# zPRO V4
# High Octane, On-prem Private Cloud
# for Linux on Z

**VM Workshop 2020**

**James Vincent**
**Velocity Software, Inc**
https://www.velocitysoftware.com

**VELOCITY**
SINCE 1988
SOFTWARE

# A Challenge: The Magical Cloud

- **Executives get sold on "the cloud" being:**
  - Easier, Cheaper, Faster, Requiring fewer FTE
  - Able to run *everything* they have now in the datacenter
  - More secure (are you laughing yet?)

- **They buy into it, especially when:**
  - Anti-mainframe people/executives are pushing it
    - Hidden agendas
  - They want a short-term win on their resume

Report: Putting Head In Hands And Moaning Quietly Still Best Way To Get Through Next Several Seconds



https://www.theonion.com/report-putting-head-in-hands-and-moaning-quietly-still-1819577866

# A Challenge: z/VM Skills Dwindling

- **IT People are Retiring / Leaving**
- **Companies usually are not ready for retirements**
  - No planning in progress for back-fill of skills
  - No job-shadowing in progress
- *IF* **the company** *planned***, there are new people to train**
  - Skills uplift can be slow
    - And overwhelming; "learn it quick – you are responsible for it all!"
  - Reluctance to send to training

# Why zPRO is Right

- **What customers really want from solutions**
  - Simple and easy to understand
  - Stable, dependable, *FAST*
  - Reduce time – delegation of tasks

- **I want it *now*…**
  - zPRO installs in about 10 minutes on top of zVPS
    - Initial zVPS install is about 2 hours for all components
  - Can be customized and tailored quickly
    - Usually 2 additional hours <u>if z/VM not already set up</u>
  - Usable by multiple users/groups concurrently
  - Clones servers in seconds (assuming flashcopy)

# zPRO is Fast & Easy?

## "Metal to Cloud in Two Days"

- **zPRO was <u>a</u> key factor in making it happen**
  - Topic presented on Tuesday of this week; many more details at (Virtual) SHARE!
- **<30 minutes – four systems – fully capable**
- **… took a break while a Linux guest was built from scratch**
- **Fired up Linux and Guest provisioning**
  - Over 155 images cloned and provisioned in <20 minutes

# zPRO exploiting the Z platform

- **Utilizes the zVWS _native_ z/VM web server**
  - Super fast engine – written in Assembler
  - Authentication support & Secure
    - VM / LDAP / AD / your own
  - CGIs easy to build; many customers w/Apps
- **Supports common directory/security management**
  - zDIRECT is _included_ for Directory Management - with or without RACF
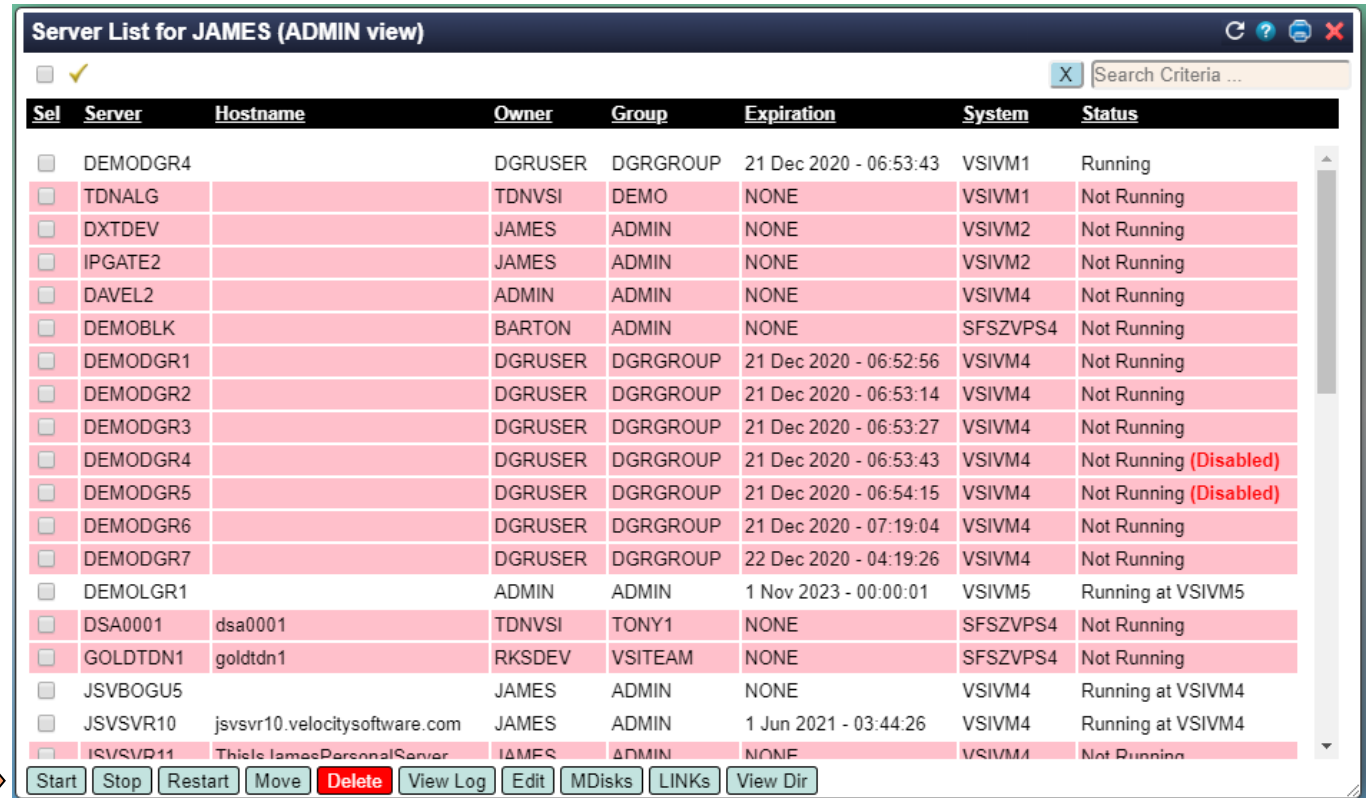- **zPRO is powerful, yet SIMPLE to use**

**VELOCITY**
SOFTWARE
SINCE 1988

# zPRO's Structure – Simple!
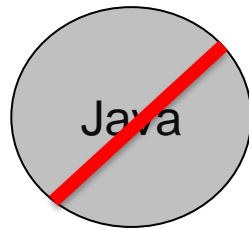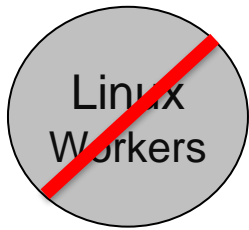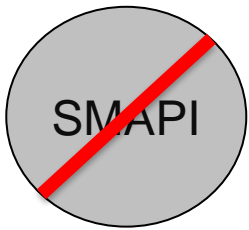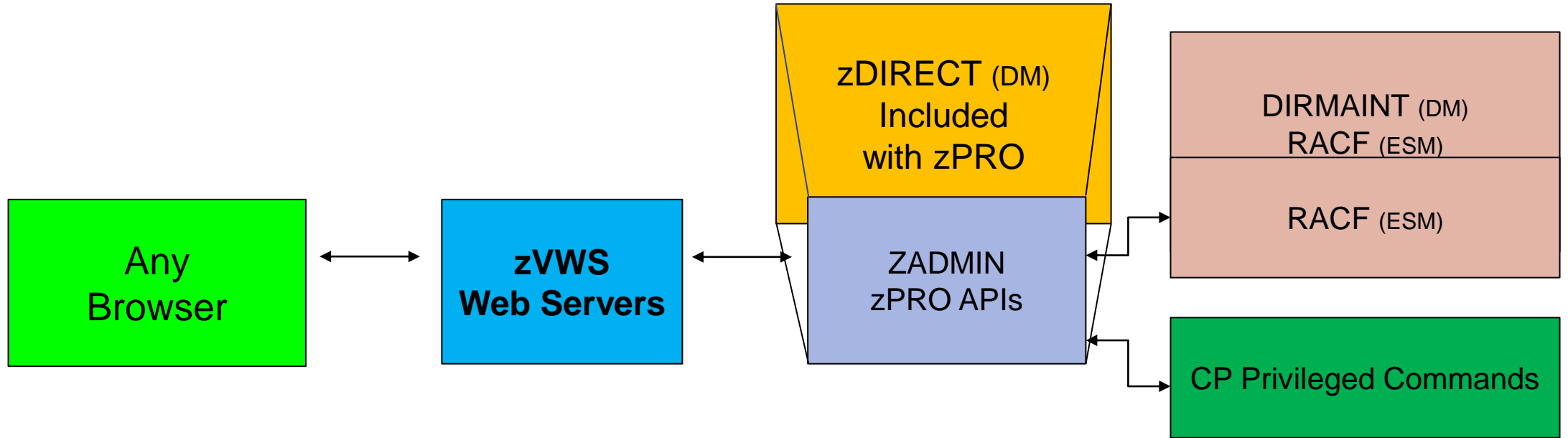
# zPRO on *the* Z platform

- **zPRO is Exceptionally Extensible** (™☺)
  - Can define and "plug in" site-defined services quickly
  - Use any of the great tools in z/VM: CP/CMS, REXX, Pipelines, networking capabilities, memory management, communications
  - Very dynamic
    - zPRO allows you to define exits and additional APIs (in REXX), custom process-windows (called DIRMODELs) and more, to fit your specific needs
    - Quick Solutioning for managing systems (operations)
    - Velocity Support will gladly assist with anything you need

# zPRO Z cloud management

- Clone (provision), modify, start, stop, move, delete servers
  - Linux w/Oracle, Websphere, etc – any z/VM guest
- Define server expirations
  - Useful for LAB, test or POC
- Selective resource controls and quota management
  - Hierarchical control from global, to group, to user to server
- SSI / LGR (live guest relocation)



Server List for JAMES (ADMIN view)

| Sel | Server | Hostname | Owner | Group | Expiration | System | Status |
|---|---|---|---|---|---|---|---|
| | DEMODGR4 | | DGRUSER | DGRGROUP | 21 Dec 2020 - 06:53:43 | VSIVM1 | Running |
| | TDNALG | | TDNVSI | DEMO | NONE | VSIVM1 | Not Running |
| | DXTDEV | | JAMES | ADMIN | NONE | VSIVM2 | Not Running |
| | IPGATE2 | | JAMES | ADMIN | NONE | VSIVM2 | Not Running |
| | DAVEL2 | | ADMIN | ADMIN | NONE | VSIVM4 | Not Running |
| | DEMOBLK | | BARTON | ADMIN | NONE | SFSZVPS4 | Not Running |
| | DEMODGR1 | | DGRUSER | DGRGROUP | 21 Dec 2020 - 06:52:56 | VSIVM4 | Not Running |
| | DEMODGR2 | | DGRUSER | DGRGROUP | 21 Dec 2020 - 06:53:14 | VSIVM4 | Not Running |
| | DEMODGR3 | | DGRUSER | DGRGROUP | 21 Dec 2020 - 06:53:27 | VSIVM4 | Not Running |
| | DEMODGR4 | | DGRUSER | DGRGROUP | 21 Dec 2020 - 06:53:43 | VSIVM4 | Not Running (Disabled) |
| | DEMODGR5 | | DGRUSER | DGRGROUP | 21 Dec 2020 - 06:54:15 | SIVM4 | Not Running (Disabled) |
| | DEMODGR6 | | DGRUSER | DGRGROUP | 21 Dec 2020 - 07:19:04 | VSIVM4 | Not Running |
| | DEMODGR7 | | DGRUSER | DGRGROUP | 22 Dec 2020 - 04:19:26 | VSIVM4 | Not Running |
| | DEMOLGR1 | | ADMIN | ADMIN | 1 Nov 2023 - 00:00:01 | VSIVM5 | Running at VSIVM5 |
| | DSA0001 | dsa0001 | TDNVSI | TONY1 | NONE | SFSZVPS4 | Not Running |
| | GOLDTDN1 | goldtdn1 | RKSDEV | VSITEAM | NONE | SFSZVPS4 | Not Running |
| | JSVBOGU5 | | JAMES | ADMIN | NONE | VSIVM4 | Running at VSIVM4 |
| | JSVSVR10 | jsvsvr10.velocitysoftware.com | JAMES | ADMIN | 1 Jun 2021 - 03:44:26 | VSIVM4 | Running at VSIVM4 |
| | JSVSVR11 | ThisIsJamesPersonalServer | JAMES | ADMIN | NONE | VSIVM4 | Not Running |

Start | Stop | Restart | Move | Delete | View Log | Edit | MDisks | LINKs | View Dir

Velocity SOFTWARE
SINCE 1988

# zPRO RESTful API Interface

- **Connect from an appliance or trusted application**
  - Standard RESTful API structures (JSON)

| | |
|---|---|
| **Audit_log** | **Guest_list** |
| **Guest_add_disks** | **Guest_run_state** |
| **Guest_clone_disks** | **Guest_show_definition** |
| **Guest_create** | **Host_get_info** |
| **Guest_delete** | **Image_list** |
| **Guest_delete_disks** | **image_show_definition** |
| **Guest_get_console** | **Job_queue** |
| **Guest_get_info** | **Version** |
| **Guest_get_power_state** | **…more** |

# zPRO Full Enterprise Support!

P R O V E N   P E R F O R M A N C E

# zPRO Full Enterprise Connectivity

- **zPRO Version 4 connects your Enterprise Z clouds**

"Single pane of glass"
    All from a single
    browser session

Secure inter-connections

One-click to disable/enable
remote sites

Graphical drag-drop

# zPRO Demo

**This would be a good place for a Live Demo!**

VELOCITY
SOFTWARE
SINCE 1988
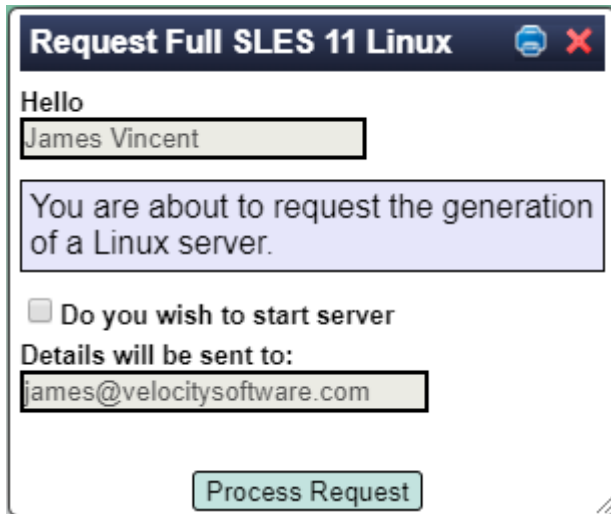
# zPRO Full Enterprise Connectivity

Target the system where the action should be run

# Simple Cloning/Provisioning

- ## Single push-button or details
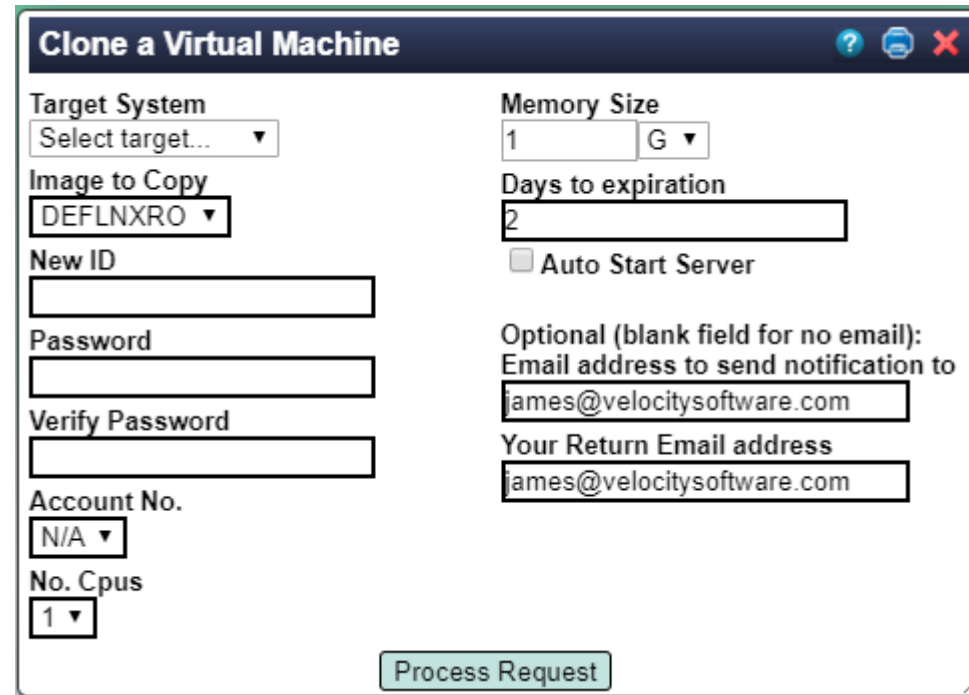


- ## Gold Images

- ## RH Kickstart

# Workers? No problem!

- **zPRO** uses workers for long-running tasks
  - If more needed, it *dynamically adds more* and then removes them when complete
  - Monitors the tasks and managers the workers without interaction
  - You don't have to dread real work failing and then have to react and manually change or fix things

# Resource Management

- **Keep track of resource usage – full control of quotas**
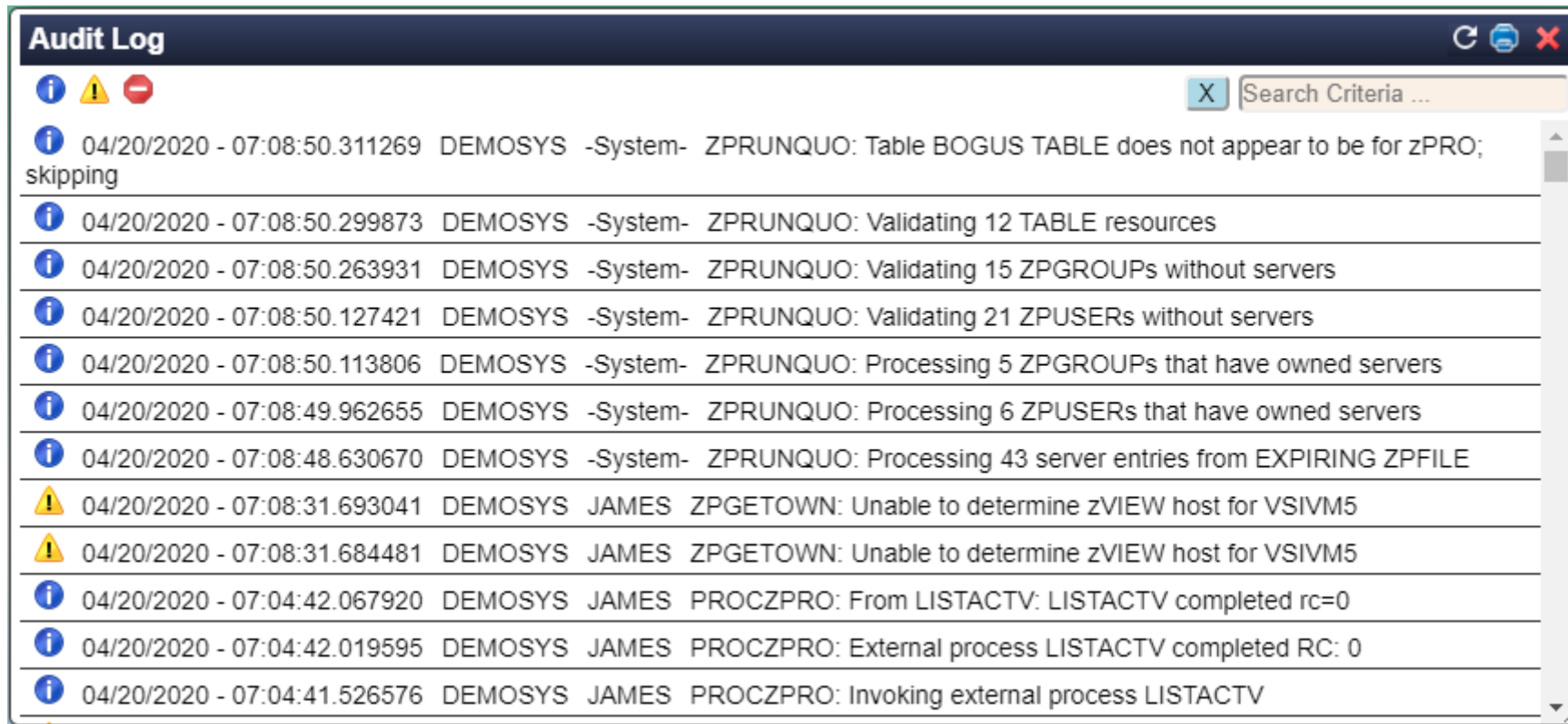


| Resource Summary Report | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **System** | **Group** | **User** | **Servers** | **VCPUs** | **VStor(MB)** | **DASD** | **MDisks** | **IPs** | **OSAs** | **FCPs** |
| CUSTOMER | DGRGROUP | totals | 1 | 1 | 32 | 0 | 1 | 0 | 0 | 0 |
| CUSTOMER | DGRGROUP | limits | 10 | 120 | 81920 | unlim | unlim | unlim | unlim | unlim |
| CUSTOMER | IBMGROUP | IBM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CUSTOMER | IBMGROUP | totals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CUSTOMER | IBMGROUP | limits | 60 | 120 | 81920 | unlim | unlim | unlim | unlim | unlim |
| CUSTOMER | ZPROPERS | ZPROPERS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CUSTOMER | ZPROPERS | totals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CUSTOMER | ZPROPERS | limits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CUSTOMER | ALL | totals | 2 | 2 | 48 | 0 | 1 | 0 | 0 | 0 |
| DEMOSYS | ADMIN | ADMIN | 13 | 16 | 11888 | 0 | 33 | 0 | 6 | 6 |
| DEMOSYS | ADMIN | JAMES | 10 | 14 | 12288 | 0 | 21 | 8 | 0 | 0 |
| DEMOSYS | ADMIN | KATHADM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DEMOSYS | ADMIN | RKSDEV | 5 | 6 | 3584 | 0 | 8 | 5 | 0 | 0 |
| DEMOSYS | ADMIN | totals | 28 | 36 | 27760 | 0 | 62 | 13 | 6 | 6 |
| DEMOSYS | ADMIN | limits | unlim | unlim | unlim | unlim | unlim | unlim | unlim | unlim |

# Auditing

- **Full auditing of who/what was done**

# Empowerment through access

- **zPRO makes managing Linux on z *very easy***
  - Systems programmers, end-users, Operations, management – really anyone
- **Give access to any groups/users you need to**
  - Unix/Linux admins, Application groups, Operations and more
  - No special z/VM authority required for groups/users
  - Defined resource boundaries for groups and users
    - Each group and user can use the same or specific resource pools / limits
    - Can clone and manage their own servers how and whenever they need
    - You/management define what they can and can't do or use
      (Functional Decentralization)

# Empowerment through access

# Integration with zVPS suite

- **Performance – high level or deep dive**

PROVEN PERFORMANCE

# Help with Skills and Time

- **Little or no z/VM system knowledge needed**
  - Fills in for any lack of z/VM skills
    - Do *YOU* need to be concerned about that? Who's retiring next?!
  - Helps to ramp-up support while learning about the platform
- **Reduces time in dealing with cloud management**
  - z/VM Systems Programmer time is freed up
    - Reduce or eliminate the off-hours support calls
    - Focus more on the bigger projects
  - Self-service models allow others to provision and manage with defined controls/authorities

# Customer case stories

- **"After the second week of {bleeping} around with {product} and still not getting it to work, we gave up. I had zPRO [running] on four systems before lunch."**
  - <customer> spent 4 *months* getting {product} working to then clone a server in 2 hours!!
- **We (seriously experienced VM people) tried OpenStack, CMA, XCAT with absolutely NO success**
- **"I had a bunch of REXX scripts I used for DNS and hypersocket assignments. zPRO let me plug them in and continue using them without any changes"**
- **I had a real need to focus on bigger projects, not trivial stuff like building new servers, or restarting them**
- **Offsite Linux support people calling at 'stupid hours of the night' – no more!**
- **Linux admin team waiting for new servers from one z/VM guy**

# zPRO – try it yourself!

- **To register:  https://demo.velocitysoftware.com/zpro/**
  - Userid: **demozpro**
  - Password: **demodemo**

- **Check email for your login info**

Welcome to the
Velocity Software zPRO Demo Site

Velocity Software maintains a cloud for demonstration purposes and for supporting your education needs.

If you do not yet have a Demo System userid, login with the userid of DEMOZPRO and password DEMODEMO to create one.

If you need assistance, contact support@velocitysoftware.com

VELOCITY
SOFTWARE

**Register for VSI Cloud**

You are requesting a **limited access** id for working with Velocity Software's zPRO cloud product.

First name

Last name

User's Email address

Process Request

VELOCITY
SINCE 1988
SOFTWARE

# Summary

- **zPRO is Simple, Fast and Powerful to manage your z/VM on-prem cloud**
- **Real customers agree:**
    - *"zPRO has spoiled me"* from a Linux Admin that was given access to build and manage application/DB servers himself
    - *"zPRO lets me focus on bigger, time-consuming projects"*
    - *"After I gave zPRO access to our off-shore support teams, I have not had 2AM phone calls asking for help since"*
    - *"We are using zPRO to make a case for [solutions] that require data to be stored more securely instead of [in] the AWS cloud."*

VELOCITY
SINCE 1988
SOFTWARE

# Questions / Comments?

**James Vincent**

**james@velocitysoftware.com**

**support@velocitysoftware.com**

zPRO Demo Site:          https://demo.velocitysoftware.com/zpro/
zPRO Virtual Demo PDF:   https://velocitysoftware.com/zprodemo.pdf
zPRO info:               https://velocitysoftware.com/zpro.html