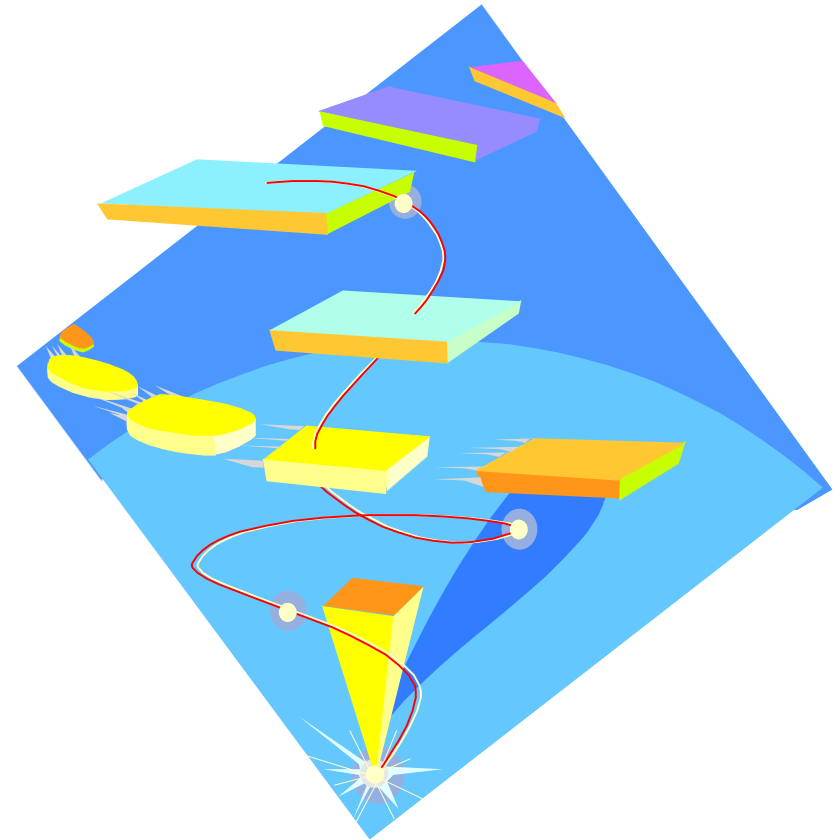


IBM Communications Servers for S/390

Enterprise-Class Networking



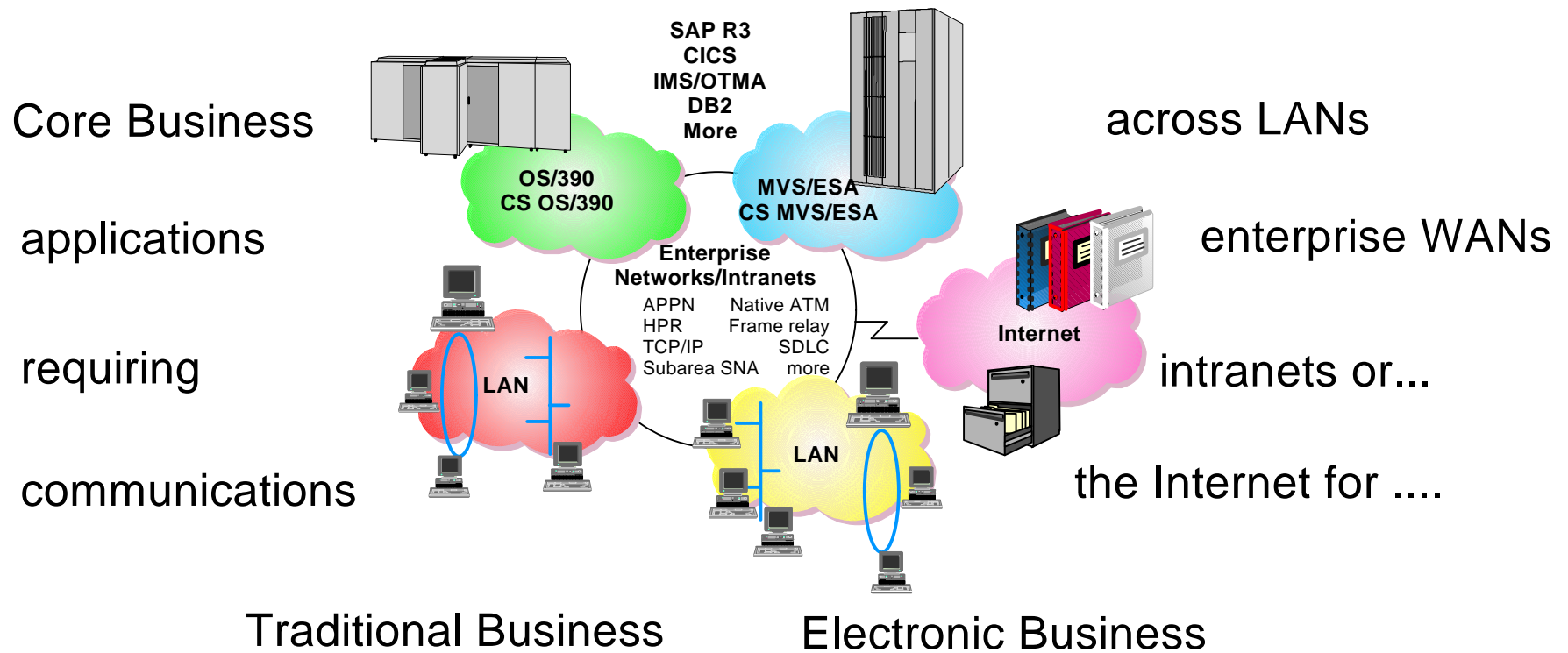
Communications Servers for S/390...

- ◆ **What are they ?**
- ◆ **Features and Benefits**
- ◆ **Directions**

Communications Servers for S/390*

CS for OS/390 and MVS/ESA

Enterprise-class, Universal Any to Any Access For...



*TCP/IP 3.2 and VTAM 4.4 with Integrated AnyNet Feature

IBM Software

Enterprise-Class Dependability

- ◆ **High Availability**
- ◆ **High Capacity Performance**
 - TCP/IP Network Supports over 20,000 sessions
 - SNA Network Supports tens of thousands sessions
- ◆ **Controlled Access Security**
- ◆ **Wide Range of Scalability**
 - From few to tens of thousands
- ◆ **Predictable Response Times**
- ◆ **Rock Solid Reliability**

High Availability

- ◆ **Virtual IP Addressing**

- **Automatic and Transparent Recovery**

- Controller Interface or Network Failures

NEW!

- ◆ **Multinode Persistent Session**

- Recovery from application outages transparent to end users

- Host connected through S/390 coupling facility
 - Avoid workload and network traffic to reestablish sessions

NEW!

- ◆ **Routing Internet Protocol (RIP)V2**

- More efficient routing around network failures

- ◆ **High Performance Routing**

- Network failure recovery transparent to user

- **Supports broader range of network configurations**

- Allows HPR sessions to extend across multiple networks

NEW!

- **Allows HPR sessions between user and application residing in a S/390 with 374X/NCP configurations.**

NEW!

- ◆ **Generic Resource capability extended to TSO/E users of parallel sysplex**

NEW!

IBM Software

High Capacity Performance

◆ High Performance Native Sockets

- Improved transport layer reduces path length and CPU time
- Improved cross memory communication
- Applications can run unchanged

◆ Virtual IP Addressing

- Enables split workloads across controllers for better performance.

◆ High Performance Routing

- Intelligent congestion control for superior throughput
- High link utilization reducing costs

◆ High Performance Data Transfer (HPDT)

NEW!

- Improves performance for APPC Applications transferring large data objects
 - HPDT coupled with multipath channel (i.e. HPDT MPC or MPC+) reduces CPU communication cycles up to two-thirds

◆ Native ATM Capability

NEW!

- Coupled with OSA 2 adapter, provides high-speed native ATM on S/390
- Supports best-effort and reserved bandwidth virtual circuits

◆ Routing Internet Protocol V2

NEW!

- More efficient use of IP addresses
- Addressing schemes tailorable to meet enterprise requirements

IBM Software

Controlled Access Security

NEW!

◆ **RIP V2 provides packet authentication**

- Authentication is password controlled
- Passwords can be up to 16 octets long
- Unauthorized RIP V2 messages are discarded

NEW!

◆ **Improved VTAM Cryptographic support**

- Supports message authentication code (MAC)
- Transaction Security System (TSS) supports broader range of products

NEW!

◆ **Improved IMS security through OTMA support**

- Easier extension of OTMA security enhancements to IMS transactions used by TCP/IP clients

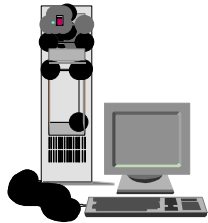
Communications Servers for S/390

Universal, Any to Any Access

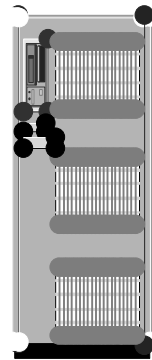
Multiple Network Technologies

Multiple Platforms

OS/390
MVS/ESA
HP
SUN



UNIX
AS/400
NT
OS/2 Warp
WIN95
DEC
RS/6000
Others



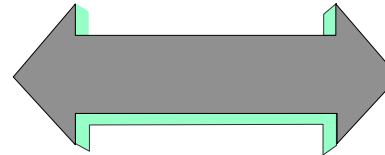
Home
Road
Office
Wired



Wireless
Mobile

Multiple Sites/Types

ATM Native
ATM LAN Emulation
X.25
Dial Cellular
Other



SNA
APPN/HPR
TCP/IP
AnyNet
ATM
Frame Relay
Token Ring/FDDI

Multiple Protocols



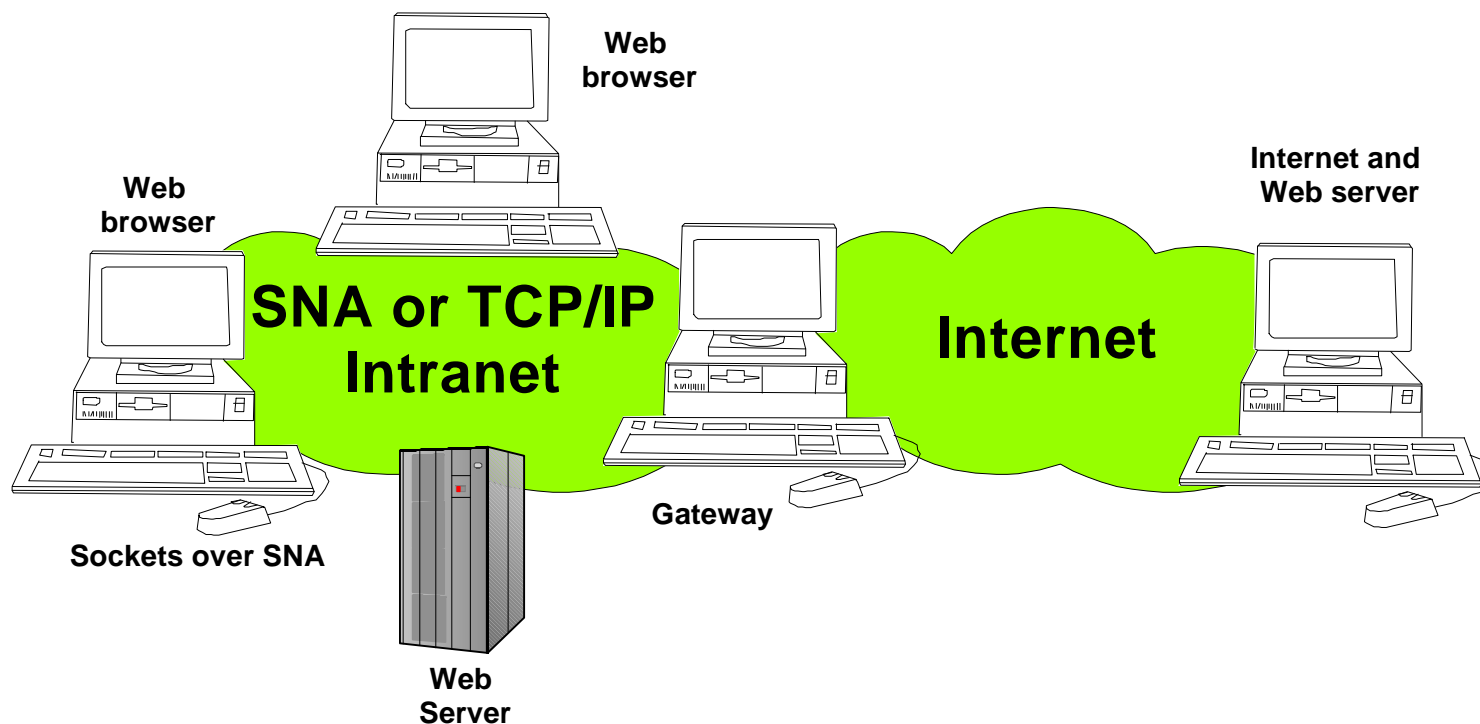
• Multiple Application Types

- 3270
- APPC
- CICS & IMS Sockets
- MVS/Open Edition
- TCP/IP supports OTMA
- FTP, Telnet, Email

Network Computing for Your Core Business

IBM Software

Intranet/ Internet Access From Anywhere

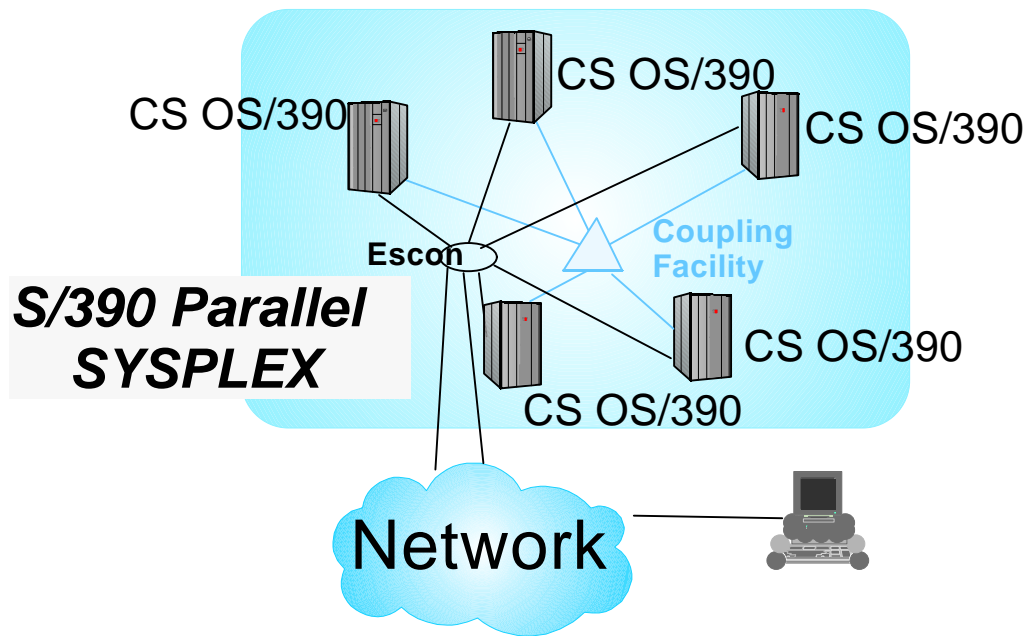


Whether the enterprise network is TCP/IP or SNA...

- ◆ End-users access Internet/intranet via web browsers while staying connected to their native network
- ◆ Internet users access Web server in the enterprise network

IBM Software

Unique Benefits for OS/390



- **Single system image**
- **Workload balancing**
- **Scalability/horizontal growth**
- **High availability**

NEW!

♦ **TSO/E Generic Resource**

- High availability for mission critical data and applications

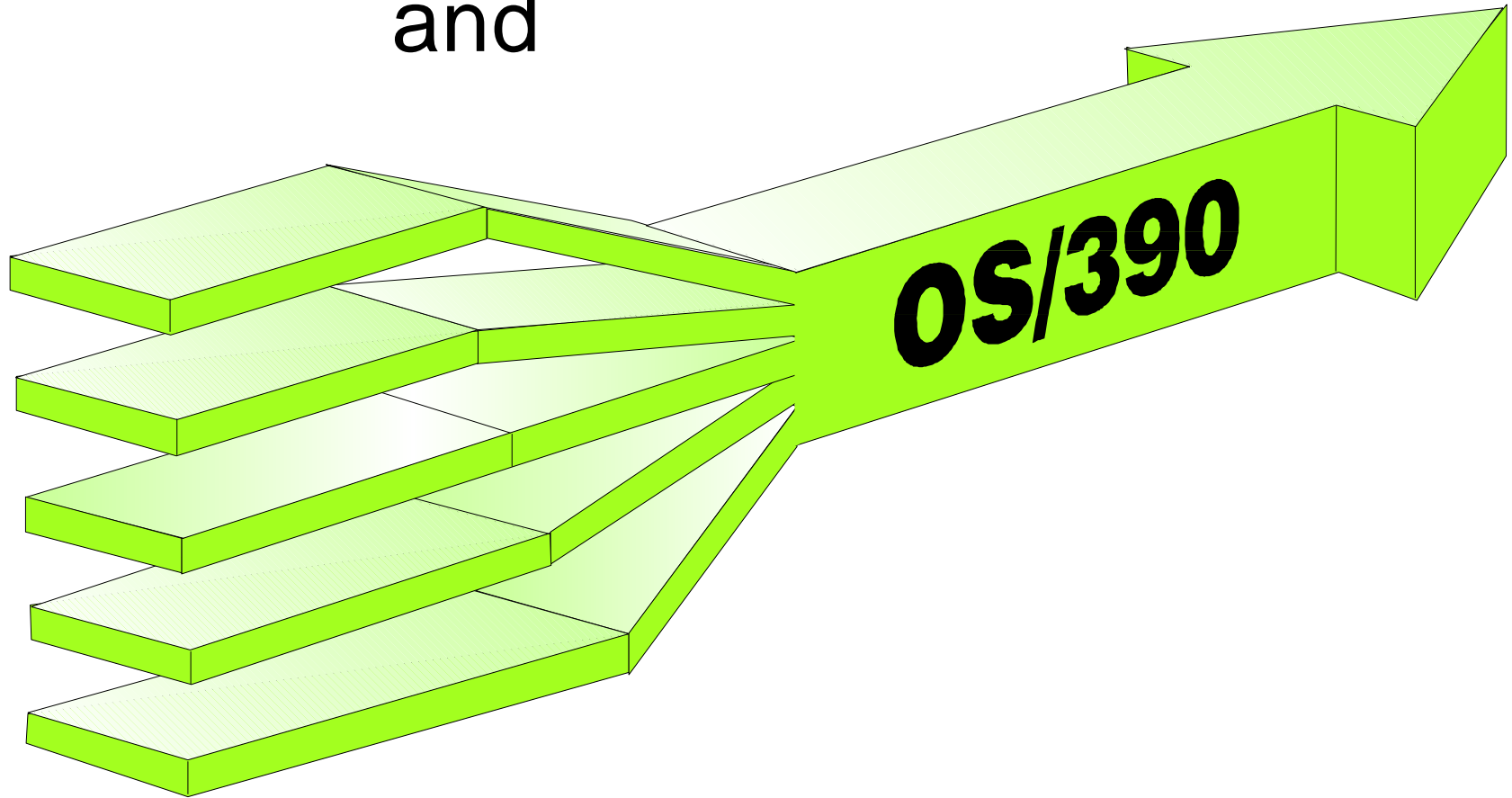
NEW!

♦ **TSO/E session balancing across sysplex**

- Enhanced usability for end users of the parallel sysplex servers

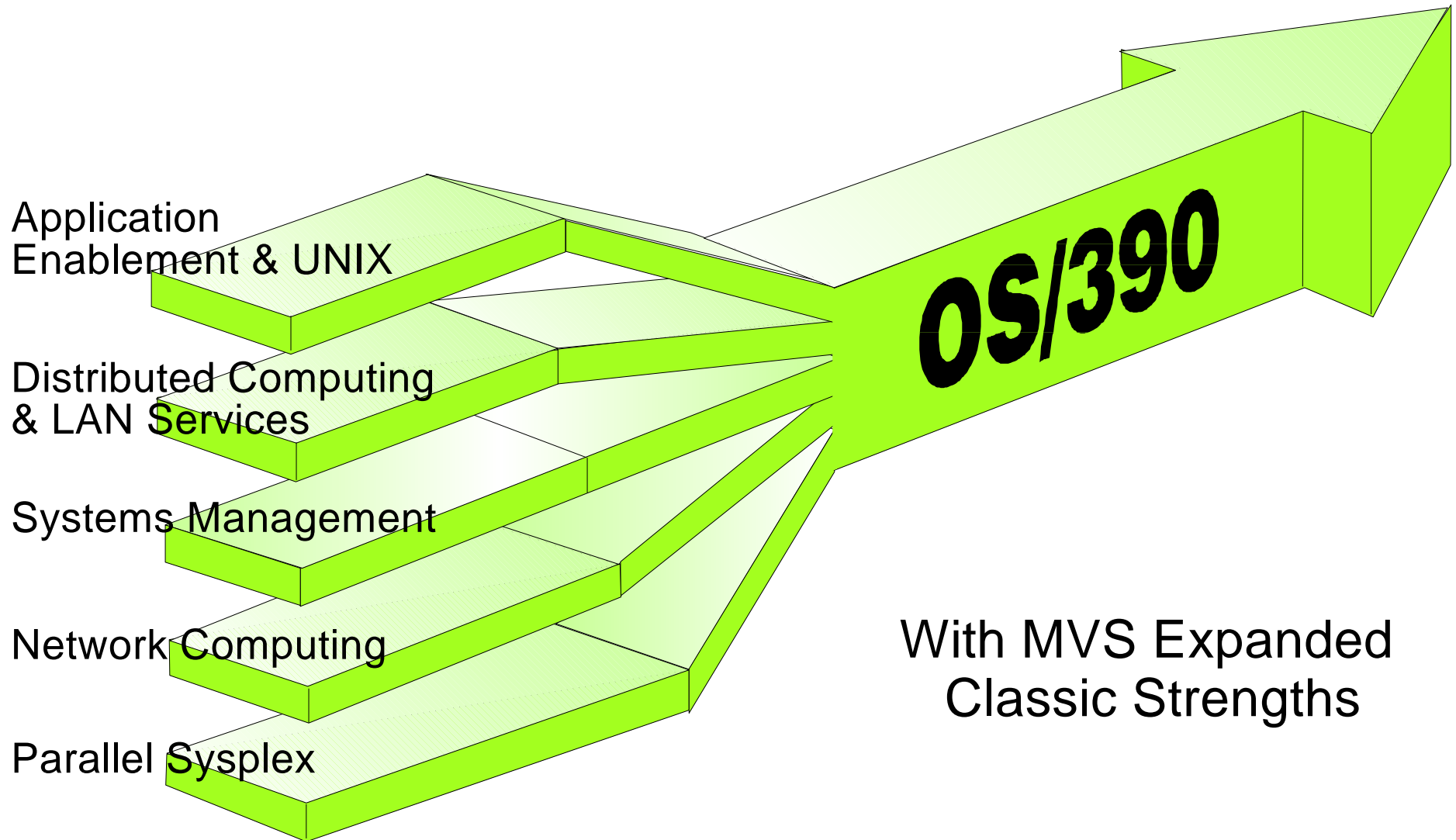
IBM Software

Communications Server and



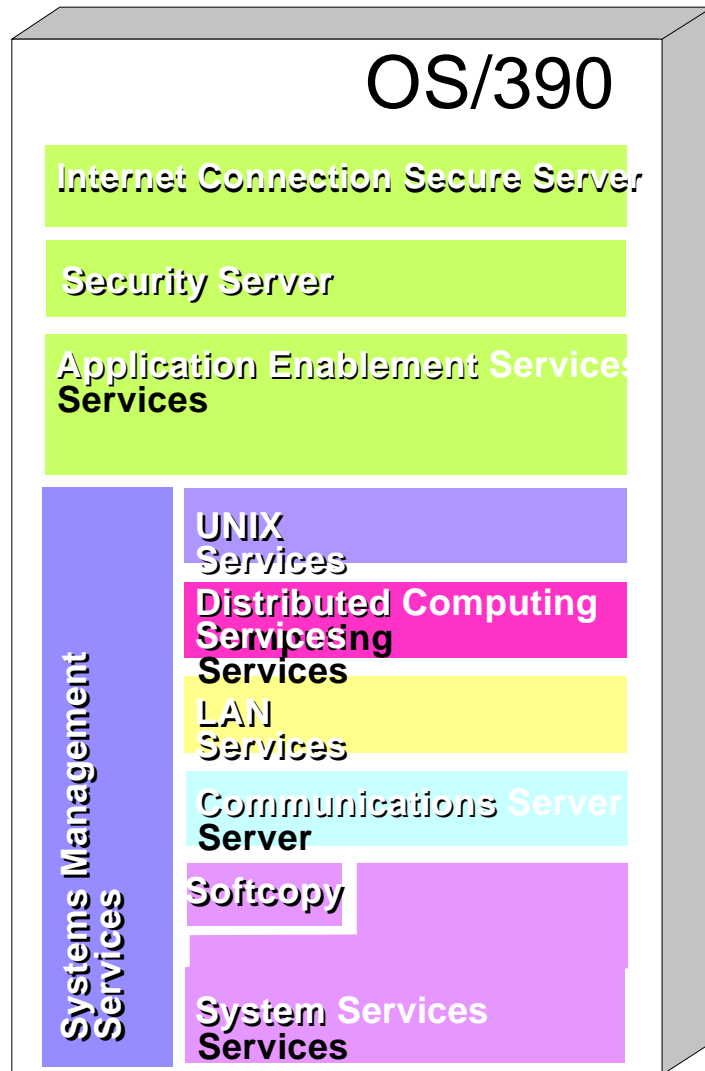
A Powerful Combination

Transforming S/390 Software



IBM Software

What is OS/390?



Leading edge open, secure network computing server

- Application enabled including Year 2000 support
- Improves time to market of business solutions
- Simplifies planning, installation, test and maintenance
- Improves total cost of computing
- Parallel Sysplex Continuous Application Availability
- Secure Network Computing Enabled
- UNIX 95 Branded Services
- Base for future enhancements

By:

- Integrating functions of products and optional features
- Performing extensive system integration testing
- New simplified delivery vehicle
- Providing powerful search, viewing and printing of softcopy publications

IBM Software

OS/390 R3 Base Elements Enhanced

System Services

- MVS/ESA BCP★
- JES2★
- ISPF
- TSO/E★

Systems Management Services

- HCD★
- SMP/E★
- SystemView for MVS Base

Application Enablement Services

- Vendor Product and Lotus Domino Enablement★
- SOMobjects RTL★
- SOMobjects Service Classes
- Language Environment★
- VisualLift RTL★
- OS/390 Application Enabling Technology★

UNIX Services

- OE MVS System Services★
- OE MVS Application Services★

Distributed Computing Services

- OE DFS (OSF 1.1)★

Communications Server

- VTAM 4.4 (includes AnyNet)
- TCP/IP 3.2
- TCP/IP 3.2 CICS Sockets
- TCP/IP 3.2 IMS Sockets

Network Computing Services

- ICSS V2R1 (not Full DES)
- BonusPak II

LAN Services

- LAN Server★
- OSA/SF 1.2

shipped with each OS/390 release when Security is specified

★ OS/390 Exclusive Enhancements

IBM Software

OS/390 R3 Optional Priced Features Enhanced

System Services

- **JES3★**

Systems Management Services

- **RMF★**
- **SDSF★**

Security Server ★

- **DCE Security Server and RACF**

Application Enablement Services

- **C/C++ (with and without debugger)★**
- **SOMobjects ADE (CORBA 2.0)★**

Distributed Computing Services

- **IP PrintWay / NetSpool**

★ OS/390 Exclusive Enhancements

IBM Software

R3 Optional No Charge Feature Enhancements

Network Computing Services

- **ICSS V2R2 and V2R1 North American security (Triple DES)**
- **ICSS V2R2 and V2R1 Export Security (RC2/RC4)**

Application Enablement Services

- **TCP/IP 3.2 OE MVS Applications**

Preconfigured OS/390 Base Image CD (available 5/97)

- **For PC Server S/390**
- **For RS/6000 S/390 Server-on-Board**

Communications Server

- **TCP/IP 3.2 Kerberos DES**
- **TCP/IP 3.2 Kerberos Non-DES**
- **TCP/IP 3.2 OS/2 Offload**
- **TCP/IP 3.2 Network Print Facility**

- ◆ **Improvements to performance**
 - TCP/IP stack and applications
- ◆ **Enhancements for network computing environment**
 - Host on Demand
 - Improved Security
 - Network Station
- ◆ **New and improved TCP/IP applications function**
- ◆ **Extended synergy between VTAM and TCP/IP**
- ◆ **Enhanced multiprotocol support**

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DB2*
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DFSMSdss
DFSMSshsm
DFSMSrmm
ESCON*
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390

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