Steps to a Healthy z/OS Lifestyle, Small Steps in the Right Direction

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Abstract

In this session we will discuss tips for better managing infrastructure and applications running in a z/OS environment. Focus will be from a security and audit perspective. Just like life, small steps can and do lead to a healthy lifestyle changes. It's hard to make big changes in life. The energy and time commitment may be too great. The problem often isn't knowing what to do; it's about the daunting task of just getting it done. So why not approach it somewhat differently? Forget about grand goals. Instead, aim to clean up the contents of specific libraries, or catalogs. Pick a couple tuning changes, and see what benefit they derive. Little tips like these can make a big difference over time. Of course, we will be talking about specific z/OS changes.

Goals for participants

- Describe what a healthy z/OS lifestyle is
- Describe behavioral changes to improve the operation and health of your z/OS system
- Identify a behavior change that would have longer term benefits at your shop
- Leave energized and ready to influence and make a positive change to the health of your z/OS system

Agenda

- What is a Healthy Lifestyle
- 7 Healthy z/OS Lifestyle Changes
- Walking the Talk
- Summary
- Questions and Answers

What is a Healthy Life Style ?

- Leaves you fit
- Energetic
- Behavior and activities to reduce risk for disease
- Actions taken to prolong life

What is a Healthy zOS Life Style ?

- System is available to provide services and functions in a quick, reliable and secure manner
- System easy to work on and find data
- Available space to store data
- Memory managed efficiently
- Unnecessary services, programs, data and duplicate files removed
- Disk defragmented
- Appropriate configuration options selected
- A properly maintained computing platform

Why are lifestyle changes important?

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Healthy Change #1

- Name Your Resources and Datasets Wisely

- Use consistent and descriptive naming conventions
- High Levels Qualifiers are High Value Assets
- All the real estate in a name is important
- Ensure standards are identified, consistent, published and known
- Take the time to think ahead and outline standards
- Reducing the number of naming conventions is worth the effort

Healthy Change #2

- Lighten the Load for the Good Life

- Often we carry things that are weighing us down
- Unpacking the bag can be a time-consuming and challenging experience
- Repack with what you truly need
- High value ROI exists in many places
  - Abandoned applications
  - Orphaned datasets
  - Catalogs

- Archive and warehouse as needed

- Lighter just feels. . . . better.

Healthy Change #3

- Health Check-ups are Important

- Periodic examination is important
- Periodic examination by professionals can lend knowledge of new threats and exploits
- Learn and optimize your security intelligence from your visits
- Follow-up and take action on recommendations

- Implement continuous health checking using the IBM Health Checker to repetitively analyzing system behaviors

Healthy Change #4

- Self Examination

- Identify factors or behaviors that may predispose the system to unfavorable conditions or results
- Identify and obtain checklists from reliable sources
- Utilize prescriptive resources where possible
  – DISA Security Readiness Review

- Examine yourself regularly

Healthy Change #5

- Automate Provisioning Processes

- Auto-provisioning – create new users on systems based upon new employee records
- Auto-deactivation – monitor employee records for changes in status and termination
- Auto-Synchronization – identify source of truth and update on associated registries
- Autonomic Cleansing – identify and purge unused access authorization
- Self-service - Allow users to update appropriate information
- Self-service access requests - Allow users to request access
- Authorization flow - Ask business stake-holders to review, approve, and reject changes
- Certify access periodically

- Assure the health of important registries

Healthy Change #6

- Test your Recovery and Resiliency Plan

- Accept that the unexpected will happen eventually
- Identify factors or behaviors that may predispose the system to unfavorable conditions or results
- Prepare and initiate countermeasures
- Create a scenario and test your ability to absorb shock and carry on performing desired functions
- Consider data replication for immediate response

- Perform an off-site recovery test

Healthy Change #7

- Update and Patch Frequently

- Subscribe to the IBMLINK Automatic Software Alert Process
- Receive notices of sensitive updates from independent software vendors using established protocols
- Apply Recommended Service Upgrades periodically
- Install quarterly service levels using Consolidated Service Test
- Keep release updates within 1 to 2 versions of generally available distributions

- Weaknesses are often closed with available patch maintenance

Walking the Talk. . .

- Take Action .   .   .
- Prioritize your activities, allocating and ensuring adequate time to complete your behavioral changing activities
- Do little things each day to be successful
- Everyday is a chance to invest in a healthier zOS lifestyle
- It's every single day that gets you to where you want to be

Summary

- Healthy lifestyle changes are the behavioral improvements which reduce risk and increase positive outcomes

- Try changing behaviors in small ways first, find out those which seem beneficial, and commit to those

References

- **Introduction to the New Mainframe: z/OS Basics**
  SG246366

- **Introduction to the New Mainframe: Large-Scale Commercial Computing**
  SG247175

- **Security Technology Implementation Guides**
  http://iase.disa.mil/stigs/os/mainframe/z_os.html

- **Exploiting the IBM Health Checker for z/OS Infrastructure**
  REDP-4590-01

Thank You for Attending

In Conclusion . . . .

I'm interested in your ideas and experiences in living a healthy zOS lifestyle, so if you have questions or have a good lifestyle change to promote, drop me an e-mail at raymond.pascoe@highmark.com