NASCIO Recognition Awards Nomination
Business Continuity and Disaster Recovery

Nebraska Business Continuity and Disaster Recovery Planning

Executive Summary

The State of Nebraska has mitigated risks to public safety and the state's economy by employing a multi-faceted approach to business continuity and disaster recovery planning, emphasizing the development of partnerships as well as the identification and prioritization of critical business functions. The iterative process, coordinated by the Office of the CIO, began in 2001 and is continuing. Components of the State of Nebraska' Business Continuity and Disaster Recovery Planning include:

- A partnership between the State of Nebraska and University of Nebraska to mutually provide assistance with business continuity and disaster recovery planning and initiatives;
- Identification and prioritization of critical business functions by agency directors;
- Creation of a Continuity of Operations /Disaster Recovery Shared Services Group to discuss the issues related to business continuity and disaster recovery to leverage their experiences and efforts; and
- Coordination with Department of Administrative Services continuity of operations efforts; and
- Continuity of operations and disaster recovery exercises.

Operational improvements include greater organizational capacity to respond to emergency situations due to increased collaboration and involvement in continuity of operations and disaster recovery planning. The changes put in place are having a significant impact on recovery efforts. Recovery time has been significantly reduced, and the recovery point has been improved. Enterprise server data can be recovered in minutes, rather than days. Because of the State of Nebraska's collaborative agreement with the University of Nebraska, this improvement was made without raising the rates charged to agencies. Failover e-mail and Lotus Notes applications servers have virtually eliminated downtime for these applications.

Public benefits of the State of Nebraska's Business Continuity and Disaster Recovery Planning efforts include improved public safety, greater economic security, and cost savings. The iterative planning process employed has improved readiness to respond to emergency situations. By identifying and prioritizing critical business functions, limited resources can be targeted initially at the mission-critical functions which directly impact public safety, mitigating risks to public safety. The State of Nebraska's Business Continuity and Disaster Recovery Planning efforts have also mitigated risks to the state's economy. The economic impact of being able to recover enterprise server data in minutes, rather than days is tremendous. Having the applications which manage Medicaid, child welfare, and child support payments down for a single day would have an economic impact of over $10 million. The collaboration between the State of Nebraska and the University of Nebraska has also resulted in modest cost savings to Nebraska tax payers and state agencies.

Business Problem and Solution

Business Problem

Nebraska, like other states, is faced with the possibility of having to sustain government services in the event of a natural disaster or disruptive event. Citizens have high expectations regarding the delivery of services even in times of disasters. Efficient response depends upon the development of partnerships and sharing of resources as well as the identification and prioritization of critical business functions. Public entities do not have the resources to independently respond to emergencies. By developing partnerships and sharing resources, public entities can more efficiently and effectively plan for business continuity and disaster recovery and respond to emergencies. By identifying and prioritizing critical business functions, limited resources can be targeted initially at the mission-critical functions which directly impact public safety. Some services, like communications capabilities for the Nebraska Emergency Management Agency, are critical to public safety. Other services, like child support and Medicaid payments, have a significant economic impact but are not critical to public safety.

Solution

The State of Nebraska has mitigated risks to public safety and the state's economy by employing a multi-faceted approach to business continuity and disaster recovery planning, emphasizing the development of partnerships as well as the identification and prioritization of critical business functions. The iterative process, coordinated by the Office of the CIO, began in 2001 and is continuing. Components of the State of Nebraska' Business Continuity and Disaster Recovery Planning include:

Partnership between the State of Nebraska and University of Nebraska. The State of Nebraska has formed a cooperative agreement with the University of Nebraska to mutually provide assistance with business continuity and disaster recovery planning initiatives. Through the agreement, University enterprise server disk storage which mirrors its enterprise server data has been installed in a state facility, and the Office of the CIO has installed enterprise server disk storage which mirrors its enterprise server data in a University facility. The Office of the CIO has also installed failover e-mail and Lotus Notes applications servers in a university facility. The University of Nebraska and State of Nebraska are currently reviewing the possible shared purchase of a capacity backup processor. Work is also in process to establish an alternate facility with greater geographic separation from the State of Nebraska and University of Nebraska facilities. Additionally, a joint project plan for disaster recovery and business continuity activities has been generated. The joint project plan has had a synergistic effect on the planning activities of both entities. Monthly meetings are held to review progress and share planning ideas.

Identification of Critical Business Functions. Agency directors met with Lt. Governor Rick Sheehy to identify critical business functions and to prioritize recovery efforts. Thirteen functions were identified as critical to public safety and public health. An additional four functions were identified as warranting immediate response but were not critical for public safety or public health. Over 40 additional functions were prioritized for recovery efforts. A technical review of critical business functions has been

conducted by Office of the CIO technical staff to determine what IT components owned and/or managed by the Office of the CIO must be recovered in order to support each critical business function. After a technical review of critical business functions, it was determined that all CIO owned and/or managed IT components must be recovered in order to support the critical business functions.

Creation of a Continuity of Operations /Disaster Recovery Shared Services Group. To leverage their experiences and efforts, a group of IT representatives from several agencies have been meeting to discuss issues related to business continuity and disaster recovery. The group has developed standard contents that should be included in a disaster recovery plan. The group has also reviewed the disaster recovery/business continuity assumptions and dependencies developed by the Office of the CIO. After several iterations, a consensus was reached on a set of assumptions and dependencies that was acceptable to the agencies represented.

Coordination with Department of Administrative Services Continuity of Operations Efforts. The Department of Administrative Services (DAS) invited the Office of the CIO to participate in the development of a DAS Continuity of Operations Plan. The effort was guided by the consulting firm, ICF. Information was gathered using templates. The first iteration of the DAS Continuity of Operations Plan was completed in March 2006. The plan included an annex for each division with continuity of business plans unique to that division.

Continuity of Operations and Disaster Recovery Exercises. The Office of the CIO conducts periodic Continuity of Operations exercises. Planning is underway for an enterprise server functional exercise in 2009. The Office of the CIO also participates in the annual statewide Continuity of Operations exercise conducted by the Nebraska Emergency Management Agency.

Operational Improvements

Operational improvements due to Nebraska's Business Continuity and Disaster Recovery Planning efforts include greater organizational capacity to respond to emergency situations due to increased collaboration and involvement in continuity of operations and disaster recovery planning. Recovery time has been reduced, and the recovery point has improved.

The ongoing, iterative process being employed by the State of Nebraska has increased the organizational capacity to respond to emergency situations. There is a greater awareness of and involvement in continuity of operations and disaster recovery planning by staff of the Office of the CIO and partner organizations. Continuity of operations and disaster recovery planning has become imbedded into the operations of the Office of the CIO and partner organizations. The Office of the CIO and partner organizations are more open to collaboration, having established trust and building upon successful past collaborations. Because public entities do not have the resources to independently respond to emergencies, effective business continuity and disaster recovery require a culture of collaboration. The collaboration with the University of Nebraska has also had a synergistic effect on the State of Nebraska's Business Continuity and Disaster Recovery Planning. By collaborating, both entities have accomplished more than if they were working individually.

The changes put in place are having a significant impact on recovery efforts. Enterprise server data can be recovered in minutes, rather than days. This has a significant impact on productivity of state employees who access the enterprise server. On average, approximately 5,000 individuals access the enterprise server in a single work day, completing an average of 3,075,000 transactions. Reducing the recovery of enterprise server data by just two hours could save up to 10,000 man hours in lost productivity. Because of the State of Nebraska's collaborative agreement with the University of Nebraska, this improvement was made without raising the rates charged to agencies. Failover e-mail and Lotus Notes applications servers have reduced the risk of service interruption due to a disaster and have virtually eliminated downtime for these applications.

Public Benefits

Public benefits of the State of Nebraska's Business Continuity and Disaster Recovery Planning efforts include improved public safety in emergency conditions, improved economic security, and cost savings.

The State of Nebraska's Business Continuity and Disaster Recovery Planning efforts have greatly mitigated risks to public safety. The iterative planning process employed has improved readiness to respond to emergency situations. By identifying and prioritizing critical business functions, limited resources can be targeted initially at the mission-critical functions which directly impact public safety, mitigating risks to public safety.

The State of Nebraska's Business Continuity and Disaster Recovery Planning efforts have also mitigated risks to the state's economy. The economic impact of being able to recover enterprise server data in minutes, rather than days is tremendous. In April 2007, the Nebraska Medicaid Management Information System (MMIS) paid over $135 million in Medicaid claims, averaging $6.75 million a day in payments. The Nebraska Child Support system (CHARTS) paid over $22 million in child support payments, averaging $1.1 million a day in payments. The Nebraska integrated eligibility, case management and child welfare system (N-FOCUS), paid over $50 million in benefits and service payments, averaging $2.5 million a day in payments. The impact of just one of these applications being down for one day is significant. The impact of all three applications being down for one day is over $10 million.

The collaboration between the State of Nebraska and the University of Nebraska has also resulted in modest cost savings to Nebraska tax payers and state agencies. For example, improved enterprise server data recovery was implemented without raising existing rates charged to agencies.