

Applying Cognitive Computing to Message Delivery in Enterprise Systems

A Multidisciplinary Team Approach

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Applying Cognitive Computing to Message Delivery

- This presentation will relate cognitive computing, specifically the attributes:
 - ✓ Adaptive
 - ✓ Intuitive
 - ✓ Interactive
 - ✓ Contextual
- to z/OS information development and the delivery of several thousand user and console messages in z/OS.
- Our multidisciplinary approach uses our respective backgrounds in computer science, technical writing, information architecture, XML, and user technology.
- How we apply our knowledge to enhance the search and information experience for Enterprise Computing customers.

Introduction: Who We Are

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- Our presenters bring a diverse set of experiences to the ECC conference:
 - ✓ One of us is a recent hire employee who has a background in information technology, computer science, and web services.
 - ✓ Two of us are experienced software engineers who practice content development and information planning for many z/OS operating system releases.
 - ✓ We vary in years in our user technology experience and collaborate from different viewpoints, with our interdisciplinary backgrounds.
 - ✓ All three of us have a commonality that we will use as an example, producing documentation for z/OS MVS system messages.
- Barbara – Operating systems overview
- Molly – Tools and Infrastructure
- Ann – Collaborative teamwork

Let's Look at the Data

- Is this content really considered “big data?” Yes, and it is structured big data.
- Thousands of system and component messages; textual information and context.
- Our z/OS library is coded in XML.
- We are tagging our XML to be compliant with computers that will use cognitive computing/analysis to look at our documentation.
- We are set up for content classification.
- Molly plans more infrastructure tooling to use this classification.
- We want to improve search results for messages and other text.
- In the future, the tagging will help the search in the z/OS library for companies that use XML.

z/OS Operating System

z/OS Operating System

- We will present a chart showing the design and flow of the z/OS operating system for Enterprise Computing mainframe software. This is a historical chart that shows the z/OS elements, including JES2, JES3, MVS, TSO/E, z/OS UNIX, z/OSMF, and other critical components.
- We will relate the chart to an everyday task that many system programmers perform, and show how the information, including a large number of component messages, is used.
- We are including this z/OS chart, showing the system components, as a physical poster graphic, at the conference.



z/OS Operating System

We will include a z/OS chart, showing the system components, as a physical poster graphic, at the conference.

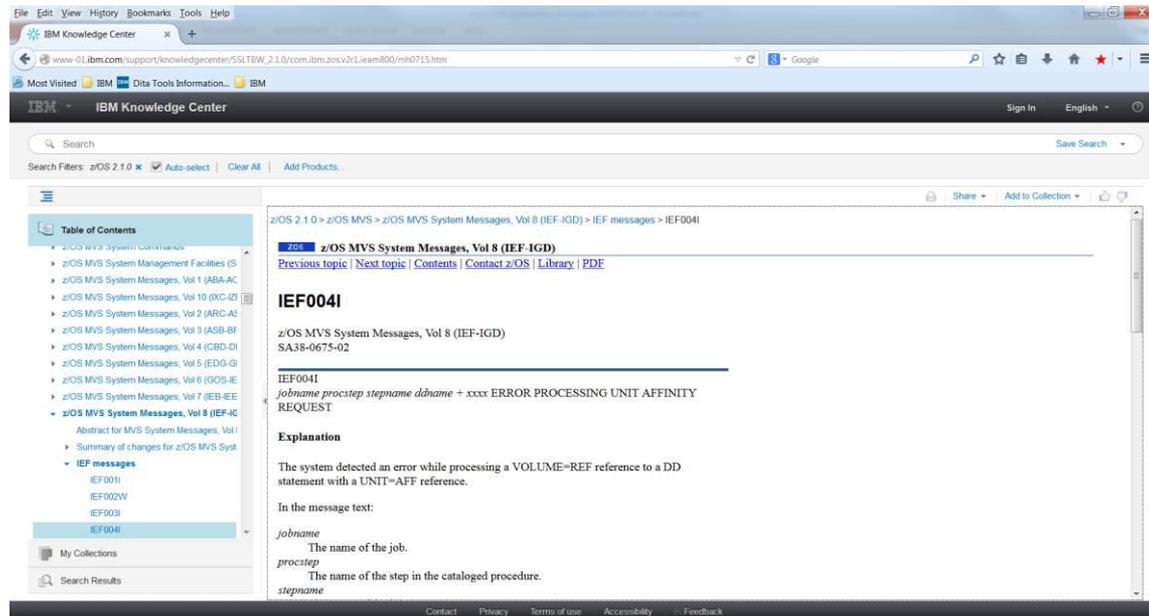
(We note that the Poughkeepsie site walking map resembles the chart.)



Tools and Infrastructure

z/OS Messages

z/OS uses messages to communicate the status of all the components of the operating system to system programmers and operations staff. One facet of the z/OS information are the thousands of messages that z/OS issues to an enterprise each day.



The screenshot shows the IBM Knowledge Center interface for the z/OS MVS System Messages, Vol 8 (IEF-IGD). The page displays the message IEF004I, which is an error message related to error processing unit affinity requests. The message text includes jobname, procstep, and ddname. The explanation states that the system detected an error while processing a VOLUME=REF reference to a DD statement with a UNIT=AFF reference.

IEF004I

z/OS MVS System Messages, Vol 8 (IEF-IGD)
SA38-0675-02

IEF004I
jobname *procstep* *stepname* *ddname* + xxxx ERROR PROCESSING UNIT AFFINITY REQUEST

Explanation

The system detected an error while processing a VOLUME=REF reference to a DD statement with a UNIT=AFF reference.

In the message text:

jobname
The name of the job.

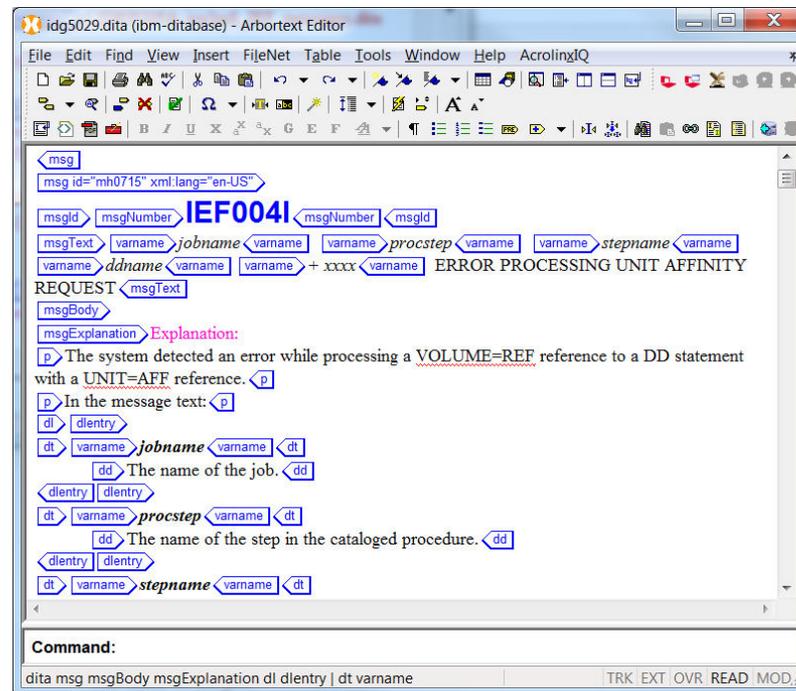
procstep
The name of the step in the cataloged procedure.

stepname

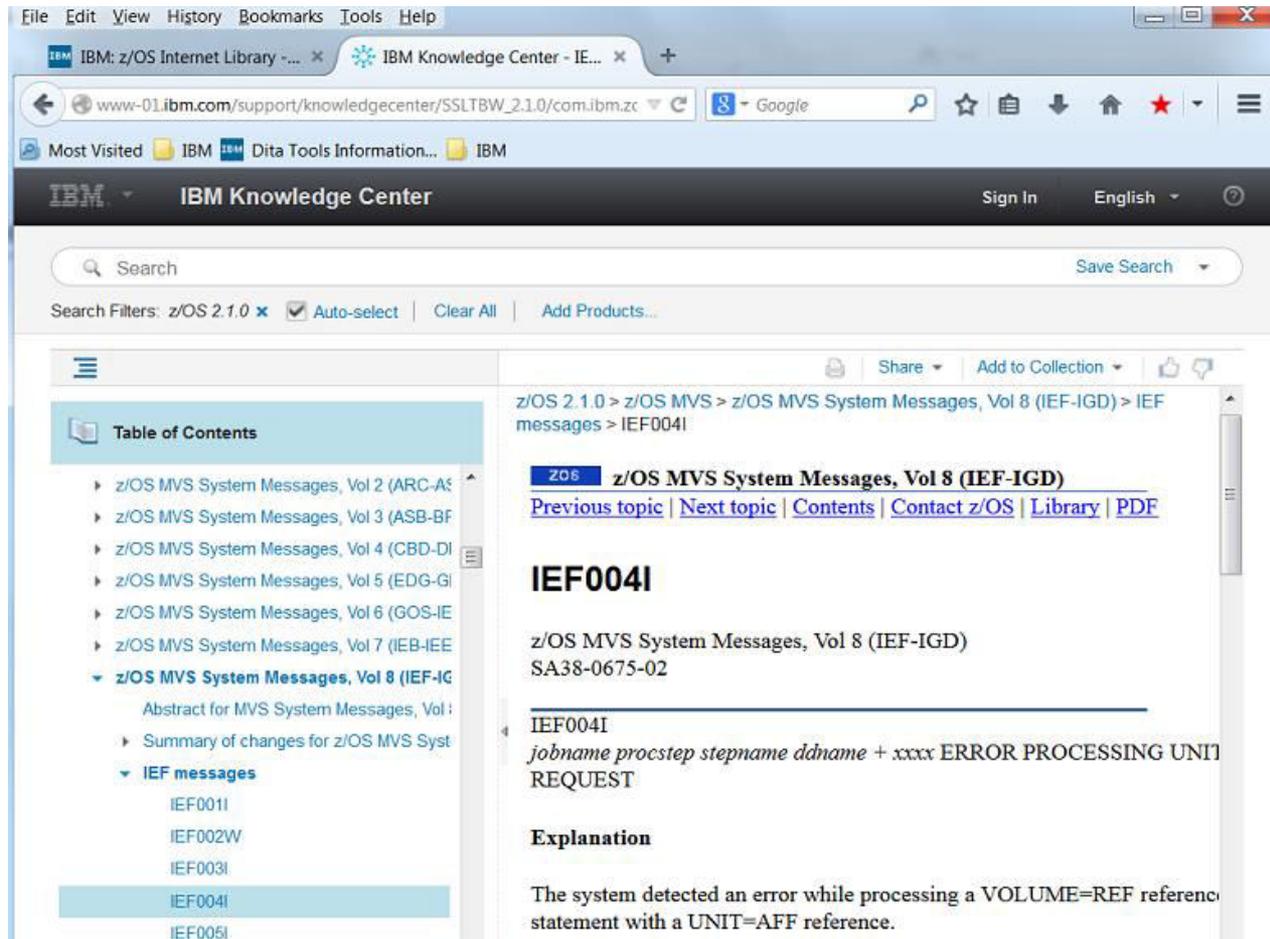
z/OS MVS message: IEF004I

Tools and Infrastructure

- Bringing disciplines together helps us to better innovate. As information developers, we work with XML source files. As technical writers, we use these files to create and update content by release. As tools and infrastructure team members, we work to use this data to create metadata and to program its use for customers to find information more easily.



Tools and Infrastructure



The screenshot shows a web browser window displaying the IBM Knowledge Center page for the IEF004I error message. The browser's address bar shows the URL `www-01.ibm.com/support/knowledgecenter/SSLTBW_2.1.0/com.ibm.zc...`. The page header includes the IBM logo, "IBM Knowledge Center", and options for "Sign In" and "English". A search bar is present with the text "Search" and a "Save Search" button. Below the search bar, search filters are shown: "z/OS 2.1.0" (selected), "Auto-select" (checked), "Clear All", and "Add Products...".

The main content area is divided into two columns. The left column contains a "Table of Contents" with a list of system message volumes. The right column displays the details for the selected message, "IEF004I".

Table of Contents:

- z/OS MVS System Messages, Vol 2 (ARC-A*
- z/OS MVS System Messages, Vol 3 (ASB-BF
- z/OS MVS System Messages, Vol 4 (CBD-DI
- z/OS MVS System Messages, Vol 5 (EDG-GI
- z/OS MVS System Messages, Vol 6 (GOS-IE
- z/OS MVS System Messages, Vol 7 (IEB-IEE
- z/OS MVS System Messages, Vol 8 (IEF-IG**
 - Abstract for MVS System Messages, Vol :
 - Summary of changes for z/OS MVS Syst
 - IEF messages**
 - IEF0011
 - IEF002W
 - IEF003I
 - IEF004I**
 - IEF005I

IEF004I Details:

z/OS 2.1.0 > z/OS MVS > z/OS MVS System Messages, Vol 8 (IEF-IGD) > IEF messages > IEF004I

z/OS MVS System Messages, Vol 8 (IEF-IGD)

[Previous topic](#) | [Next topic](#) | [Contents](#) | [Contact z/OS](#) | [Library](#) | [PDF](#)

IEF004I

z/OS MVS System Messages, Vol 8 (IEF-IGD)
SA38-0675-02

IEF004I
jobname procstep stepname ddname + xxxxx ERROR PROCESSING UNIT
REQUEST

Explanation

The system detected an error while processing a VOLUME=REF reference statement with a UNIT=AFF reference.

Collaborative Teamwork



Collaborative Teamwork

- Bringing disciplines together helps us to better innovate:
 - ✓ As information developers, we work with XML source files.
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 - ✓ As tools and infrastructure team members, we work to use this data to create metadata and to program its use for customers to find information more easily.

Collaborative Teamwork

- eReview
- Meetings, brainstorming
- Migration to XML
- File migration from CMVC to IDCMS
- RSSOwl immediate notification system
- Teamrooms
- IBM Connections

Information Architecture

Information Architecture

- As information strategists, we work with the current infrastructure to transform the way information is delivered. We look ahead to the technology that's coming next and how it can help us develop new solutions for Enterprise customers. We look for ways to improve the tools we currently have and how we can provide automation for our teams.
- One of our goals is to have the first result of any internet search is to direct users to the correct information in IBM Knowledge Center for z/OS. Our presentation shares how our efforts in using our knowledge collaboratively helps us reach that goal.

Search Optimization



Summary

Summary

- In summary, we have found it effective, rewarding, and enjoyable to coordinate our expertise with frequent feedback from customers, to provide an information solution for z/OS messages.

References

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