Infrascale™

AN RTO-BASED SOLUTION WILL SAVE YOUR BACON

"Sooner or later, you're gonna get hit. If you don't have a good backup and recovery plan, you're done."

David Wynn, *American Precision Industries*

PRECISION INDUSTRIES
AMERICAN PRECISION INDUSTRIES
METAL SPECIALTIES

PROFILE

American Precision Industries (API) is an Oregon-based metal manufacturer that provides fabrication, design, sawing, manual machining, proto typing, fixturing, CNC machining, high precision multi-axis machining and large production services. API works in conjunction with two additional sister companies to deliver just over half-a-million units per year to various electronics, semiconductor, optical and energy sector companies throughout North America.

CHALLENGES

- Multiple sites
- Strict privacy controls
- 1 shared IT resource
- Less than 4hr RTO

SOLUTION

American Precision Industries has used Infrascale Disaster Recovery in three major downtime events, recovering critical data and systems within their planned RTO each time.

BACKGROUND

Businesses with multiple locations often run into issues providing equal protection for each office—both in terms of function and cost. In the case of API, stringent privacy statements add to the complexity of keeping a "run in the dark" manufacturing operation running 24/7/365. API protects large CAD files in addition to their customer and order databases, hosted across an array of IBM-compatible machines running Windows.

API's three locations are operated by roughly 80, 40 and 10 people, respectively. The machine tools run on proprietary operating systems and only require the CAD files and order information to operate. For API, this typically means production will continue for up to 12 hours even when every other system is offline. Still, David Wynn, IT Administrator, found that their rotation of 20 HP tapes was far too cumbersome to recover from even the most basic data loss or downtime event, and went in search of a new system.

API first went with Eversync (acquired by Infrascale in 2014) and later upgraded to Infrascale's Disaster Recovery service. Since the move from tape, API has experienced three major downtime events, including two bouts with ransomware, and, in every case, was able to meet their RTO goals.

REQUIREMENTS

American Precision Industries has three sister companies, but just one IT professional who manages the IT across all three locations with some seasonal help from several third-party contractors who are conscripted for big IT projects and events.

In the primary location, there are 50+ IBM-compatible, Windows machines running CAD systems, payroll, operations and order processing. The data produced must be kept and stored for 7-10 years depending on the customer. Machine tools can produce parts if the CAD files are available to be fed to the machines' system. Maintaining uptime for these manufacturing machines relies on quick, file-level recoveries. The rest the operation is negatively impacted by unplanned downtime, albeit, not as dramatically.

RESULTS

- Bacon Saved: 3 times
- All sites protected
- All data secured, privately
- Significantly reduced TCO
- Cost-effective solution

" Before, it was cumbersome, even for a single file recovery. Now it takes all of about two seconds. Those three major recoveries would have taken three to five days with the tape system."

David Wynn,
API

Application/Data/System	Hardware	OS	RTO, Uptime
CAD application server	IBM compatible	Windows	<12 hours, 99%
Machining Tools	Proprietary	Proprietary	NA, 99.9%
CAD files	IBM compatible	Windows	<12 hours, 99%
Payroll DB	IBM compatible	Windows	<24hours, 99%
Customer/Order DB	IBM compatible	Windows	<24 hours, 99%
CAD user endpoints	Various	Windows	<12 hours, 99%

SYSTEM ASSESSMENT & RECOVERY PLAN

The following table describes what's being protected, the business impact of being down and the chance of downtime. Risk Factor is the product of multiplying Impact and Chance. For any system with a risk factor above 10%, API has developed either a prevention strategy, a recovery plan or both, in some cases.

Application/Data/System	Impact	Chance	Risk Factor	Recovery Plan
CAD APPLICATION SERVER	99%	99%	99%	Infrascale Disaster Recovery replicating from site A to site B. Local boot for testing or individual machines. File recovery readily available from either site. Spare hardware required in the event of hardware destruction. Restore time is less than 20 minutes once hardware is available for recovery.
MACHINE TOOLS	100%	<1%	<1%	N/A. These units are closed systems.
CAD FILES	80%	80%	80%	Files are protected by Infrascale Disaster Recovery and replicated to a secondary DR appliance and are available for restore within minutes. Files can be recovered to any USB device to then be fed to the machine tools' systems.
PAYROLL DB	60%	100%	60%	Infrascale Disaster Recovery replicating from site A to site B. Local boot available for recovery in less than 10 minutes. Production recovery time dependent on available hardware, less than 20 minutes once available.
CUSTOMER/ ORDER DB	80%	100%	80%	Infrascale Disaster Recovery replicating from site A to site B. Local boot available for recovery in less than 10 minutes. Production recovery dependent on available hardware, less than 20 minutes once available.
CAD USER ENDPOINTS	70%	100%	70%	Systems are backed up centrally and covered in DR backups onsite and replicated to the secondary. Endpoints can be restored within 20 minutes once hardware or a VM is available.