

# 10 WAYS TO USE ARTIFICIAL INTELLIGENCE FOR SIMPLER, SMARTER IT

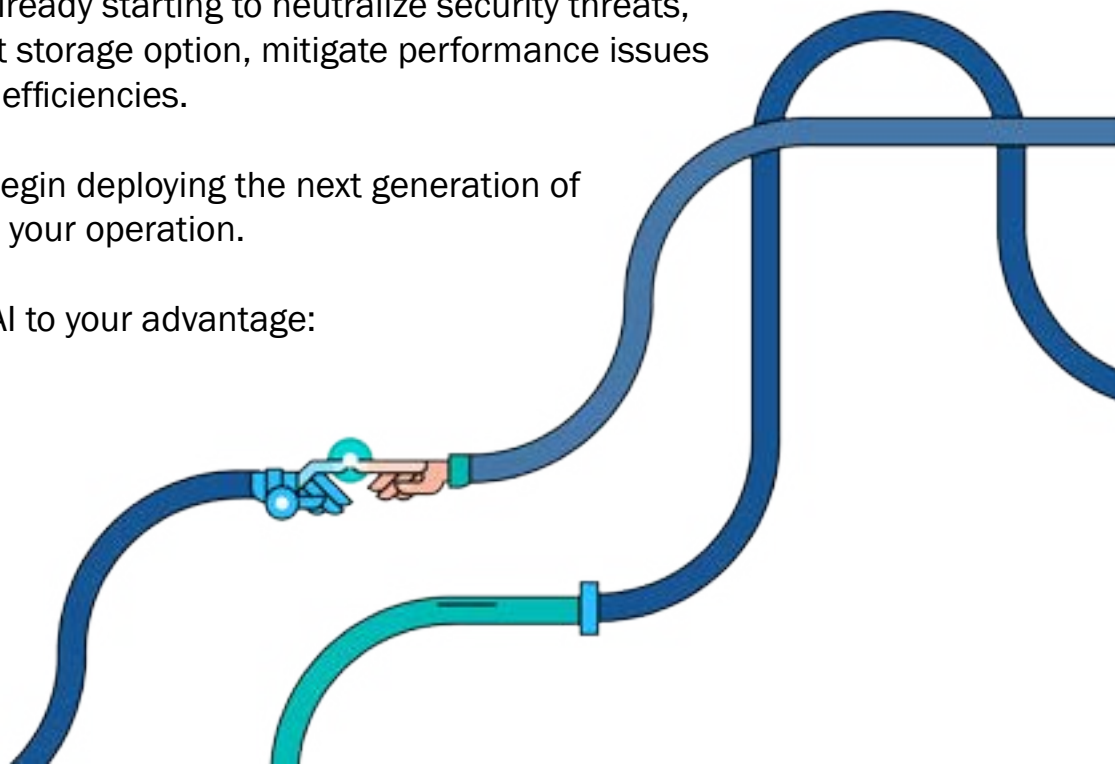
## ARTIFICIAL INTELLIGENCE IS INCREASINGLY MAKING IT SOLUTIONS SIMPLER AND SMARTER.

Whether called AI, machine learning or predictive analytics, new intelligent systems are making our lives simpler and more productive. Driverless cars empowered by AI are a great example of what can be done to improve devices that were formerly entirely dependent on human direction. Similar advancements are taking place in IT solutions that make administrators faster and more efficient at their jobs. AI is beginning to automatically perform tasks that now require human intelligence, such as identifying and automatically recovering from ransomware and recognizing the differences between real and false disaster recovery situations.

AI advancements are already being integrated in solutions responsible for backup and data protection. Backup tools sit in a very strategic location, touching all corporate data, and advancements in AI are already starting to neutralize security threats, direct backups to the best storage option, mitigate performance issues and enhance operational efficiencies.

It is an excellent time to begin deploying the next generation of AI-enhanced systems into your operation.

Here are 10 ways to use AI to your advantage:



## RANSOMWARE DETECTION

# 1

Ransomware and other criminal attacks are a real and growing threat to enterprises of all types. Ransomware is evolving away from its brute force mechanisms of immediate, mass encryption, making it easy to detect, and employing more stealth in its intrusion and proliferation. As the attackers evolve, IT threat detection must evolve as well to avoid false positive and negative alarms.

Machine learning is already employing techniques that can detect high probabilities of ransomware infection through learning and analyzing change rates, data entropy and randomness of data. Understanding anomalies in these metrics allows software to detect and mitigate threats in near real-time. Small changes to expected behaviors can be detected early and AI-based remediation actions automatically initiated to help businesses continue with less impact. Adoption of this form of AI enables IT personnel a chance of keeping up with this evolving epidemic.



## BUSINESS POLICY AUTOMATION

# 2

IT Administrators are asked to align data management and availability tactics to business policies, many times without really understanding how details such as file locations and snapshot schedules impact availability and recovery results. AI-based Business Policy Automation allows administrators to define and schedule backups based on specific recovery objectives (recovery times and location of backups). Once set, predictive analytics will determine exactly how long it will take to recover the workloads, and the software will automatically engage in determining the steps required to meet those recovery goals.

## APPLICATION RECOVERY TIME PREDICTIONS



# 3

Applications today are complex stacks of software, data, databases, and settings frequently spread across disparate hardware. If any one of the components is out of line, a critical application will remain unavailable to business users. Intelligent tools are now available to identify, simulate, and test the many steps required to recover complex applications and determine if an application will be truly available for use. After all, a successful recovery is when the application can be successfully accessed by the end users.

With little to no human interaction, these AI-enabled tools can predict the time required to recover failed systems from system outage to login to the recovered application. These tools enable IT to understand in advance if they can meet business recovery goals. Some modern, innovative solutions will also automatically provide the IT professionals with reports for proof of compliance that are acceptable to government and industry auditors.



## DATA LOSS PREDICTIONS

# 4

One of the most impactful consequences of downtime is the loss of data. Data loss in downtime can include the corruption of stored or in transit files as well as not capturing business data that would have been produced during a downtime event. Lost sales records, customer contact information, and employee production all have real business value. Just as intelligent tools can forecast recovery times, those tools can also simulate different disaster or outage scenarios and predict how and what types of data would be lost in a downtime event.





## ECONOMIC IMPACT PREDICTIONS

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Most IT jobs are task and data focused – did the backup succeed? Was the file replicated?... But IT also needs to be a business partner and answer business questions such as how long a downtime event will last and what it will cost in terms of real dollars.

Intelligent tools are able to project the costs of both, supplying teams with potential impact ranges for a variety of outage and attack scenarios. With this data, IT gets the answers and confidence they will achieve their business goals. These intelligent tools give IT the power to identify economically viable, effective data protection and business recovery investments.



## INITIATE RECOVERY PROCEDURES

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For companies still using non-AI enabled technology, recognizing and initiating recovery procedures is a very manual task. Applications can sit suspended and non-performing for extended periods until a user alerts IT administrators that they can't do their job. This is often how a ransomware attack is identified.

Tools that monitor the heartbeat of applications and enable hot-failover for failed systems exist as high-cost hardware solutions in some high-end data centers. Look for this technology as it begins to transition downstream, with DR tools coming to market that enable automatic distinction between a true DR event and a hiccup, and then initiate a failover procedure based on true system unavailability.

## HARDWARE FAILURE PREDICTIONS

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Predictive analytics enables devices to understand what is inside the range of normal performance. With remote monitoring, slight performance anomalies can predict future issues. As intelligent devices gain greater knowledge from analyzing larger volumes of data, they will more accurately predict failures so recovery tactics can be taken before users are affected. Today systems use predictive analytic tools such as Elastic Stack to track system performance and predict future hardware and software issues.



## DATA PLACEMENT DECISIONS

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IT Administrators have more choices than ever in where to store data – local servers, SANs, NAS, cloud or archived cold storage – and on what types of media and for how long. Each has a cost in terms of both \$/GB but also their impact on recovery times. Today, administrators can manually select the placement of backups based on instantiation point, priority, or retention policies. Machine learning and AI backup devices are coming to market that can translate business objectives into strategies for storage locations and automate the migration of aged archival data to less expensive, long-term media. Look for future releases that support the automated migration of data to locations meeting recovery time policies based on predictive recovery time testing.





## TEST ENVIRONMENT ORCHESTRATION

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Today, administrators must manually create test environments for software version testing, analytics, patch tests, or what/if analysis. Usually this is a ticketing process that adds burden and delay that can adversely affect Dev/Ops projects.

Intelligent backup tools are able to automatically create test environments without human intervention and without risking production environments. The criteria for when and what to include in test environments is fully automated. AI dramatically reduces the burden of DR and patch testing.



Now that you have read about AI capabilities that are currently or soon to be available, it is time to begin integrating them into your IT infrastructure.

You may be interested in seeing how Unitrends is [building these capabilities into their solutions](#) for Simpler, Smarter IT.

Think you know AI? Take the quiz and test your AI IQ!

## IT RESILIENCE

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While some of the above is already on the market, the next step in Simpler, Smarter IT is ITR (IT Resilience). ITR refers to an ever growing set of technologies that work together to automatically take action to protect data and applications against just about any type of threat. As the IT world gets more complicated, incorporating solutions that bring the latest in AI and machine learning will be essential to resilience. Companies that do not move their solutions sets forward are at risk of not just falling behind the times, but losing their business due to data loss and outages.

**TAKE THE AI IQ QUIZ**

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