CICS Test Drive

Feel the Power

Preface

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CICS Performance Analyzer

CICS Historical Analysis for solving today's business problems

CICS Performance Analyzer

- **What does it do?**
  - ISPF Dialog to build, maintain and submit reports
  - Extensive Tabular Reports and Graph Reports
  - Create Historical Databases that include trend and capacity information
  - Comprehensive Batch Reporting and Analysis from SMF data
  - Online Statistics Reporting Capability

- **Benefits**
  - Improves tuning and capacity planning analysis
  - Improve transaction response time
  - Provides detailed performance bottleneck analysis
  - Uncovers trends leading to poor CICS performance or even outages
  - Helps plan capacity for optimal performance

CICS Performance Analyzer for z/OS (CICS PA)

Key features

- ▶ Comprehensive Performance Reporting and Analysis for CICS
- ▶ Including DB2, WebSphere MQ, and MVS System Logger
- ▶ Extensive Tabular Reports and Extract Data Sets
- ▶ Historical Database (HDB)
- ▶ Trending and Capacity Planning
- ▶ ISPF Dialog to build, maintain, and submit reports and extracts
- ▶ Comprehensive reporting of CICS Statistics data
- ▶ Ease of Use
- ▶ **Threadsafe metrics like TCB use by transaction, dispatch and CPU time, number of TCB switches etc**

CICS Support

- ▶ CICS TS V2,V3, and V1.3

New in CICS PA V2.1

- •**CICS TS V3.2 support including:**
  - • Compressed SMF type 110 records
  - • Higher precision (12-byte) clock
  - • New and updated statistics data
- •**Extended integration with OMEGAMON XE for CICS**
  - • Report on 3rd party systems monitored by OMEGAMON (Adabas, CA-IDMS, CA-Datacom, Supra)
  - • Report on Resource Limit Warnings
- •**New and updated sample reports**
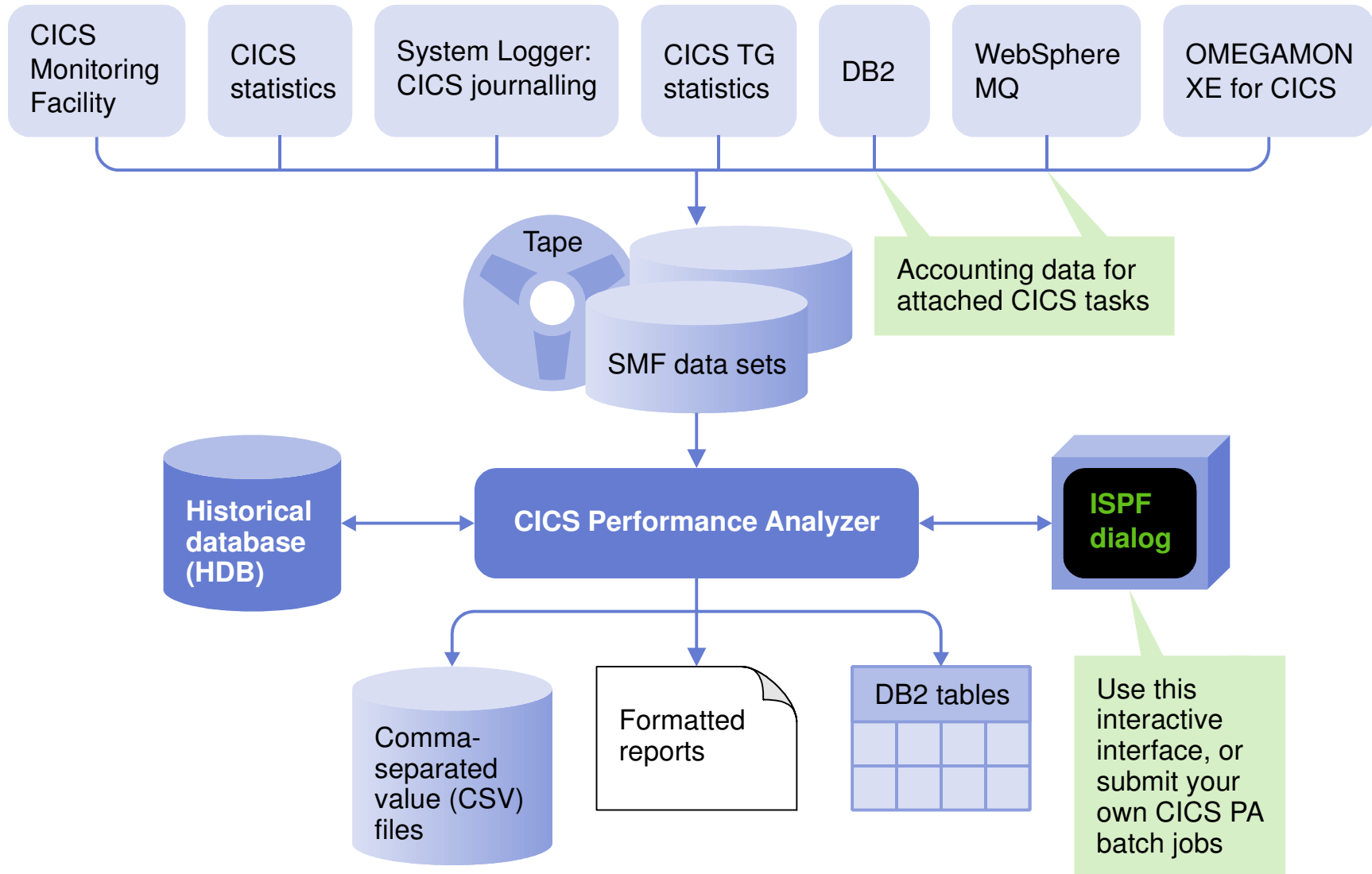 - • Transaction Profiling reports
  - • Distribution reports
- •**Historical Reporting using SupportPac CP12**

What SMF Data does CICS PA use?

- Comprehensive Performance Reporting and Analysis for CICS

- CICS Monitoring Facility (CMF) data (SMF 110)

- CICS Statistics data (SMF 110)

- CICS Server Statistics data (SMF 110)

- DB2 Accounting records (SMF 101)

- WebSphere MQ Accounting records (SMF 116)

- z/OS System Logger records (SMF 88)

- Tivoli OMEGAMON XE for CICS on z/OS (SMF 112)

- CICS Transaction Gateway for z/OS V7.1. (SMF 111)

CICS PA Overview

CICS Monitoring Facility

CICS statistics

System Logger: CICS journalling

CICS TG statistics

DB2

WebSphere MQ

OMEGAMON XE for CICS

Tape

SMF data sets

Accounting data for attached CICS tasks

Historical database (HDB)

CICS Performance Analyzer

ISPF dialog

Comma-separated value (CSV) files

Formatted reports

DB2 tables

Use this interactive interface, or submit your own CICS PA batch jobs

CICS PA - Business values

- **Plan capacity to reduce MIPS cost**
  - ▶ Trend analysis for capacity planning

- **Proactively analyze performance trends to reduce down time and increase customer satisfaction**
  - ▶ Ensure quick response to performance issues identified by an online monitor

- **Reduce cost of outages**
  - ▶ Enables performance reviews before applications go into production
  - ▶ Identification of usage trends leading to reduced CICS performance or even outages

- **Reduce risk of missing service level commitments**

- **Reduce time and cost of managing system performance and availability**
  - ▶ CICS PA also complements the enterprise-wide historical performance capabilities of IBM Tivoli ® Decision Support for z/OS

CICS Interdependency Analyzer

Understand Relationships in your CICS Environment

ON DEMAND BUSINESS™

CICS Interdependency Analyzer

- **What does it do?**
  - ▶ Real-time capture of CICS application calls (API)
  - ▶ Query facility from both Windows / CICS / Batch
  - ▶ Document application affinities to facilitate Dynamic Transaction Routing
  - ▶ Identify application programs that are ThreadSafe / Open TCB
  - ▶ Creates and updates CPSM affinities rules database

- **Benefits**
  - ▶ Eliminate manual documentation of application systems
  - ▶ Quickly identify application scope
  - ▶ Verify the application code via call path tracing
  - ▶ Automatically maintains CPSM rules
  - ▶ Helps you lower the total cost of ownership of your zSeries platform

- **Makes it easier to maintain, enhance, modify, and redistribute your applications.**

CICS Interdependency Analyzer for z/OS (CICS IA)

- **Key features**
  - ▶ Captures resource relationships
  - ▶ Programs with potential affinities
  - ▶ Run-time and batch reporting tool
  - ▶ Relationship data loaded onto a DB2 database
  - ▶ Query interface and sample queries provided for comprehensive analysis
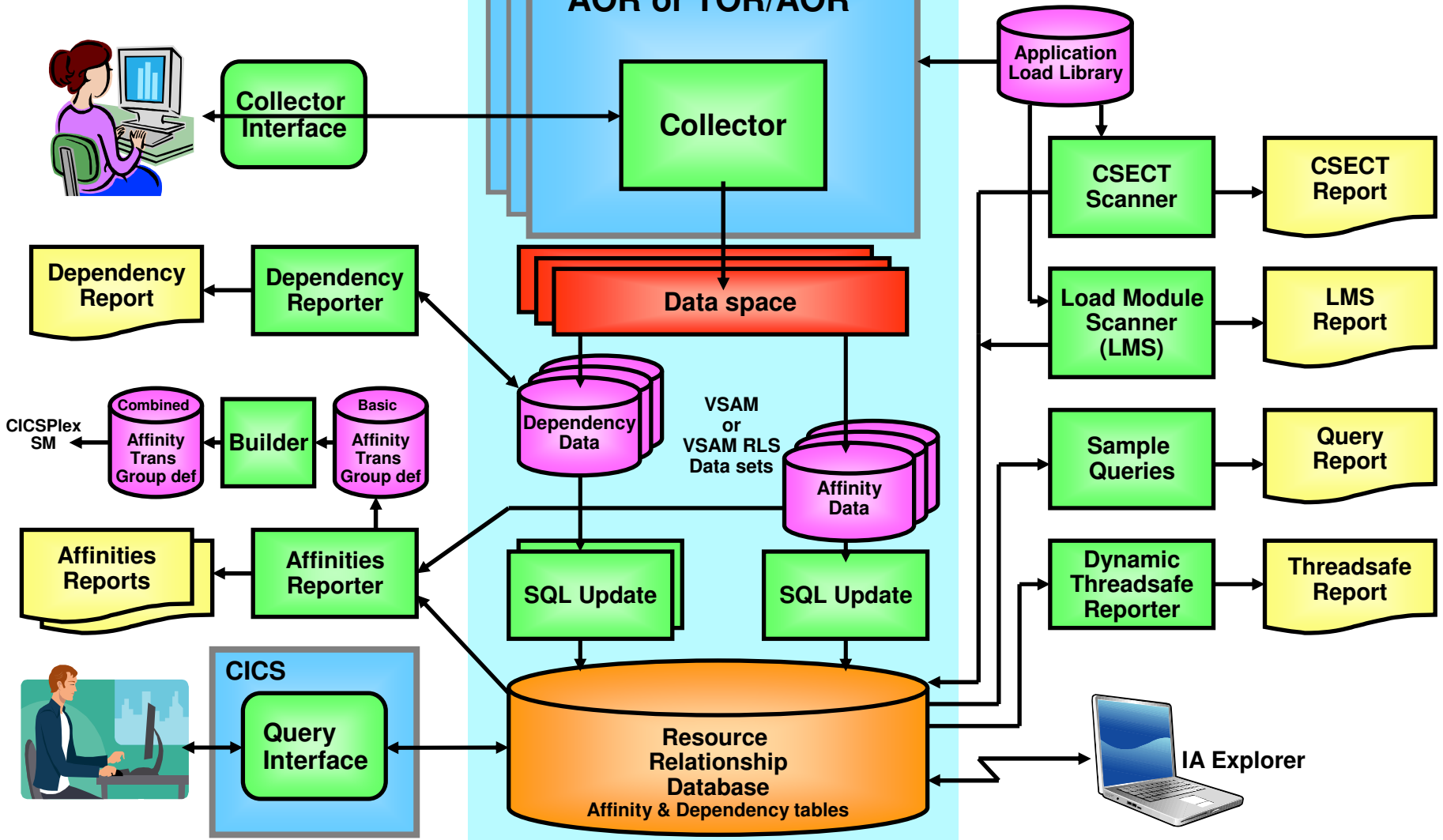
- **CICS Support**
  - ▶ CICS Transaction Server for z/OS, V2 and V3

New in CICS IA V2.2

- **CICS TS V3.2 support**
- **CICS Version Migration Support**
- **Application performance support**
- **Thread safety, Affinities**
- **Web service support**
  - •**Detect, Identify, Capture**
- **Intuitive new CICS IA Explorer**
- **Sample queries - rich query editor**
- **Software AG Natural 4GL support**
- **Optimized database schema**

CICS IA Architecture

AOR or TOR/AOR

Collector Interface

Collector

Application Load Library

CSECT Scanner → CSECT Report

Dependency Report ← Dependency Reporter

Data space

Load Module Scanner (LMS) → LMS Report

Combined Affinity Trans Group def ← Builder ← Basic Affinity Trans Group def

CICSPlex SM

Dependency Data

VSAM or VSAM RLS Data sets

Affinity Data

Sample Queries → Query Report

Affinities Reports ← Affinities Reporter

SQL Update

SQL Update

Dynamic Threadsafe Reporter → Threadsafe Report

CICS

Query Interface

Resource Relationship Database
Affinity & Dependency tables

IA Explorer

CICS IA – Business Value

- **Understand active application inventory quickly and efficiently**
  - ▶ Understand cross-system applications and dependencies
  - ▶ Know the resource topology within a particular CICS region
  - ▶ Understand the where and how resources are used
  - ▶ Know the last time a particular resource was used

- **Maintain or enhance applications more quickly and efficiently**
  - ▶ Identify the scope of a change
  - ▶ What resources that are affected directly and indirectly
    - *Transactions, programs, data elements: files, queues, screens, ...*
  - ▶ What to change, what to build, what to test, what needs to be communicated to roles involved
  - ▶ Look across boundaries, including shared data

CICS Configuration Manager

A single point of control for CICS resource definitions across your enterprise

ON DEMAND BUSINESS™

CICS Configuration Manager

- **What does it do?**

  - ▶ Simplifies and automates the management of your CICS resources in both CSD and CPSM BAS environments

  - ▶ Enables migration of CICS resources from different environments under a structured change control process

  - ▶ Tracks resource history as well as provides back-out to previous change level

  - ▶ Provides detailed reports of CICS resources

- **Benefits**

  - ▶ Helps reduce errors and abends related to incorrect resource changes

  - ▶ Minimizes manual work by operators and system programmers

  - ▶ Provides complete audit history of all CICS resource modifications

  - ▶ Helps you lower the total cost of ownership of your zSeries platform

CICS Configuration Manager for z/OS (CICS CM)

■Key features

- ▶ Create, update, delete, copy, replicate CICS resource definitions

- ▶ Change management through the life-cycle stages, e.g. development, test, production

- ▶ Create customized reports to identify redundant definitions, show resource relationships and change management history

- ▶ Audit, back-out and change authorization capabilities
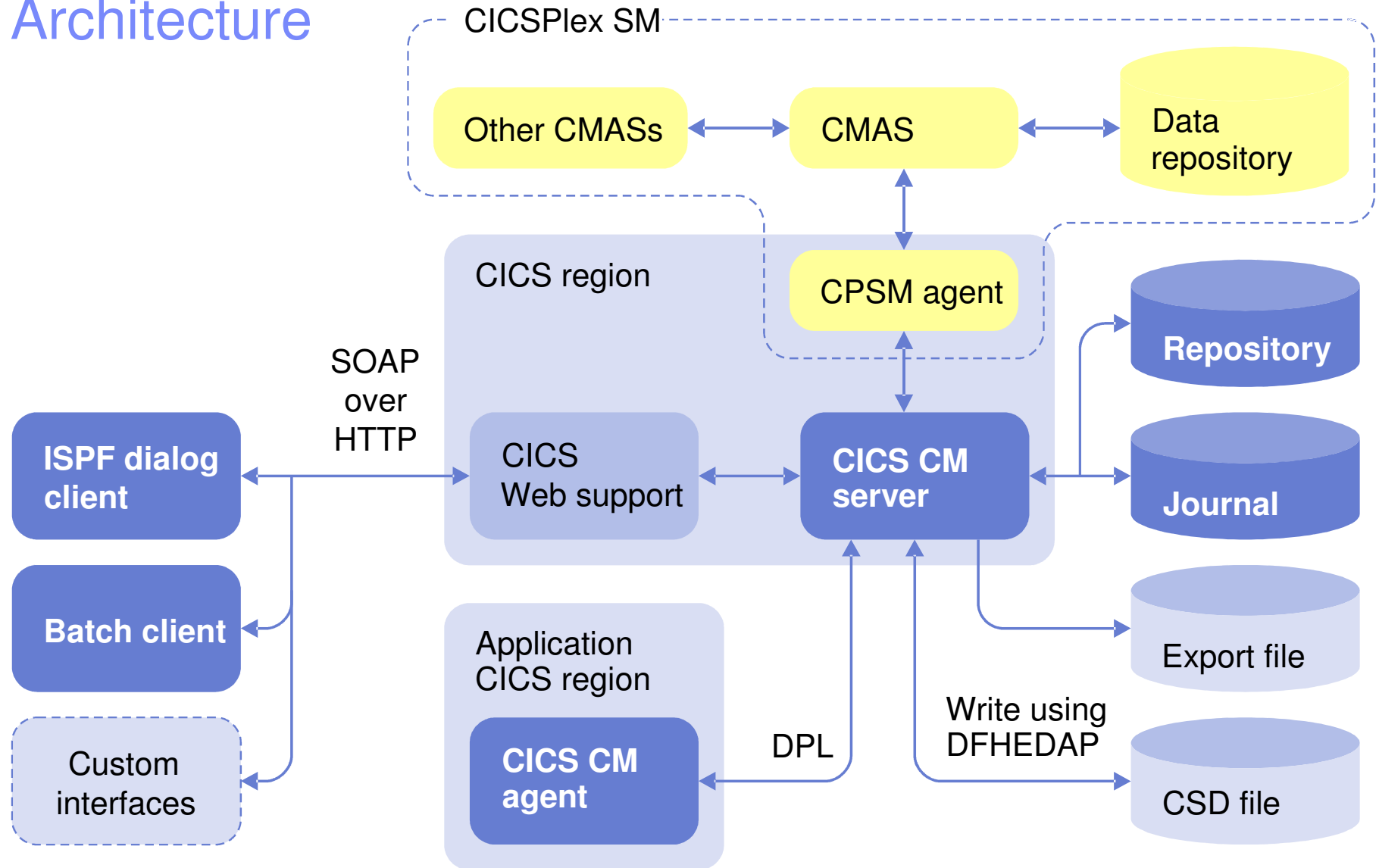
■CICS Support

- ▶ CICS Transaction Server for z/OS, V2 and V3
- ▶ CICS Transaction Server for OS/390 V1.3

New in CICS CM V1.2

- • **CICS TS V3.2 support PTF**

- • **Migration of resource definitions between partitioned environments**

- • **Integration with change management solutions**

- • **Mixed RLS and non-RLS CSDs**

- • **Improved identification of orphaned recourses**

- • **Improved CSD clean-up capabilities.**

- • **Usability and reporting enhancements**

- • **Coming soon**

- • **Identification of resources updated outside of CICS CM**

Architecture

CICSPlex SM

Other CMASs ⟷ CMAS ⟷ Data repository

CICS region

CPSM agent

SOAP over HTTP

Repository

ISPF dialog client ⟷ CICS Web support ⟷ **CICS CM server** ⟷ Journal

Batch client

Application CICS region

Custom interfaces

CICS CM agent — DPL

Write using DFHEDAP

Export file

CSD file

Business Values

Reduce CICS system administration overhead

- ▶ Single point of control (access) to all CICS resources
- ▶ Share responsibility between technical & application groups
- ▶ Extensive resource analysis capability (compare, search, history)
- ▶ Audit Trail of all resource modifications

Improve Speed of Implementation

- ▶ Associate resource modifications to AD change package
- ▶ Build and reuse migration schemes
- ▶ Use transformation rules to modify attributes
- ▶ Automate repetitive change activities

Reduce the chance of outages

- ▶ Enforce naming standards
- ▶ Less manual intervention
- ▶ Signoff for migrations
- ▶ Backout facility

For more information

Tools WEB sites

▶ CICS tools, including library: www.ibm.com/cics/tools

▶ WebSphere zSeries tools:
    www.ibm.com/software/websphere/zadportal

▶ Try CICS tools for free for 60 days
    www.ibm.com/software/os/zseries/trials/cicstools

Support Pacs

▶ CP12: CICS PA Historical Database Reporting
    www.ibm.com/support/docview.wss?uid=swg24011
    321

Business Article

▶ The Wall Street Journal, June 24, 2007. *The Dinosaurs That Won't Die:*
    http://blogs.wsj.com/biztech/2007/07/24/the-dinosaurs-that-wont-die/

Program numbers (licence):

5697-J23: CICS Interdependency Analyzer

5697-N40: CICS Performance Analyzer

5697-I78: CICS Configuration Manager

5655-P30: CICS VSAM Recovery

5697-I76: CICS VSAM Transparency

5697-I94: CICS Batch Application Control

5655-K01: IBM Session Manager

5655-I05: CICS OTTO