

# SAP Systems Management Roadmap

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SAP AG



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## Topics

- Managing Mission-Critical Applications

Manageability

Performance

Availability

Security

Outlook



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# Managing Mission-Critical Applications

System managers face special demands...



Create Sales Order & Billing Document



Create Shipping Order

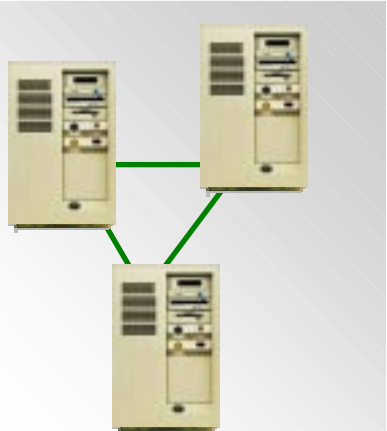


Post Incoming Payment



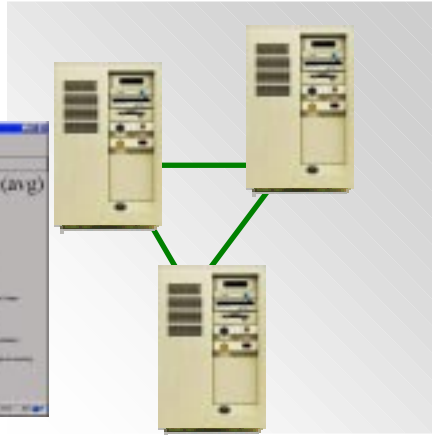
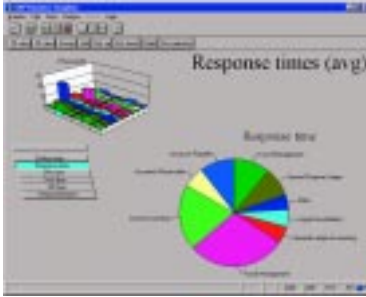
# The System Manager Must Ensure...

## Manageability



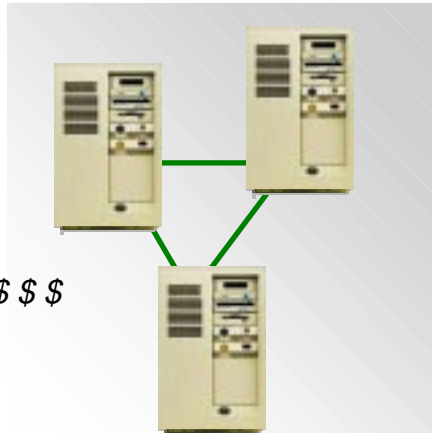
# The System Manager Must Ensure...

## Performance



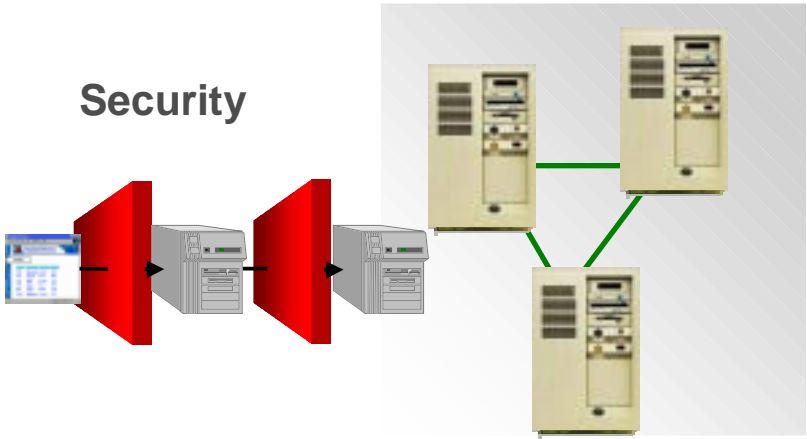
# The System Manager Must Ensure...

## Availability



# The System Manager Must Ensure...

## Security



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## Topics

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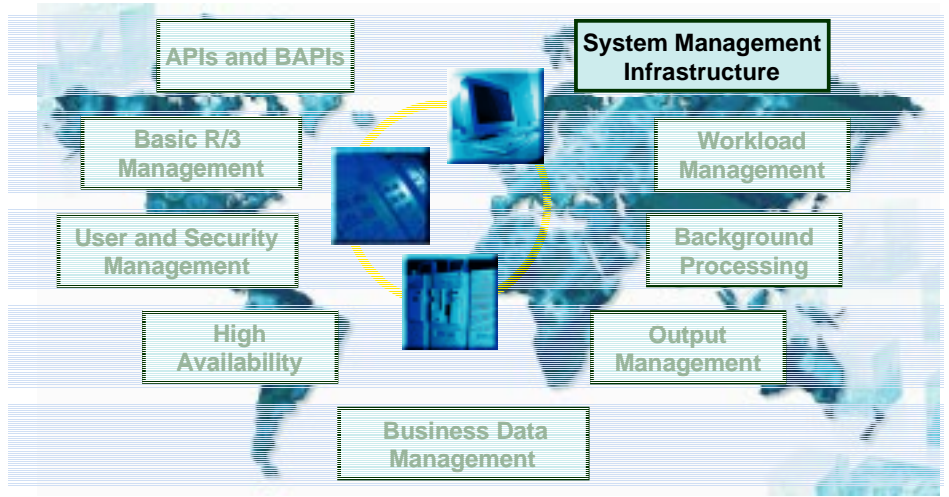
Outlook



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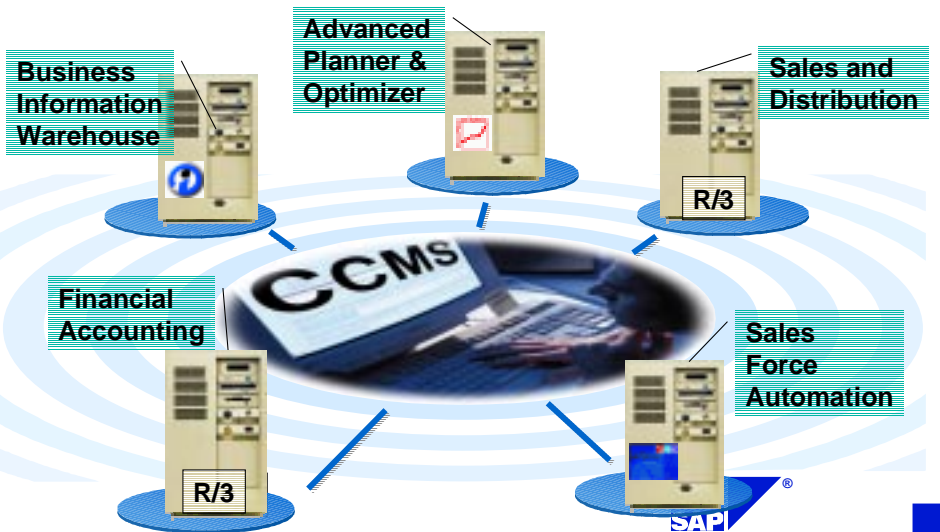
# CCMS: Computing Center Management System



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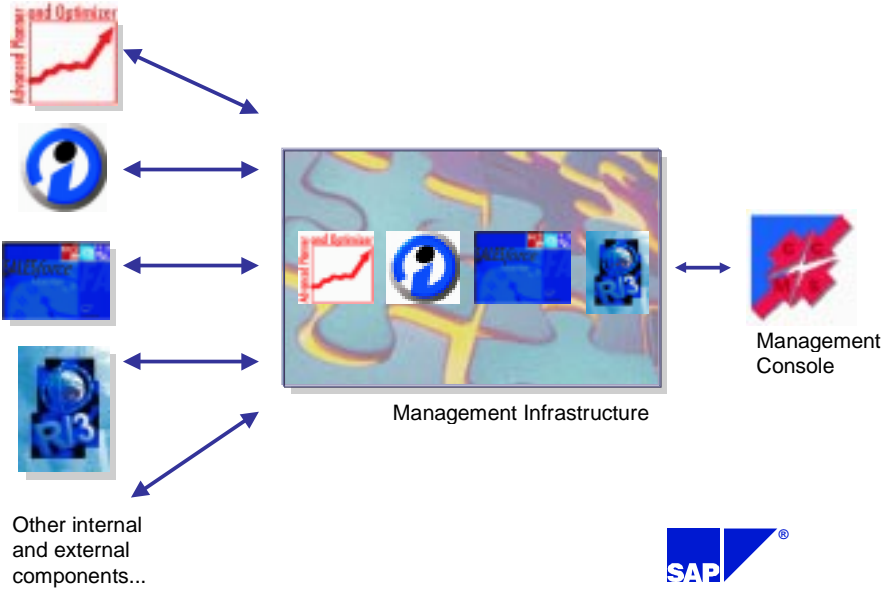
# Centralized System Management in a Decentralized World



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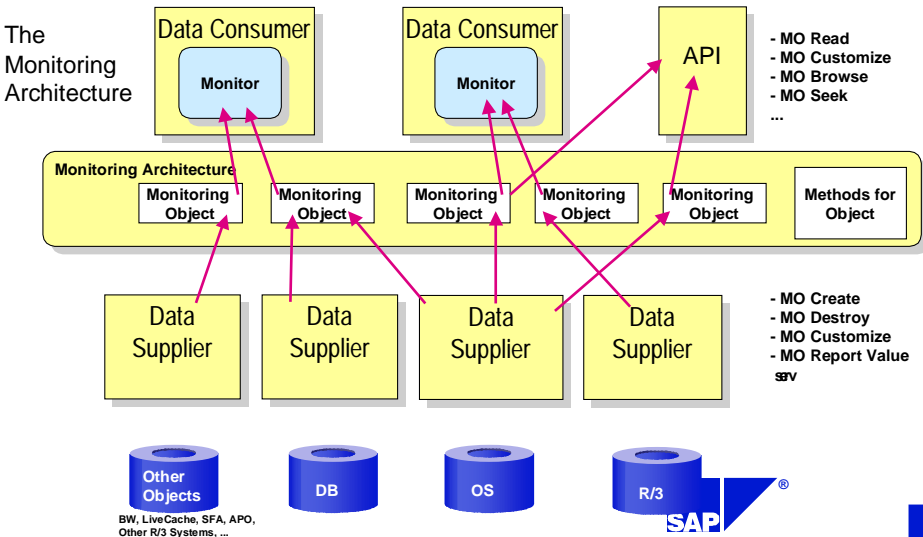
# System Management Infrastructure



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# System Management Infrastructure



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# System Management Infrastructure

## API for Collection Tools

```
Report datasupplier_1...  
Call function SALI_MO_CREATE_ATTACH..      " Create or attach to  
                                           " monitoring object  
  
Call function SALI_PERF_CREATE_ATTACH      " Create (for example)  
                                           " a performance monitoring  
                                           " attribute  
SALI_SMES_CREATE_ATTACH                   " Status message attribute  
SALI_MSC_CREATE_ATTACH                     " Message container attribute  
  
* Gather performance data (application-specific code)  
call function SALI_PERF_REPORT_VALUE      " Report value to  
                                           " monitoring architecture  
SALI_SMES_REPORT_T100_MESSAGE             " Report status message  
SALI_MSC_REPORT_T100_MESSAGE             " Add message to message  
                                           " container
```

**Session N2:** *The CCMS Monitoring Architecture in R/3 Release 4*  
Tuesday 14:00 - 15:30

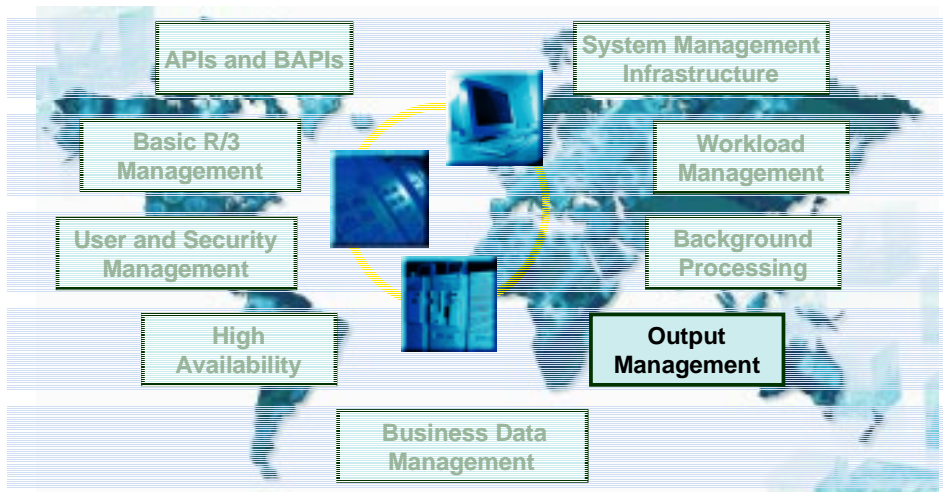
**Session F4:** *The CCMS Monitoring Architecture in R/3 Release 4: Workshop*  
Wednesday 14:00 - 18:00



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# CCMS: Computing Center Management System



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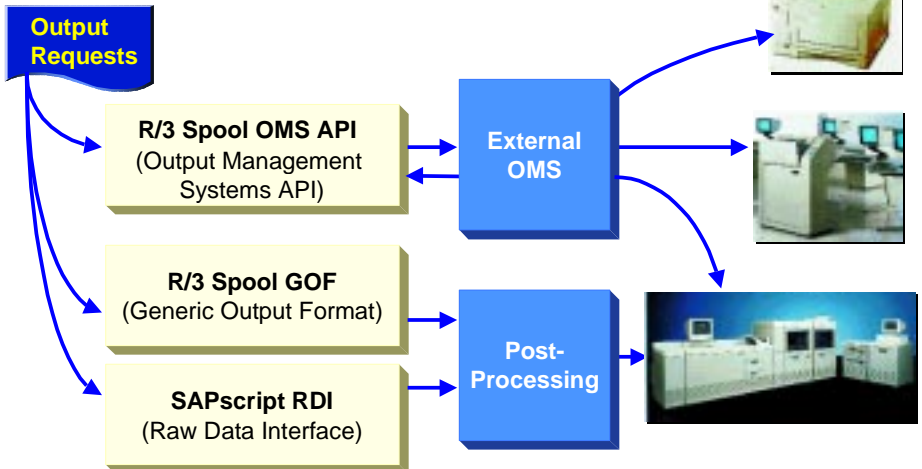
# Output Management

- Output tailored to high-volume, real-time requirements
- Complete, platform-independent, output-ready formatting within R/3
- Architecture enhancements for reliability and high throughput
  - Multiple spool servers per output device
  - Automatic workload balancing
  - Output request takeover for unavailable spool server
- BAPI for integration with external tools

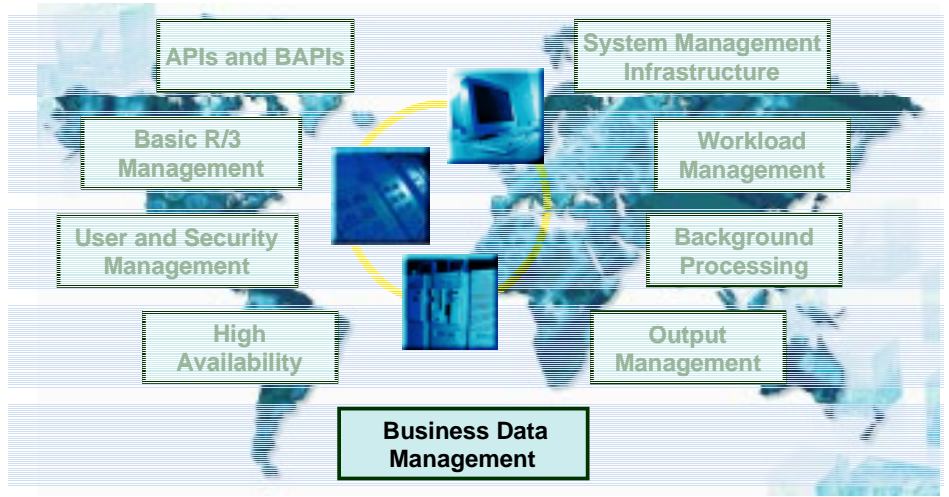


# Post-Processing Options

## R/3 Spool System



# CCMS: Computing Center Management System



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## Database Management

### ● Challenges

- Database monitoring
  - ◆ Watch the database proactively
  - ◆ Minimize failure latency
- Backup concept that meets your runtime and restore time needs
- Fast, adaptable restore to handle database failures quickly and safely
- Data archiving concept to keep database trim

### ● Solution

- CCMS SAPDBA
- CCMS Data Archiving

**Session C1:** SAPDBA: New Features of the R/3 Oracle DB Administration

Tuesday 10:30 - 12:30

Wednesday 10:30 - 12:30

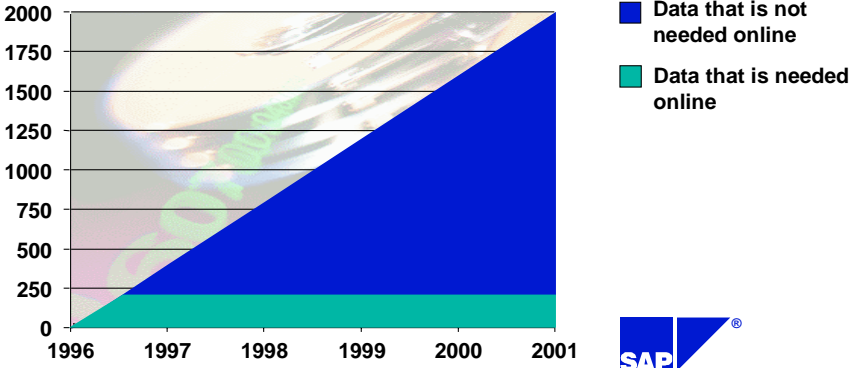


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# Data Archiving: Customer Case

- Yearly data growth 400 GB, retention 6 months
- Data aging 1800 GB not required after 5 years
- Backup volume without archiving: 1,000,000 GB after 5 years
- Backup volume with archiving: 190,000 GB after 5 years

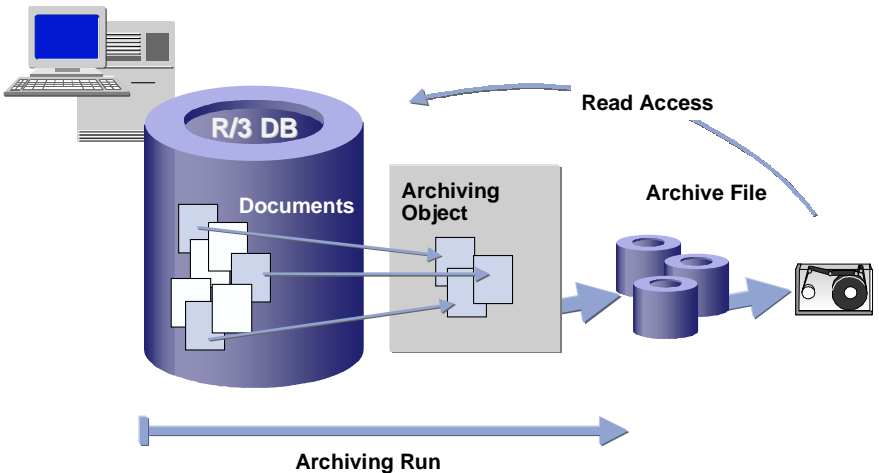


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# Data Archiving



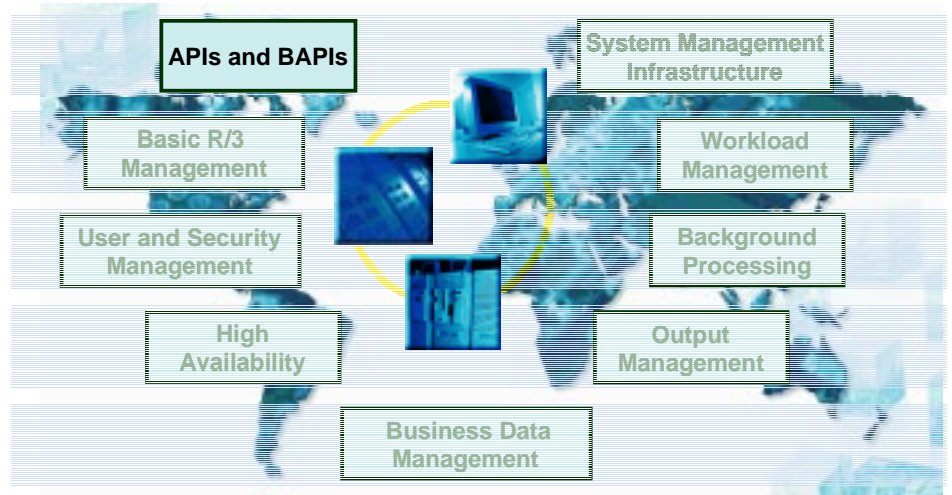
Session F2: Data Archiving Solutions with ADK and R/3 AS  
Tuesday 14:00 - 18:00



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# CCMS: Computing Center Management System



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## Available BAPIs

- Background Processing (XBP)
- Backup/Recovery (BRI) (XBR)
- Database Administration (XDB)
- Framework Interface (XMI)
- Management Basics (XMB)
- Monitoring Architecture (XAL)
- Output Management (XOM)



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# CCMS: SAP's System Management Solution

- Centralized system management in the SAP Business Framework
- Efficient end-to-end management
- No need to customize; immediately available and active
- Information delivery oriented to information needs
- Platform for service-level management and service offerings
- Open for integration to protect investment
- Lowest cost of ownership



## Topics

Managing  
Mission-Critical Applications

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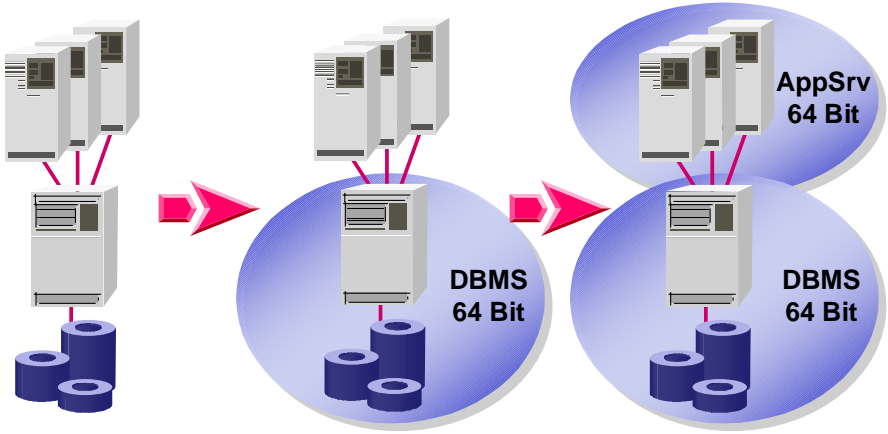
Availability

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# Roadmap from 32-Bit to 64-Bit



**Session N4:** *Live Cache: High-Performance Memory-Based Computing*  
Wednesday 10:30 - 12:00

**Session O5:** *News on R/3 Platform Technology*  
Wednesday 14:00 - 15:30



# More Performance, Scalability, Functionality

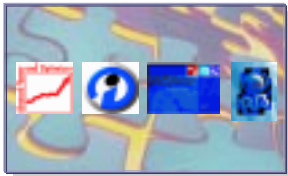


# Managing Business Processes

- **SAP performance statistics**
  - Based on exhaustive work process-level statistics collection
  - Enables detailed analysis for problem-solving, tuning, SLA verification, system usage analysis
  - Provides the basis for business process management
- **Visualizing business processes**
  - Service level agreements
  - Process re-engineering
  - Ease-of-use in centralized system management
  - Optimal use of system resources



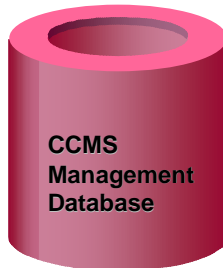
# Management Database



Management Infrastructure



System and Business Process Statistics

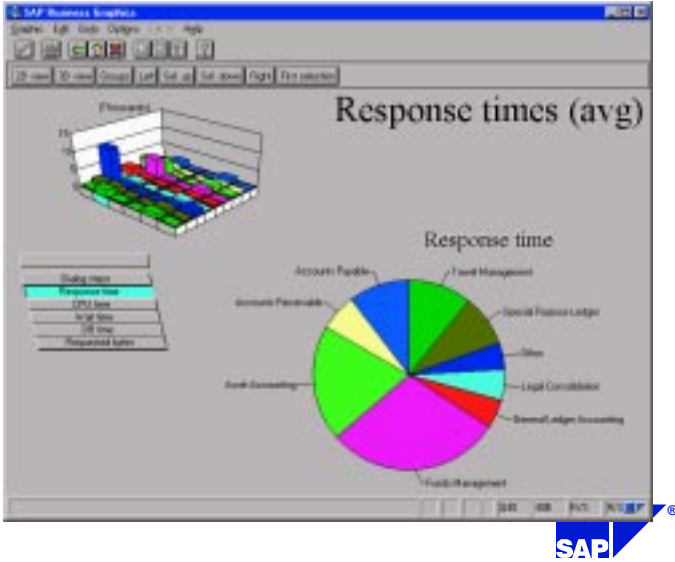


CCMS Management Database

- Trend analysis and forecasting
- "How has my new hardware changed response time?"
- "How can I optimize business process x?"
- "How does yesterday's performance compare to today's?"



# Analyzing Business Process Throughput



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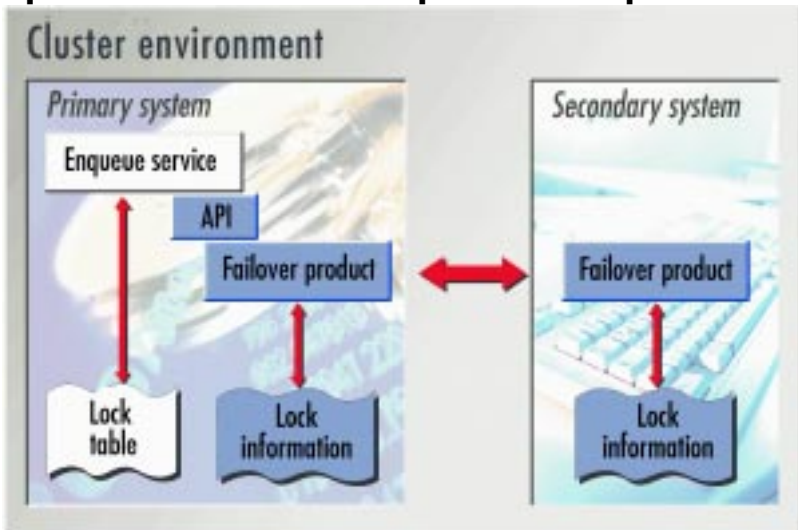
# High Availability



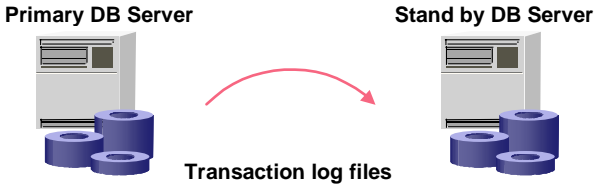
- High availability: Important business opportunity; often an IT necessity
- SAP offers reliability and redundancy solutions to minimize unplanned downtime, enable 7x24 operation
- SAP offers documented best-practices procedures for HA
- SAP works closely with platform partners to keep HA solutions on the leading edge



# Enqueue Server with Replication Option



# Disaster Recovery Mechanism



- Restore backup to stand by DB server
- Transfer of transaction log files from primary DB server to secondary DB server
- Commit after writing to log file on primary DB server
- No performance impact on primary DB server



## Topics

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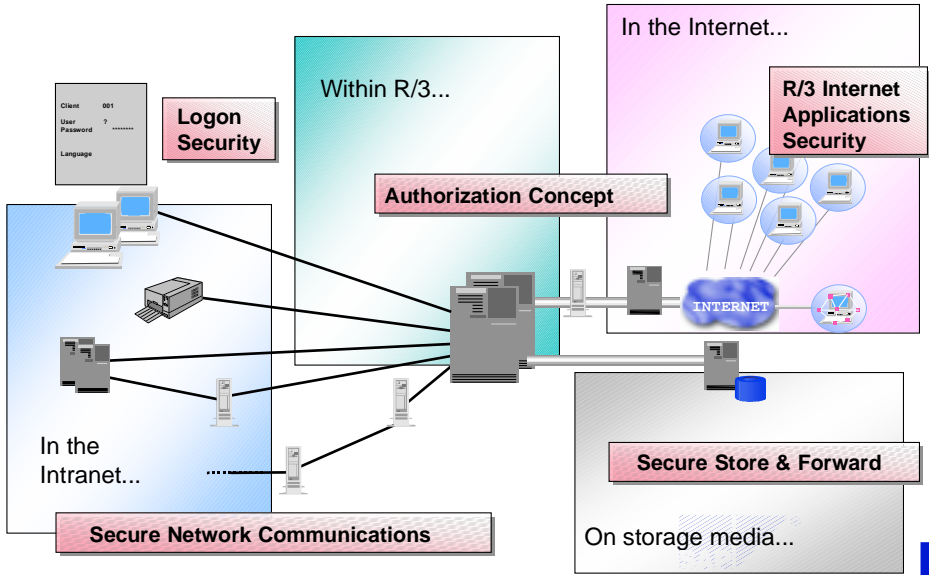
Availability

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# System Security Solutions



## System Security

- **Security affects the entire system**
  - R/3 - Database - Network - Operating system
- **In R/3**
  - User authentication by password
  - Authorization check via R/3 authorization concept
- **On the Internet**
  - Deployment of Internet security standards
    - SSL (Secure Sockets Layer)
    - PCT (Private Communication Technology)
    - SET (Secure Electronic Transactions)
    - Firewalls



# System Security

- **Security for R/3 online communications and business transactions**
  - Secure Network Communications and Secure Store & Forward
- **Customer support for secure R/3 installations**
  - SAP R/3 Security Guide and Installation Recommendations

Session 06: *R/3 Security Services - A Technical Overview*  
Wednesday 16:00 - 17:30



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# CCMS Development Outlook

## Initiatives

- **Stand-alone CCMS**
- **Support for new standards**
  - Web-Based Enterprise Management (WBEM)
  - Common Information Model (CIM)
- **LDAP-based access (Lightweight Directory Access Protocol)**
- **Enhanced business process views for real-time monitoring (Service Level Agreements), tuning, and analysis**
- **Exploitation of new HW/OS functionality**



## Related Sessions and Workshops

- **N2**            **The CCMS Monitoring Architecture in R/3 Release 4**  
Tuesday                      14:00 - 15:30
- **F4**            **The CCMS Monitoring Architecture in R/3 Release 4: Workshop**  
Wednesday                      14:00 - 18:00
- **O3**            **Output Management with R/3 Release 4**  
Tuesday                      16:00 - 17:30
- **N4**            **Live Cache: High-Performance Memory-Based Computing**  
Wednesday                      10:30 - 12:00



## Related Sessions and Workshops

- **O5**            **News on R/3 Platform Technology**  
Wednesday            14:00 - 15:30
- **F2**            **Data Archiving Solutions with ADK and R/3 AS**  
Tuesday                14:00 - 18:00
- **O6**            **R/3 Security Services - A Technical Overview**  
Wednesday            16:00 - 17:30
- **J5**            **Directory-Enabled R/3: SAP Supports LDAP**  
Wednesday            14:00 - 15:30



## Related Sessions and Workshops

- **C1**            **SAPDBA: New Features of the R/3 Oracle DB Administration**  
Tuesday                10:30 - 12:30  
Wednesday            10:30 - 12:30

