

CPS Energy plugs into reliable backup technology

HP Data Protector's flexible scheduling and reliable functionality ensures utility can mitigate risks to its business-critical data



"After many years of using HP Data Protector in our environment, I can say that the technology was the right choice for us. It is reliable, flexible, and enables us to meet our critical business requirements for ongoing backups of our SAP and Oracle production systems."

—Suzanne Shuler, Infrastructure Services and UNIX Supervisor, CPS Energy

Objective

Support business-critical SAP environment by protecting data integrity, supporting fast data restores

Approach

Leverage easy to use, reliable enterprise data backup platform

IT improvements

- Ease of use
- Restorations easy to perform
- Flexible scheduling allows IT to run backups throughout the day
- Able to run restores and backups at the same time
- Able to respond more quickly to restore requests
- User-friendly interface means database administrators, help desk staff can perform restores if needed

Business benefits

- Risk of loss of business critical data is minimized

HP customer case

study: HP Data Protector ensures a utility's SAP production systems and Oracle databases can always be restored if needed

Industry: Energy



When CPS Energy implemented an Enterprise Resource Planning (ERP) environment a decade ago, the nation's largest municipally owned energy utility was able to streamline its business operations and align its technology more closely to its business processes.

Today, the new infrastructure supports Oracle and web-based applications across a variety of functions, including customer relationship management, call center services, and online customer account management. It also provides a foundation for future technology-based services, such as smart metering applications to streamline the tracking of customers' electric and gas usage.



Given the critical nature of these processes, however, the CPS Energy technology organization needs to ensure that the databases associated with the infrastructure are protected against loss or corruption. For this reason, CPS Energy uses HP Data Protector software as the backup solution for its ERP environment and HP Integrity servers with HP-UX to provide a mission-critical platform. This easy-to-use, flexible software solution provides CPS Energy with the functionality it needs to perform ongoing backups of its ERP system data, and restore that data quickly when needed.

Rock-solid data backup

CPS, which was acquired by the City of San Antonio, Texas in 1942, serves a population of 707,000 electric and 322,000 natural gas customers in San Antonio and surrounding communities. CPS customers' combined energy bills rank among the lowest of the United States' 20 largest cities. The utility also prides itself on the reliability of its services, its commitment to renewable energy—16% of its energy is derived from wind, solar and landfill-generated methane gas—and its participation in local community service and charity programs.

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Suzanne Shuler, Infrastructure Services and UNIX Supervisor, CPS Energy

Today, CPS runs SAP as its core ERP platform, It is standardized on HP hardware for its UNIX environment, including HP Integrity servers, HP-UX Operating Environment, and HP XP24000/XP12000 Disk Arrays.

As a municipal utility, CPS operates under a unique combination of constraints and responsibilities. “We have to move slowly when it comes to implementing technology,” explains Suzanne Shuler, Infrastructure Services and UNIX Supervisor, CPS Energy. “We are publicly funded. We have a responsibility to our community to exercise great care with how we allocate our budget.”

In addition to being budget-conscious, CPS Energy must also consider how its technology choices impact customer service. “We standardized on HP Integrity servers running HP-UX because we need to run our company on a reliable platform end-to-end,” notes Frank Salinas, Network Administration Analyst. “We need to ensure that our website and call center services will be available when customers need to reach us or check on their accounts. HP Integrity servers with HP-UX deliver the performance and reliability we require.”

The utility's HP-UX environment and HP Serviceguard Solutions drive infrastructure availability with functions like automated fault detection. And CPS Energy backs its systems with HP Mission Critical Services. “We require a high level of service to reduce the risk that an outage might impact our customers,” Salinas says. “With HP Mission Critical Services, we have 24 x 7 support on our infrastructure.”

A final way CPS Energy ensures it fulfills its responsibilities to its customers is by maintaining rock-solid data backup processes and technology. “Our priority as an IT organization is to ensure that our data is fully protected, and that it can be easily restored whenever necessary,” Salinas notes. “If we didn't have backups, it would be catastrophic for CPS. All of our financial data is housed in the systems that the Data Protector backs up. Payroll or customer billing would be impacted if we lost data. It is critical that backups occur regularly.”

CPS Energy follows industry best practices for its backup processes, using HP Data Protector to perform backups to tape of the utility's production systems up to eight times per day—more often for large production systems than for smaller databases. Backups may comprise anywhere from a terabyte and a half to four terabytes of data. They are scheduled during non-peak hours. Data is backed up to an HP Enterprise Systems Library (ESL) Tape Library. To meet the performance requirements of backing up over 96 TBs per week, the team uses direct attached fiber channel drives to multiple cell managers and media servers to stream data at very fast rates.

To meet the utility's disaster recovery (DR) requirements, the backups are performed across two data centers. “We have four HP ESL Tape Libraries altogether, with nine drives apiece,” Salinas explains. CPS has also split the infrastructure into two master servers (Data

Protector Cell Managers). “The SAP environment is backed up in one cell manager, and the Oracle environment in the other cell domain.”

CPS Energy backs up its archive logs to both sites simultaneously, ensuring that if necessary it could run from either site. “For disaster recovery purposes, if we need to roll back a database it doesn’t matter what site we pull the data from,” Salinas notes.

The other backups alternate their site designations on a day-by-day basis.

Reliable, flexible, and intuitive user interface

CPS Energy chose the HP data backup solution in part because of its overall relationship with HP, which is a strong one, but also because of the solution’s functionality. “HP Data Protector works extremely well,” Shuler says. “It is very reliable. And it lets us run restores while our normal backup load is also running, which is crucially important to us, because we don’t have to postpone backups to accommodate restore requests.”

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Another benefit of HP Data Protector is flexibility. The technology allows the team to easily manipulate its backup schedules. If an unexpected need for a restore arises, it can quickly accommodate the new request. “We can make the new request a priority,” Salinas notes. “And if for some reason we have to abort a

Customer solution at a glance

Primary applications

SAP and Oracle backup

Primary hardware

- HP Integrity servers
- HP XP12000 and XP24000 Disk Arrays
- HP Enterprise Systems Library Tape Libraries

Primary software

- HP Data Protector software
- HP Serviceguard software
- HP-UX 11i

HP Services

- HP Mission Critical Services

backup, HP Data Protector automatically returns to that point when we start it up again.”

Salinas says the technology’s interface is user-friendly. It’s easy to categorize backup jobs, and to find backed-up databases should a restore be needed. In addition, the infrastructure services team can provide limited rights to CPS Energy’s database administrators, which allows them to perform their own data restores. This reduces the amount of time the management team must devote to data restoration requests.

Shuler and Salinas are investigating extending HP Data Protector to the company’s Windows® environment, which they expect will consolidate the IT staff skill set to one enterprise platform.

Shuler and Salinas also use HP Data Protector to support other IT processes, such as replicating the utility’s existing production databases to its development and Quality Assurance systems. “When developers or testers need a copy of our production environment, we can give it to them without impacting our normal backup procedures,” Salinas says.

CPS Energy will continue to leverage HP Data Protector in the future, as it continues to refine other pieces of its enterprise infrastructure. The utility is considering moving to a virtual tape library solution, for instance, which will allow it to speed up restores. If they proceed in that direction, Shuler and Salinas will consider leveraging HP StoreOnce de-duplication technology.

In the meantime, however, CPS Energy remains pleased that HP Data Protector ensures it protects the data the utility needs to serve its customers. "Because HP Data Protector software is a reliable technology, we are confident that we are managing risk relative to our SAP environment," Shuler says. "It's precisely the technology we need and we are extremely satisfied with the way it supports our backup processes and requirements."

