IBM Power11 Summary

IBM Power11: Built for the AI Era

The Challenge of Modern Enterprises

By 2028, over 1 billion new applications are expected to be developed worldwide, creating massive complexity in IT environments. Organizations today face critical issues: silos, outages, rising costs, skills shortages, and ever-expanding data volumes.

- 70% of business leaders say their technology architecture creates confusion and conflict.
- 92% of executives agree their workflows will be digitized and powered by AI automation by 2025.
- 65% of leaders consider IT architecture a key driver of business performance.

As enterprises push to remain competitive in the AI era, highly resilient IT systems have become essential for success.
IBM Power11 represents a new generation of autonomous IT, engineered to accelerate enterprises into the AI era. It delivers a foundation of performance, availability, and security—while automating critical operations.

Key highlights include:
- Zero Planned Downtime – platform maintenance without business disruption.
- <1 minute guaranteed ransomware detection with automated response and recovery.
- 5x faster business process throughput with AI integration.
- 99.9999% availability for unprecedented continuity.

By removing planned downtime, organizations save millions annually. Forrester estimates the average cost of planned downtime at $5.6M per year, while IT teams spend up to 40% of their time planning and executing maintenance. Power11 eliminates this burden.

Business Continuity and Trust

Enterprises such as Infosys Finacle report transformative value from Power11. Customers can now install security updates seamlessly, maintain compliance, and deliver uninterrupted services—all critical in industries like banking and healthcare.

With Power11:
- Agile platform updates ensure security without disruption.
- Zero downtime resilience enhances regulatory posture.
- Continuous availability boosts customer trust and satisfaction.

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AI-Ready Infrastructure

Power11 is purpose-built to scale AI across the enterprise:
- On-chip accelerators boost AI workloads within core business processes.
- AI-powered assistants and agents drive developer productivity (+23%).
- Lower TCO compared to x86 and GPU-based alternatives, with up to 18x efficiency gains for GenAI workloads.

Case studies highlight impressive results:
- Geis Group achieved 5x faster order processing by embedding AI into workflows.
- Shibuya reduced GenAI translation service costs by 23% while improving performance.

Cloud and Hybrid Flexibility

IBM Power11 extends seamlessly into hybrid cloud with IBM Power Virtual Server (PowerVS), providing flexible workload placement:
- Faster migration to SAP RISE.
- 25% lower TCO vs. other IaaS clouds.
- 14x fewer hypervisor vulnerabilities compared to alternatives.

IBM itself has adopted RISE with SAP on PowerVS, reducing operational costs by 30% while supporting 150,000 users across 175 countries.

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Power11 Stack Capabilities – Sustainability & Energy Efficiency

While 95% of companies have operational sustainability goals, only 41% have made any progress toward meeting them. The rest don't know where to start. (Source: The ESG data conundrum. IBM Institute for Business Value. April 2023.)

Customers need to reduce energy consumption to address several challenges:

- Reputation Risk: Customers are required to meet corporate and governmental regulatory requirements for reporting their energy usage and carbon footprint emissions.

- Increasing Costs & Datacenter Constraints: Address rising energy costs and energy scarcity to mitigate datacenter and rack energy constraints, grow workloads, or add technology.

- Governmental Standards: Meet regulatory requirements based on energy scarcity and governmental mandates.

Power11 delivers new levels of efficiency, reducing energy consumption, carbon emissions, and datacenter energy footprint.

Key Results:
- 2x performance per watt vs x86 systems.
- 60% less energy & carbon emissions compared to Power9.
- 28% better energy efficiency with NEW Energy Efficient Mode compared to Maximum Performance mode.

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Energy Savings with Power11: Up to 37% more rPerf per Watt compared to Power10.

When consolidating multiple Power9 systems onto a single Power11 system:

- Up to 60% less energy consumption and 1/3 the footprint.

We are delivering:
- Energy Efficient Mode.
- Partition Level Monitoring.
- Automated Mode Scheduling.

These innovations allow:

- Real-time monitoring and reporting of energy and carbon emissions at the VM/partition level.
- Optimization of energy consumption around performance requirements with scheduling of modes.
- Reduction of energy consumption when maximum performance is not required.

Energy Savings with Energy Efficient Mode: Up to 28% better energy efficiency utilizing Energy Efficient Mode compared to Maximum Performance Mode.

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Tools to help:

- Energy Simulator Spreadsheet Tool: Provides high-level energy and carbon savings through consolidation scenarios and opportunities.
- IBM Systems Environment Estimator: A web-based tool that calculates energy consumed (Watts), cooling requirements (BTU/hour), and carbon footprints (kg CO2e) for IBM Power, IBM Z, IBM LinuxONE, and IBM Storage systems based on specific configurations. Now including Power11.
- Carbon Footprint Reports: Product carbon footprint reports for representative products using the Product Attributes to Impact Algorithm (PAIA) model. Now available for E1180, E1150, S1124, and S1122.

System Requirements:

- HMC 11.1.1110.0 required for partition-level monitoring and simplified scheduling of energy/performance modes.
- Power11 system required for new energy-efficient mode.

Energy Savings with Power11 – What it means to clients:

- Slash energy costs: reduce operational expenses.
- Unlock growth in constrained environments: address regional energy restrictions and resolve datacenter and rack challenges enabling workload expansion and adoption of cutting-edge technologies like AI.
- Ensure compliance & avoid penalties: meet evolving governmental energy restrictions and regulations, safeguarding operations and avoiding potential fines.

Power11 reduces energy consumption, carbon emissions, and datacenter footprint while delivering on ESG requirements with improved monitoring & reporting capabilities, along with a new energy-optimized mode.