The Future of z Systems Documentation
IBM Knowledge Center and Beyond

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Information overload and the tools we use

- Agile and DevOps methodology

- IBM Design Thinking

- IBM Knowledge Center

- IBM Watson and cognitive computing

- Hot Topics, Redbooks, and Communities
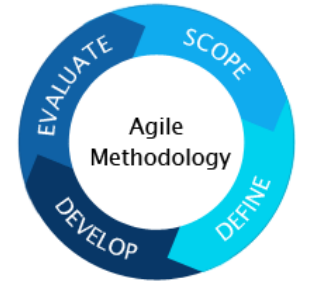
Agile and DevOps Methodology

Susan Shumway

How we are using Agile and DevOps methodologies

- Agile

- DevOps

What is Agile?

Defined as a project management alternative to traditional "waterfall" development, characterized by:

- Incremental, iterative work cadences, known as sprints or iterations
- Regular assessment of the direction of a project throughout the development lifecycle
- Project redirection whenever deemed necessary
- Potential delivery of a consumable product increment at the end of a sprint/iteration
  - "Continuous delivery" = software can be reliably released at any time. Every change is deployable to production, but a team **may choose to not deploy it**.

What is Agile? (cont.)

- Around for decades
  - "Agile methodology" originally introduced in the late 1970s
  - "Manifesto for Agile Software Development" first proclaimed in 2001
- Successfully implemented by many top companies (Google, Facebook, PayPal), for example:
  - Agile transformation at **Nationwide** led to 50% improvement in code quality
  - Agile transformation at **Cars.com** led to 7.5x more releases per year
  - Agile transformation at **Cap Gemini** led to 25% faster to market
  - Agile transformation and SAFe adoption at **Telstra Corporation** led to fewer mistakes
- z/OS development use =~ 5 years

How does Agile impact the z Systems documentation?
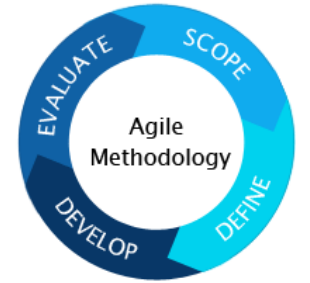
Documentation for a function is written in the same sprint/iteration as the coding and testing of the function, not long afterward like in previous waterfall models.

This promotes:

- More efficient workload balancing
  - (A piece of work is completed, then everybody moves on to the next one)
- Faster turnaround of and more complete technical reviews
  - (Everybody works on the same piece of work at the same time)
- Greater accuracy of the documentation
  - (Function is fresh in everybody's minds)

= Higher quality of the end product

What is DevOps (DEVelopment OPerationS)?
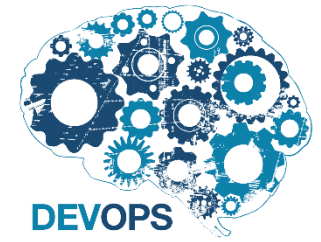
Defined as the practice of operations and development engineers participating together in the entire service lifecycle, from early design of the product through service of the shipped product.

All disciplines (design, code, documentation, test, build, support, etc.) are involved, with equal influence, at all stages of product development.

How does DevOps impact the z Systems documentation?
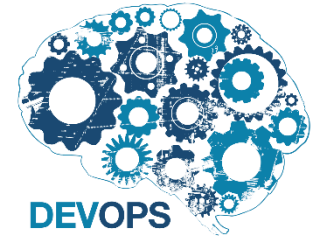
The product documentation team members are involved in all aspects of product development.

This promotes:

- Greater understanding of the product
    - (Everybody provides input on the design and participates in testing)
- Greater understanding of what we need and what the stakeholder (test, user, etc.) after us needs
    - (Everybody communicates efficiently and continuously)

= Higher quality of the end product

Agile resources

- IBM Lean and Agile development: ibm.com/ibm/devops/us/en/agile/

- IBM Lean and Agile case studies and additional resources:

  ibm.com/software/rational/agile/casestudies/
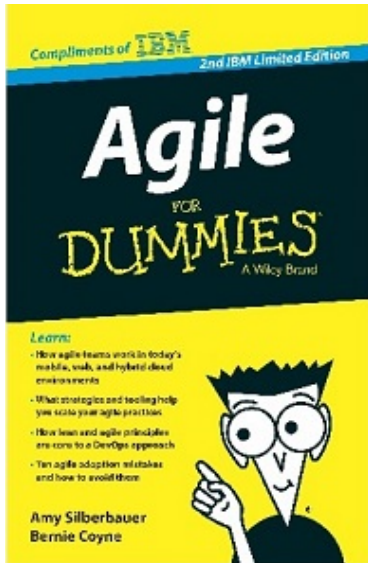
- Agile for Dummies (IBM edition) e-book:

  ibm.co/agilefordummies

IBM Design Thinking

The future of information delivery

Jodi Everdon

IBM Design Thinking

IBM **Design Thinking**

Human-centered outcomes at speed and scale
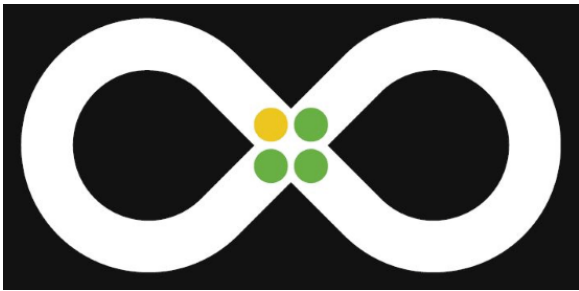
The Design Loop:
Human-centered outcomes at speed and scale

- **A focus on user outcomes.** There are many ways to prioritize work and define goals. If you choose to prioritize the needs of the people who will use your solution, IBM Design Thinking is for you.

- **Multidisciplinary teams.** When you need to move fast, there's no time for waterfall processes. You need a great multidisciplinary team. If you have one, you're ready to go. Otherwise, help your leadership understand the gap.

- **Everything is a prototype.** Everything—even in-market solutions. When you think of everything as just another iteration, you're empowered to bring new thinking to even the oldest problems.

Keys to IBM Design Thinking

- Three of the most important techniques for scaling design thinking to complex teams and projects:

  - **Hills:** Align complex teams around a common understanding of the most important user outcomes to achieve.

  - **Playbacks:** Bring your extended team and stakeholders into the loop in a safe, inclusive space to reflect on the work.

  - **Sponsor Users:** Collaborate with real users to increase your speed and close the gap between your assumptions and your users' reality.

Design Thinking is everywhere

Design thinking is a necessary skill in today's business culture.

Some examples of critical applications for design thinking:

- Developing new products
- Developing new features for an existing product
- Enhancing the look and feel of a product
- Guiding strategic direction
- Solving difficult problems
- Helping decision-makers with tough choices
- Building cognitive solutions with IBM Watson using Bluemix

Mission of IBM Design Thinking
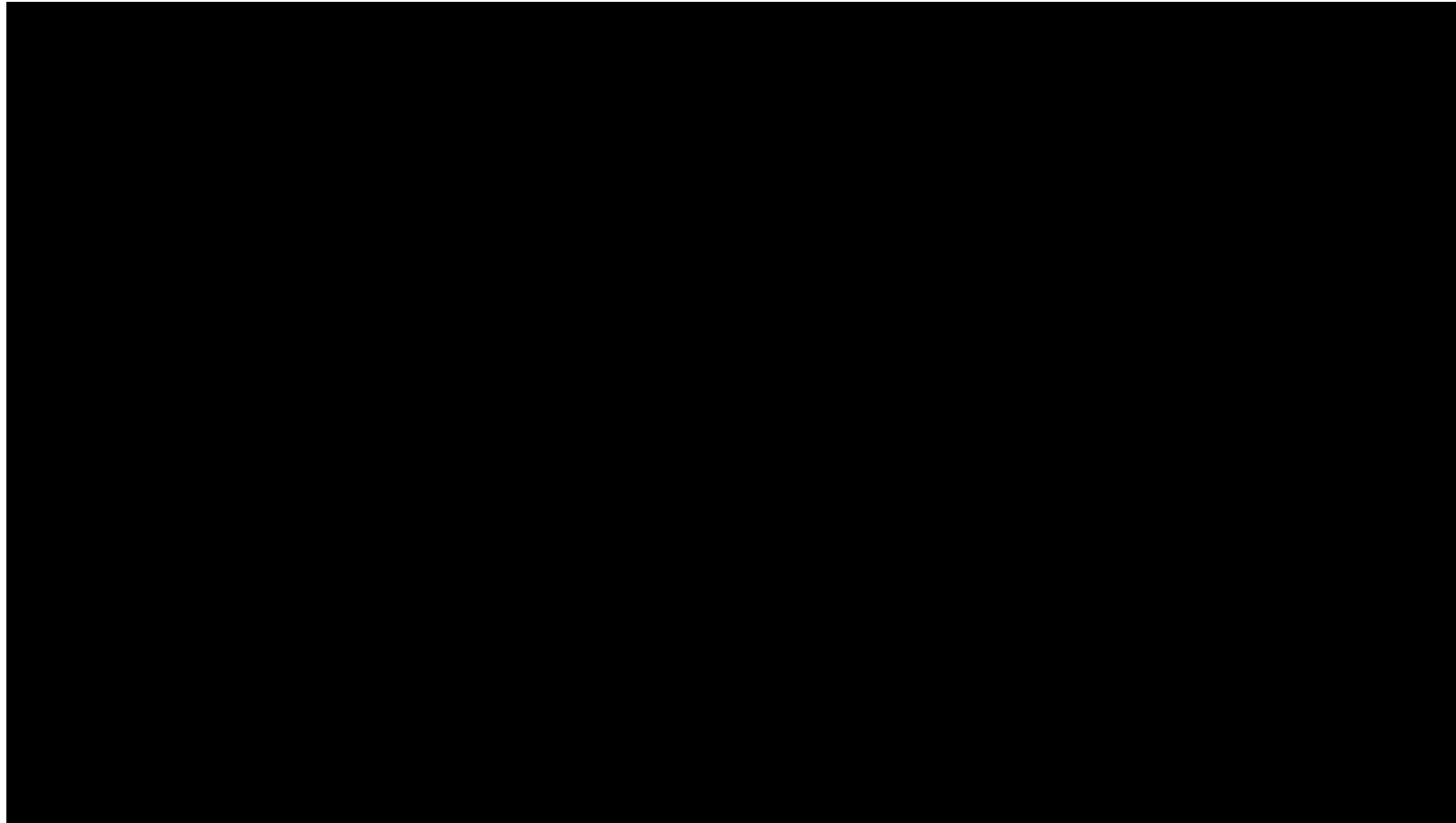
Design resources

To learn how ***IBM Design Thinking is transforming z Systems***, attend
- ***IBM Design Thinking - Transforming z Systems,*** by Kirsten McDonald and Iris M. Rivera (Marist ECC, Monday, June 13th, at 3:50pm)

To learn about IBM Design Thinking from IBM and other perspectives, check out:
- **IBM Design Thinking Resources: ibm.com/design**
- **"IBM's Design-Centered Strategy to Set Free the Squares" - Steve Lohr, New York Times**
- Design at Wired.com
- **Stanford Design School: Crash Course** dschool.stanford.edu/dgift/

IBM Knowledge Center

Geoff Smith

z/OS information challenges

- Better search – the ability to find the right information quickly and easily

- Currency – provide real time updates to large mainframe libraries

- Skills – the majority of people who work with mainframes are leaving and people new to the platform need to be productive quickly.

- Bridging the UI divide – Green Screen versus Touch Screen
    - z/OSMF Simplify and eliminate documentation
    - Workflows to simplify tasks and eliminate documentation
    - Tools

General review of IBM Knowledge Centers

- Developed to replace information centers and bring all IBM documentation under one website.
- KC flavors:
  - IBM Knowledge Center Hosted – Delivered on the Internet
  - IBM Knowledge Center Hosted - Mobile Edition
  - IBM Knowledge Center for Customer Install (Windows)
  - IBM Knowledge Center for z/OS Customer Install (z/OS V2R2 new element of z/OS)
- Differences:
  - Hosted versions leverage IBM logon to let you save searches and provide more of a personalized user experience.
  - Knowledge Center Customer Install (KCCI) provides a standalone KC but it does not include personalization functions
- IBM Knowledge Center versions:
  - The current version is 2.0: ibm.com/support/knowledgecenter/

IBM Knowledge Center for z/OS (KC4z)

KC4z serves IBM product publication content to web browser clients from the z/OS server system.

KC4z provides the ability to display, navigate and search content in a manner similar to the Knowledge Center on ibm.com.

Content can be automatically added to and maintained in KC4z zFS repositories using the enhanced Softcopy Librarian tool.

By adding and maintaining content, KC4z can be made to serve product publications for many different IBM products.

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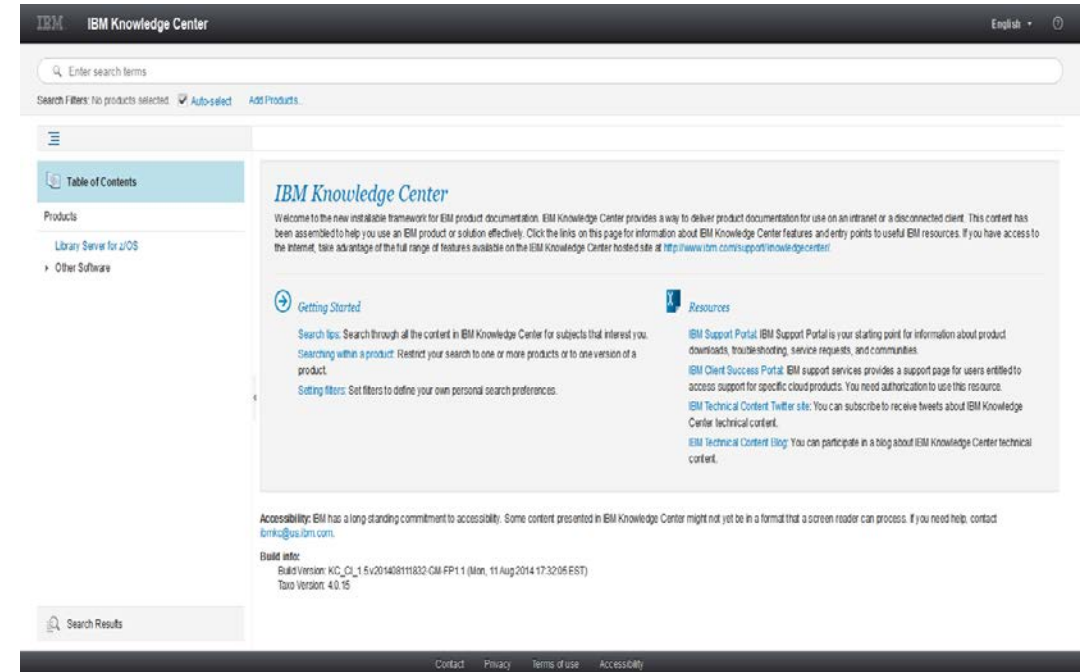
Using Softcopy Librarian (SCL)

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Introducing Knowledge Center 2.0

Improving search for IBM Knowledge Center 2.0

- IBM Knowledge Center 2.0 was developed using IBM Design Thinking methodology, which is an iterative process that involves customers in the design process.

- New Improved Interface – compliant with **ibm**.com

- Improved Context in Search Results

- Improved navigation throughout

- Optimized mobile Interface for smaller mobile devices that will automatically detect the device and change to optimize the display

Tip: View the Video tour for a quick overview of how to easily utilize the new features of Knowledge Center 2.0.
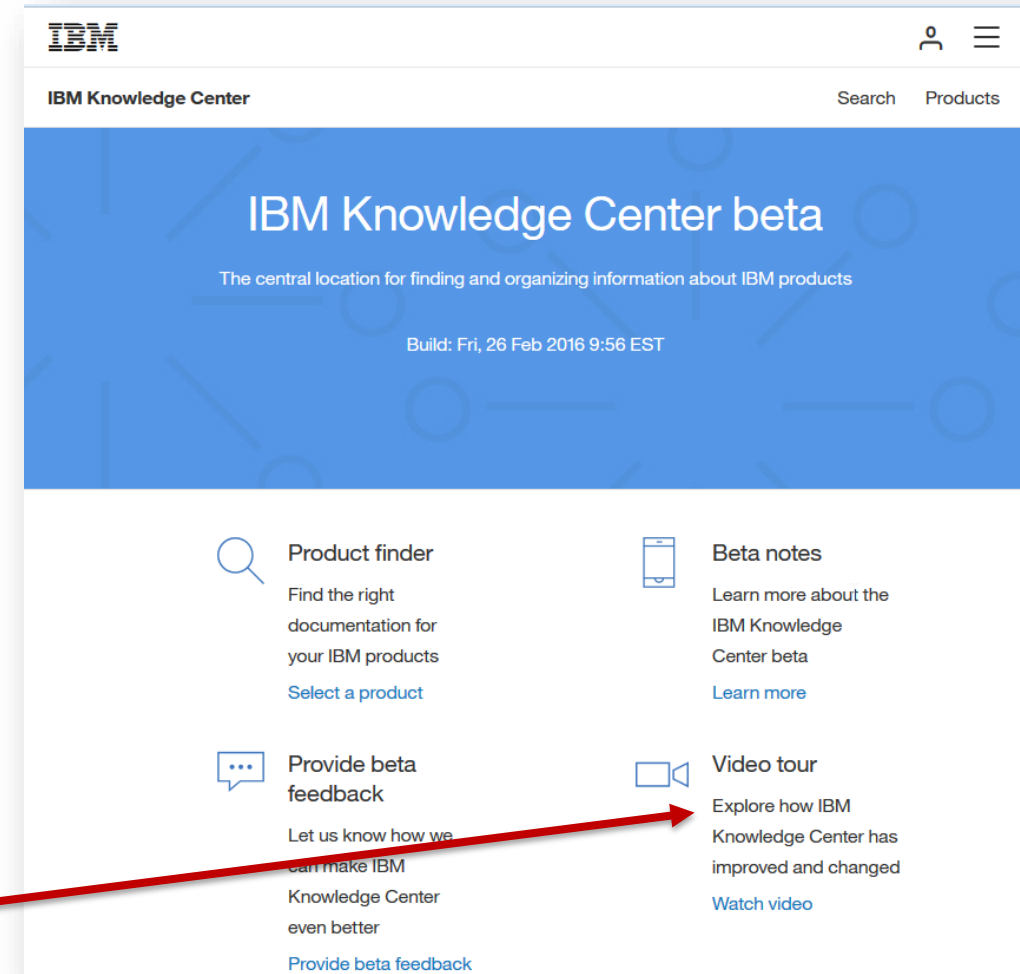
knowledgecenter.mybluemix.net/beta

IBM Knowledge Center improvements

Knowledge Center 1.5

- **User interface -** Too complex and confusing and not compliant with emerging standards
- **Navigation -** KC 1.5 exposed the unnecessary details of IBM's product taxonomy with the table of contents.
- **Search context -** Customers complained there wasn't enough context in search
- **Speed -** Too slow

Knowledge Center 2.0

- **User interface -** Dramatically simpler. Removed function that web statistics showed customers were not using – such as "collections" and custom PDFs
- **Navigation -** Simplified by just listing the product names.
- **Search context -** Search results provide a preview function
- **Speed -** Redesigned internals dramatically improves responsiveness

Searching KC 2.0

- The top complaint from users of KC 1.5 typically was ... Not enough context in search results
- New preview function lets users see their results before going to them.
- Hover over the results and a plus sign lets users preview the results
- In addition, we are requesting that the book title be added to the results to provide even more context.
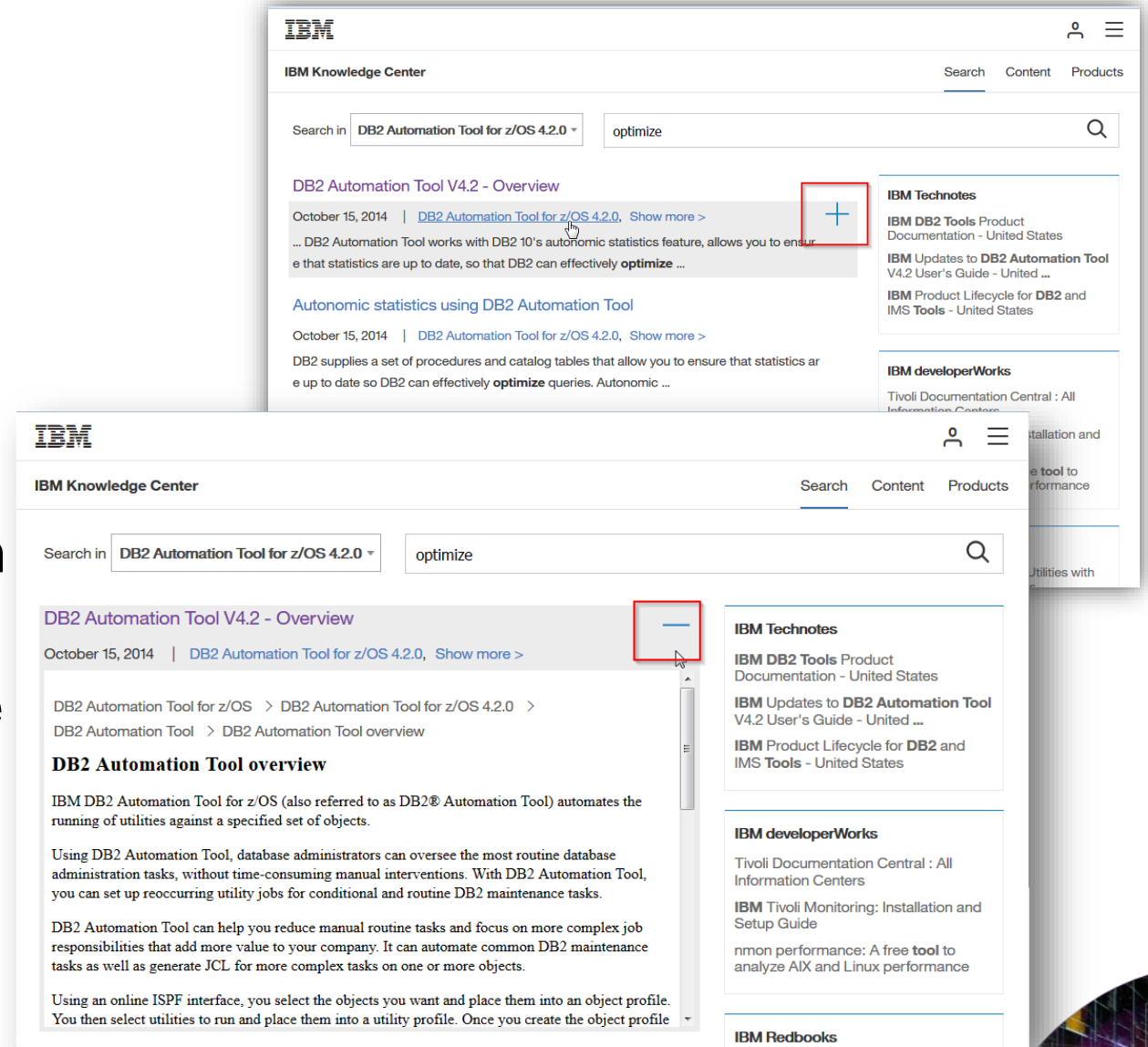
Using IBM Knowledge Center 2.0

Three easy steps

1. Find your product.

   Click on "Products" link and start typing the product name until it appears on the list.

2. Select the product and version you are interested in

3. Enter your search term and click search
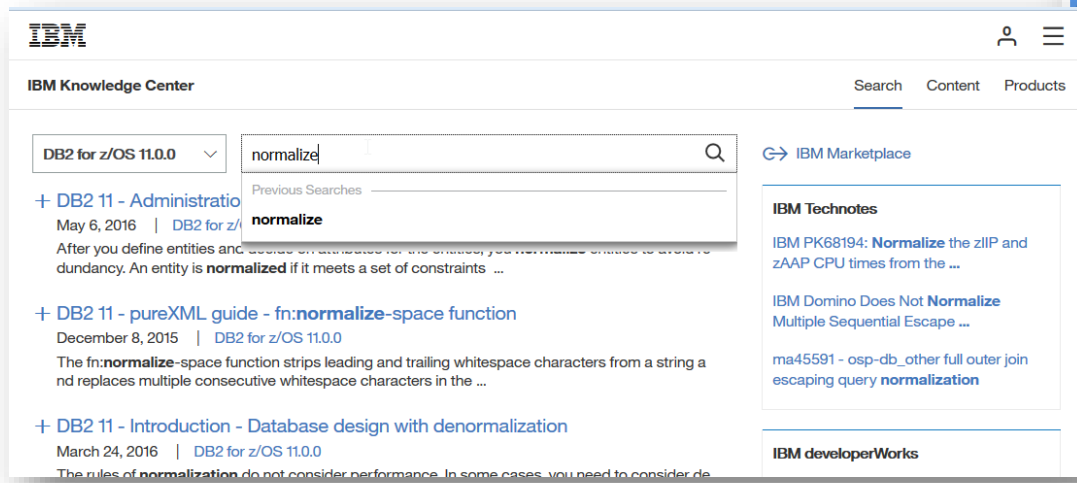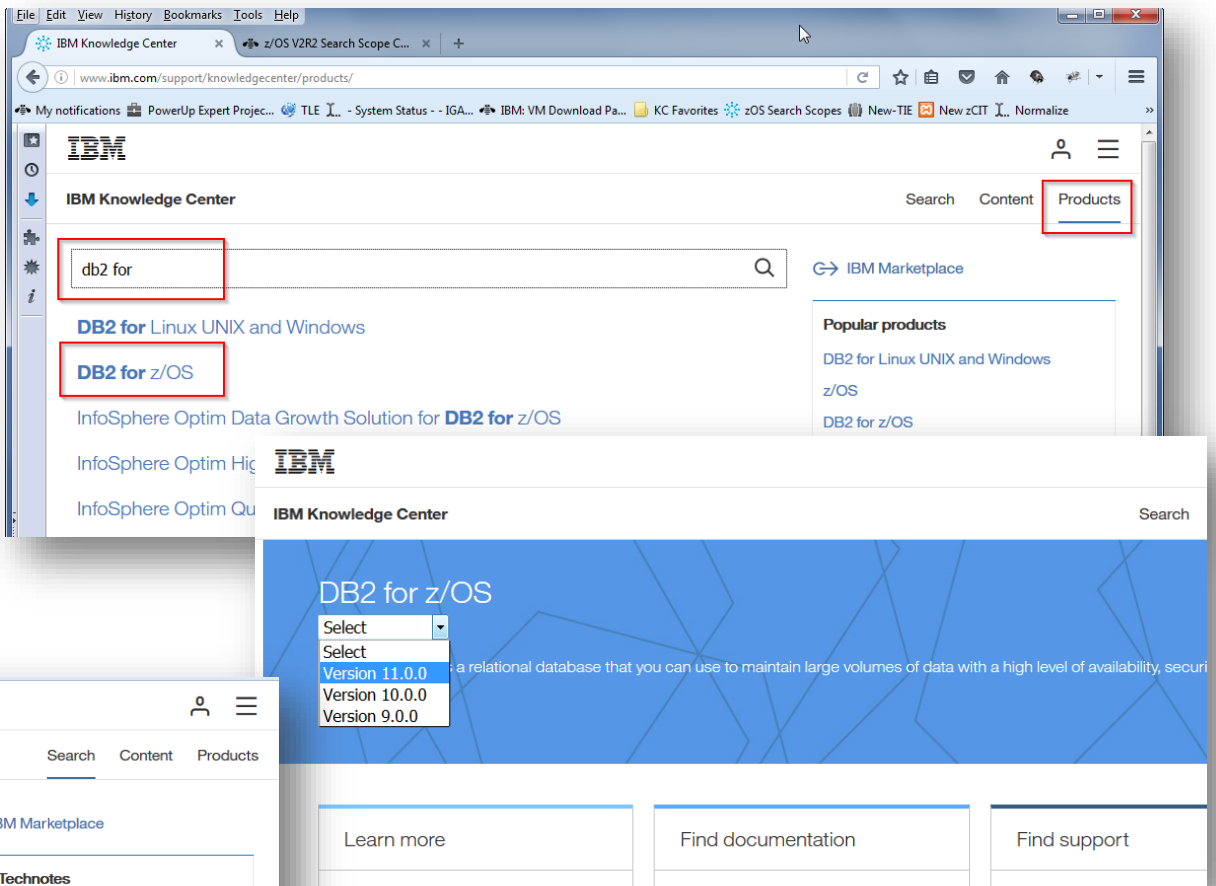
Adobe indexed PDF collections **

We created this deliverable based on comments from the SHARE closed door and discussion sessions.

- Our survey indicated that most customers download PDFs to create a personal repository for offline or emergency use
- Customers requested an easy way to download all PDFs at once
- Customers also wanted a search that showed the type of context they were accustomed to with BookManager.

publibfp.dhe.ibm.com/epubs/html/c2784301/c2784301.zip

**Note: We are introducing an "Adobe indexed PDF collection" which uses standard Adobe indexes. We plan to stop producing collections that use IBM's proprietary Advanced Linguistic Search (ALS) by z/OS V2R3.

Name	Type	Compressed size	Passwo
z_OS V2R2 PDF Collection Acrobat Index.pdx	Adobe Acrobat Catalog In...	1 KB	No
izuz5101.pdf	Adobe Acrobat Document	770 KB	No
izuz3111.pdf	Adobe Acrobat Document	1,414 KB	No
izu27200.pdf	Adobe Acrobat Document	1,366 KB	No
izu23200.pdf	Adobe Acrobat Document	1,587 KB	No
izu22100.pdf	Adobe Acrobat Document	551 KB	No
izu21100.pdf	Adobe Acrobat Document	77 KB	No
isp2ug10.pdf	Adobe Acrobat Document	1,807 KB	No
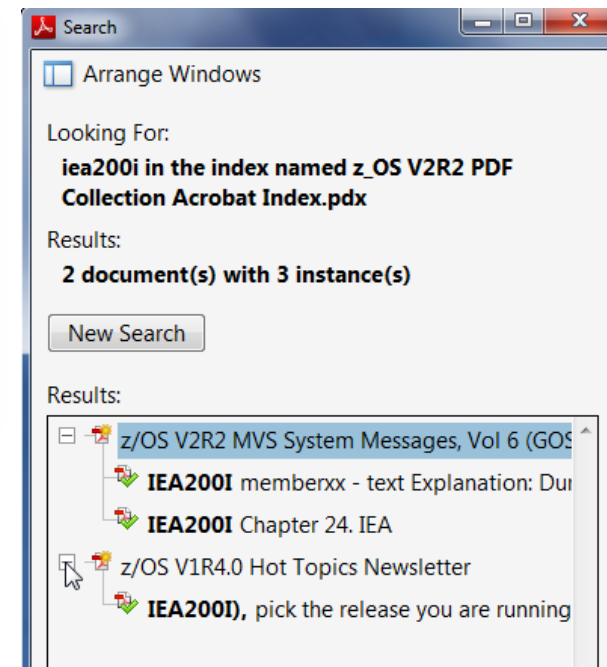
Benefits:
1. Provides standalone library
2. Provides a full text search with good context

Search

Arrange Windows

Looking For:

iea200i in the index named z_OS V2R2 PDF Collection Acrobat Index.pdx

Results:
   2 document(s) with 3 instance(s)

New Search

Results:
- z/OS V2R2 MVS System Messages, Vol 6 (GOS
  - **IEA200I** memberxx - text Explanation: Du
  - **IEA200I** Chapter 24. IEA
- z/OS V1R4.0 Hot Topics Newsletter
  - **IEA200I),** pick the release you are running

IBM Message Buddy

- A beta of the IBM Message Buddy app is available internally today.

- It is a new message lookup facility.

- It runs on Android.

- The user will install it from Google Play.

- Once installed, the user can choose the message catalogs they download.

- The message explanations are installed on the device, so the explanation is available without an Internet connection.

- It has type-ahead so as you type a message id, the list of potential explanations appears below
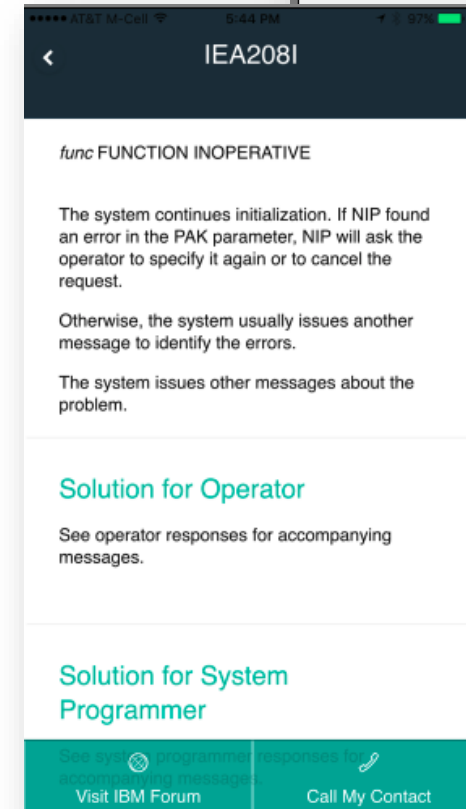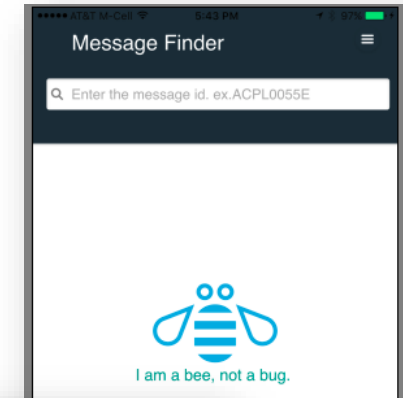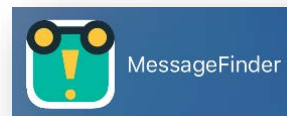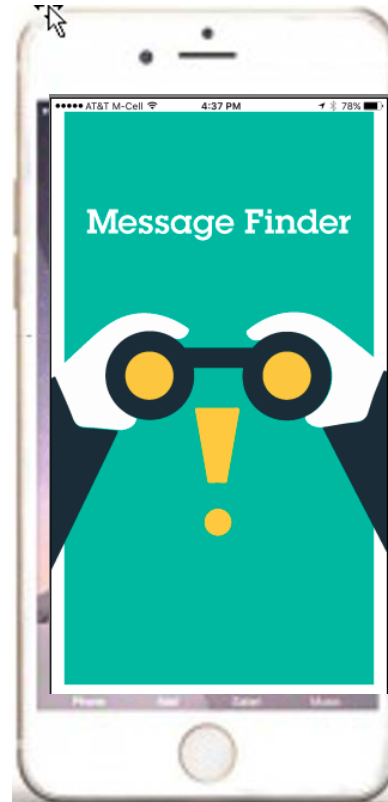
IBM Watson and Cognitive Computing

Using IBM Watson to improve documentation

What is cognitive computing?

- Cognitive computing refers to systems that learn at scale, reason with purpose and interact with humans naturally. Rather than being explicitly programmed, they learn and reason from their interactions with us and from their experiences with their environment.

- Most current systems have been deterministic; cognitive systems are probabilistic. They generate not just answers to numerical problems, but hypotheses, reasoned arguments and recommendations about more complex and meaningful bodies of data.

- What's more, cognitive systems can make sense of the 80 percent of the world's data that computer scientists call "unstructured." This enables them to keep pace with the volume, complexity and unpredictability of information and systems in the modern world.

Overview: How IBM Watson learns

www.youtube.com/watch?v=ymUFadN_MO4
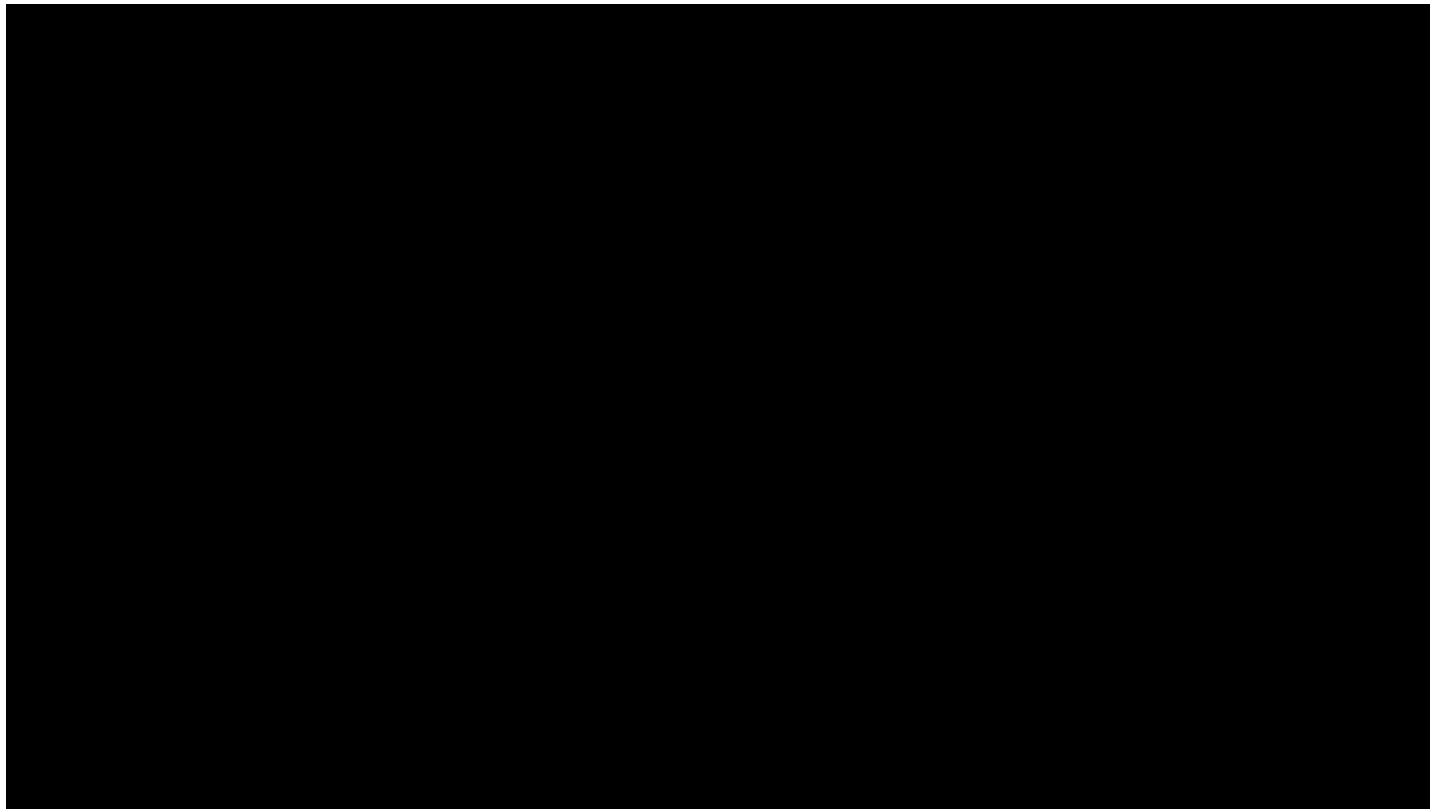
How IBM Watson works

How Watson reveals insights

Analyzes unstructured data

Uses natural language processing to understand grammar and context

The first person mentioned by name in 'The Man in the Iron Mask' is this hero of a previous book by the same author.
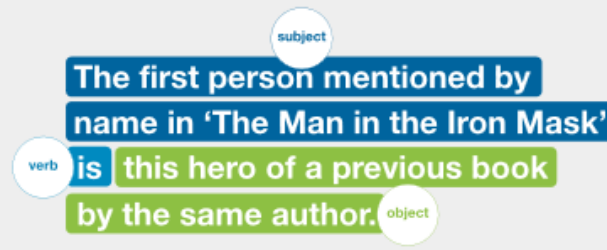
Understands complex questions

Evaluates all possible meanings and determines what is being asked

d'Artagnan
43%
56%
78%
31%
15%

Presents answers and solutions

Based on supporting evidence and quality of information found

ibm.com/smarterplanet/us/en/ibmwatson/what-is-watson.html

Using IBM Watson APIs

IBM Watson Bluemix: ibm.com/cloud-computing/bluemix/library

Marist and IBM Watson

How can you build a cognitive solution?

- Join IBM Bluemix today (ibm.com/cloud-computing/bluemix/library) without a credit card.
- Access to 2 GB of runtime and container memory to run apps.
- Unlimited IBM services, APIs, and complimentary support.

Hot Topics, Redbooks, and Communities

Other sources for z-related documentation

Rita Beisel

IBM z/OS Hot Topics

IBM z/OS Hot Topics is an annual newsletter that provides usable, hands-on, technical information about z/OS topics and features.

To check out previous editions:

ibm.com/systems/z/os/zos/library/hot-topics/hot-topics.html

IBM z Systems **Red**books

Redbooks address product, platform, and solution perspectives and explore the integration, implementation, and operation of realistic client scenarios. Some examples include:

- ABCs of IBM z/OS System Programming
- IBM z13 Technical Guide
- IBM Mainframe Bits: Understanding the Platform Hardware

To see the available Redbooks for z Systems:

www.redbooks.ibm.com/portals/systemz

z-Related communities

Connect with experts, collaborate & share with peers via Communities:

- z Systems: ibm.com/systems/z/resources/community.html
- IBM Destination z: www.destinationz.org/Community.aspx
- SHARE: www.share.org/
- zNextGen: www.znextgen.org/
- IBM Academic Initiative: developer.ibm.com/academic/

z-Related contests and learning systems

- IBM Master the Mainframe contest:
  ibm.com/systems/z/education/academic/masterthemainframe/index.html
- New:
  - **Mainframe Contest Learning System**

    IBM opened the Master the Mainframe Contest system to anyone wishing to gain extra mainframe experience in a controlled environment (Note: No prizes are awarded with participation):
    ibm.com/systems/z/education/academic/masterthemainframe/contest/learning.html

Additional z-Related resources

- zFavorites: ibm.com/systems/z/os/zos/library/zfavorites/
- IBM terminology: ibm.com/software/globalization/terminology/
- IBM Publications Center: ibm.com/e-business/linkweb/publications/servlet/pbi.wss
- z Systems resources: ibm.com/systems/z/resources/index.html
- z Systems education: ibm.com/systems/z/education/index.html

z-Related Facebook pages

- IBM System z: www.facebook.com/IBMsystemz
- IBM Master the Mainframe Contest: www.facebook.com/MasterTheMainframe
- IBM Destination z: www.facebook.com/IBMDestinationz
- SHARE Inc: www.facebook.com/SHAREonSocial

z-Related LinkedIn profiles

- System z Advocates: www.linkedin.com/groups/155723/profile
- IBM z Systems Events: www.linkedin.com/groups/IBM-System-z-Events-3053018
- Mainframe Experts Network: www.linkedin.com/groups/Mainframe-Experts-Network-55779