

Have you made the right platform choices to minimise risk?

Critical systems have to run and run...

POWER PERSPECTIVE



In the struggle to minimise operational risk, don't hinder yourself with systems and processes that aren't fit for purpose. Now that you are more reliant on your IT than ever before, and need key systems to be operational 24x7, are you still trying to patch together complex suites of tools to protect equally complex server stacks that have grown organically over the years? Can your infrastructure handle risk routinely, or do you face challenges - and if you do, could it be time for a rethink?

How high-scale, vertically integrated systems can help

Key system characteristic

Why this matters

Encryption through all elements of the system from the motherboard, CPU, networking elements and storage into memory and operations. Encryption at rest, in transit and in use.

Systems designed from the ground up to ensure application and data security is simple to run and operate without continuous administration reduces exposure threats at all levels.

Operating system and virtualisation hypervisor built with ability to logically partition the environment to deliver different service capabilities with minimal underutilisation of resources.

Granular controls and workload isolation enable maximum protection for sensitive data/applications. Compliance reporting, automation and real-time intrusion detection provide security visibility.

Highly available and resilient, with the ability both to easily integrate with other systems via on-site clustering, and to embrace public cloud resources as needed by individual workloads.

Systems designed to be resilient with multiple means to ensure availability via a full range of local and remote service options ensures 24x7 operation of IT services critical to the business.

Entire system designed as an integrated whole, with components that work optimally together throughout its lifetime via certified upgrades as service requirements change.

Systems offer guaranteed compatibility, predictability and stability whenever hardware upgrades and changes are needed, thereby limiting "cracks" in security exposure and availability.

Other things to think about

It is true that x86 based solutions can be built with enhanced resilience and scalability, but the results may be complex to implement, difficult to maintain and may require significant skills to operate. As a result the operational costs can be high, and the risk they carry is often not minimised. An alternative approach is to use tightly-integrated solutions that are designed from the ground up to deliver such capabilities.

Real-world solution example: IBM Power

To illustrate some of the ways that tightly integrated systems can minimise operational risk, we will look at the concepts behind one of the real-world examples of this type of system, namely the IBM® Power® platform, an offering from the sponsor of this paper. Nothing we say here should be taken as an endorsement or recommendation, but it is useful to see how a specific example can illustrate some of the principles in reality.

At the time of writing, the IBM Power platform has been used for over a decade to provide a resilient and secure base for critical business systems. Beyond the system itself, IBM® and its ecosystem partners offer a wide range of software tools and services to further enhance availability combining on-site resources, public cloud or a combination of both.

Resilience and availability apart, the challenges posed now by a sophisticated cyber threat industry make protecting critical data and services a key focus of enterprise attention. To address such threats, IBM Power systems have sophisticated security features designed into the platform, starting at the processor level with transparent memory encryption. Together these capabilities are designed to protect sensitive data in-use, in-flight and at-rest using techniques such as open key management, full stack encryption and secure workload isolation etc.

Without automated tools to simplify operations, minimising operational risk can require extensive skilled resources. IBM Power has therefore integrated platform and security management tools using real-time intrusion detection technologies and automated patch management. These also help with ongoing compliance reporting. IBM Power is therefore well equipped to support critical applications securely and cost-effectively, and to minimise IT operational risk for sensitive business workloads.

About the Power Perspective series

This document is one of a series of similar pieces looking at how high-scale, vertically integrated systems can provide tangible business benefits in context for a range of different themes. Other Power Perspectives include:

[Supporting the needs of highly unpredictable workloads](#)

It's all about flexibility, scalability and cost effectiveness

[Getting real about IT sustainability](#)

From good intentions to tangible results through smart systems selection

[S/4HANA without compromise](#)

A modern ERP architecture needs a powerful and future-proof platform

[Don't let your smart software suffer from poor system choices](#)

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