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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





#### 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 information?



Information 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 information
  - (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 information?



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)

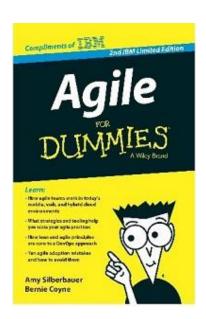
= Higher quality of the end product



#### Agile resources

- IBM Lean and Agile development: <a href="mailto:ibm.com/ibm/devops/us/en/agile/">ibm.com/ibm/devops/us/en/agile/</a>
- IBM Lean and Agile case studies and additional resources:

ibm.com/software/rational/agile/casestudies/



• Agile for Dummies (IBM edition):

www.amazon.com/Agile-Dummies-IBM-Limited/dp/111830506X

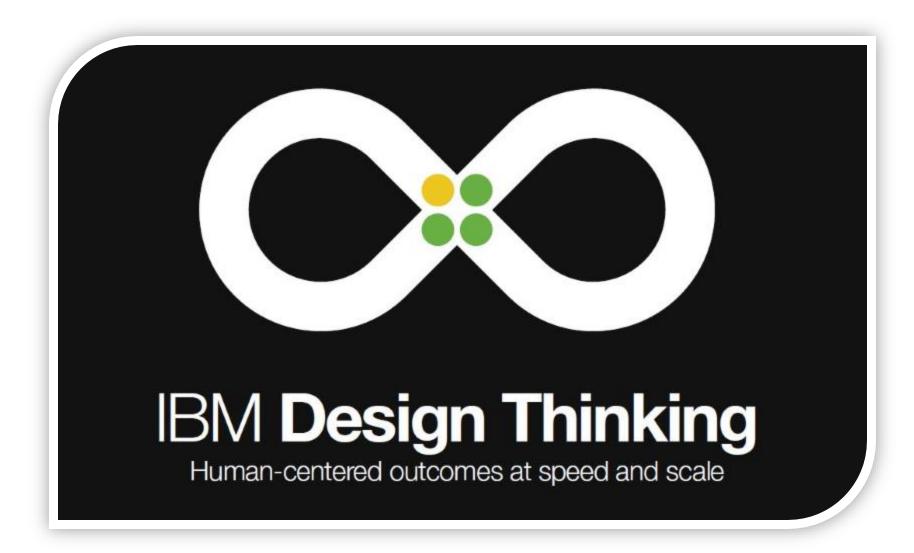


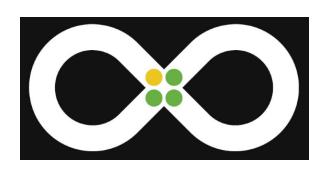


## **IBM Design Thinking**

The future of information delivery Jodi Everdon, jeverdon@us.ibm.com

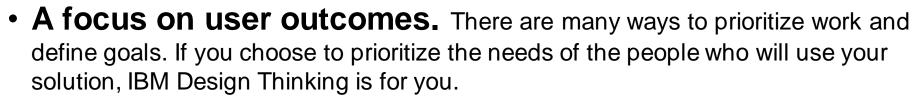
#### **IBM Design Thinking**





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







• **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.



#### Mission of IBM Design Thinking

www.youtube.com/watch?v=RcOtXkihBXU



### **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

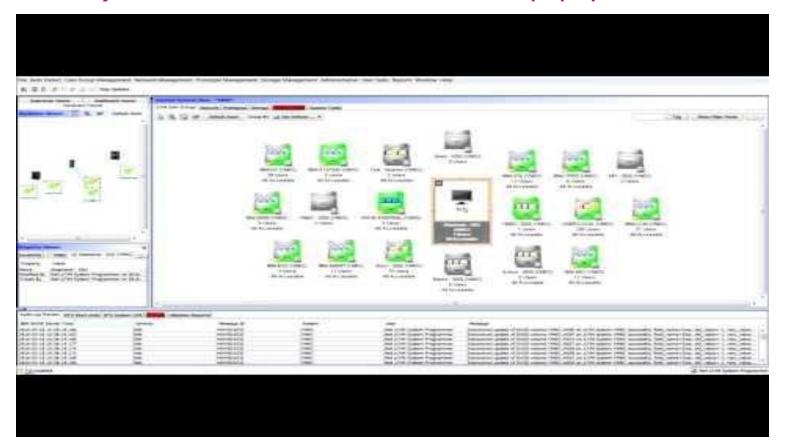
Design thinking is a necessary skill in today's business culture. Some examples of critical applications for design thinking:

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



#### **IBM Design Thinking in action**

www.youtube.com/watch?v=EVhwFpqOpJs



#### **Design resources**

To learn more about IBM Design Thinking from IBM and other perspectives:

- IBM Design Thinking Resources: <u>ibm.com/design</u> and <u>ibm.com/design/research</u>
- Transforming z Systems, by Kirsten McDonald and Iris Rivera at the 2016 ECC Conference: <a href="ecc.marist.edu/documents/367507/562924/BrunnerIBM+DT+KBM+IMR+Transforming+z+ECC+2016.pdf">ecc.marist.edu/documents/367507/562924/BrunnerIBM+DT+KBM+IMR+Transforming+z+ECC+2016.pdf</a>
- "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, gksmith@us.ibm.com

### 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 simplifies tasks and eliminates documentation
  - Workflows 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 (new element of z/OS in V2R2)
- Differences:
  - Hosted versions leverage IBM login to let you save searches and provide more of a personalized user experience.
  - Knowledge Center Customer Install ("KC-CI") provides a standalone KC but it does not include personalization functions.
- IBM Knowledge Center versions:
  - The current version is 2.0: <u>ibm.com/support/knowledgecenter/</u>

IBM

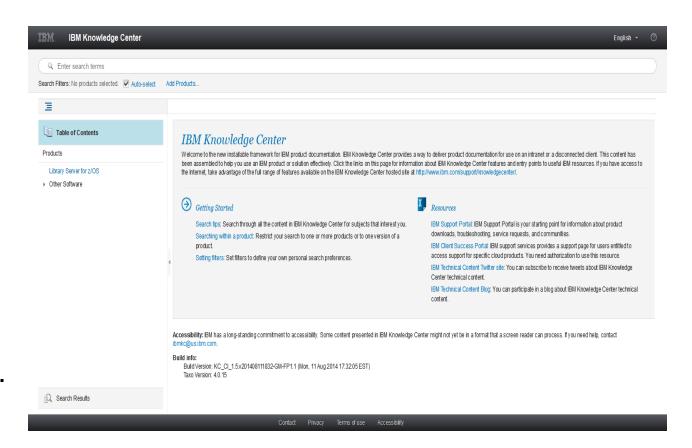
### IBM Knowledge Center for z/OS (KC4z)

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

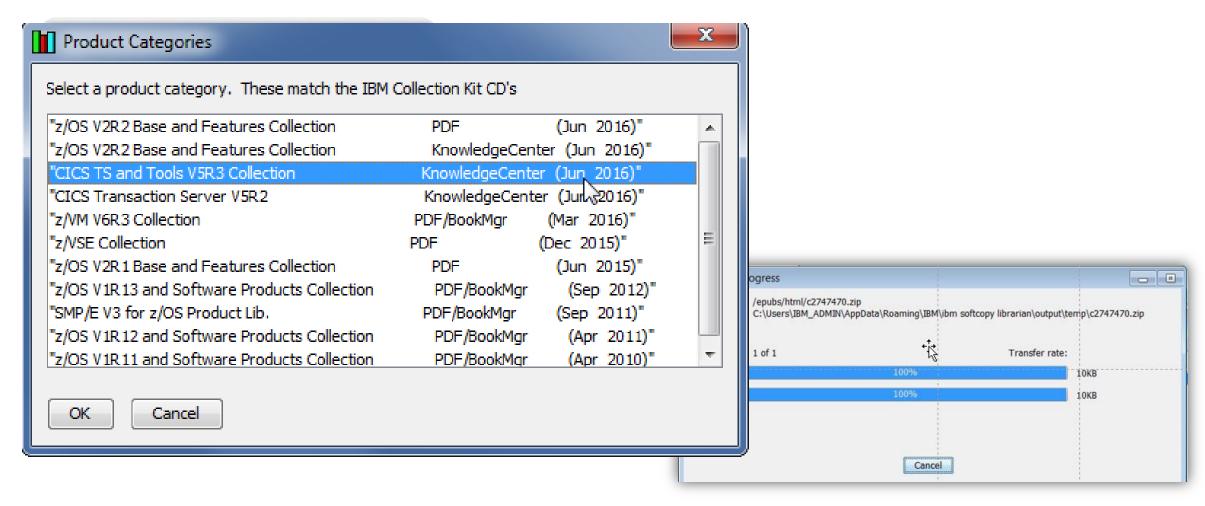
KC4z provides the ability to display, navigate and search content in a manner similar to the Knowledge Center hosted on ibm.com.

You can automatically add content to and maintain content in KC4z zFS repositories using the enhanced Softcopy Librarian tool.

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



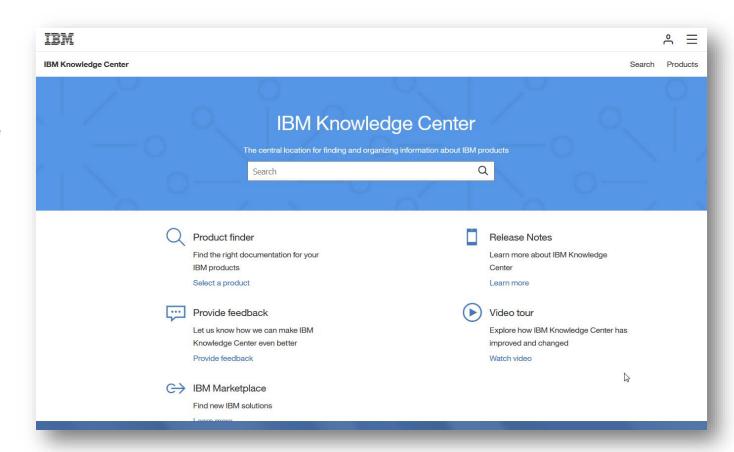
## Softcopy Librarian (SCL) – Used to populate KC on z/OS



If you need additional libraries, send email to the individual product libraries. You may also want to add your support to RFE 84246, which requests more KC4Z content.

#### **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

#### **IBM Knowledge Center improvements**

#### **Knowledge Center 1.5**

- User interface Too complex and confusing and not compliant with emerging standards
- Navigation Exposed the unnecessary details of IBM's product taxonomy with the table of contents
- Search context Not enough context in search
- Speed Too slow

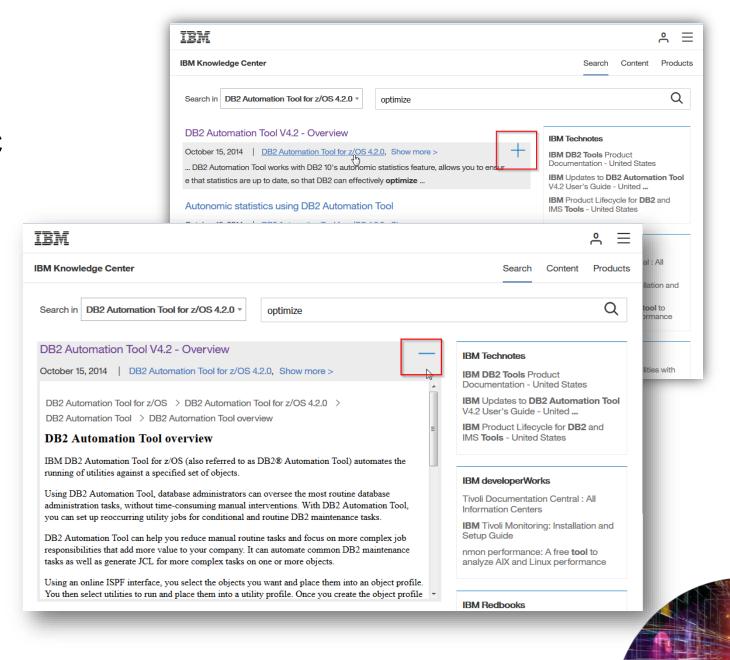
#### **Knowledge Center 2.0**

- User interface Dramatically simpler: used web statistics to determine unused functions, such as Collections and custom PDFs, and removed them
- Navigation Simplified by listing just the product names
- Search context Search results provide a preview function
- Speed Redesigned internals dramatically improves responsiveness



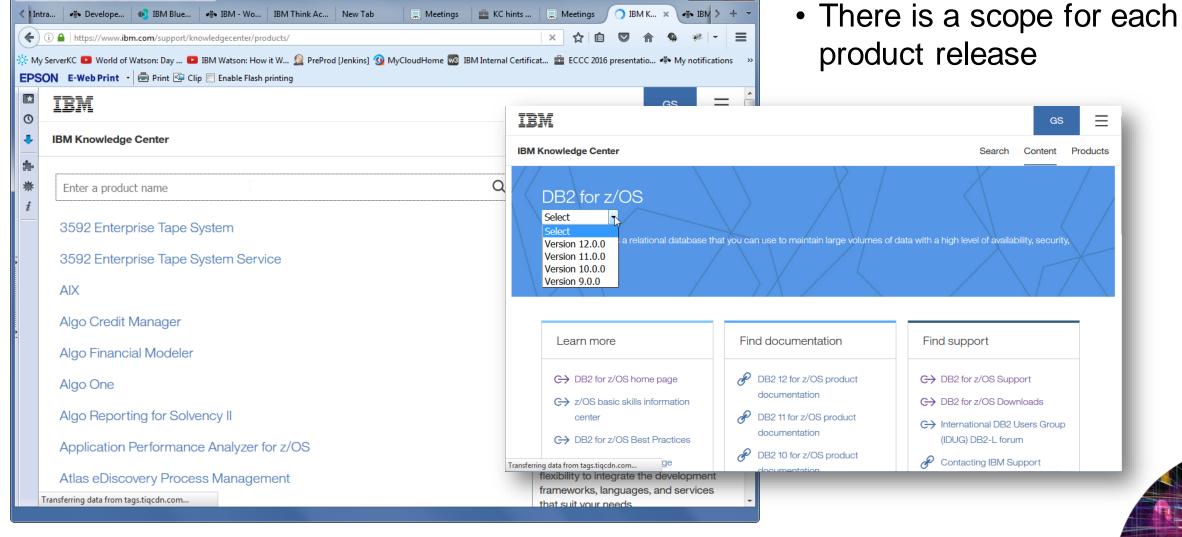
#### **Searching KC 2.0**

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



### **About search scopes**

File Edit View History Bookmarks Tools Help

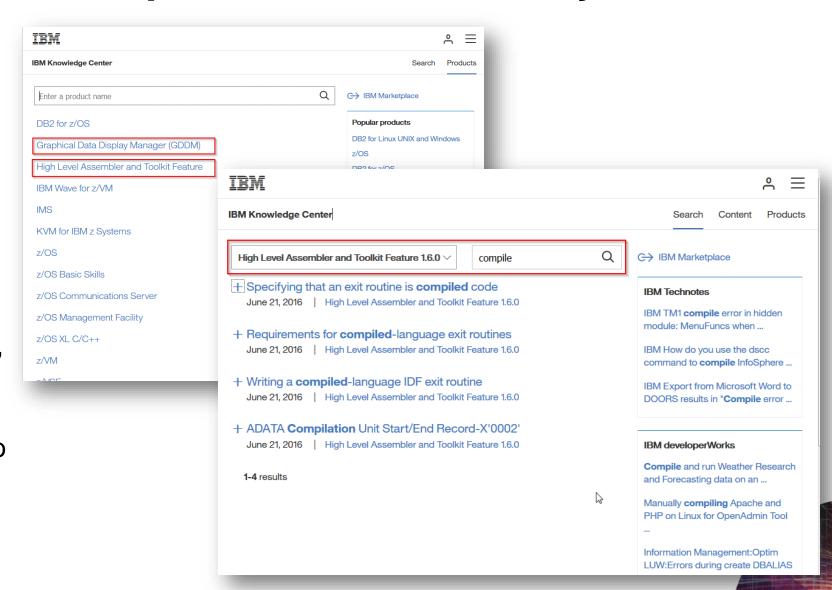


Search scopes are based

on product taxonomies.

#### z/OS search scopes – Improvements underway

- z/OS consists of several components, so search scopes at the release level are very large.
- We restructuring our z/OS KC to break up the content into as many component parts for larger element libraries.
- This will result in a scope or, in BookManager terms, a shelf for the elements
- At the same time, we plan to remove duplicate content that is common to each release.



#### **Using IBM Knowledge Center 2.0**

#### Three easy steps

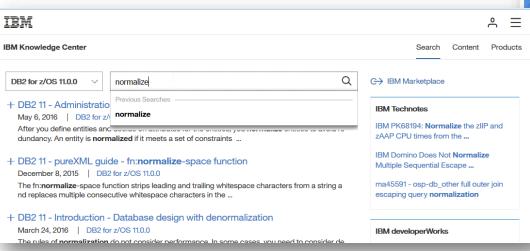
1. Find your product.

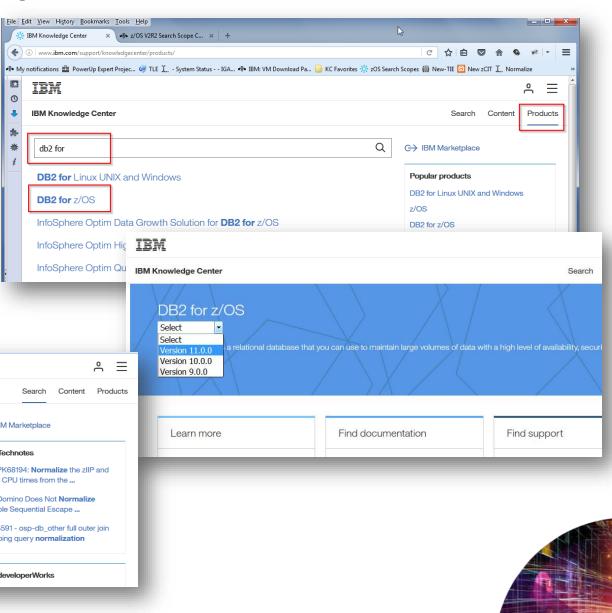
Click on "Products" link and start typing the product name until it appears in the list.

2. Select the product and version you are interested in

3. Enter your search term and click

search





#### **Improvements**

#### z/OS Product Documentation

- We are restructuring our documentation to provide smaller search scopes
- Eliminating redundant information
- Provide the ability to search at the book level
- Working with the corporate team to drive improvements that our customers want.
- We are working to facilitate more content for Knowledge Center for z/OS

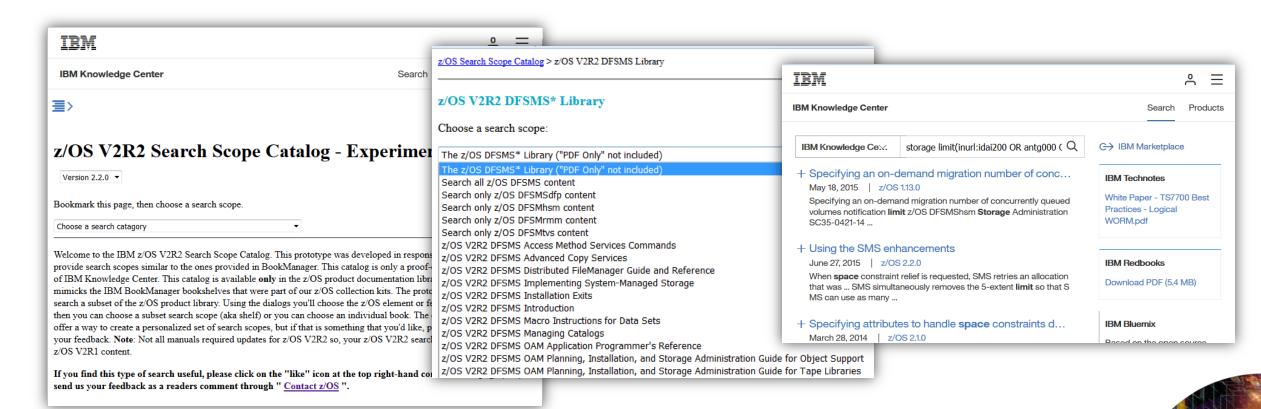
#### **Knowledge Center Design Thinking**

If you are interested in volunteering to join in the design thinking work to make Knowledge Center better, contact the product manager, Jamie Roberts (robertsj@ca.ibm.com)

#### **Search Scope Catalog - Experimental**

Designed for z/OS to let users search at the element/feature level and at the book level.

www.ibm.com/support/knowledgecenter/SSLTBW 2.2.0/com.ibm.zos.v2r2/zos-search/zossearchscopes.html



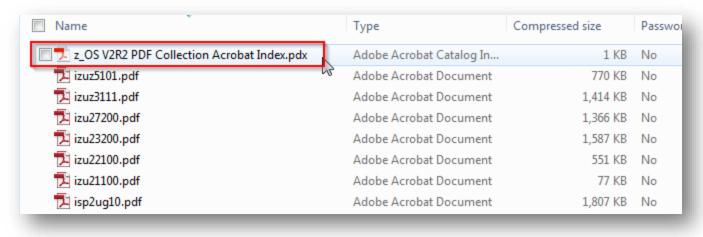
#### Additional resource: Adobe indexed PDF collections \*\*

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.

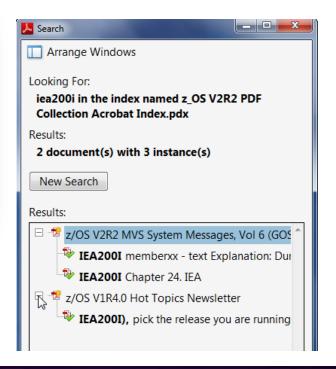
publibfp.dhe.ibm.com/epubs/html/c2784301/c2784301.zip

\*\*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.



#### Benefits:

- 1. Provides standalone library
- 2. Provides a full text search with good context

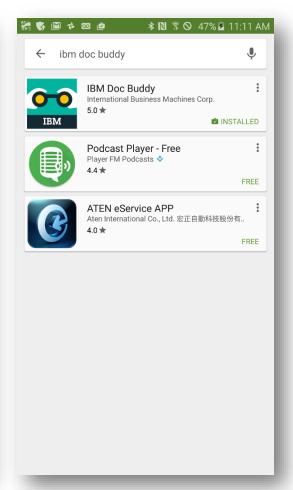


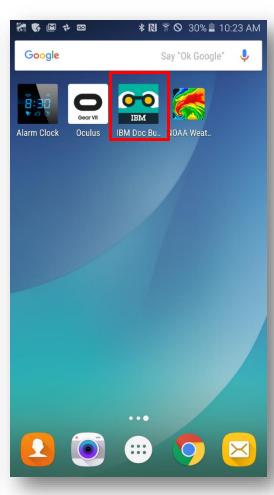


#### Message lookup for Android: IBM Doc Buddy

Install the app from the Google Play catalog.







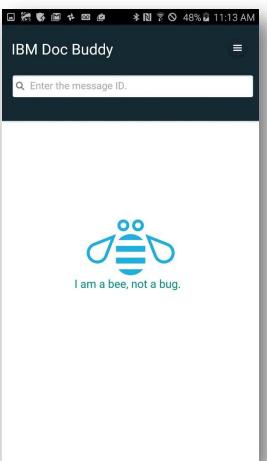
After installation, click on the icon to launch the app for the first time.

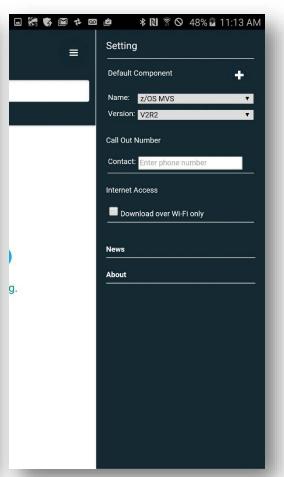


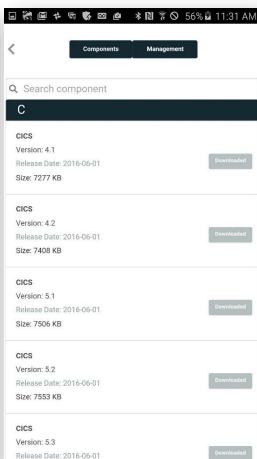
## **Setting up IBM Doc Buddy**

Before you can search for a message, you need to complete some setup. A catalog lists all the components that you can download to the app. Download all components that you'll want to search.





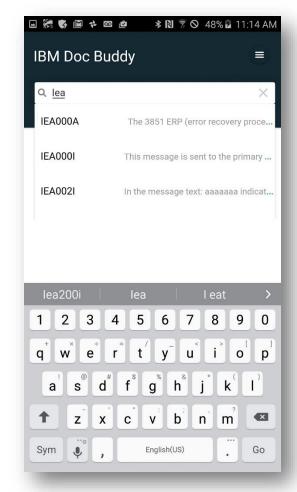


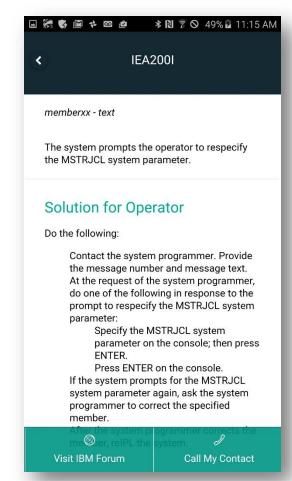


#### **Using IBM Doc Buddy**

After the content is downloaded, you can use the app offline. Just start to type the message ID. The list narrows as the full message is entered.









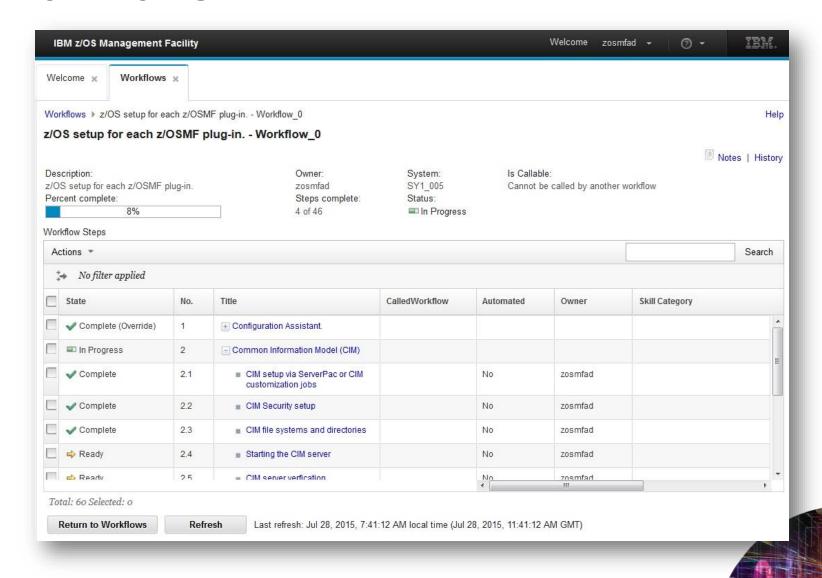
#### z/OSMF workflows

- ibm.com/systems/z/os/zos/features/zosmf/tasks/workflows.html
- Simplify software configuration efforts.
- Ensure that consistent methods and tools are used for software configuration on z/OS.
- Provide administrative functions for assigning workflow responsibilities and tracking progress.
- More than merely a checklist of activities, the Workflows task provides a structured process for accomplishing work on z/OS. With the Workflows task, you can:
  - Guide the activities of system programmers, security administrators and others at your installation who are responsible for managing the configuration of the z/OS system.
  - Assign individual work items in the workflow (the steps) to performers and track their progress.
  - Save the output of a step in a separate file for use by subsequent steps in the workflow.
  - Require a step to be performed when a logical condition is satisfied on the z/OS system.
  - Use wizards to assist your team with creating system objects (UNIX files and z/OS data set members) and submitting work to run on z/OS, such as batch jobs, REXX scripts, and UNIX shell scripts.
  - z/OSMF provides guided, step-based workflows for migrating and configuring functions on z/OS. For more details, see <u>z/OSMF Downloads</u>.

IDM.

#### Learn more about workflows

- z/OSMF also provides a set of Representational State Transfer (REST) services for creating and managing a workflow on a z/OS system.<sup>2</sup>
- For more details, see IBM z/OS
   Management Facility
   Programming Guide, SA32 1066, in the IBM Publications
   Center.

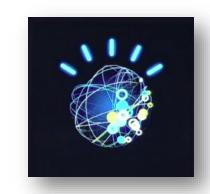




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## What is cognitive computing?

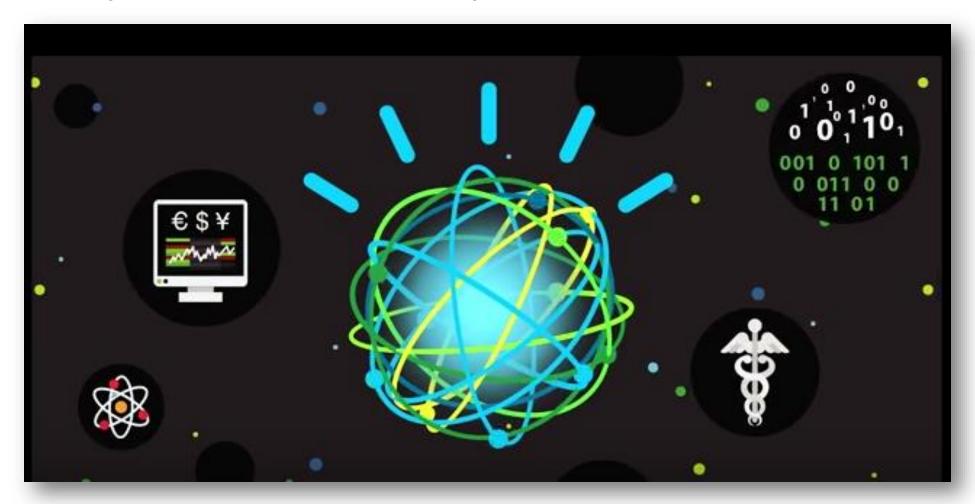
- Cognitive computing refers to systems that learn at scale, reason with purpose, and interact with humans naturally. Rather than being explicitly programmed, they learn and reason from their interactions with us and from their experiences with their environment.
- Most current systems have been deterministic;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

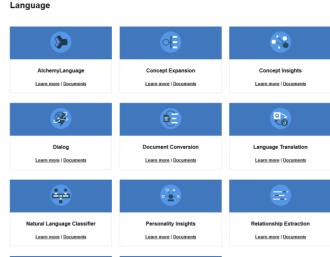


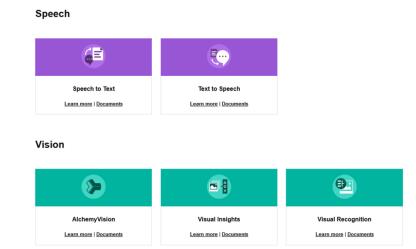
ibm.com/smarterplanet/us/en/ibmwatson/what-is-watson.html



### **Using IBM Watson APIs**





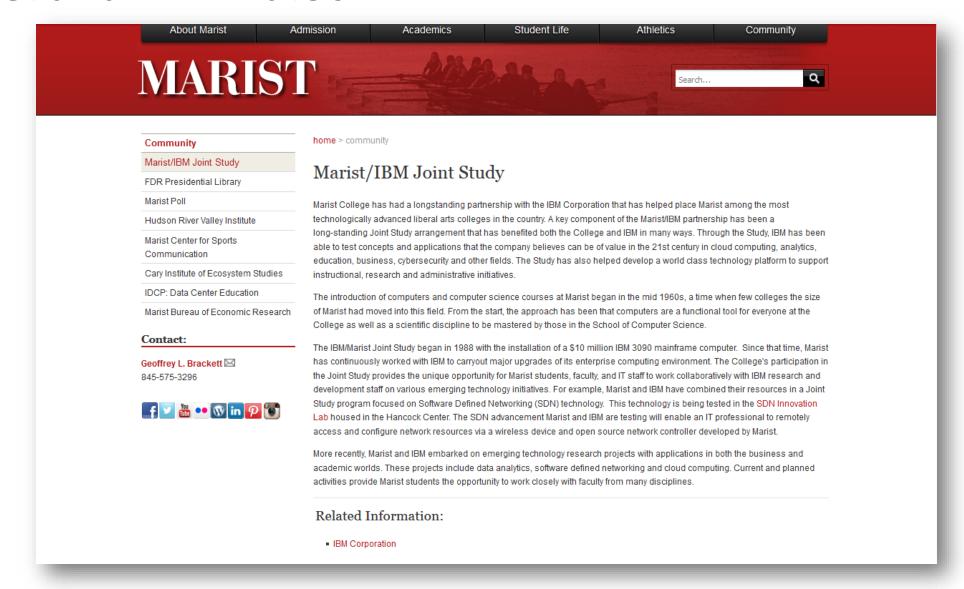


#### **Data Insights**



IBM Watson Bluemix: <a href="mailto:ibm.com/cloud-computing/bluemix/library">ibm.com/cloud-computing/bluemix/library</a>

#### **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.





### IBM z/OS Hot Topics Newsletter

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

To check out previous editions: <a href="mailto:ibm.com/systems/z/os/zos/library/hot-topics/hot-topics.html">ibm.com/systems/z/os/zos/library/hot-topics/hot-topics.html</a>



### IBM z Systems Redbooks

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: <u>ibm.com/systems/z/resources/community.html</u>
- IBM Destination z: <a href="https://www.destinationz.org/Community.aspx">www.destinationz.org/Community.aspx</a>
- SHARE: www.share.org/
- zNextGen: <u>www.znextgen.org/</u>
- IBM Academic Initiative: <a href="developer.ibm.com/academic/">developer.ibm.com/academic/</a>
- IBM-MAIN list: <u>listserv.ua.edu/cgi-bin/wa?LIST=IBM-MAIN</u>
- IBM developerWorks: <a href="mailto:ibm.com/developerworks/analytics/zsystems/">ibm.com/developerworks/analytics/zsystems/</a>

#### z-Related contests and learning systems

- IBM Master the Mainframe contest: <u>ibm.com/systems/z/education/academic/masterthemainframe/index.html</u>
- 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: <a href="mailto:ibm.com/systems/z/os/zos/library/zfavorites/">ibm.com/systems/z/os/zos/library/zfavorites/</a>
- IBM Systems Blog: <a href="mailto:ibm.com/blogs/systems/">ibm.com/blogs/systems/</a>
- IBM terminology: <a href="mailto:ibm.com/software/globalization/terminology/">ibm.com/software/globalization/terminology/</a>
- IBM Publications Center: <u>ibm.com/e-</u> <u>business/linkweb/publications/servlet/pbi.wss</u>
- z Systems resources: <u>ibm.com/systems/z/resources/</u>
- z Systems education: <a href="mailto:ibm.com/systems/z/education/">ibm.com/systems/z/education/</a>



### z-Related Twitter pages

- IBM z Systems: <u>twitter.com/IBMzSystems</u>
- IBM Systems: <u>twitter.com/IBMSystems</u>
- IBM Master the Mainframe Contest: twitter.com/mastermainframe
- IBM Destination z: <u>twitter.com/myzcommunity</u>
- SHARE Inc: twitter.com/SHAREhq
- IBM z Systems Events: <u>twitter.com/SystemZEvents</u>



### z-Related Facebook pages

- IBM System z: <u>www.facebook.com/IBMsystemz</u>
- IBM Systems: <u>www.facebook.com/ibmsystems</u>
- IBM Master the Mainframe Contest: www.facebook.com/MasterTheMainframe
- IBM Destination z: <a href="https://www.facebook.com/IBMDestinationz">www.facebook.com/IBMDestinationz</a>
- SHARE Inc: <a href="https://www.facebook.com/SHAREonSocial">www.facebook.com/SHAREonSocial</a>



### z-Related LinkedIn profiles

- IBM Systems: www.linkedin.com/company/ibm-systems
- System z Advocates: <a href="https://www.linkedin.com/groups/155723/profile"><u>www.linkedin.com/groups/155723/profile</u></a>
- IBM z Systems Events: <a href="https://www.linkedin.com/groups/IBM-System-z-Events-3053018">www.linkedin.com/groups/IBM-System-z-Events-3053018</a>
- Mainframe Experts Network: <a href="www.linkedin.com/groups/Mainframe-Experts-Network-55779">www.linkedin.com/groups/Mainframe-Experts-Network-55779</a>





# Thank you!

