

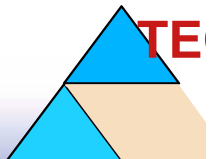
Dr. Karl-Heinz Strassemeier

DE, @server Strategy

IBM Entwicklung GmbH, Boeblingen

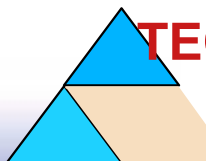
strasse@de.ibm.com

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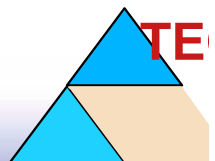
Die on demand Denkkultur und ihre Auswirkung auf die IT Industrie gestern, heute und morgen

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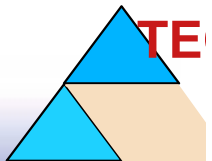
The World of "On Demand"

1. What is an on demand business and why should I become one?
2. What kind of operating environment does on demand business require, and how do I build one?
3. Can on demand business redefine the way I buy and manage computing?



What is an "On Demand Business"?

***An enterprise whose business processes --
integrated end-to-end across the company and
with key partners, suppliers and customers --
can respond with speed to any customer
demand, market opportunity or external threat.***

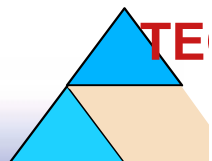


Business On Demand

Business Attributes	Operating Environment Requirements
Responsive in real time	Integrated
Variable cost structures	Open
Resilience around the world, around the clock	Virtualized
Focus on core competencies / what's differentiating	Autonomic

Source: IBM Scorpion White Paper: Simplifying the Corporate IT Infrastructure, 2000

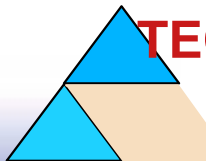
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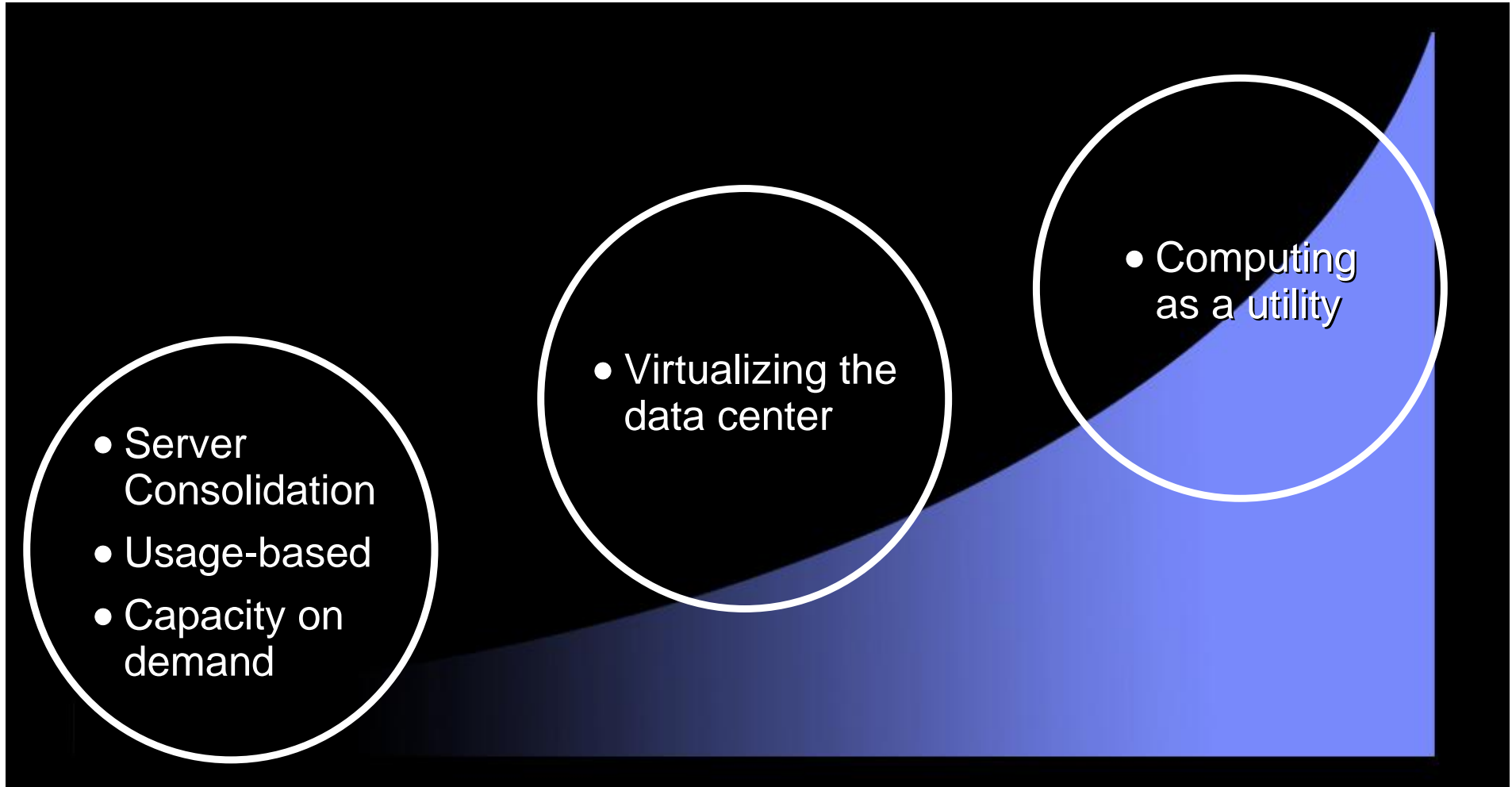
Can On Demand Business redefine the way I buy and manage Computing?

On demand operating environment offers more flexibility, variability and economically attractive choices for buying and managing computing

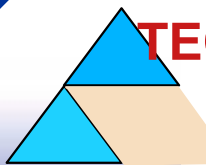
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Flexibility and Choice

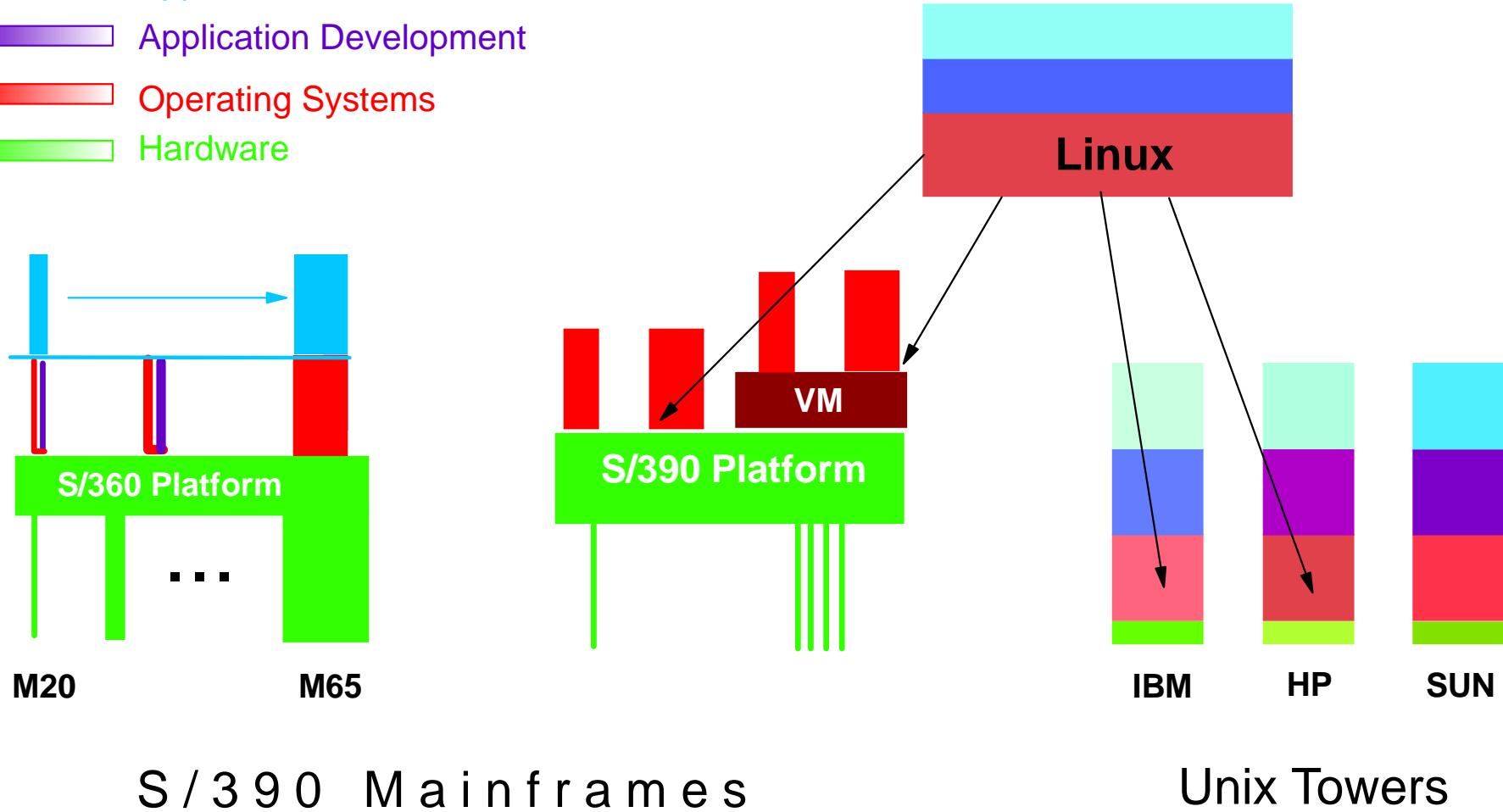


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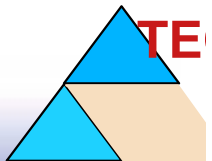


IT Technology Evolution

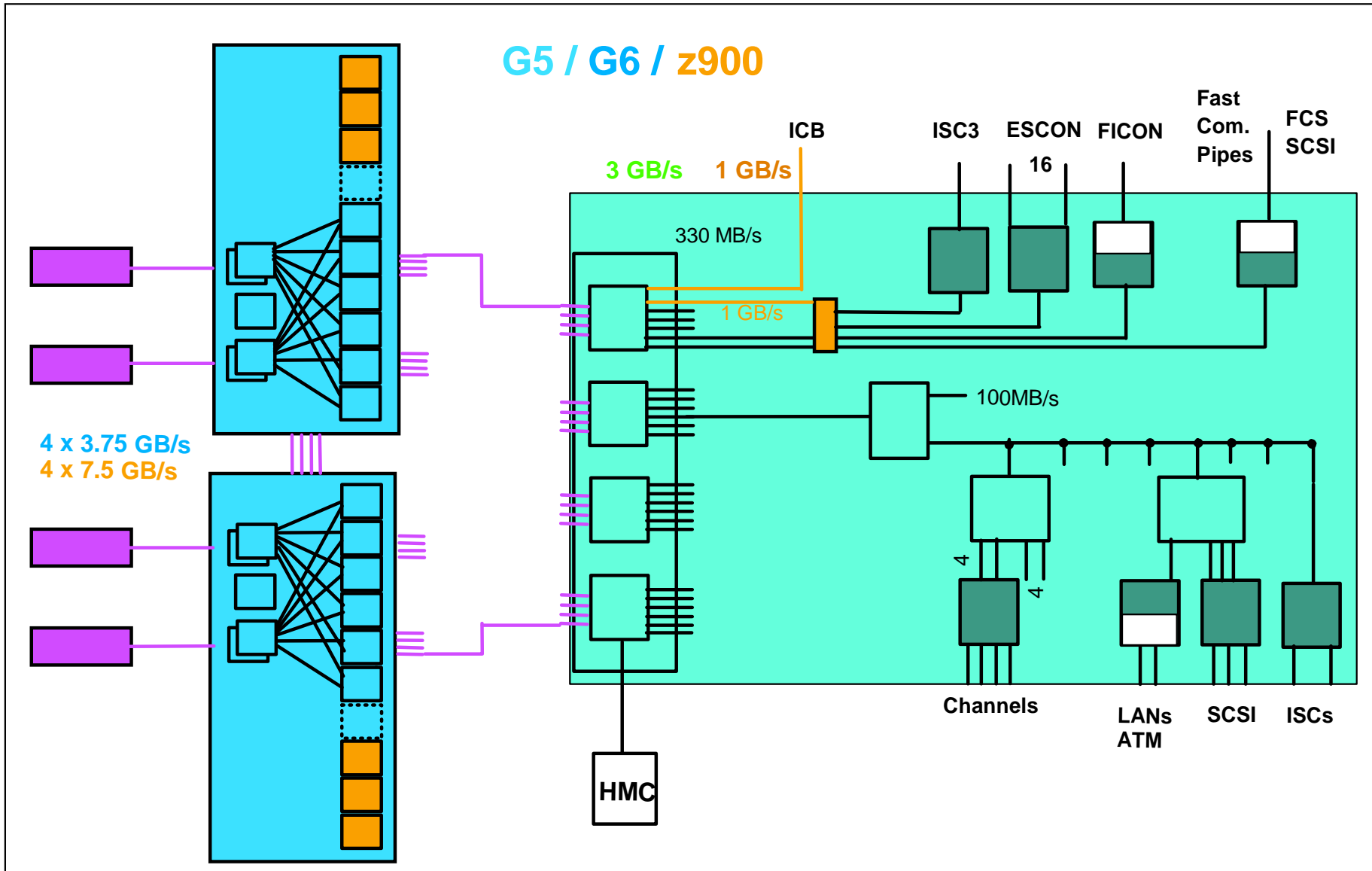
- Applications
- Application Development
- Operating Systems
- Hardware



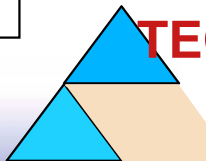
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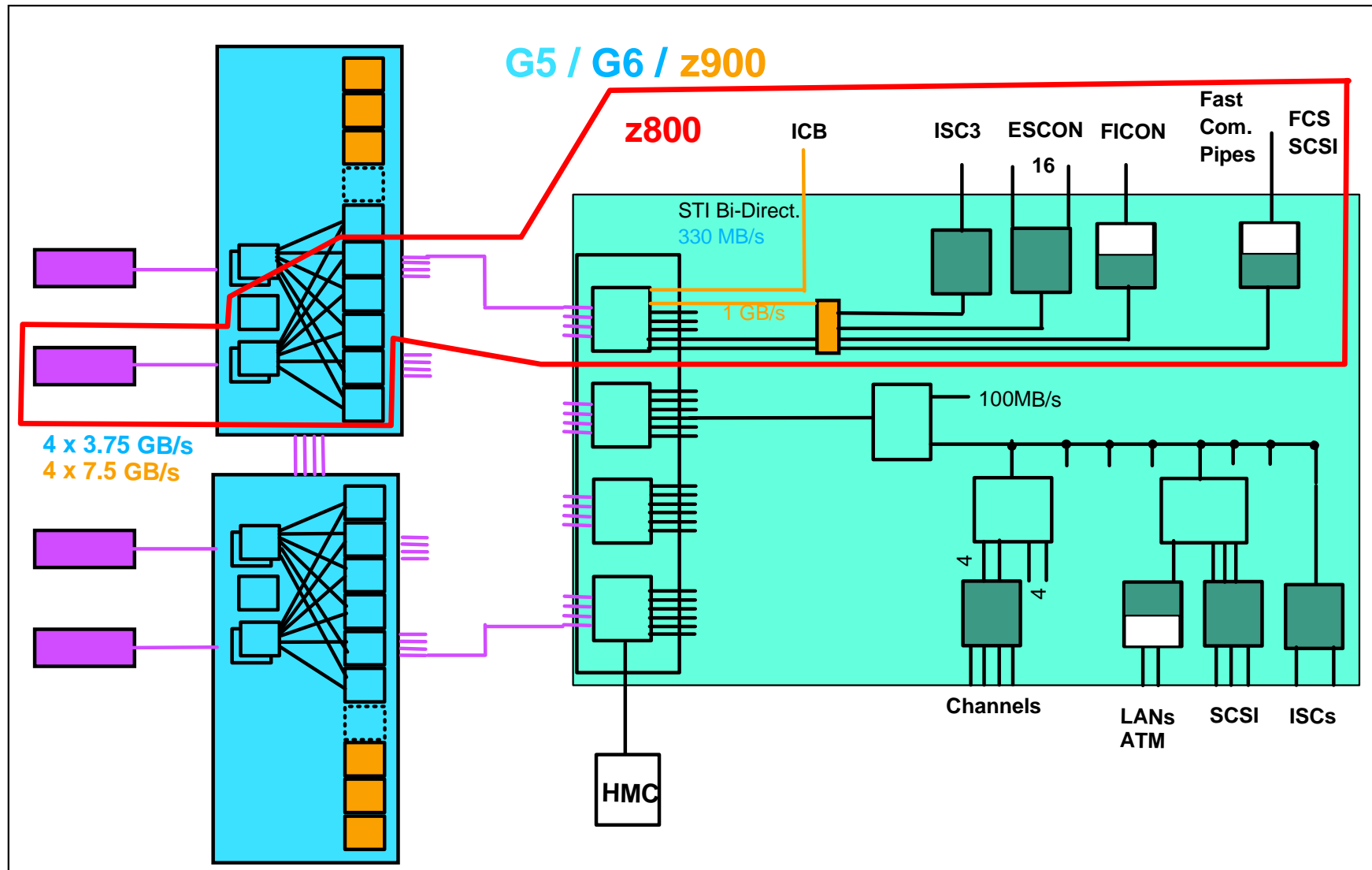
S/390 Platform Structure Evolution



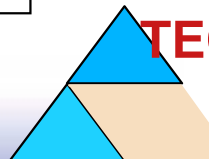
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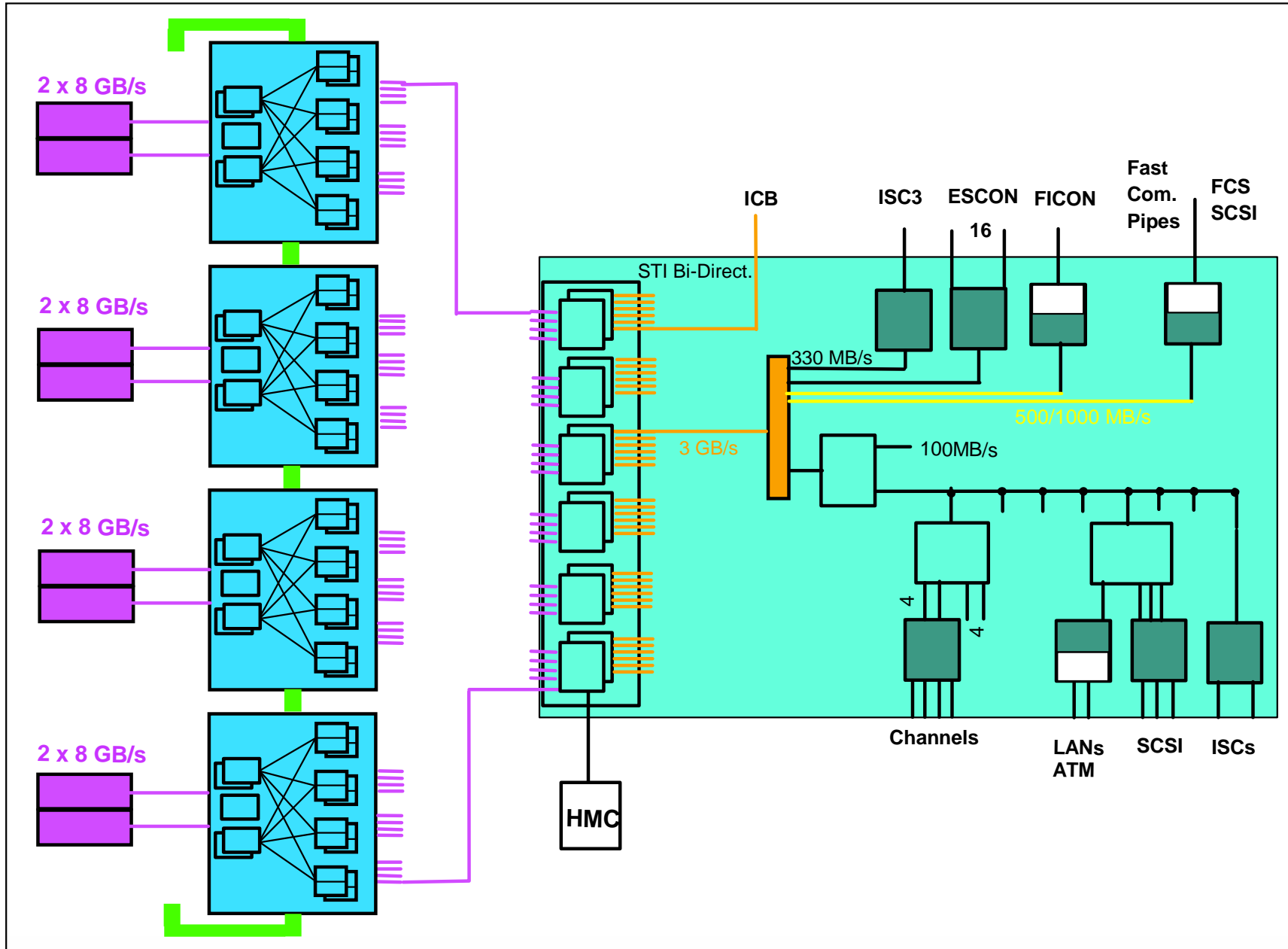
z800 as derivative of z900



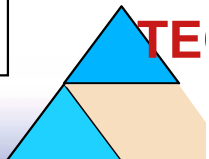
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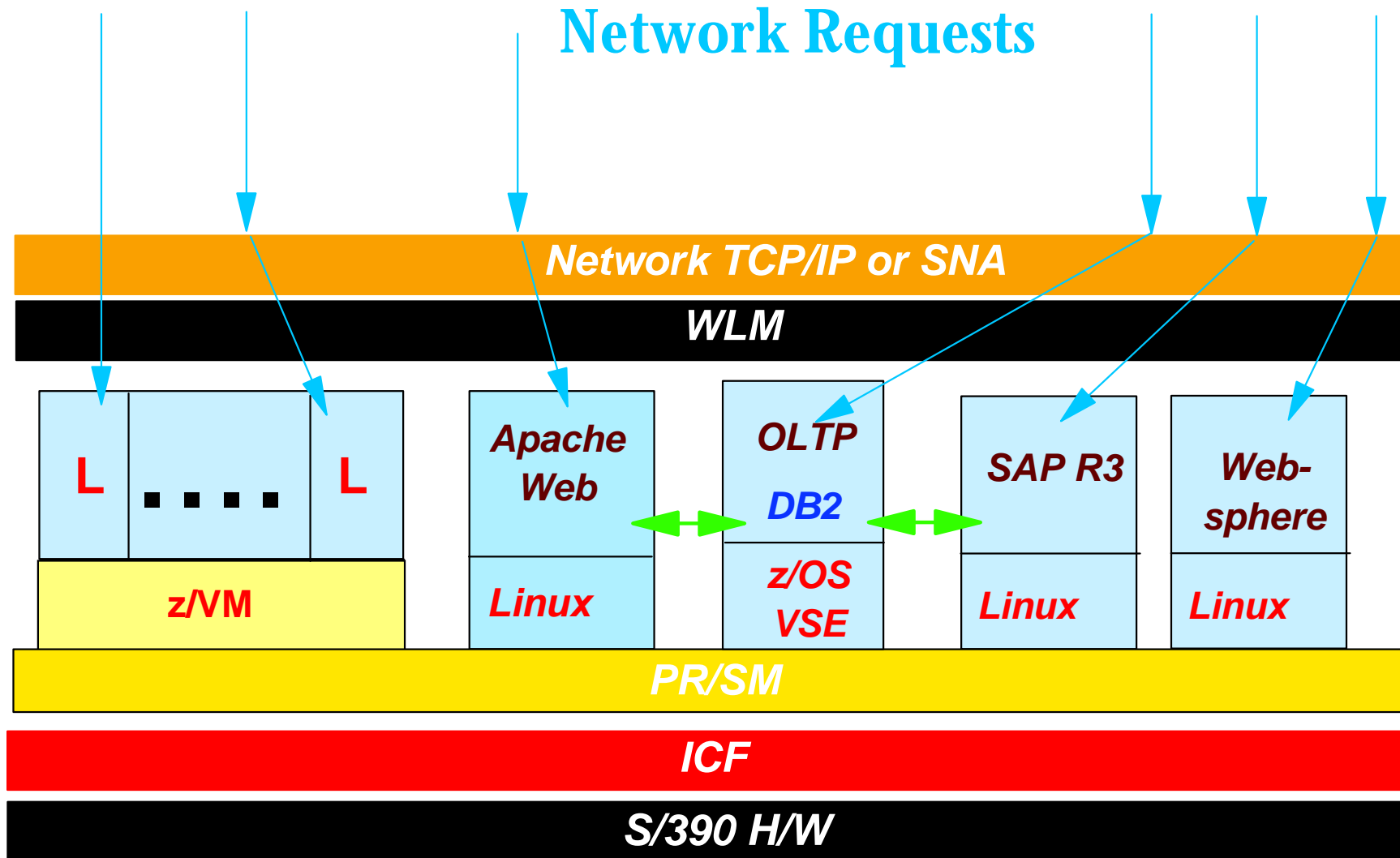
z990 evolved from z900



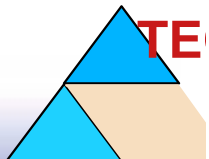
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Heterogeneous virtual system consolidation on zSeries platform



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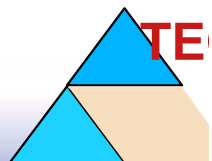


S/390 Reliability - Availability - Serviceability

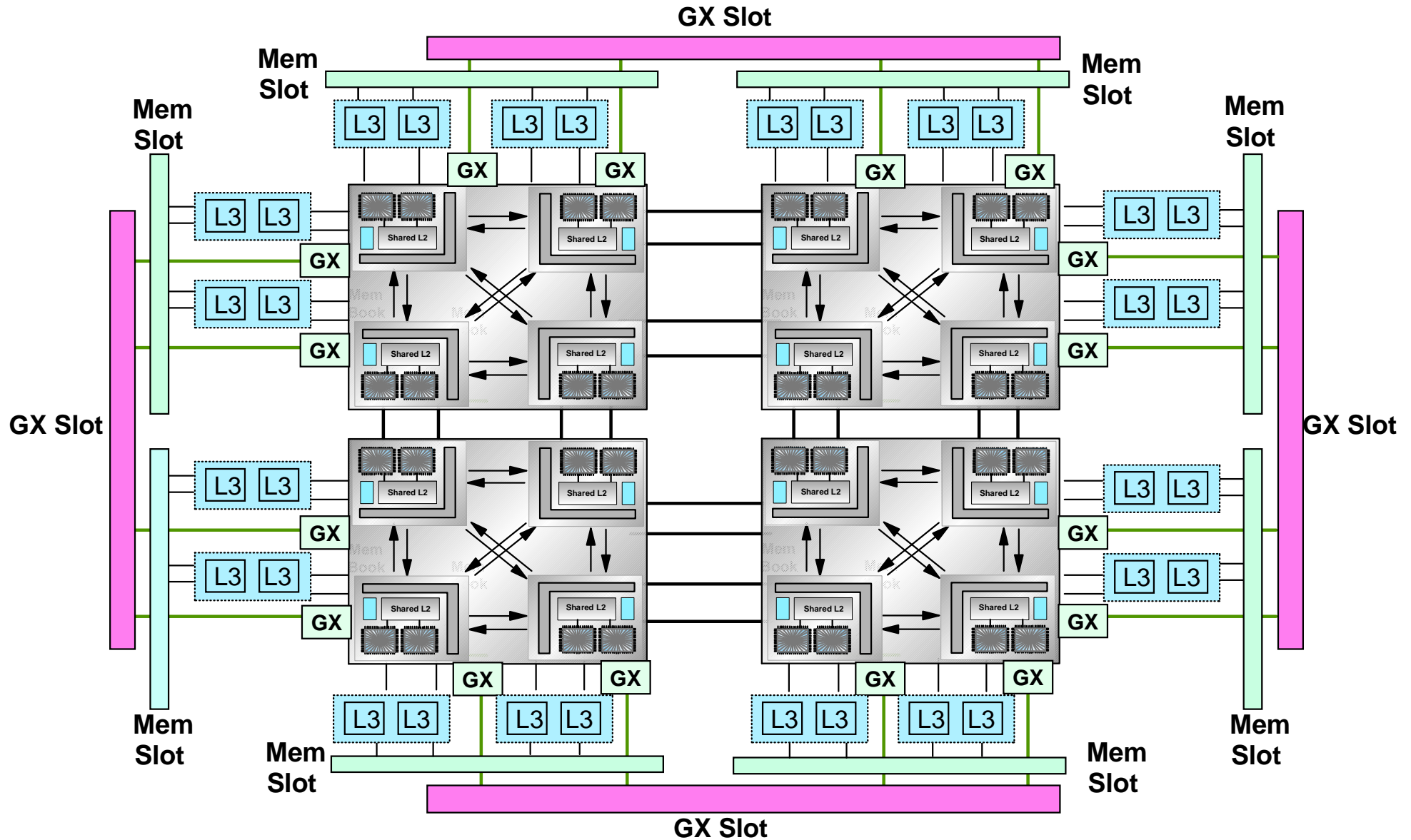
- **Guarantee Data Integrity**
 - ▶ 100% error detection
 - ▶ ECC for Memory Caches + Busses
 - ▶ Memory Key Protection
- **Provide Continuous Availability**
 - ▶ Hardware Redundancy
 - ▶ Parallel Sysplex
 - ▶ Concurrent Repair + Upgrade
- **Minimize Customer Impact**
 - ▶ Deferred Repair
 - ▶ Degraded Operation
- **Eliminate Customer Involvement**
 - ▶ Dynamic
 - Spare Processor Activation
 - Storage Reconfiguration
 - I/O Reconfiguration

➔ **Acknowledged Industry RAS Leadership**

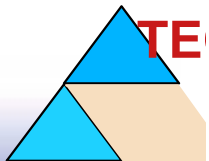
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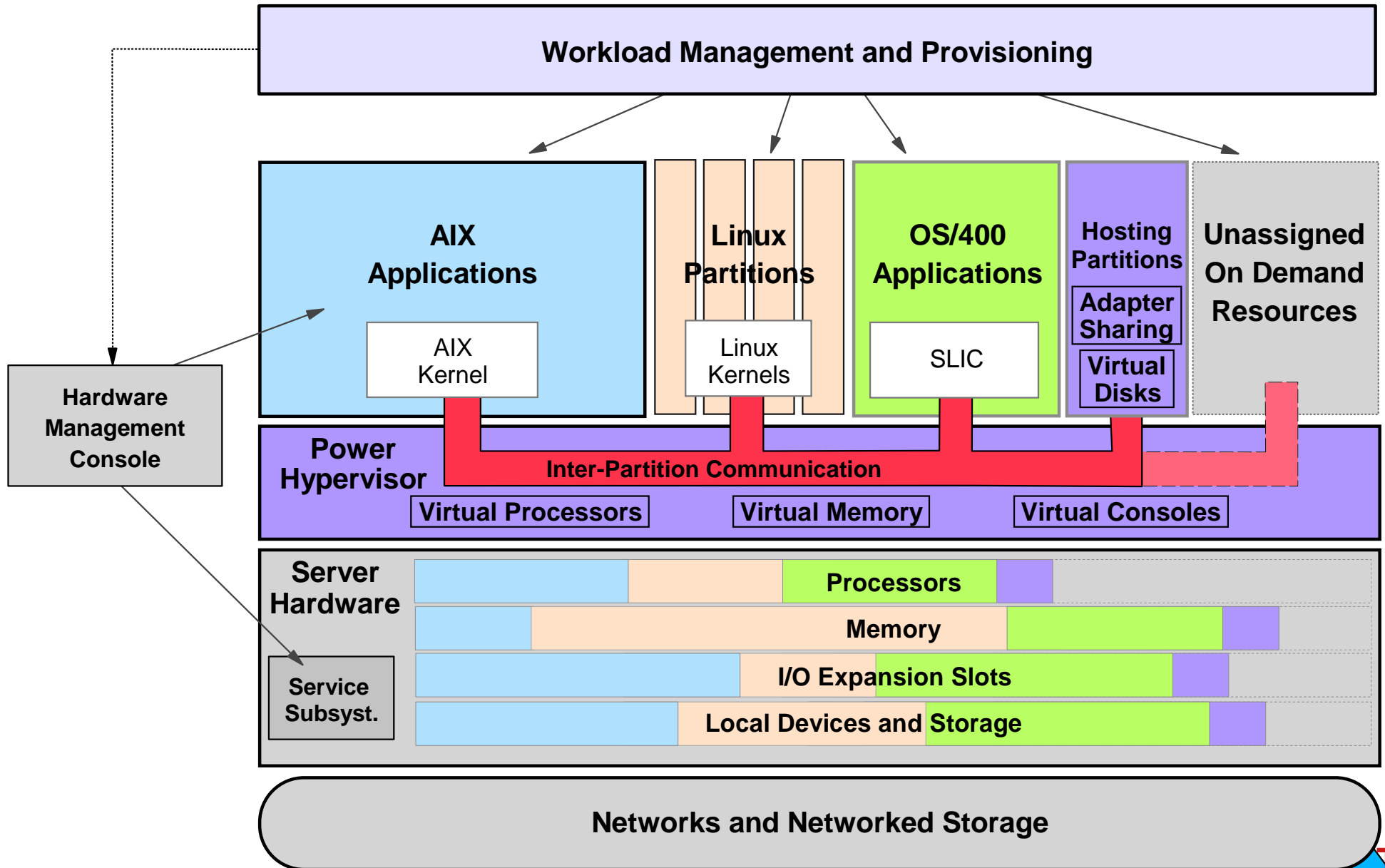
pSeries System Structure



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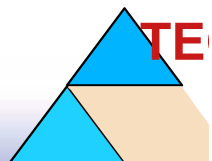
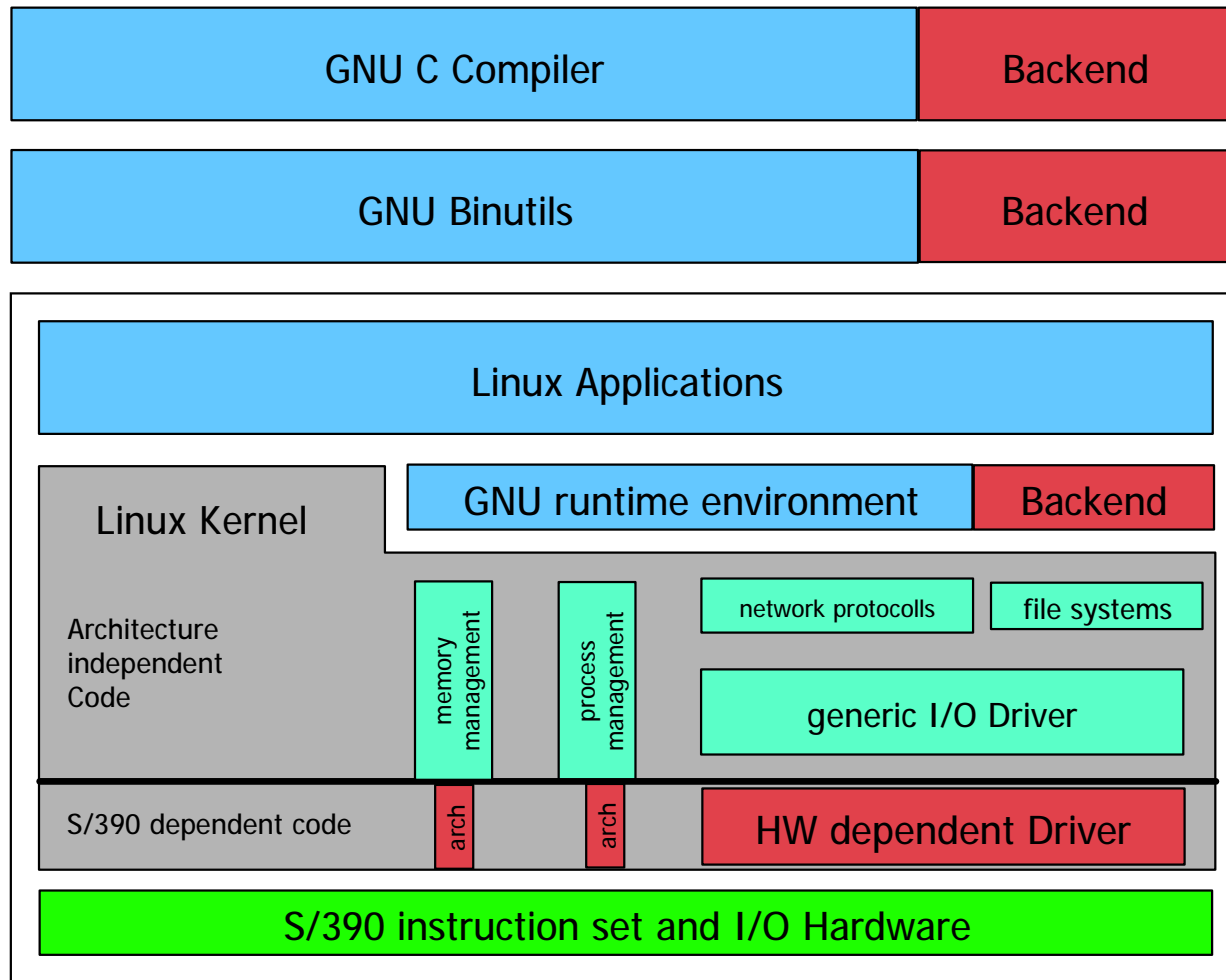


Future p/iSeries Virtual System Consolidation



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Linux Platform Structure



Linux for S/390 and zSeries

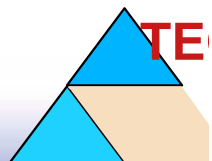
▶ Concept of Platform Independence Proven

- Open Source Products
- IBM Middleware
- Vendor Products

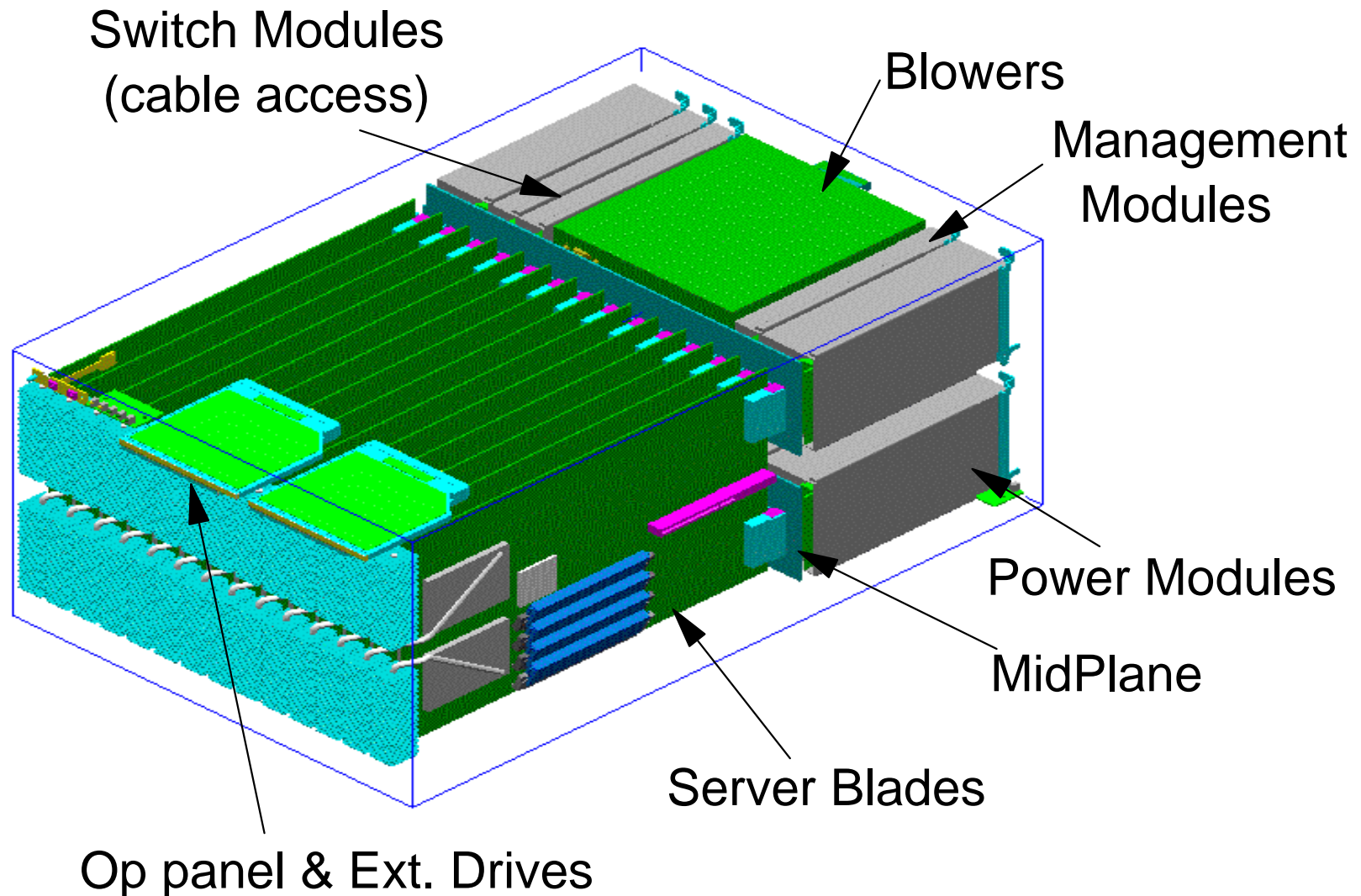
▶ Porting means in general: Translate Sourcecode and Run

▶ Culture still to be embraced

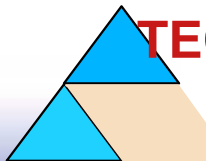
package	total	zSeries	relative
kernel	1,500,000	160,000	3% + 8%
gcc	1,300,000	12,000	0.9%
glibc	1,200,000	9,000	0.8%
gdb	1,200,000	5,000	0.4%
binutils	800,000	6,000	0.8%
strace	27,000	200	0.7%



Blade Center



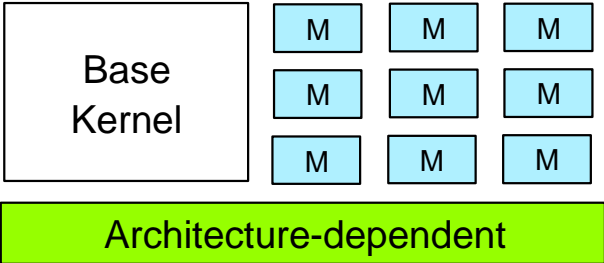
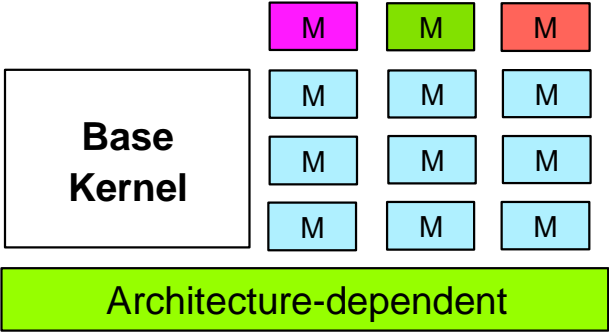
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Linux OS Family

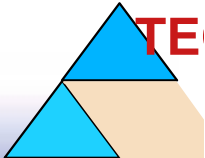
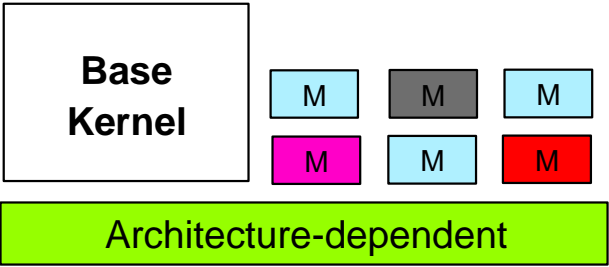
Scalability,
Clustering,
Systems
Management

Enterprise
Server



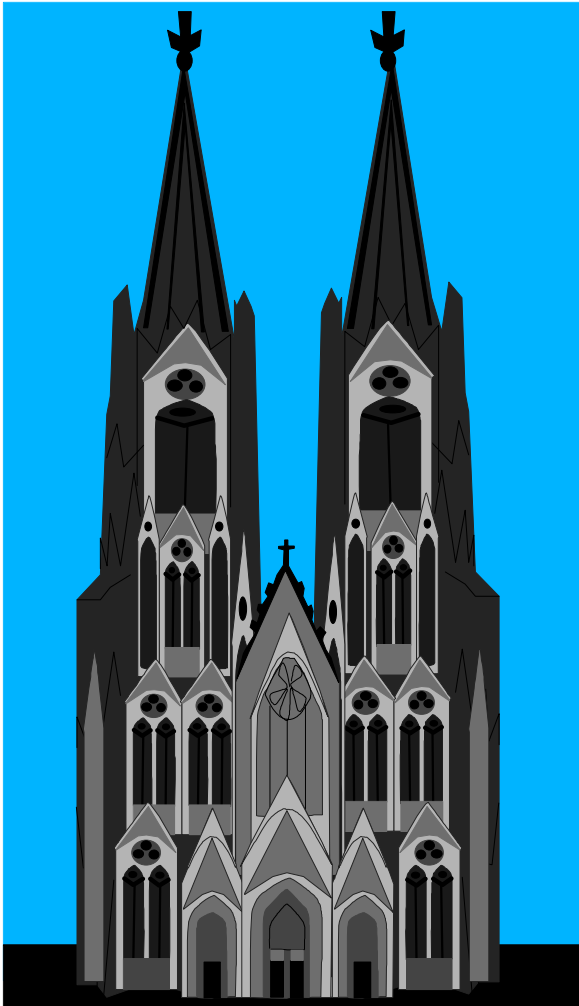
Size,
RealTime,
Device Driver,
Input Method

Embedded
Systems



Do it the LINUX way

Established development process: Cathedral-Style



► A different Culture: Bazaar

- flexible (re-) organization
- dynamic processes
- contents always up-to-date
- all tasks in parallel
- no idling
- designed by participants



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