our IT staff. Grant Hill is needed for the data library project. So it comes down to you or Tom. Frankly, there is general agreement among the associate directors that Tom is essential to the institute. I

know this might come as a surprise to you, and before I make a decision I want to give you a chance to change my mind.”

1. If you were Garth, how would you respond to the director?
2. What mistakes did Garth make?
3. What are the lessons to be learned from this case?

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Case 10.2



Tom Bray

Tom Bray was mulling over today’s work schedule as he looked across the bay at the storm that was rolling in. It was the second official day of the Pegasus project and now the real work was about to begin.

Pegasus was a two-month renovation project for AtlantiCorp, a major financial institution headquartered in Boston, Massachusetts. Tom’s group was responsible for installing the furniture and equipment in the newly renovated Accounts Receivable Department on the third floor. The Pegasus project was a dedicated project team formed out of AtlantiCorp’s Facilities Department, with Tom as the project lead.

Tom was excited because this was his first *major league* project and he was looking forward to practicing a new management style—management by wandering around (MBWA). He had been exposed to MBWA in a business class in college, but it wasn’t until he attended an AtlantiCorp leadership training seminar that he decided to change how he managed people. The trainer was a devout MBWA champion (“You can’t manage people from a computer!”). Furthermore, the testimonies from his peers reinforced the difference that MBWA can make when it comes to working on projects.

Tom had joined the facilities group at AtlantiCorp five years earlier after working for Electronic Data Systems for six years. He quickly demonstrated technical competencies and good work habits. He was encouraged to take all the internal project management workshops offered by AtlantiCorp. On his last two