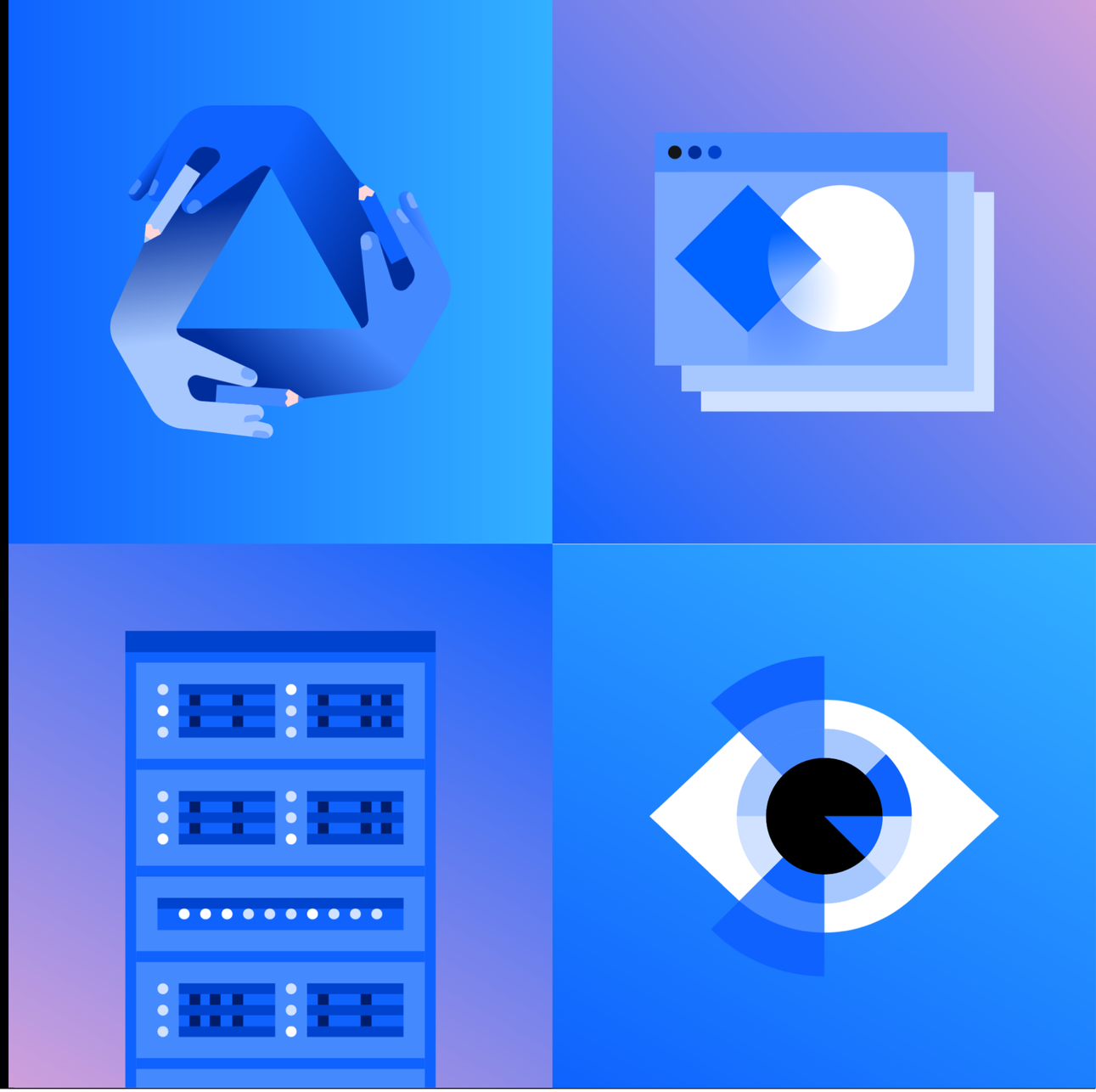
iF Design Award Submission

Modernizing Mainframe Management



IBM

Mainframes make the world go round

Every day, mainframe computers run business process transactions and power things we do as consumers.

From credit card and ATM transactions to flight booking to insurance claims and stock trades, mainframes carry out high value, real-time transactions that include a lot of sensitive information. It is vitally important that the transactions are carried out effectively and securely. IBM Z Mainframes are designed and built for that purpose—to process billions of transactions, store and restore massive amounts of data in and from anywhere quickly, reliably, and securely.

Today, IBM isn't just making improvements in reliability, availability, and serviceability. We are also improving ways mainframe users like system programmers manage and maintain the operating system so it's easier to train the new generation of IT professionals of mainframe skills.

71%
Of Fortune 500 companies' critical core IT is hosted on mainframe: 92 of the world's top 100 banks; 23 of the 25 top airlines; 10 of the world's top 10 insurers

30 billion
Transactions per day

70%
Of the world's production IT workloads run on mainframes yet account for only 6% of IT costs

1.3 million/second
Daily transactions on CICS vs 68,542/second on Google

99.99999%
Availability which translates into only three second of downtime in a year

z/OS programmers need **modern ways** of working

> “ I would love user-friendly tools to help me do bureaucratic tasks quicker. ”
>
> **z/OS Systems Programmer** with five years experience

> “ Documentation is not an easy way to learn how to manage such a system. ”
>
> **z/OS Systems Programmer** with 17 months experience

> “ It has taken me six months to start feeling like I can contribute, and a year to contribute independently. ”
>
> **z/OS Systems Programmer** with two years experience

Research identified two of our customers’ biggest needs

A modern user interface for tasks performed by z/OS system programmers

94% of surveyed customers identified this as a pain point that will impact their business

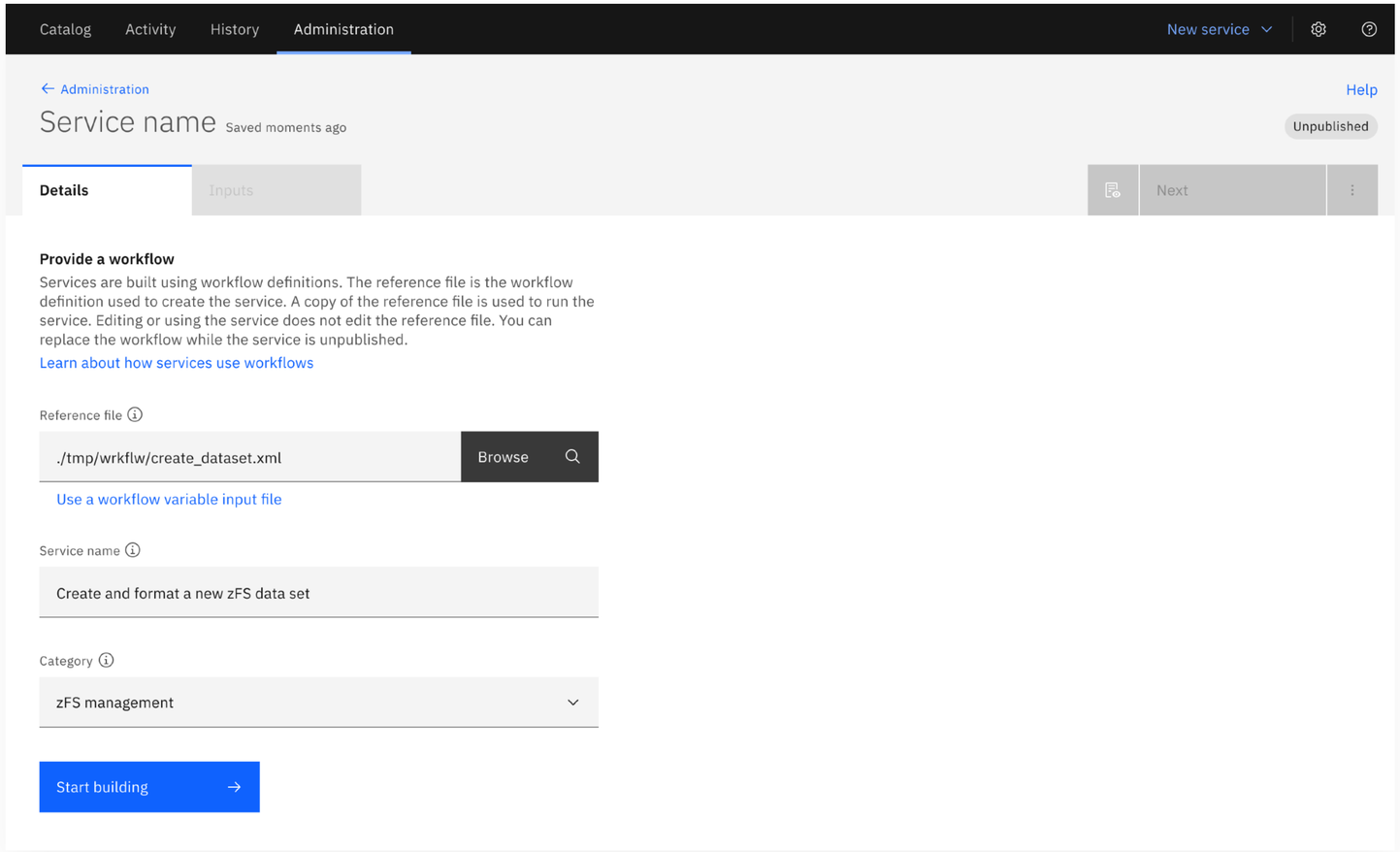
Help from IBM to teach z/OS skills and **pass their institutional knowledge** to the next generation of z/OS system programmers

In a 2017 mainframe study by BMC 44% of customers reported staffing and skills in their top 3 challenges

Simplify processes & knowledge sharing

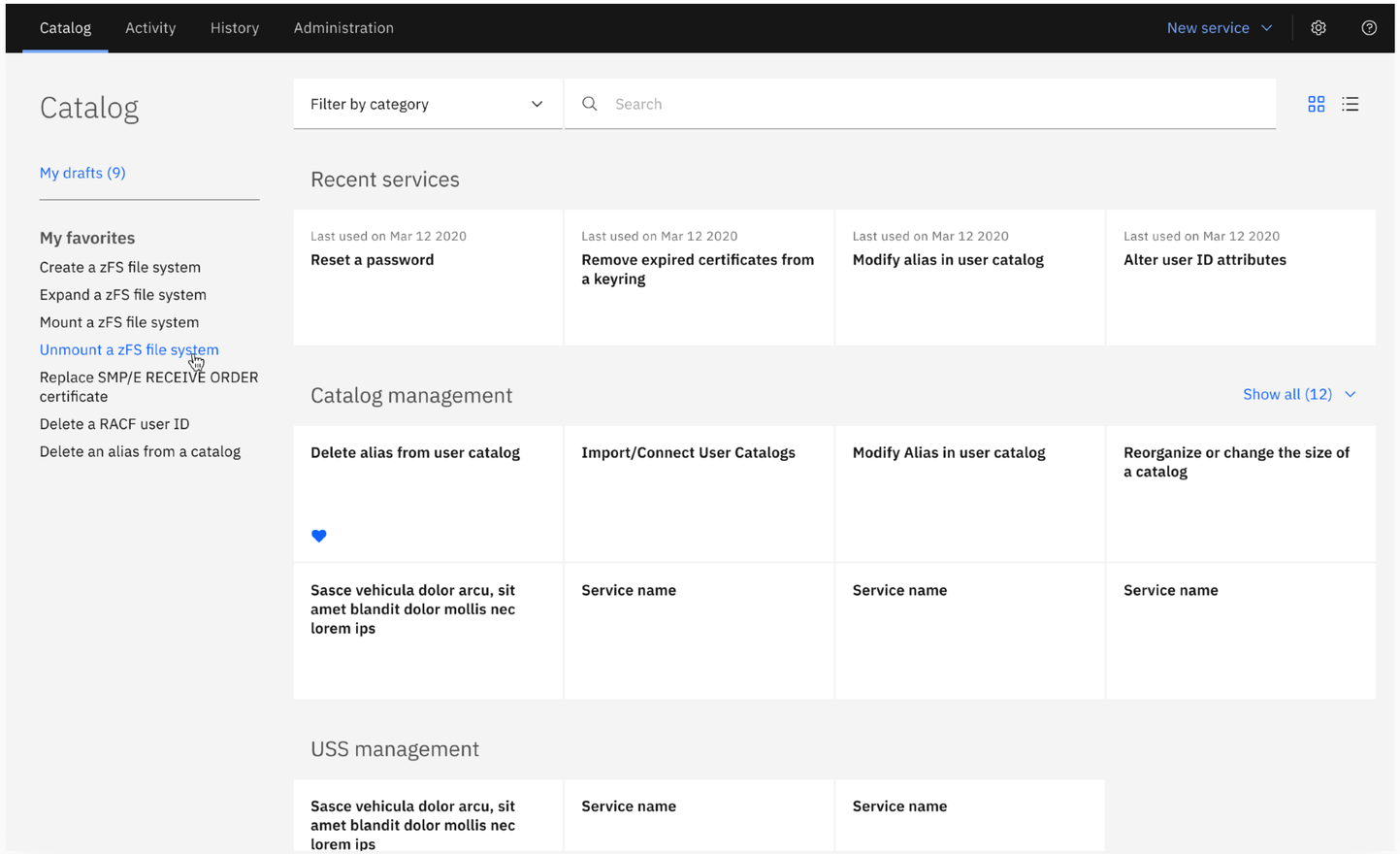
By logging into zOSMF, users can visit Management Services Catalog.

Tenured systems programmers can create, manage, and publish services for their early tenure systems programmers to run. Much of this is done from the Administration table. Users can view their services in a filterable/sortable list, take bulk or individual actions on services, and click into individual services to edit them in the builder.



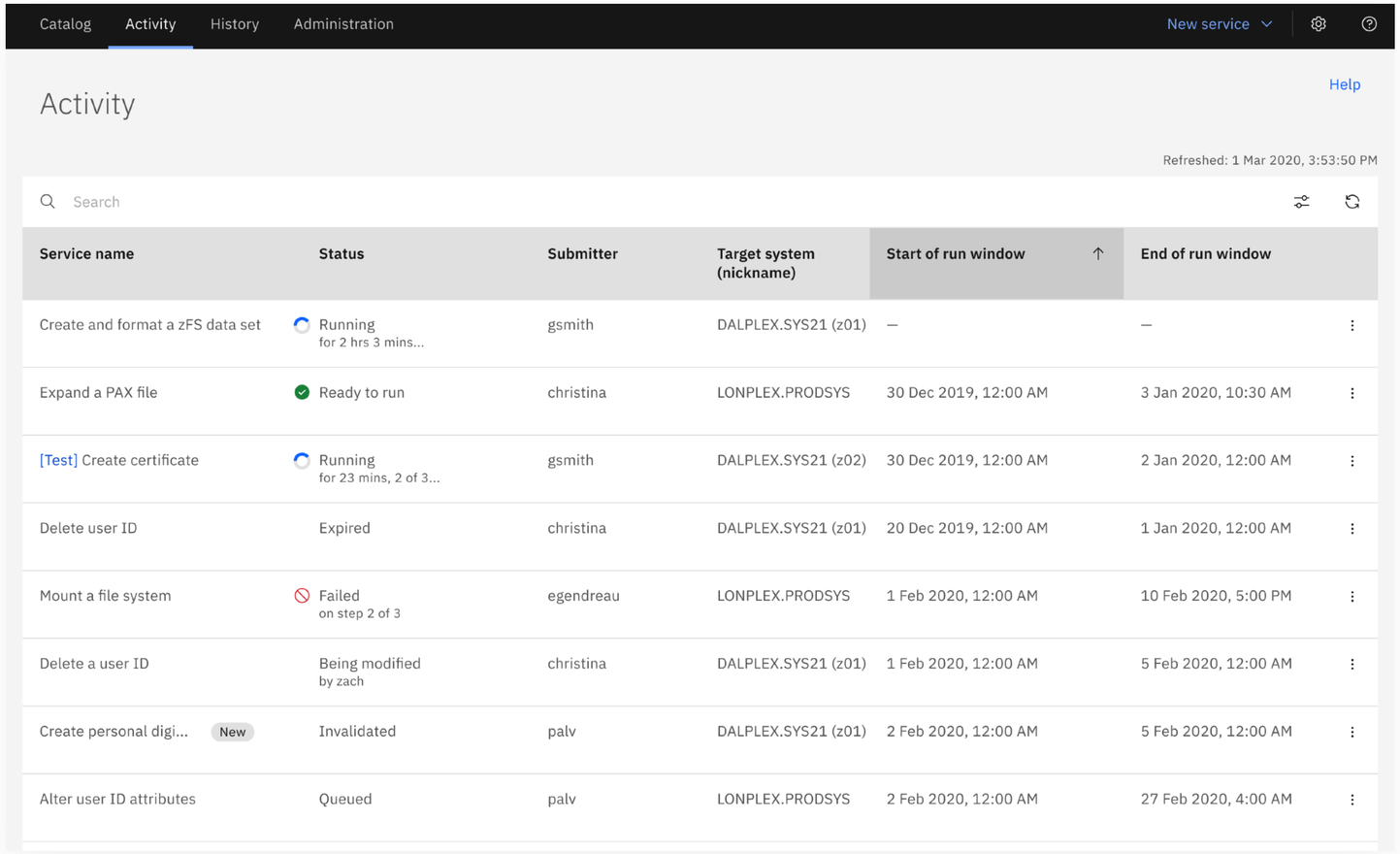
Increase productivity & **minimize** errors

Users can visit the Catalog and select any service to run it on their chosen target system. They can also “favorite” services. The service list can be viewed in card or list format. Once a service is selected, the user fills out the submission details form and clicks submit. The service runs the workflow in the background. Partially completed service submissions are saved to drafts to revisit later.



Collaboratively manage, run, & plan services

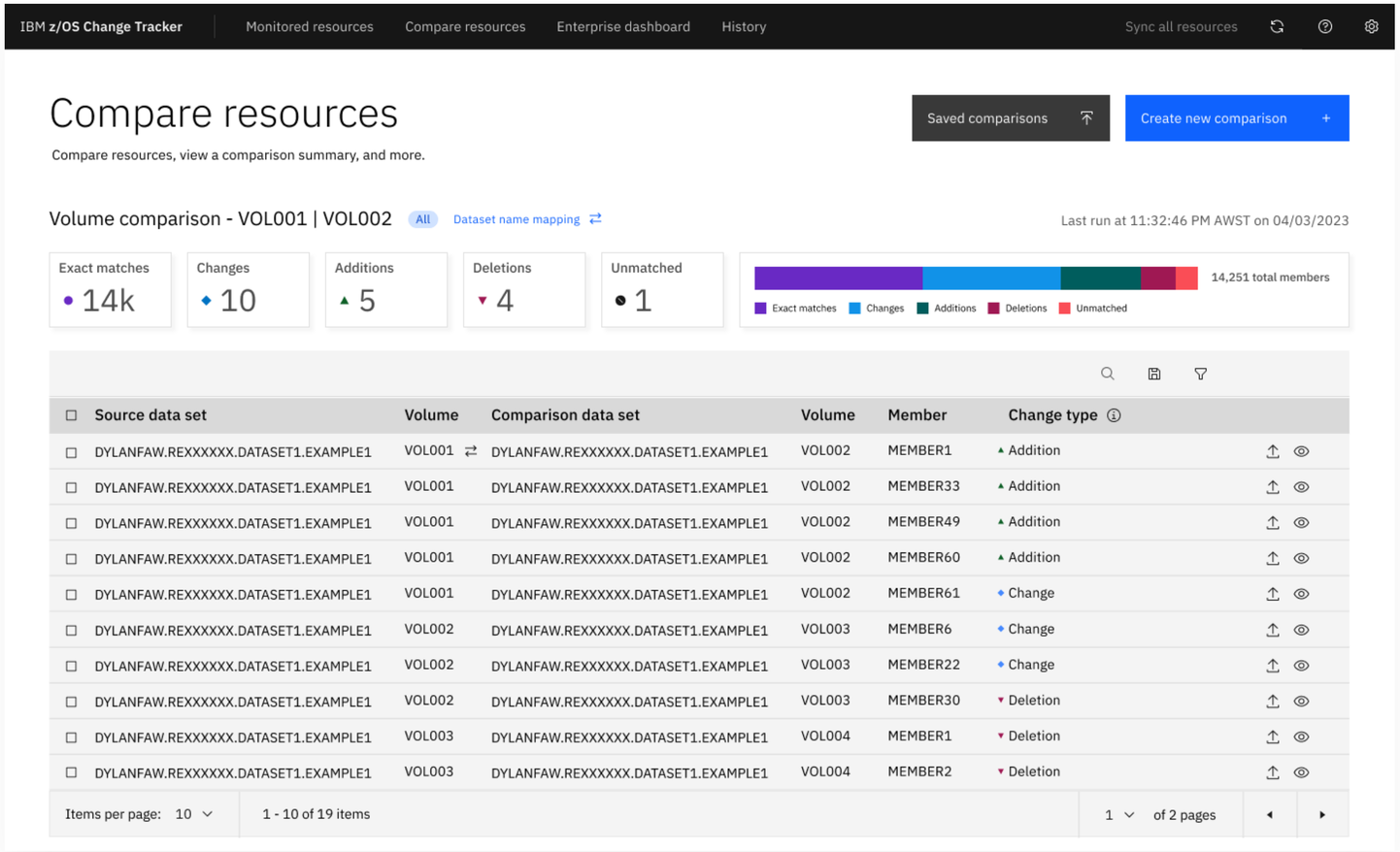
Users can visit Activity to review actively running services, or History to see services that have completed running. Services are presented as a filterable/sortable list with core details such as submitter and run time. Service submission details can be viewed by clicking into each service. Users can also view the workflow underlying the service.



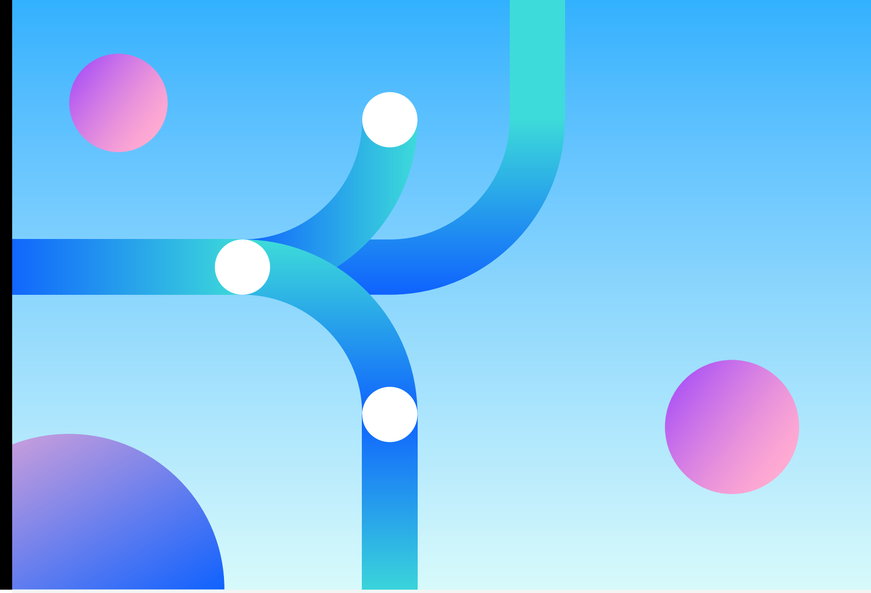
Efficiently compare multiple resources & review results in a single view

When a user runs a comparison between resources in their environment, they see the results in a straightforward summary that shows both high-level statistics and more detailed data that gives them deeper access to the exact items that were changed, added, or removed between the comparison objects.

User also have the option to save and export the comparison results, extending the utility of this flow to fulfill reporting needs, auditing requirements, disaster recovery protocols, and more.



Impact: Reimagining mainframe management with our users' purpose in mind helped create these values



Modernize

- → Intuitive, accessible, and easy to learn interfaces
- → Robust and fast data comparisons, ability to compare data sets, entire volumes of data

Automate

- → Automatic, real-time monitoring of change activities
- → Detection and recording of key elements of changes
- → Automated member-level backup for protected resources

Streamline

- → Infusing institutional knowledge of specific shops
- → Allowing early tenure zOS system programmers to be productive, faster
- → Reducing time for experienced system programmers to mentor newer programmers