

HOW AI IN THE DATA CENTER CLOSSES THE LOOP ON DIGITAL TRANSFORMATION

We live in an era of digital transformation where businesses increasingly rely on prediction technology. Predictions have always been important in business. Historically, predictions came with a high price requiring huge amounts of financial and human capital. Technologies based on artificial intelligence (AI) offer effective prediction analytics faster, more accurately and at reduced costs than alternative methods.

AI AND INDUSTRY

In the past artificial intelligence had promised to transform our lives, and today we are seeing it take shape. AI is not only in our lives, it is beginning to transform virtually every aspect of it. AI is making an impact across all industries. It has proven itself as an invaluable tool not only in the high tech sector, but in other fields too. In education, AI systems help with personalized tutoring, customized to each child's needs. Scientists are integrating AI into research to improve agriculture, improving the lives of some of the world's poorest farmers. In health care, AI is helping health care workers select optimal treatment pathways.

DIGITAL TRANSFORMATION AND AI

True digital transformation requires 100% data availability, which demands a new way of predicting and resolving infrastructure problems. Prediction technology built on machine learning and AI, is an essential element of a truly autonomous infrastructure. A predictive analytics engine can transport digital transformation to a new era.

Traditionally, IT operated in a reactive mode, serving its users as problems arise. Unfortunately, reacting to unexpected infrastructure problems is insufficient—

especially as corporate IT teams have increasing responsibility for delivering innovation, and are playing a much larger role in company-wide initiatives.



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Digital transformation demands solutions that can proactively avoid problems. The amount of data and the complexity of transitioning to a dominantly digital infrastructure requires a new approach—predictive problem solving. More specifically, prediction through AI. AI offers better, faster and cheaper prediction than what traditional IT teams were able to provide, using traditional methods and big data analytics.



FROM REACTIVE TO PREDICTIVE ANALYTICS

Artificial intelligence has transformed infrastructure management from reactive to predictive. Complete digital transformation is unattainable through reactive data management. For optimal performance, IT departments must transition from break/fix infrastructure management to a system that functions without manual intervention. Truly autonomous infrastructure is only possible through predictive analytics.

Many data center challenges have multiple causes and are too complex for humans to identify or fix before a loss of performance. True digital transformation is unimaginable amidst disruptions and delays. Digital transformation demands always-on autonomous data centers that function free of disruptions. The more complex the infrastructure becomes, the more critical it is to create self-healing systems. AI-powered predictive analytics engines allow for automated recommendations eliminating the need for human intervention.

With rising application diversity, public and hybrid clouds, managing data without AI is increasingly elusive. IT administrators and traditional analytics tools lack the predictive analytics required for effective data management. Digital transformation requires systems that learn through observing; predicting damaging problems while rejecting false positives.

HPE INFOSIGHT AI-POWERED PREDICTION TECHNOLOGY

HPE InfoSight AI is designed to predict and prevent problems across data centers. It can collect data from systems around the world, utilizing machine learning from data centers across the globe. Through AI, optimal performance no longer has to be time-consuming and expensive. Data infrastructure without AI could become a liability.

True digital transformation requires data centers to implement predictive solutions, utilizing cloud-based predictive analytics, rich cross-stack telemetry and global learning. HPE InfoSight is the AI platform that makes sense of the things hidden in data that human beings would never be able to analyze in a timely manner.

True digital transformation is only possible if IT administrators can rely on tools that can predict problems. The infrastructure must be able to heal itself without input from the IT team. Reactively fixing problems is too little too late. AI transfers the burden of managing IT infrastructure from human to machine. With the help of cloud-based machine learning, HPE InfoSight predicts and prevents infrastructure problems.

Before AI, data from infrastructure has been limited to log files and graphs. HPE InfoSight can collect and analyze millions of sensors per second. It offers a more comprehensive approach to data collection and analysis which results in continuous learning. The result is 99.9999% guaranteed availability. 86% of issues are automatically opened and resolved with the use of machine learning and predictive analytics. AI injects foresight into IT management.

AI OUTPERFORMS TRADITIONAL IT MANAGEMENT SYSTEMS IN SEVERAL WAYS:

- AI supports autonomous operation without the need for human intervention.
- AI excels at learning from thousands of peer systems. Traditional systems are highly reactive and fail to learn. Learning systems are preemptive. Abnormal behavior that is detected on one site can help prevent issues at other sites.
- AI offers cross-stack analysis. AI analytics can correlate across multiple infrastructure layers such as applications, databases, networks, storage, etc.
- AI enables machine-learning algorithms to identify causation from events in the past to predict destructive issues.
- AI recommendations can be applied automatically.



- HPE InfoSight analyzes millions of sensor data points each second from HPE's globally connected installed base. HPE InfoSight makes the autonomous data center through predictive analytics and recommendation engines. It replaces reactive infrastructure management with a self-healing model to eliminate human intervention. Problematic activity is predicted through recognition of patterns and configurations.

PREDICTIVE ANALYTICS ENGINE

HPE InfoSight can identify potential infrastructure interruption without human involvement, eliminating frustration from the support experience. Predictive support can auto-resolve problems before they can negatively impact your business.

Predictive analytics:

- **Better planning through machine learning**—By anticipating performance and resources, HPE InfoSight is a great planning tool.
- **Improved user experience through predictive analytics**—Problems are resolved before the customer is aware of the issue.
- **Predict future bandwidth, capacity and performance needs**—Through historical use and autoregressive and Monte Carlo simulations.

RECOMMENDATION ENGINE

It is because of the AI-powered recommendation engine that HPE InfoSight can make autonomous proactive decisions. The recommendation engine helps to prevent issues, proactively improve performance and optimize resources. Utilizing machine learning, HPE InfoSight analyzes performance problems based on I/O load, systematically identifies variables that have the greatest impact and gives the appropriate recommendation to enhance performance.

One of the greatest advantages of the HPE InfoSight predictive analytics and recommendation engine is that it optimizes performance while it eliminates guesswork. Preemptive recommendations help prevent issues before they occur, resulting in proactive performance improvements with optimized resources.

ARCHITECTING THE RECOMMENDATION ENGINE

Infrastructure problems usually fall into two groups:

1. Typical and frequent—80% of issues cause 20% of pain
2. Uncommon and complicated—20% of issues cause 80% of pain

Typical and frequent issues such as hard drives failing inflict a small amount of pain on IT teams. Because of the frequency of hard drive failures, IT teams can resolve such issues fairly easily. Automated solutions can more readily predict and resolve typical and frequent problems. For optimal performance, businesses demand solutions that can automatically predict and resolve both typical and uncommon problems.

While a typical issue can be identified by evaluating a few pieces of data, to resolve uncommon and complicated problems, analytics solutions must analyze exponentially greater number of variables. IT administrators are unable to perform that type of real-time quantitative analysis required to identify and prevent complex problems. HPE InfoSight recommendation engine removes the human bottleneck to facilitate autonomous data centers free of disruptions.

Businesses have finite IT management resources to dedicate to infrastructure management. Organizations are wasting valuable time and money hunting down false positives. Machine learning can identify events that actually matter. By eliminating false positives, HPE InfoSight can efficiently improve infrastructure performance.



With HPE InfoSight IT administrators don't have to worry about performance or waste time manually tuning the infrastructure. HPE InfoSight pinpoints opportunities to optimize performance based on workload patterns and businesses get the appropriate recommendation to optimize their infrastructure. This takes away the guesswork while improving the performance of your resources.

AI is especially important to resolve the uncommon and complicated infrastructure problems which cause about 80% of the pain. The recommendation engine is designed to help resolve complex problems, using global heuristics from HPE's deep telemetry and AI.

This AI-powered recommendation engine can predict complex issues using expert defined and machine-learned predictive models. The result is automatic preemptive and prescriptive problem solving, using machine learning to predict complex problems.

SUMMARY

HPE InfoSight eliminates the pain of managing performance. IT administrators no longer need to react to unexpected problems, trying to interpret countless graphs and logs and calling vendor support. HPE InfoSight reduces stress on business organizations and IT departments.

86% of all problems are predicted and prevented before the customer realizes that there is a problem. Imagine an infrastructure where 86% of the issues are automatically solved.

AI solutions can react to unexpected problems without IT administrators spending countless hours interpreting the data. Guesswork and manual tuning become a thing of the past.

Organizations can take advantage of smarter and more reliable infrastructure through AI. HPE InfoSight AI driven performance recommendations enable businesses to minimize disruptions.

HPE InfoSight delivers a self-managing, self-healing and self-optimizing autonomous infrastructure. It fundamentally changes infrastructure management, and empowers the IT team to close the loop on digital transformation initiatives.



TALK TO WEI TODAY

Ready to see how HPE InfoSight works? Contact the team at WEI today to setup a demonstration.

ABOUT WEI

WEI is an innovative, full service, customer centric IT solutions provider.



Why WEI? Because we care. Because we go further.

At WEI, we're passionate about solving your technology problems and helping you drive your desired business outcomes. We believe in challenging the status quo and thinking differently. There are a lot of companies that can take today's technology and create a great IT solution for you. But we do more. We go further. And we have the customer, vendor and industry awards to prove it. WEI is a premier technology partner, who always puts our customers first while providing the most innovative solutions for over 25 years.



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