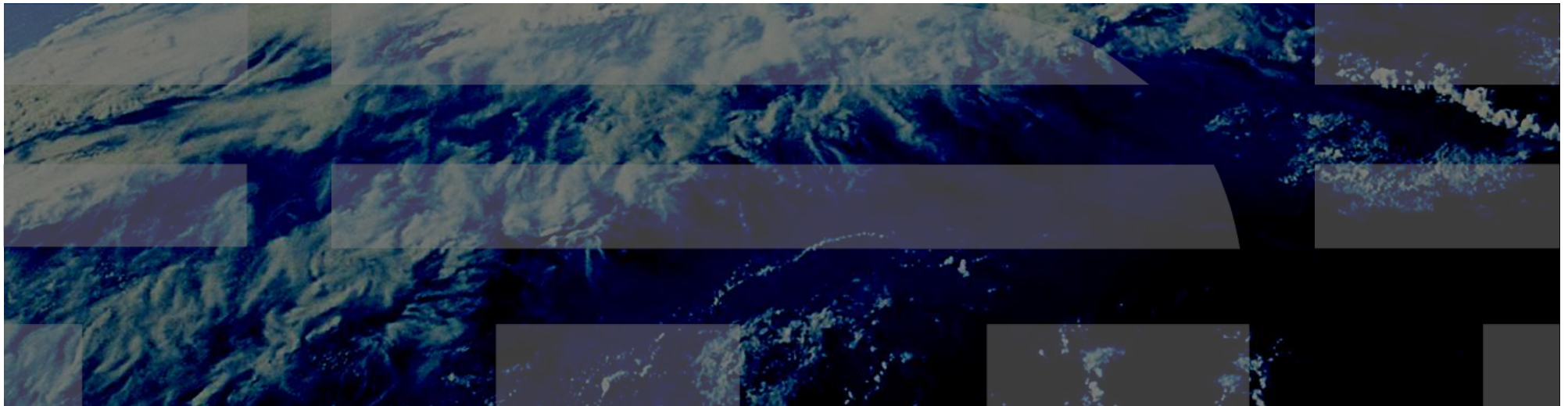


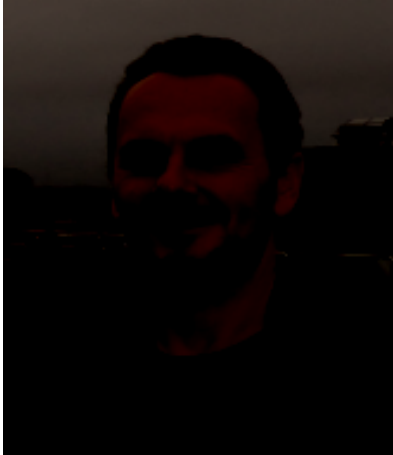
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# IBM Case Manager 5.2 Administration Overview and Best Practices Part 1



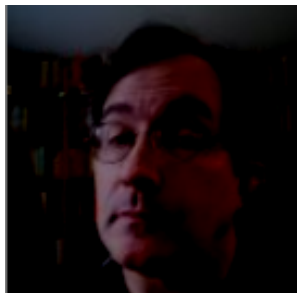
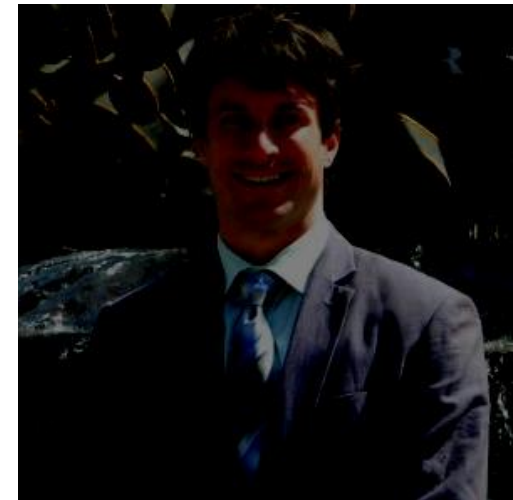
This session will be recorded and a replay will be available on IBM.COM sites and possibly social media sites such as YouTube. When speaking, do not state any confidential information, your name, company name or any information that you do not want shared publicly in the replay. By speaking during this presentation, you assume liability for your comments.

## Welcome & Thank you for joining us!



Tom Garda  
Software Support Engineer  
IBM Enterprise Content Management

William Kilpatrick  
Software Support Engineer  
IBM Enterprise Content Management



Brian Roots  
Case Manager Engineering Team  
IBM Enterprise Content Management

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## Section 1: Agenda

- Section 1: Agenda
  
- Section 2: Introduction to IBM Case Manager
  - System Topology - Concepts, ICM Environments
  - Tools
  - Log and Configuration files
  - Ping Pages
  - Resources
  
- Summary
  
- Questions and Answers

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## Section 2: Introduction to IBM Case Manager

- **System Topology**
- Tools
- Log and Configuration files, Debugging
- Ping Pages
- Resources – links

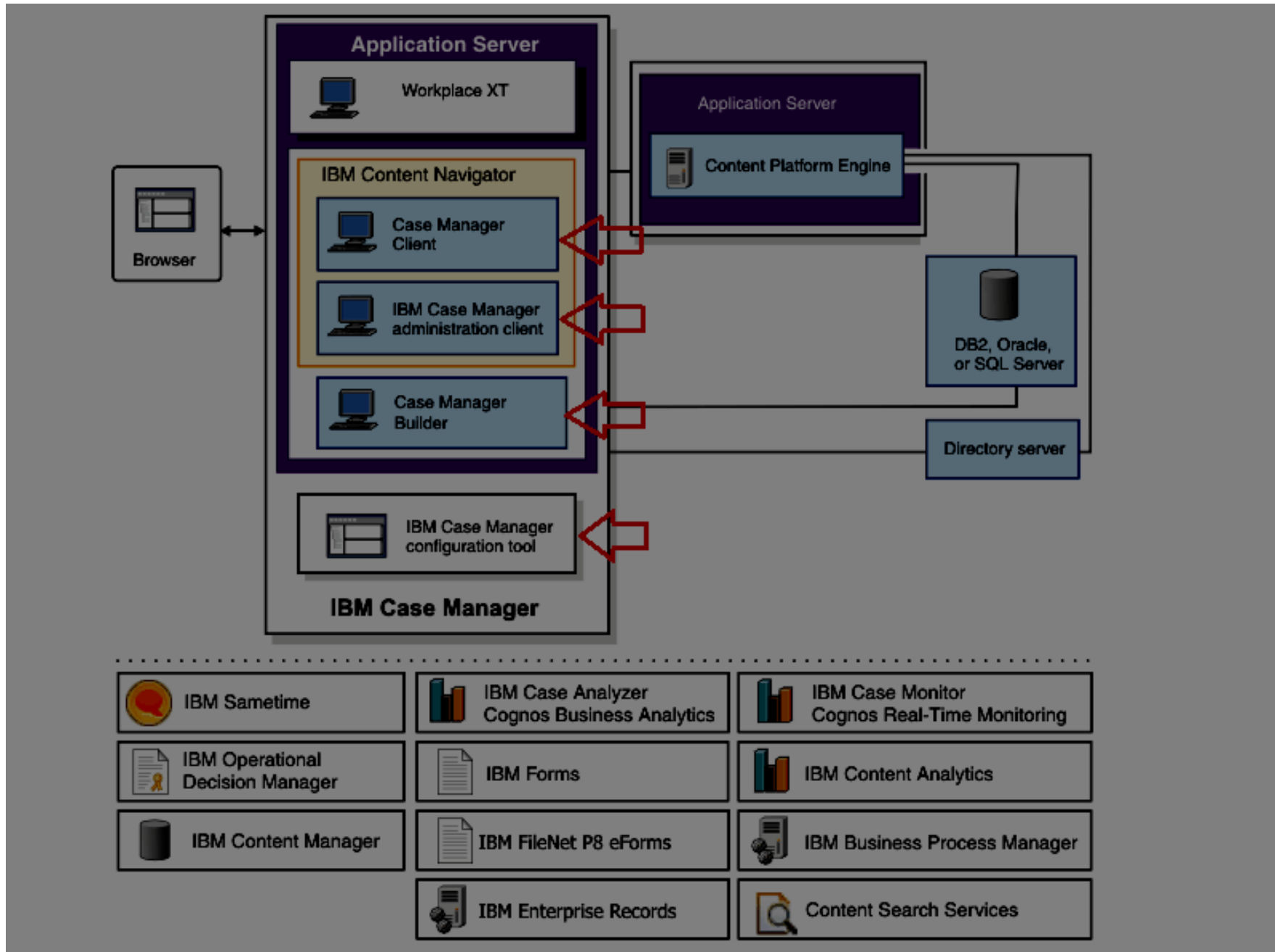
## System Topology: Single-system architecture vs. Distributed system architecture

### Single-system architecture

- All-in-one box, installed by IBM Case Manager Composite Platform Installation Tool (CMPIT)
- Ideal for development and test systems
- Quick start from the ground up
- CMPIT only installs IBM WebSphere, DB2 and Tivoli Directory Server (TDS)

### Distributed system architecture

- IBM Case Manager is installed on a separate system from Content and Case Foundation
- Content Foundation: Content Platform Engine (CPE)
- Ideal for robustness, scalability, manageability
- IBM Case Manager installation program
- All integrating components supported



## Concepts

### ■ Business Process Management (BPM) vs. Case Management

–BPM: emphasis is on the process, or workflow

–Case Management: emphasis is on the information and what needs to be done

### ■ Heads-down worker vs. Knowledge worker

–Heads-down worker: automatic processing of work without making major processing decisions (e.g. data entry, updates, review) - typical in BPM

–Knowledge worker: flexible processing of information while making informed decision on how to proceed (e.g. decide on tasks to be processed, information or documentation to be provided for the case) – typical in Case Management

### ■ Case

–A collection of information and coordinated activities by knowledge workers that are required to accomplish a business goal

### ■ Solution

–the application of case management technology to a particular business problem in a particular domain

## Concepts

### ICM profiles

- DEV – for designing and editing solutions and developer testing
- PROD – for business user testing and production use of solutions
- DEV end PROD profiles differ in some components, architecture, and procedures (installation, upgrade, patching)

### CPE Object Stores for Case Manager:

- Design OS (DOS) – design-time solution metadata; solution edited here (DEV profile only)
- Staging OS (SOS) – solution diagnosed here, but should not be edited (PROD profiles)
- Target OS (TOS) – run-time solution deployment information and data

**Solution Deployment:** process of transferring solution package from DOS/SOS to TOS

### Project Areas – ICM DEV profile only

- One default project area on all systems
- Zero or more regular project areas are optional
- each project area is associated with its own..
  - unique connection point to a workflow system and target object store
  - user base
- Purpose: design-time manageability - Reset Test Environment function does not affect all solutions

### Target environments – ICM PROD profile only

- One or more target environment environments on all systems
- each target environment is associated with
  - a shared or dedicated connection point, to a region in a workflow system, stored in a target object store;
  - a shared or dedicated ICN desktop
- Purpose: run-time manageability – solutions are separated
  - Specify different security settings
  - Manage load differently
  - Size the environment differently if the anticipated number of cases vary for different solutions



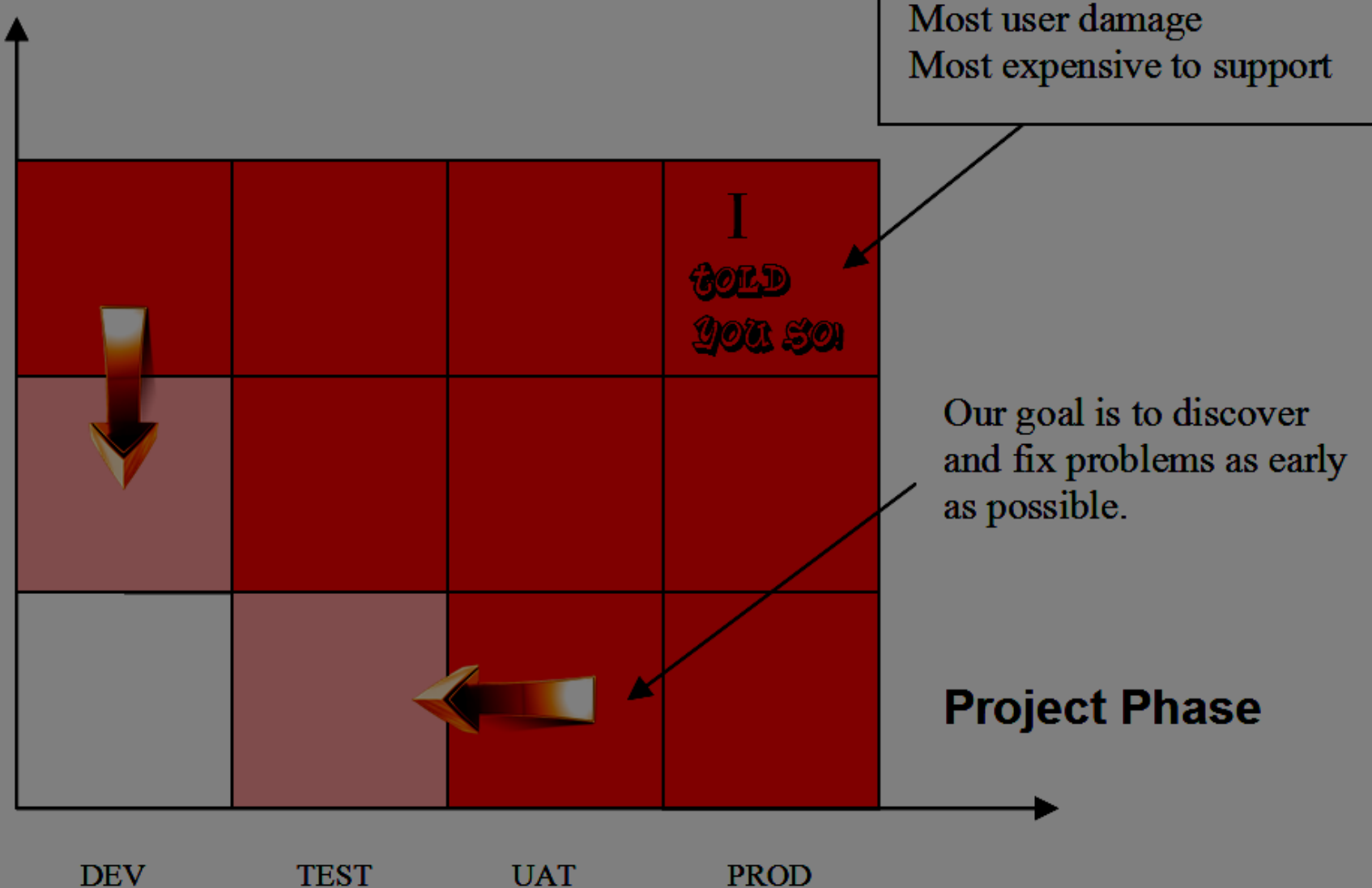
# Cost of Ownership / Support / Maintenance

**User Impact**

Critical

Non-Critical

Low Impact



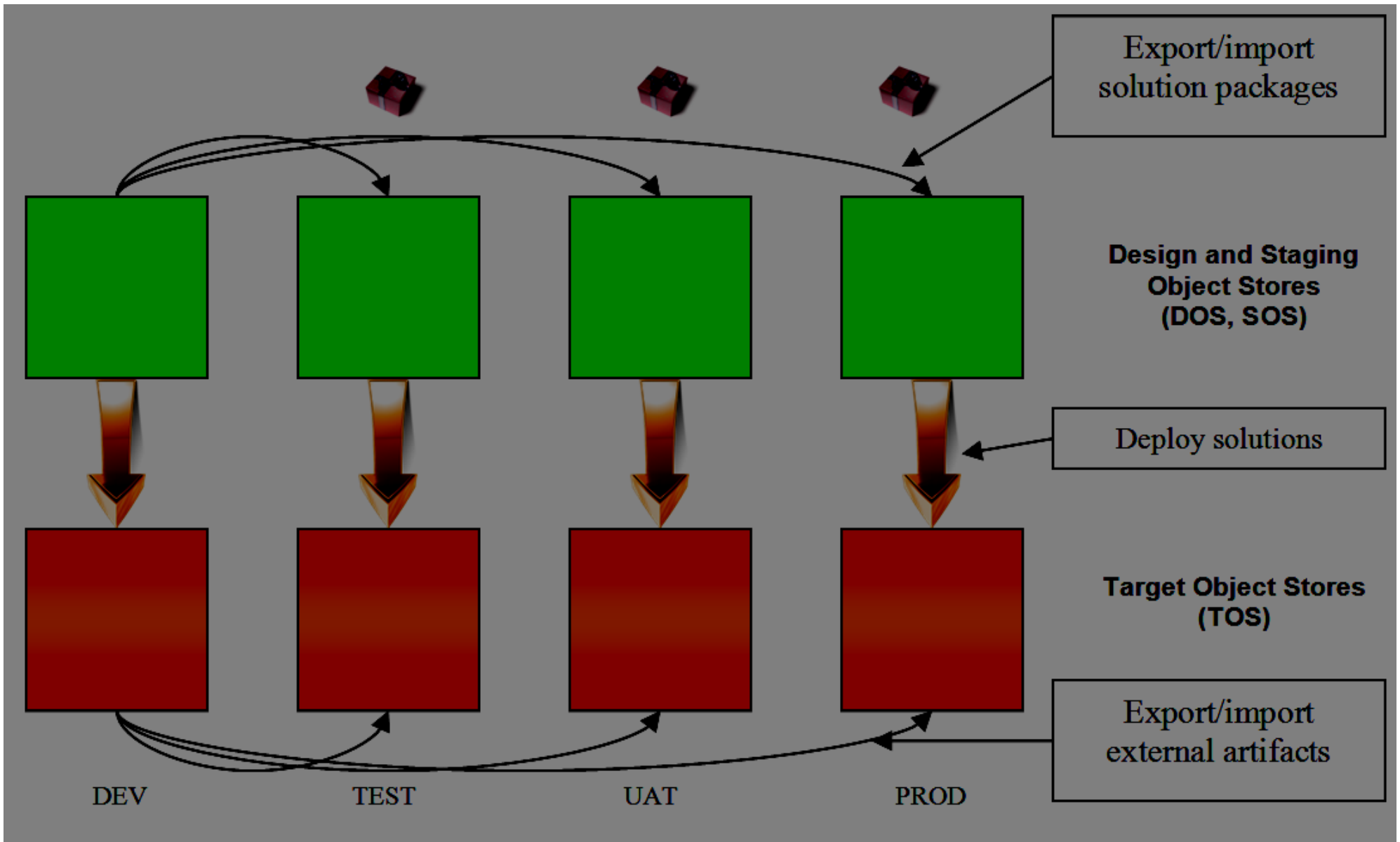
Most user damage  
Most expensive to support

Our goal is to discover and fix problems as early as possible.

**Project Phase**

DEV TEST UAT PROD

# IBM Case Manager Environments



## System Topology: Recommended ICM environments

### Development Environment

- ICM development profile
- Solution development – solution changes should be made only in the dev. env.
- Typically has a non-enterprise LDAP
- **Best practice: assign each critical solution its own Project Area**

### Test Environment

- ICM development profile
- **Best practice:  
Non-business users validate solution – do NOT edit solution here, go back to dev. env.**
- Typically has a non-enterprise LDAP

### UAT or Pre-production Environment

- ICM production profile
- Business users validate solution for production readiness
- Enterprise LDAP
- **Best practice: configuration should be as close to production as possible (clustering, integration)**

### ICM Production Environment

- ICM production profile
- Solutions are deployed for actual production use
- Solution should be problem-free
- **Best practice: deploy solutions to different target environments as appropriate for efficient management and sizing**

## Exporting and Importing External Solution Artifacts

If your solutions use some of the following artifacts, then be sure to import them into the target object store of the next environment and document your procedures:

### Filenet Deployment Manager:

- Custom widgets
- Custom workflows
- Custom code modules
- Document Entry templates
- Search templates
- Form documents

### ■Process Configuration Console

- Component queues
- Workflow system configuration parameters

## System Topology:

### Advantages of having 4 ICM environments vs. 3 ICM environments

- Usually, these are the 3 ICM environments: DEV, TEST or UAT, PROD
- Usually, these are the 4 ICM environments: DEV, TEST, UAT, PROD
  
- The difference is having 2 vs. 1 testing environment (TEST + UAT vs. TEST)
  
- With 2 testing environments:
  - You can dedicate one testing environment to development activities and keep it in synch with DEV environment.
  - You can dedicate the other testing environment to pre-production and production activities and keep it in synch with the PROD environment.
    - In TEST, you test for development
    - In UAT, you test for production
  - The UAT environment can be very close to PROD
    - ICM production profile
    - Solution security
    - Solutions and data are never deleted
  
- **Best practice: dedicated TEST and UAT testing environments allow for the decoupling of the schedules of DEV and PROD-related activities**

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## Section 2: Introduction to IBM Case Manager

- System Topology
- **Tools**
- Log and Configuration files, Debugging
- Ping Pages
- Resources – links

## Tools: Integrating Components

- LDAP: LDAP browsers – Softterra LDAP browser
- Database: database tools for running queries, scripts, profiling, and generating metadata
- Content Platform Engine:
  - Administrative Console for Content Engine (ACCE)
  - Create new workflow system
  - Subsystem tracing  
[http://www-01.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.0/com.ibm.p8.ce.dev.ce.doc/logging\\_concepts.htm?cp=SSNW2F\\_5.2.0%2F10-2-1-29&lang=en](http://www-01.ibm.com/support/knowledgecenter/SSNW2F_5.2.0/com.ibm.p8.ce.dev.ce.doc/logging_concepts.htm?cp=SSNW2F_5.2.0%2F10-2-1-29&lang=en)
  - Workplace XT: Process Administrator, Process Designer, Process Configuration Console
  - Option to start Process Administrator and Process Configuration Console in ACCE  
<http://www.ibm.com/support/docview.wss?uid=swg21666115>
- IBM Content Navigator
  - Debug-level server tracing  
[http://www-01.ibm.com/support/knowledgecenter/SSEUEX\\_2.0.2/com.ibm.installgeuc.doc/eucts002.dita?lang=en](http://www-01.ibm.com/support/knowledgecenter/SSEUEX_2.0.2/com.ibm.installgeuc.doc/eucts002.dita?lang=en)
- IBM WebSphere: MustGather Documentation
  - WebSphere Application Server, Tracing and logging configuration  
[http://www-01.ibm.com/support/knowledgecenter/SSAW57\\_8.5.5/com.ibm.websphere.nd.multiplatform.doc/ae/utrb\\_logtrace.html?cp=SSAW57\\_8.5.5%2F3-18-6-574](http://www-01.ibm.com/support/knowledgecenter/SSAW57_8.5.5/com.ibm.websphere.nd.multiplatform.doc/ae/utrb_logtrace.html?cp=SSAW57_8.5.5%2F3-18-6-574)
  - MustGather: Sessions and session management issues  
<http://www-01.ibm.com/support/docview.wss?uid=swg21192604>
  - MustGather: Performance, hang, or high CPU issues on AIX  
<http://www-01.ibm.com/support/docview.wss?uid=swg21052641>
  - WAS MustGather: Performance, hang, or high CPU issues on Windows  
<http://www-01.ibm.com/support/docview.wss?uid=swg21111364>

## Tools: IBM Case Manager Components

### ■ IBM Case Manager configuration tool

–MustGather: Collecting Data for IBM Case Manager configuration tool v5.2.0.x issues

<http://www-01.ibm.com/support/docview.wss?uid=swg21640049>

–Configuration tasks for installation, upgrade, patching

–Define and register target environments

–Export and Import solutions

–Deploy solutions with an ICM production profile

<http://www.ibm.com/support/docview.wss?uid=swg21678448>

### ■ IBM Case Manager administration client

–MustGather: Collecting Data for IBM Case Manager administration client v5.2.0.x issues

<http://www-01.ibm.com/support/docview.wss?uid=swg21641126>

–Manage object store add-ons for IBM Case Manager

–Define and manage project areas

–Define and register target environments

–Manage solutions: deploy, export, import, copy, configure security with Security Wizard, etc.

–Manage object store add-ons

### ■ Case Builder

–MustGather: Collecting Data for IBM Case Manager Builder v5.2.0.x issues

<http://www-01.ibm.com/support/docview.wss?uid=swg21640052>

–Develop, test, deploy solution

–Reset target environment – this task is only possible in an ICM development environment



## Tools: IBM Case Manager Client and Third-Party Browser Tools

- MustGather: Collecting Data for IBM Case Manager Client v5.2.0.x issues

<http://www-01.ibm.com/support/docview.wss?uid=swg21640053>

- "icmErrorStackTrace=true" parameter

–e.g. "http://<server\_name:port\_number>/navigator/?desktop=icm&icmErrorStackTrace=true"

–error dialog with an error stack when loading a page

- Microsoft® Internet Explorer: Fiddler

- Mozilla® Firefox: Firebug

–softwareishard.com tools: Console Export, Net Export

- HTTPWatch

- Java application server logs (e.g. WebSphere® Application Server SystemOut.log)

- IBM Content Navigator debug-level tracing

–output goes into java app server logs

- Test a symptom in different browser types and versions, if possible

- Advanced: "debug=true parameter" in the URL to debug uncompressed source code

–Will show javascript file names in console traces

–Enables break points to step through javascript source code

–e.g. "<http://localhost:9080/navigator/?desktop=icm&debug=true&icmErrorStackTrace=true>"

–Documentation:

• <http://pic.dhe.ibm.com/infocenter/cmdev/v8r5m0/index.jsp?topic=%2Fcom.ibm.developingeuc.doc%2Faucdi001.htm>

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## Section 2: Introduction to IBM Case Manager

- System Topology
- Tools
- **Log and Configuration files, Debugging**
- Ping Pages
- Resources – links

# IBM Case Manager Log and Configuration files

## IBM Case Manager configuration tool

### ■ Installation log file

< ICM\_install\_dir>/logs/IBM\_Case\_Manager\_5.2.1.0\_InstallLog.txt

### ■ Configuration files

<ICM\_install\_dir>/configure/configmgr.ini

<ICM\_install\_dir>/configure/configmgr\_cl.ini

<ICM\_install\_dir>/configure/configuration/cmlogging.properties (to configure primary logging)

### ■ Runtime log files

#### –Primary log files:

<ICM\_install\_dir>/logs/.metadata/.log

< ICM\_install\_dir>/logs/IBM\_Case\_Manager\_5.2.1.0\_CMCT\*.log

• The most recent one is named IBM\_Case\_Manager\_5.2.1.0\_CMCT0.log

#### • debug-level tracing

- enabled by default in the GUI

- use the -debug switch at the command prompt

#### –Scripts and logs for each task:

<ICM\_install\_dir>/configure/tmp/\*.tcl

<ICM\_install\_dir>/configure/tmp/\*.log

### ■ Other logs to look at: Java application server logs

–WebSphere® Application Server SystemOut.log

–Oracle® WebLogic Server AdminServer.log file (AdminServer is the default server name)

## IBM Case Manager Log and Configuration files

### IBM Case Manager administration client

- Installation log file

- < ICM\_install\_dir>/logs/IBM\_Case\_Manager\_5.2.0.0\_InstallLog.txt

- Version file

- <ICM\_install\_dir>/version.txt

- Runtime log files

- java application server logs :

- WebSphere® Application Server SystemOut.log

- Oracle® WebLogic Server AdminServer.log file (AdminServer is the default server name)

- Debugging

- Browser tools (Fiddler, Firebug)

- IBM Content Navigator debug-level logging – output goes into java app server logs

- Other log files to look at

- solution deployment logs in the solution folder in the target object store

# IBM Case Manager Log and Configuration files

## IBM Case Manager Builder

### ■ Installation log file

< ICM\_install\_dir>/logs/IBM\_Case\_Manager\_5.2.0.0\_InstallLog.txt

### ■ Version file

<ICM\_install\_dir>/version.txt

### ■ Runtime log files

java application server logs (SystemOut.log, AdminServer.log)

### ■ Debugging: two options

–WebSphere admin console > Logging and Tracing > server > Change log detail levels;

•WebSphere diagnostic tracing (a.k.a Case Builder debug-level server tracing):

•[http://www-01.ibm.com/support/knowledgecenter/SSCTJ4\\_5.2.0/com.ibm.casemgmt.design.doc/acmta004.htm?lang=en](http://www-01.ibm.com/support/knowledgecenter/SSCTJ4_5.2.0/com.ibm.casemgmt.design.doc/acmta004.htm?lang=en)

•Output goes into java app server logs

•**Must be logged into Case Builder to see components in WebSphere admin console**

–Case Builder CBE logs – rare scenarios

•[http://www-01.ibm.com/support/knowledgecenter/SSCTJ4\\_5.2.0/com.ibm.casemgmt.design.doc/acmta035.htm?lang=en](http://www-01.ibm.com/support/knowledgecenter/SSCTJ4_5.2.0/com.ibm.casemgmt.design.doc/acmta035.htm?lang=en)

•Output goes into CBE log files (icmcbe%u.log); XML format, large output files

•Mostly the same info as WebSphere diagnostic trace, try that option first

–Browser tools (Fiddler, Firebug)

–IBM Content Navigator debug-level logging -- **not applicable**, CB is not registered in ICN

### ■ Other log files to look at

–solution deployment logs

# IBM Case Manager Builder debug-level server tracing

View: All tasks ▾

- Welcome
- ⊕ Guided Activities
- ⊕ Servers
- ⊕ Applications
- ⊕ Services
- ⊕ Resources
- ⊕ Security
- ⊕ Environment
- ⊕ System administration
- ⊕ Users and Groups
- ⊕ Monitoring and Tuning
- ⊕ Troubleshooting
  - Logs and trace
  - Configuration problems
  - Class loader viewer
  - Java dumps and cores
- ⊕ Configuration Validation
- ⊕ Diagnostic Provider
- ⊕ Runtime Messages
- ⊕ Service integration
- ⊕ UDDI

Logging and tracing

**Logging and tracing > server1 > Change log detail levels**

Use log levels to control which events are processed by Java logging. Click Components to specify a log detail level for individual components, or click Groups to specify a log detail level for a predefined group of components. Click a component or group name to select a log detail level. Log detail levels are cumulative; a level near the top of the list includes all the subsequent levels.

Configuration
Runtime

**General Properties**

**Change log detail levels**

Disable logging and tracing of potentially sensitive data (WARNING: This might cause the log detail level setting to be modified when it is applied on the server.)

Select components and specify a log detail level. Log detail levels specified here will apply to the entire server. Expand Components and Groups and click Components to specify a log detail level for individual components, or click Groups to specify a log detail level for a predefined group of components. Click a component or group name to select a log detail level. Log detail levels are cumulative.

\*=info

⊖ Components and Groups

**Components**

Groups

- ⊕ com.ibm.ISecurityLocalObjectTokenBaseImpl.\*
- ⊕ com.ibm.ISecurityUtilityImpl.\*
- ⊕ com.ibm.WebSphereSecurityImpl.\*
- ⊕ com.ibm.acm.\*
- ⊕ com.ibm.apc.\*
- ⊕ com.ibm.bdsl.\*
- ⊖ com.ibm.casemgmt.\*
  - com.ibm.casemgmt.api
  - com.ibm.casemgmt.cbe
  - ⊕ com.ibm.casemgmt.rest.\*
- ⊕ com.ibm.config.\*
- ⊕ com.ibm.datapower.\*
- ⊕ com.ibm.debug.\*

# IBM Case Manager Log and Configuration files

## IBM Case Manager Client

- Installation log file

- < ICM\_install\_dir>/logs/IBM\_Case\_Manager\_5.2.0.0\_InstallLog.txt

- Version file

- <ICM\_install\_dir>/version.txt

- java application server logs (SystemOut.log, AdminServer.log)

- Debugging – discussed previously under Tools

- Browser tools (Fiddler, Firebug)

- IBM Content Navigator debug-level logging – output goes into java app server logs

- "icmErrorStackTrace=true" parameter

- "debug=true parameter"

# IBM Case Manager Log and Configuration files

## Additional Links About Logging

### ■Case Manager Troubleshooting technote

<http://www.ibm.com/support/docview.wss?uid=swg21648669>

### ■MustGather: Collecting Data for the IBM Case Manager installation program v5.2.0.x issues

<http://www-01.ibm.com/support/docview.wss?uid=swg21640026>

### ■MustGather: Collecting Data for IBM Case Manager Java/REST API v5.2.0.x issues

<http://www-01.ibm.com/support/docview.wss?uid=swg21640051>

### ■Process Engine REST API tracing on the ICM server

[http://www-01.ibm.com/support/knowledgecenter/SSCTJ4\\_5.2.0/com.ibm.casemgmt.installing.doc/acmlg001.htm](http://www-01.ibm.com/support/knowledgecenter/SSCTJ4_5.2.0/com.ibm.casemgmt.installing.doc/acmlg001.htm)

### ■CPE Subsystem Tracing

[http://www-01.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.0/com.ibm.p8.ce.admin.tasks.doc/p8pcc070.htm?lang=en](http://www-01.ibm.com/support/knowledgecenter/SSNW2F_5.2.0/com.ibm.p8.ce.admin.tasks.doc/p8pcc070.htm?lang=en)

–The ICM server generates its own p8\_server\_trace.log and p8\_server\_error.log files too

### ■CPE Process Tracing

[http://www-01.ibm.com/support/knowledgecenter/SSNW2F\\_5.2.0/com.ibm.p8.pe.vw.doc/bpfvl049.htm?lang=en](http://www-01.ibm.com/support/knowledgecenter/SSNW2F_5.2.0/com.ibm.p8.pe.vw.doc/bpfvl049.htm?lang=en)

–vwtool can run on any CPE client

–Tech note with step-by-step instructions:

<http://www-01.ibm.com/support/docview.wss?uid=swg21678454>



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## Section 2: Introduction to IBM Case Manager

- System Topology
- Tools
- Log and Configuration files, Debugging
- **Ping Pages**
- Resources – links

## Ping Pages

IBM Case Manager build number:

[http://<CM-server name or IP>:<port\\_number>/CaseManager/CASEREST/v1/info](http://<CM-server name or IP>:<port_number>/CaseManager/CASEREST/v1/info)

CPE build number (CPE Startup Context, or Ping Page):

[http://\[CPE server name\]:\[CPE port\]/FileNet/Engine](http://[CPE server name]:[CPE port]/FileNet/Engine)

CPE System Health:

[http://\[CPE server name\]:\[CPE port\]/P8CE/Health](http://[CPE server name]:[CPE port]/P8CE/Health)

Process service build number (Process Service ping page):

[http://\[CPE server name\]:\[CPE port\]/peengine/IOR/ping](http://[CPE server name]:[CPE port]/peengine/IOR/ping)

[http://\[CPE server name\]:\[CPE port\]/peengine/IOR/ping?systeminfo=true](http://[CPE server name]:[CPE port]/peengine/IOR/ping?systeminfo=true)

- displays thread information

ACCE version:

[http://\[CPE server name\]:\[CPE port\]/acce](http://[CPE server name]:[CPE port]/acce)

Log into ACCE, click on the Tools (gear icon next to the user name) menu, and choose About.

ICN ping page (shows ICN build number):

[http://\[ICN server name\]:\[ICN port\]/navigator/Ping](http://[ICN server name]:[ICN port]/navigator/Ping)

Workplace XT build number:

[http://\[Workplace XT server name\]:Workplace XT port\]/WorkplaceXT](http://[Workplace XT server name]:Workplace XT port]/WorkplaceXT)

Do not log in. Right-click the page on the white space anywhere, and choose View Source.

The Workplace XT build information is towards the top of the HTML code.

IBM Forms test URLs:

[http://\[IBM Forms server name\]:8085/translator](http://[IBM Forms server name]:8085/translator)

[http://\[IBM Forms server name\]:8085/translator/Translate?Action=toolbelt](http://[IBM Forms server name]:8085/translator/Translate?Action=toolbelt)

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## Section 2: Introduction to IBM Case Manager

- System Topology
- Tools
- Log and Configuration files, Debugging
- Ping Pages
- **Resources – links**

## Resources

### ■ IBM Knowledge Center

<http://www-01.ibm.com/support/knowledgecenter/SSCTJ4/welcome>

- Troubleshooting section
- Fix pack documentation – readmes, installation instructions
- **Do NOT use InfoCenter – deprecated, no longer updated**

Obsolete InfoCenter link: <http://pic.dhe.ibm.com/infocenter/casemgmt/v5r2m0/topic/com.ibm.casemgmttoc.doc/ic-homepage.html>

### ■ Software Product Compatibility Reports

<http://www-969.ibm.com/software/reports/compatibility/clarity/index.jsp>

- Replaces P8 Hardware and Software guide

### ■ Fix Pack Matrix

<https://www-304.ibm.com/support/docview.wss?rs=3278&uid=swg27014734&wv=1>

### ■ IBM Support Portal

[http://www-947.ibm.com/support/entry/portal/support?cm\\_mc\\_uid=29164713667114056420830&cm\\_mc\\_sid\\_50200000=1406058334](http://www-947.ibm.com/support/entry/portal/support?cm_mc_uid=29164713667114056420830&cm_mc_sid_50200000=1406058334)

- Support Notifications – flashes, alerts, bulletins, tech notes, fixes
- Troubleshooting Documentation – tech notes, known issues, APARs

### ■ Newsletter: Featured Documents for IBM Case Manager

<http://www-01.ibm.com/support/docview.wss?uid=swg27039276>

### ■ RedBook: Advanced Case Management with IBM Case Manager

– [http://www.redbooks.ibm.com/Redbooks.nsf/RedpieceAbstracts/sg247929.html?Open&cm\\_mc\\_uid=29164713667114056420830&cm\\_mc\\_sid\\_50200000=1406058334](http://www.redbooks.ibm.com/Redbooks.nsf/RedpieceAbstracts/sg247929.html?Open&cm_mc_uid=29164713667114056420830&cm_mc_sid_50200000=1406058334)

### ■ developerWorks: Enterprise Content Management Application Center

<https://www.ibm.com/developerworks/community/groups/service/html/communityview?communityUuid=e8206aad-10e2-4c49-b00c-fee572815374>

### ■ developerWorks: ECM Community Blog

<https://www.ibm.com/developerworks/community/blogs/e8206aad-10e2-4c49-b00c-fee572815374/?lang=en>

## Summary

- Set up an adequate number of Case Manager environments
  - IBM recommends at least four environments: DEV, TEST, UAT, PROD
  - Separate testing environments for DEV and PROD activities allow the decoupling of DEV and PROD-related activities
  
- Best practices for Case Manager environments:
  - DEV: assign each critical solution its own Project Area
  - TEST: do NOT edit solution here, go back to dev. env.
  - UAT: configuration should be as close to production as possible
  - PROD: deploy solutions to different target environments as appropriate for efficient management and sizing
  
- Logging, debugging
  - Use the tools in Case Manager as well as in integrating components, such as WebSphere tracing, Content Navigator debug-level logging, Fiddler or Firebug debugging
  - Since the ICM Client is the interface for end-users and has the potential to cause highly visible problems, be aware of your troubleshooting options
  - You may have to be logged into Case Builder in order to see the Case Builder components on the WebSphere admin client Logging and Tracing interface
  
- Diagnostics
  - Have the Case Manager and Content Foundation ping pages at a handy location
  - Use product documentation and MustGather documents to check component compatibility and collect information

## Questions?



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