



HP Integrity servery – flexibilná platforma pre Vaše aplikácie

ITAPA 2004

Radovan Horváth
Produktový manažér

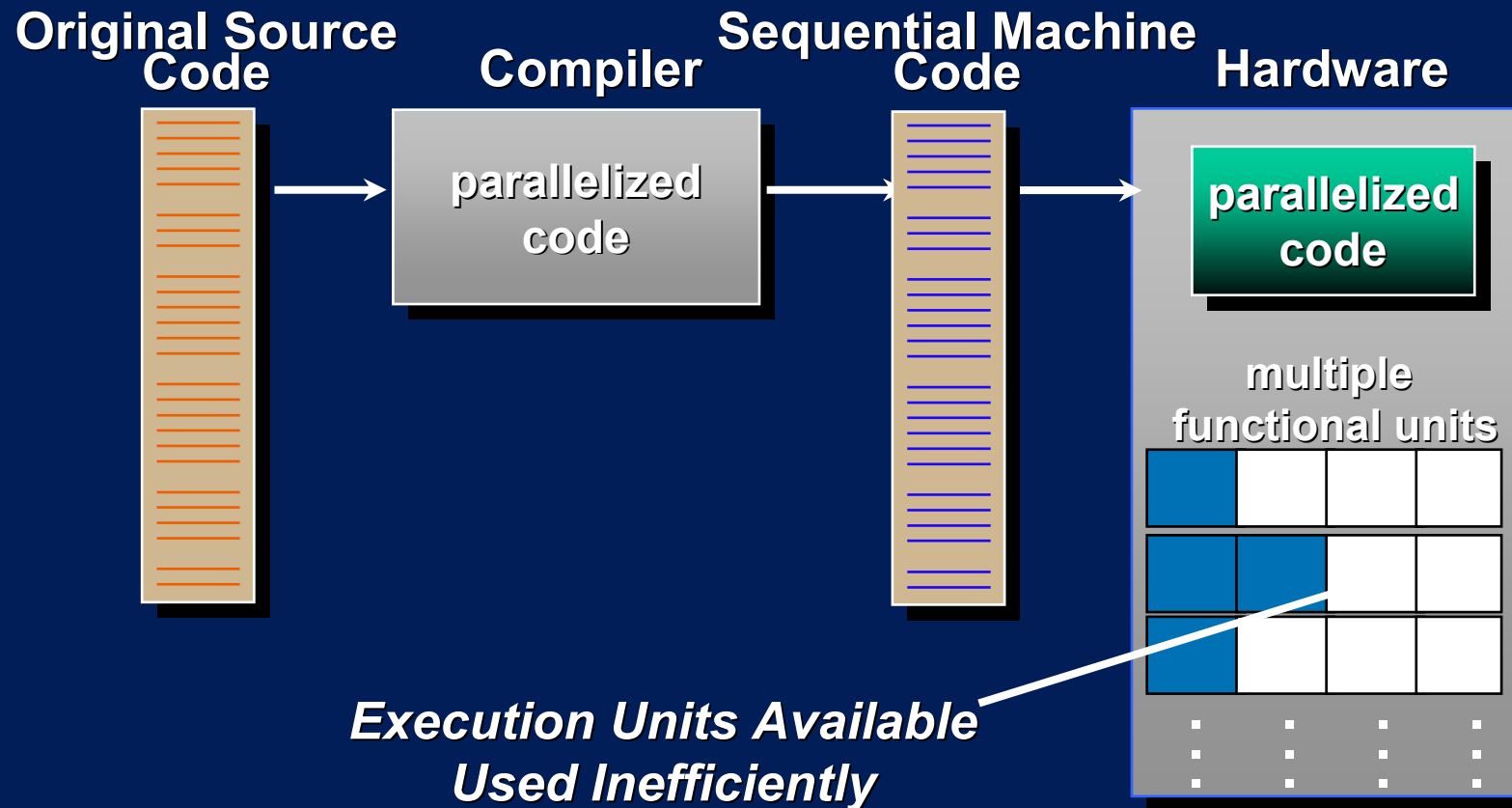
© 2004 Hewlett-Packard Development Company, L.P.
The information contained herein is subject to change without notice



Agenda

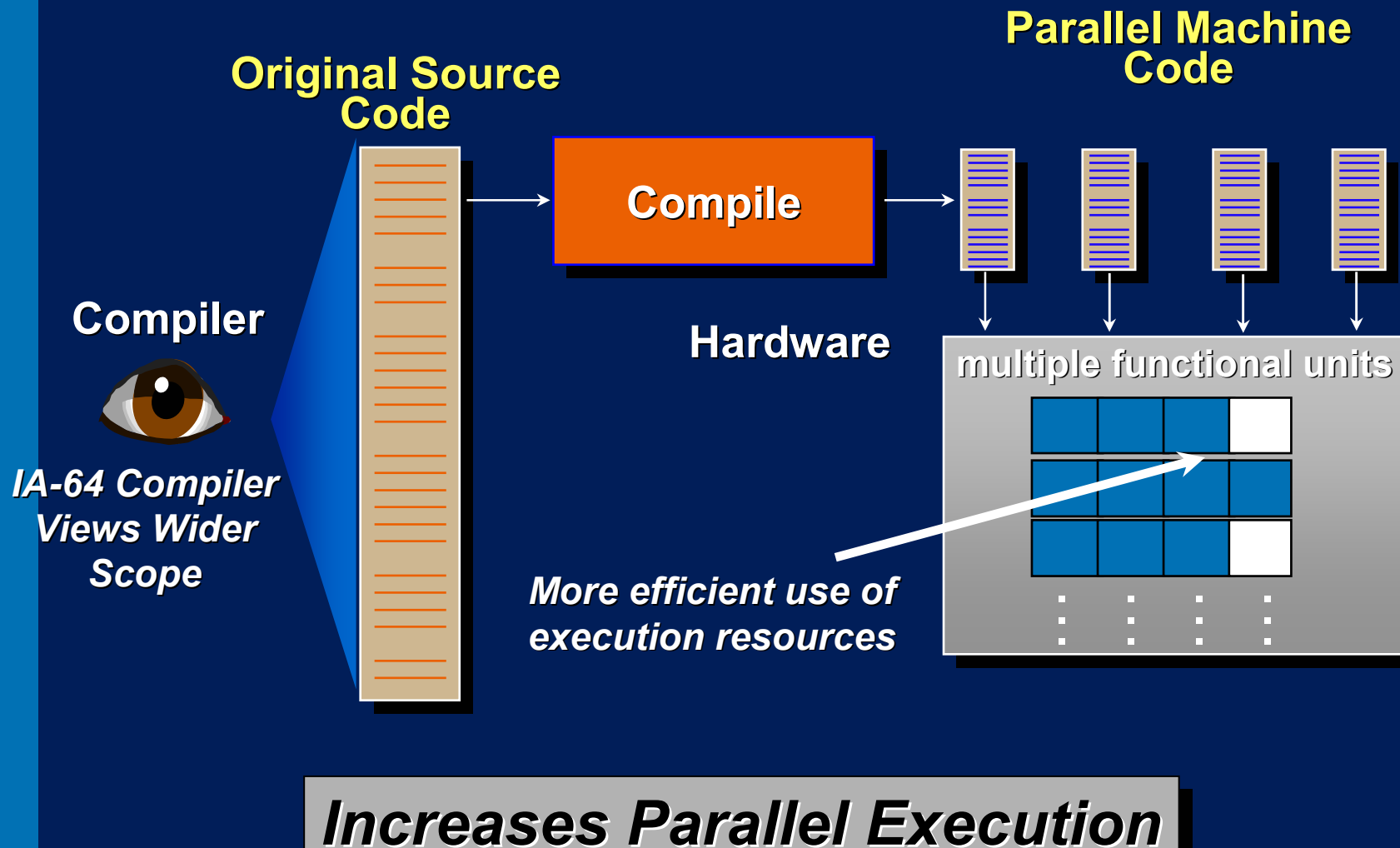
- ✓ Čo je Itanium
- ✓ Servery HP Integrity
- ✓ Praktické nasadenie Integrity serverov
- ✓ Budúcnosť Itanium platformy
- ✓ Záver

Traditional Architectures: Limited Parallelism



Today's Processors often 60% Idle

Itanium/EPIC Architecture: Explicit Parallelism



Why the Intel® Itanium®-based systems market has grown 500%* over the past year



- **Itanium architecture has a robust and growing ecosystem**
 - Itanium has been adopted by 8 out of 9 RISC vendors and over 40 OEMs
 - High performance compilers and tools, full system chipsets, storage support, etc.
 - Top ISVs committed; 2,500+ ISV applications available now on HP-UX, Windows and Linux for HP Integrity servers
- **Full, leadership end-to-end 64-bit architecture**
 - Full HP Integrity server line: from 1 to 128-way; field-proven, commercial-grade hardware and OS
 - Wide deployment of HP Integrity servers at customer sites such as Airbus, Fiat, Raymond James, Queen's University/Belfast, Bell Canada, CompUSA, First Trust
- **HP Integrity servers lead in 32+ benchmarks**
 - Commercial and technical; across UNIX, Windows and Linux



Agenda

- ✓ Čo je Itanium
- ✓ Servery HP Integrity
- ✓ Praktické nasadenie Integrity serverov
- ✓ Budúcnosť Itanium platformy
- ✓ Záver

The broadest Itanium server portfolio - Integrity

CPU's

32/64

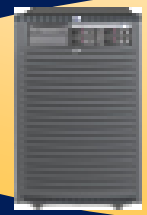
HP Integrity Superdome



2-64 way Itanium2 (128 way w. MX2)
1 TB RAM
1 server in two 2m racks
Max. 16 HW partitions
192 PCI-X slots

16

HP Integrity rx8620 server



2-16 way Itanium2 (32 way with MX2)
256 GB RAM
2 servers in 2m rack
Max. 4 hardware partitions, 32 PCI-X slots

8

HP Integrity rx7620



2-8 way Itanium2 (16 way with MX2)
128 GB RAM
4 servers in 2m rack
Max. 2 hardware partitions, 15 PCI-X slots

4

HP Integrity rx4640



2-4 way Itanium2 (8 way with MX2)
64 GB RAM
4 servers in 2m rack
6 PCI-X slots

2

HP Integrity rx2600
HP Integrity rx1600



Agenda

- ✓ Čo je Itanium
- ✓ Servery HP Integrity
- ✓ Praktické nasadenie Integrity serverov
- ✓ Budúcnosť Itanium platformy
- ✓ Záver



“Airbus UK needed a partner that could enable backward and upward compatibility for our engineering simulations, so that we could run applications decades from now and know that the math libraries will be compatible and our numerical results consistent. HP's high-performance computing reference architecture has enabled us to meet this need through multiple generations of hardware, most recently with the HP Integrity servers running HP-UX 11i. With our current Intel® Itanium® 2 based HP systems, we are able to begin running 20 to 30 simulations for wing designs each night.”

Nigel Barry
IT Architect
Airbus UK



Airbus UK is responsible for the design and manufacture of the high-technology wings for all Airbus models as well as overall design and supply of the fuel system. For most Airbus models the company is responsible for overall design and supply of landing gear. Employing around 10,000 people, Airbus UK is based at two sites; Broughton in North Wales where wing component manufacturing and wing assembly takes place and Filton near Bristol where the engineering and design activity takes place along with some other manufacturing work.



“Fiat sees the Intel® Itanium® Processor Family as the strategic way forward especially for our backend databases. We have therefore bought Intel Itanium 2 based systems from HP running Oracle9i that are in production now in Spain. We are planning to replicate it in other European countries including servers based on Intel's Itanium Processor Family and Oracle 9i RAC.”

Claudio San Pedro
General Manager
Fiat Auto (location Spain)



Fiat Auto is using Oracle9i RAC on HP Integrity servers running HP-UX 11i. The company's award-winning project is called Fiat Link, a Web portal used to interact with 200 Fiat dealers across Spain.



“At ChevronTexaco, we are evaluating HP Integrity rx5670 servers running SAP R/3 on HP-UX11i. So far, we have achieved a two-fold performance improvement over our previous systems and are pleased with the results. We are considering Intel® Itanium® 2 and HP solutions as a way to meet our growth and performance requirements while reducing costs.”

ChevronTexaco San Ramon SAP Technical Support Team

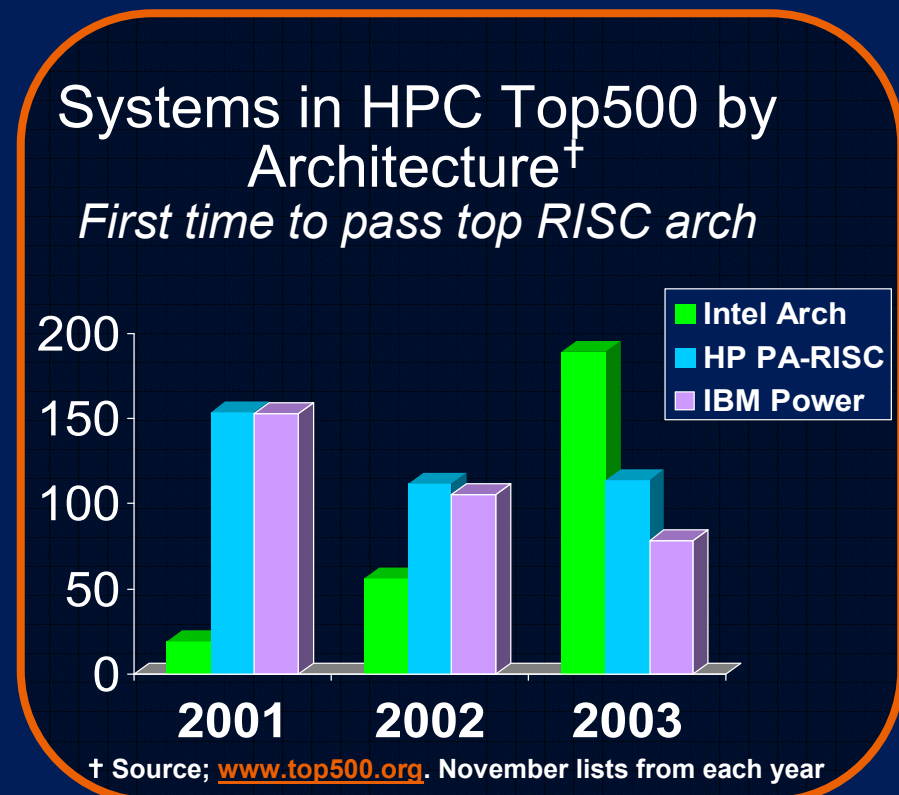
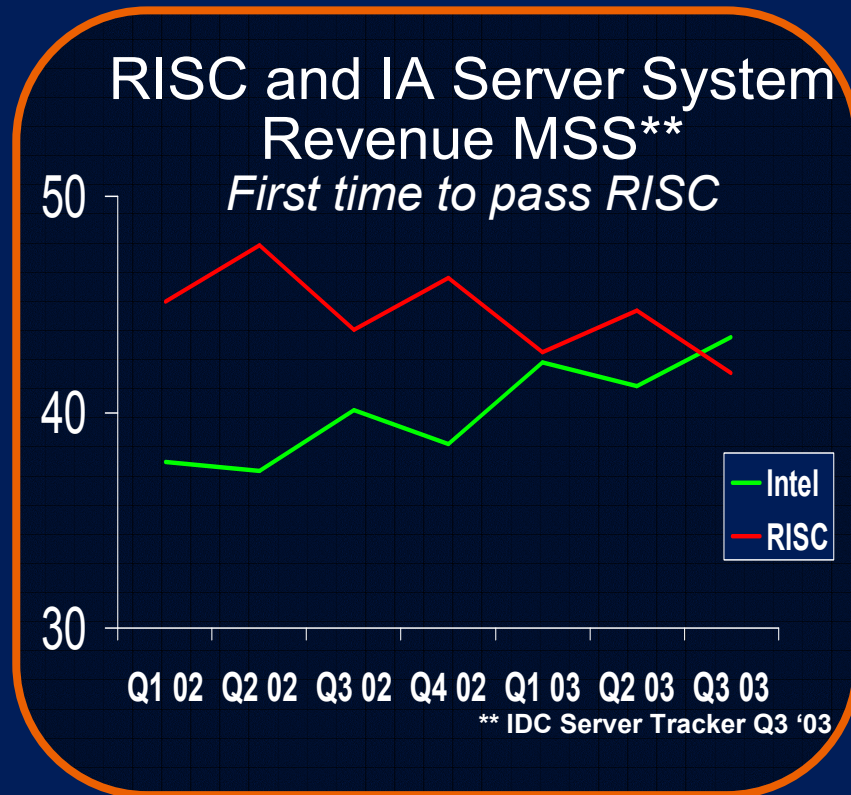
ChevronTexaco

ChevronTexaco Corp. ranks among the world's largest and most competitive global energy companies. Headquartered in San Ramon, California, it is engaged in every aspect of the oil and gas industry, including exploration and production; refining, marketing and transportation; chemicals manufacturing and sales; and power generation.

Agenda

- ✓ Čo je Itanium
- ✓ Servery HP Integrity
- ✓ Praktické nasadenie Integrity serverov
- ✓ Budúcnosť Itanium platformy
- ✓ Záver

2003: Milestone Year for Intel in Enterprise

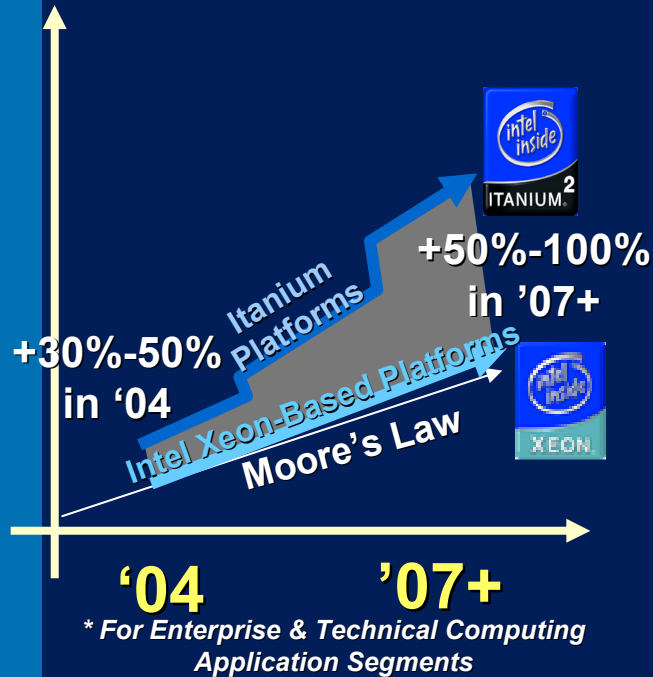


- Record shipments: Itanium® 2 and Xeon™ processors
- Record performance: Surpassing RISC on #1 TPC
- Significant RISC to IA migration – enterprise and HPC

Itanium® 2 & Xeon™ Processor MP Comparison



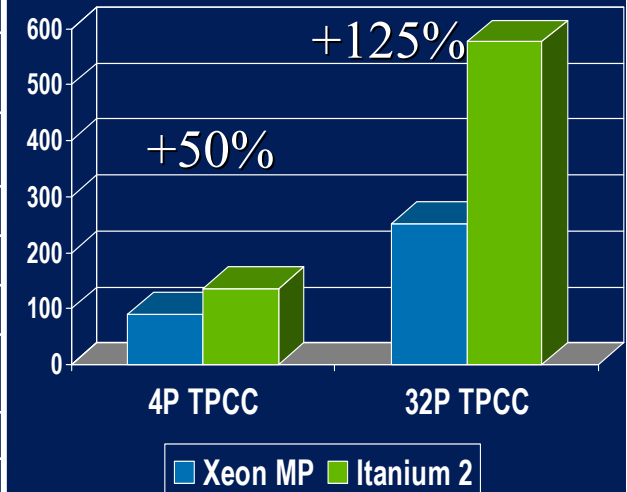
Performance



Reliability

Characteristic	Itanium® 2	Xeon™ MP
Error recovery on data bus-ECC	✓	
Internal soft error logic check	2005	
Machine Check Architecture	✓	
Bad data containment	✓	
Cache Reliability	2005	
Lockstep support	✓	✓
Memory SDEC, retry double-bit	✓	✓
Memory spares	✓	✓
Partitioning	✓ <i>node</i>	✓ <i>node</i>

Scalability



Today:
30-50% higher performance

2007:
Up to 2x performance at same platform price

High-end
"RISC"-level RAS

~2x Higher Scalability

**Itanium's EPIC Architecture:
Highest Performance, Reliability, Scalability**

Prečo práve HP Integrity?

- Nižší potrebný počet CPU na rovnaký výkon
 - nižšia cena licencií
 - lepšia škálovateľnosť aplikácie
- Najvyššia flexibilita
 - viaceré OS na tom istom type HW
 - štandardizácia
- Vysoký stupeň ochrany investícií
 - in-box upgrade na ďalšie generácie CPU
 - možnosť prechodu na iný OS

Prečo práve HP Integrity?

- Najväčšie skúsenosti s platformou vďaka spoločnému vývoju HP-Intel
- Najširšie portfólio serverov vychádzajúce z osvedčeného konceptu HP9000 serverov, vysoká výkonnosť vďaka vlastnému vývoju kvalitných čipsetov
- Najvyššia flexibilita na trhu vďaka jedinečnej Multi-OS podpore a možnosti konsolidácie viacerých operačných systémov na jednom HW

Zopár otázok na záver

- Čo znamená skratka EPIC ?
- Koľko aplikácií je dnes cca. podporovaných na Itanium platforme?
- V čom sú výhody nasadenia platformy HP Integrity (vymenujte min. 2 hlavné dôvody) ?



i n v e n t