zPRO
Powerful, Easy to Use Cloud Management for Linux on IBM Z
A Virtual Demo

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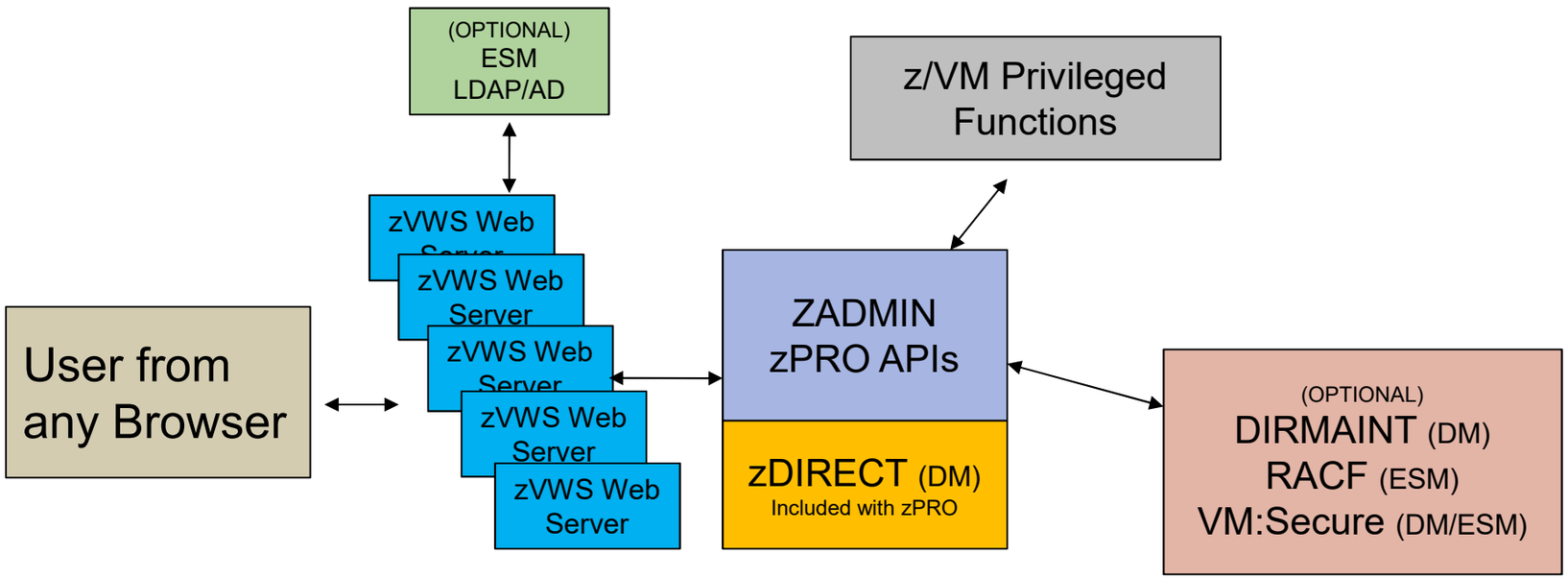
Introduction

- **This Virtual Demo is intended to convey details about what zPRO is and how it can be used to improve workflow in the management of Linux on Z**
- **There is far more to zPRO than can be put into this document**
  - The zPRO Administrator's Guide has more information
- **Contact us to learn more or to schedule a real-time demo of the product!**
  - We would love the opportunity to show you more about zPRO and how it can help you and your organization be successful with Linux on z/VM

Why zPRO

- **zPRO leverages the *strengths* of *z/VM***
  - Very dynamic – extensible
    - zPRO allows you to define different exits, additional APIs, process-windows (called DIRMODELs) and more, to fit your specific needs.
  - Enables quick solutioning – both in speed and time
    - zPRO makes managing Linux on z very easy for systems programmers, end-users, operations, management and potentially other groups. It allows you to designate privileges to other users to build and manage their own servers within the guidelines and scope established by YOU.
  - **Simple, Fast, Lightweight and Reliable** - This is the premise of zPRO and our commitment to you. There are no other requirements other than z/VM and zVPS to run zPRO!

Overview

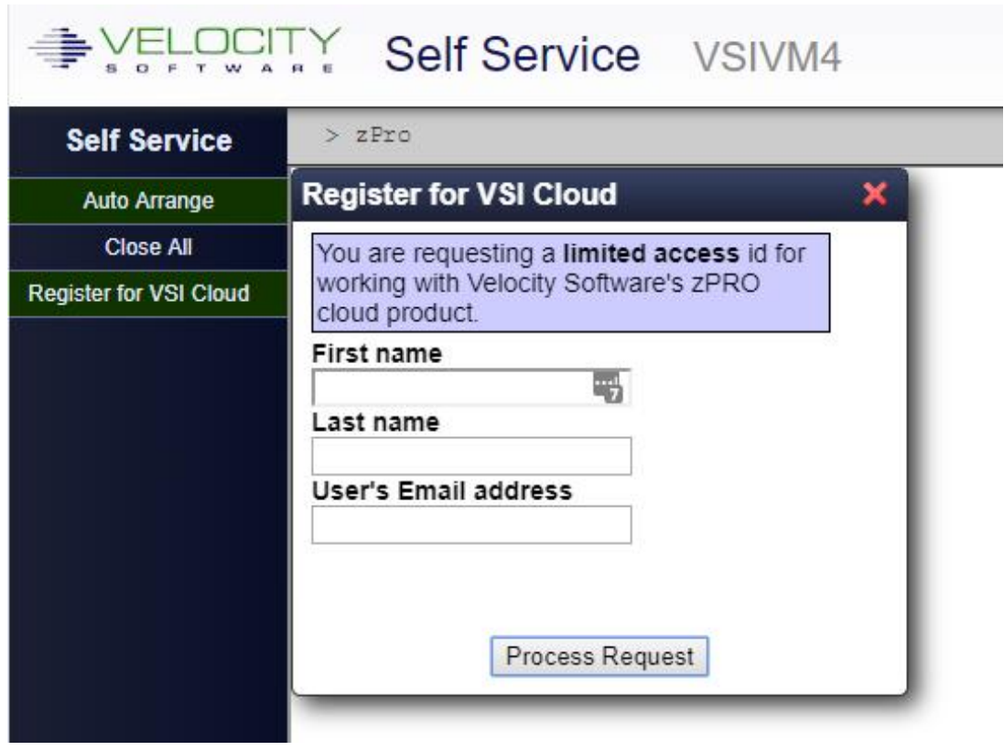


zVPS includes zVWS, which installs five webservers along with ZADMIN by default. zPRO uses the webservers and ZADMIN to perform all of its required functions. The ZADMIN virtual machine handles the privileged commands and interfaces with the Directory Manager (DM) and External Security Manager (ESM), if present. If there is no DIRMAINT or VMSECURE available, zPRO is shipped with a zDIRECT feature that will handle all the zPRO-required directory maintenance processes for you, while allowing you to maintain the CP Directory manually for other needs.

Velocity's zPRO Cloud Demo Site

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

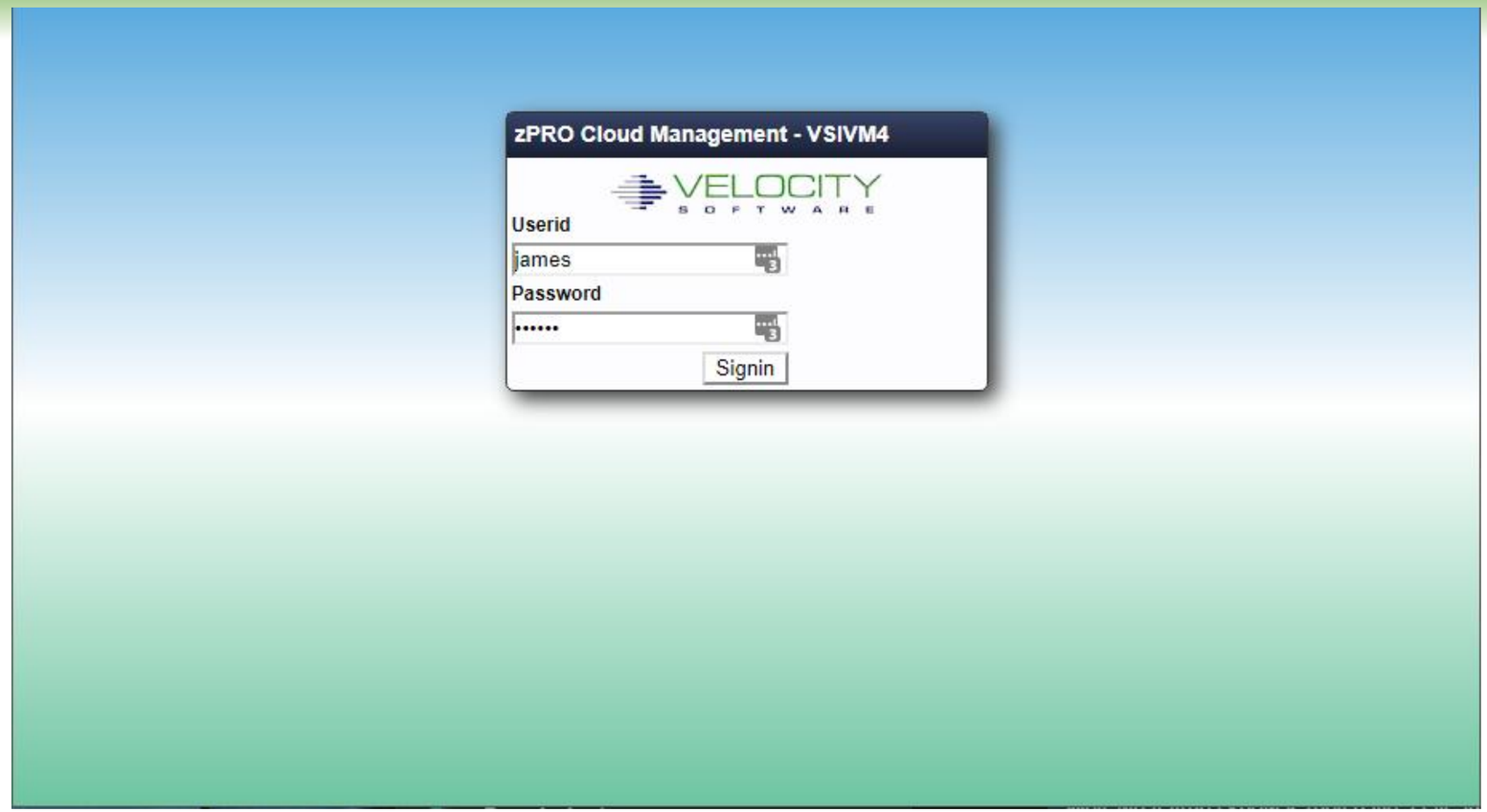
- **Check your email for your login info**



Our Cloud Demo site will allow you to register for your own userid. You can then use that userid to create, manipulate and use a selection of servers through zPRO.

It is a full zPRO system that is running the same code we ship to our customers. **Note** that Demo userids only have access to a subset of zPRO functions and are limited in authorizations.

zPRO Virtual Demo: Sign-in

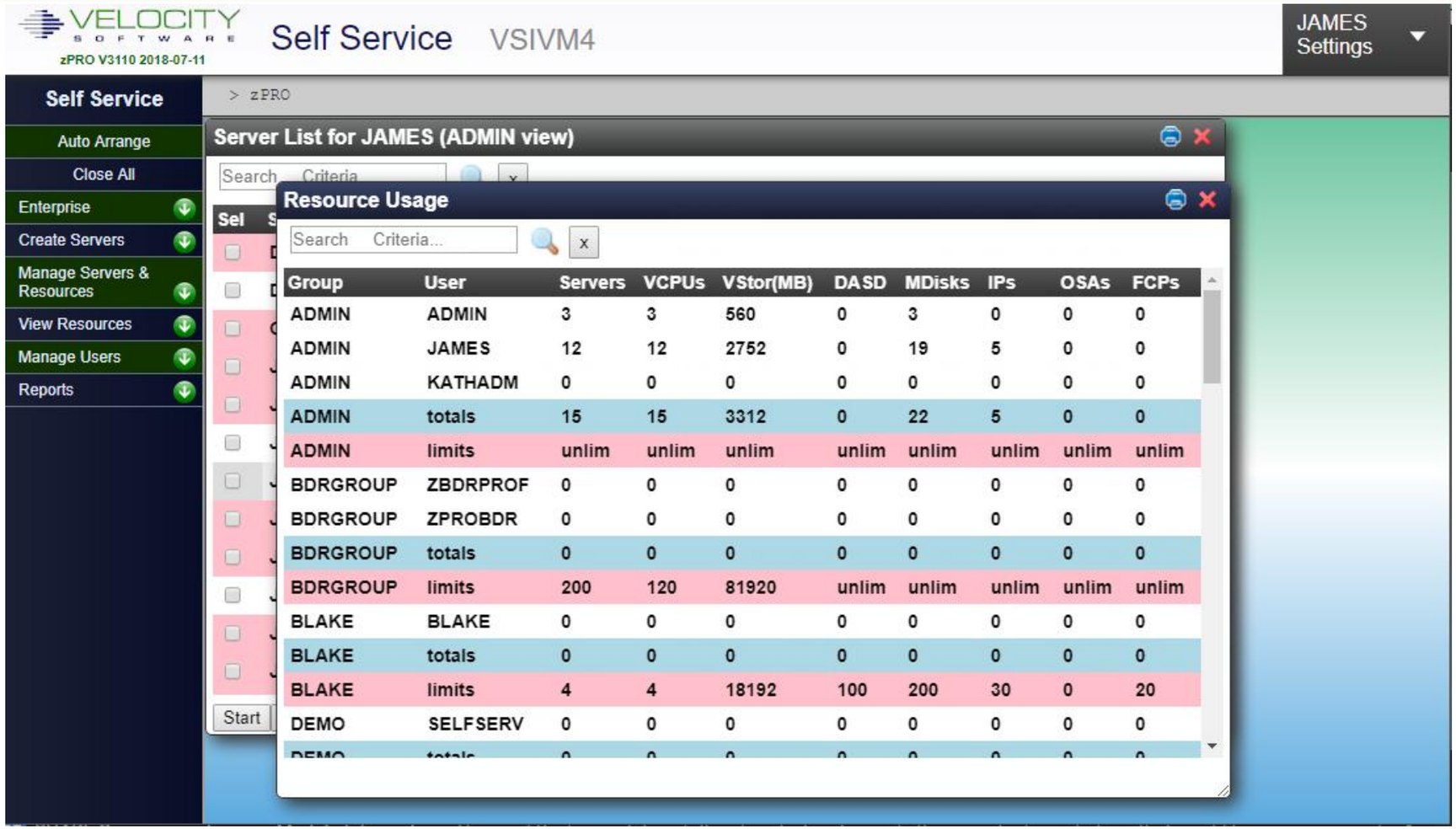


Login to zPRO is simple – you are presented with a userid/password prompt to enter your zPRO defined information. Your credentials can be validated on z/VM directly, through LDAP/AD, or any credential verification process that can be implemented via the available security exit.

Virtual Demo: Initial View

Once logged on, you are presented with the zPRO workspace. Within the workspace is where the process-windows are opened. You can move/arrange these windows as you wish. On login, the AUTOOPEN windows, as defined by the zPRO administrator, are presented. The left side is the menu that gives you access to all the self-service processes that you are authorized to use. Clicking on a menu item with the down-arrow icon will display sub-menu items for that group.

Content of the various windows is governed by the authorizations and scope imposed on the end-user.



Group	User	Servers	VCPUs	VStor(MB)	DASD	MDisks	IPs	OSAs	FCPs
ADMIN	ADMIN	3	3	560	0	3	0	0	0
ADMIN	JAMES	12	12	2752	0	19	5	0	0
ADMIN	KATHADM	0	0	0	0	0	0	0	0
ADMIN	totals	15	15	3312	0	22	5	0	0
ADMIN	limits	unlim	unlim	unlim	unlim	unlim	unlim	unlim	unlim
BDRGROUP	ZBDRPROF	0	0	0	0	0	0	0	0
BDRGROUP	ZPROBDR	0	0	0	0	0	0	0	0
BDRGROUP	totals	0	0	0	0	0	0	0	0
BDRGROUP	limits	200	120	81920	unlim	unlim	unlim	unlim	unlim
BLAKE	BLAKE	0	0	0	0	0	0	0	0
BLAKE	totals	0	0	0	0	0	0	0	0
BLAKE	limits	4	4	18192	100	200	30	0	20
DEMO	SELFSERV	0	0	0	0	0	0	0	0

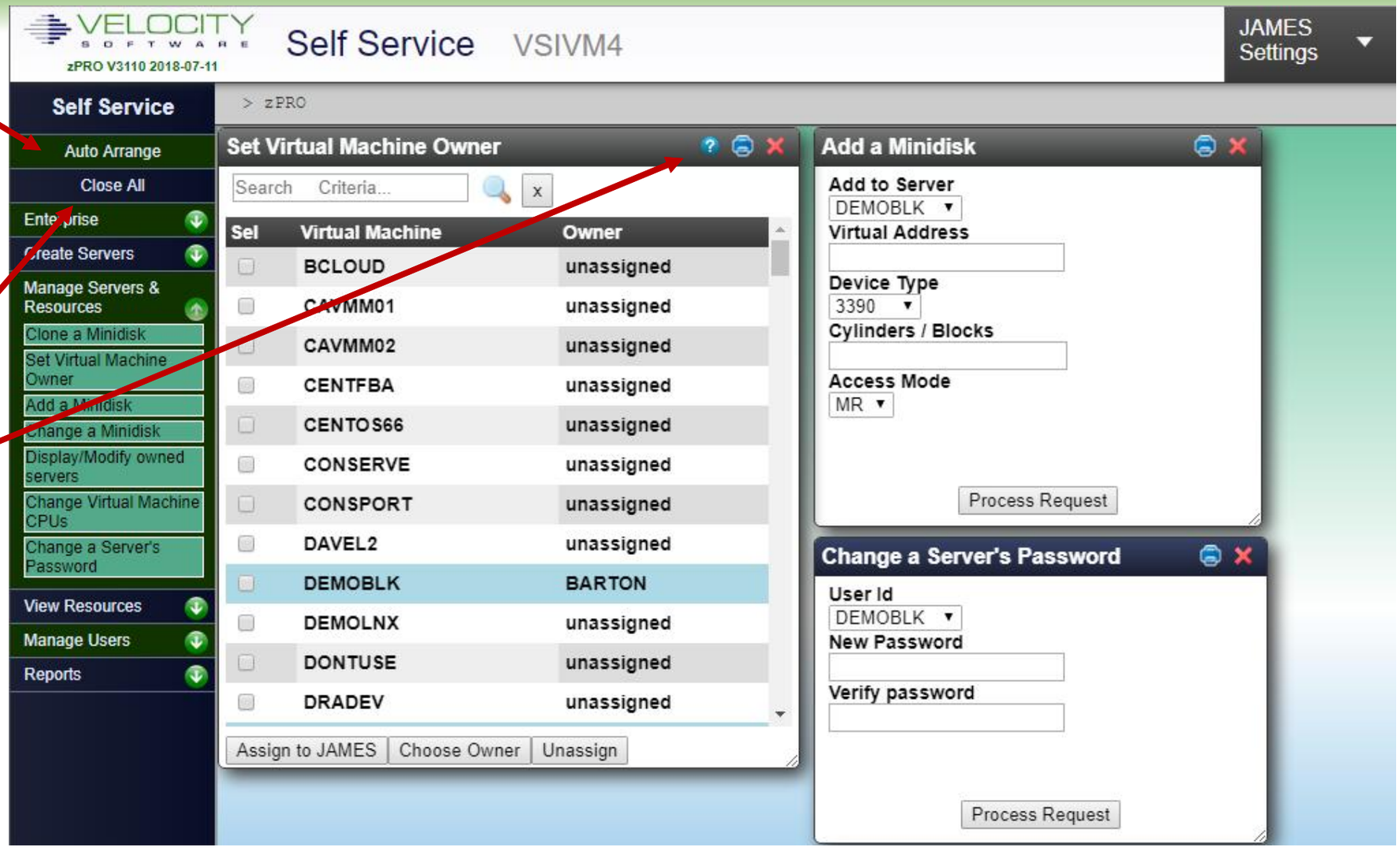
Virtual Demo: Windows and Controls

Any open windows can be Auto Arranged to present them side-by-side across your workspace. This can be handy if you have multiple windows open on top of each other and want to see them all at once.

A simple Close All is available to close any open windows no matter how many are open.

Windows also may have three basic controls on the title bar:

- Content Help (if available)
- Print
- Close

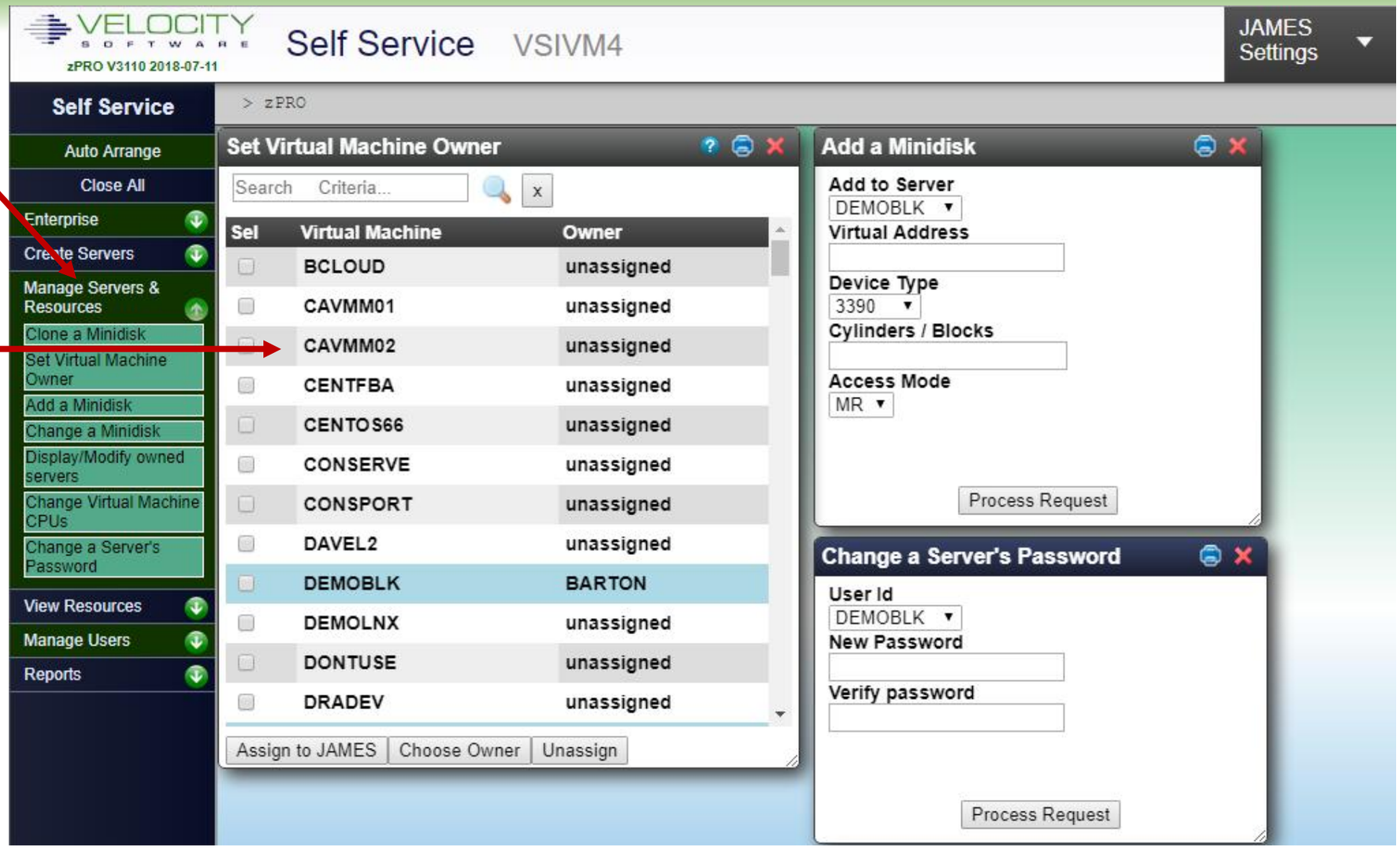


Virtual Demo: Server Management

The Manage Services and Resources menu items shipped give you a multitude of ways to manage your servers.

You can add, change, and delete MDISKs, CPU and Storage size. You can change servers' VM password if needed. There is also a Set Virtual Machine Owner model to bring servers that were built outside of zPRO, under the zPRO umbrella of server management. This process also assigns "ownership" of servers to an end-user for subsequent server management. In addition, by using the "Unassign" feature servers can be removed from zPRO's scope of management.

zPRO utilizes two "NOGO" lists, which identify virtual machines that can never be added to zPRO server management. zPRO is shipped with a standard list and you can define your own list locally. These are to protect system userids from inadvertently being added to zPRO.



Virtual Demo: Server Management (cont.)

Managing servers in zPRO is done in many ways. The "Display/Modify owned servers" menu item is the most commonly used method for this purpose. The table shows all the servers that you have access to manage, and details about each.

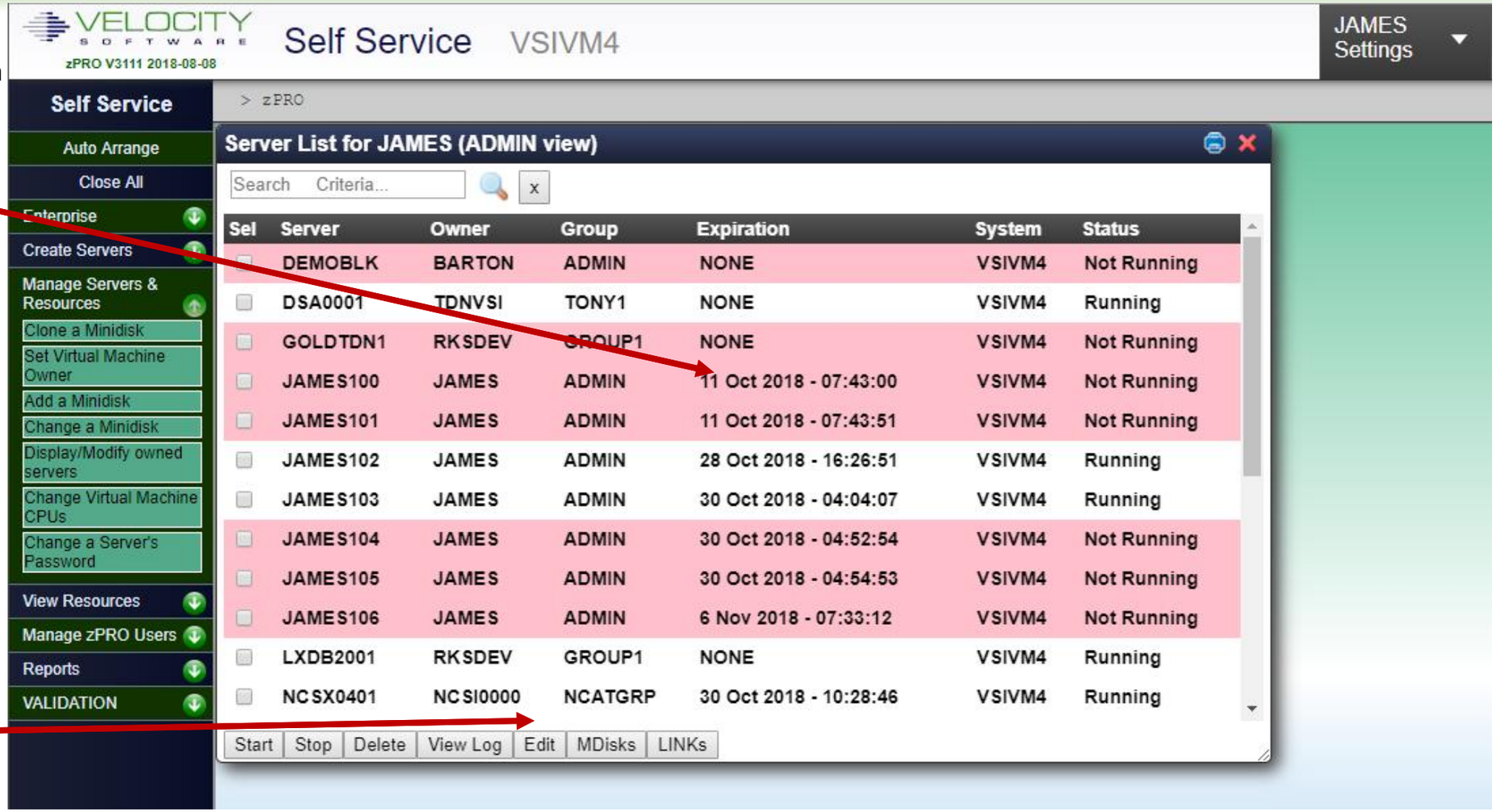
The row of buttons at the bottom of the window will include only operations that you are authorized to perform for any selected servers. Selecting one or more servers and clicking an action button will initiate the action FOR ALL SELECTED SERVERS. Confirmations are presented for anything that causes a state-change to the server (like stopping, deleting, etc) You can manage MDISKS and LINKS for each server from here also.

Virtual Demo: Server Expiration

zPRO allows you to define servers with optional expiration periods. This can be handy for groups/users that you want to allow servers to exist for a finite amount of time.

There are different configurations you can set for expirations including the type of delete (a soft-delete where the server is disabled but still defined on the system, a hard-delete where the server is completely deleted and all associated resources are reclaimed or a notification-only). Notifications can be set up to go to the owner and the system admin before and as expiration actions occur.

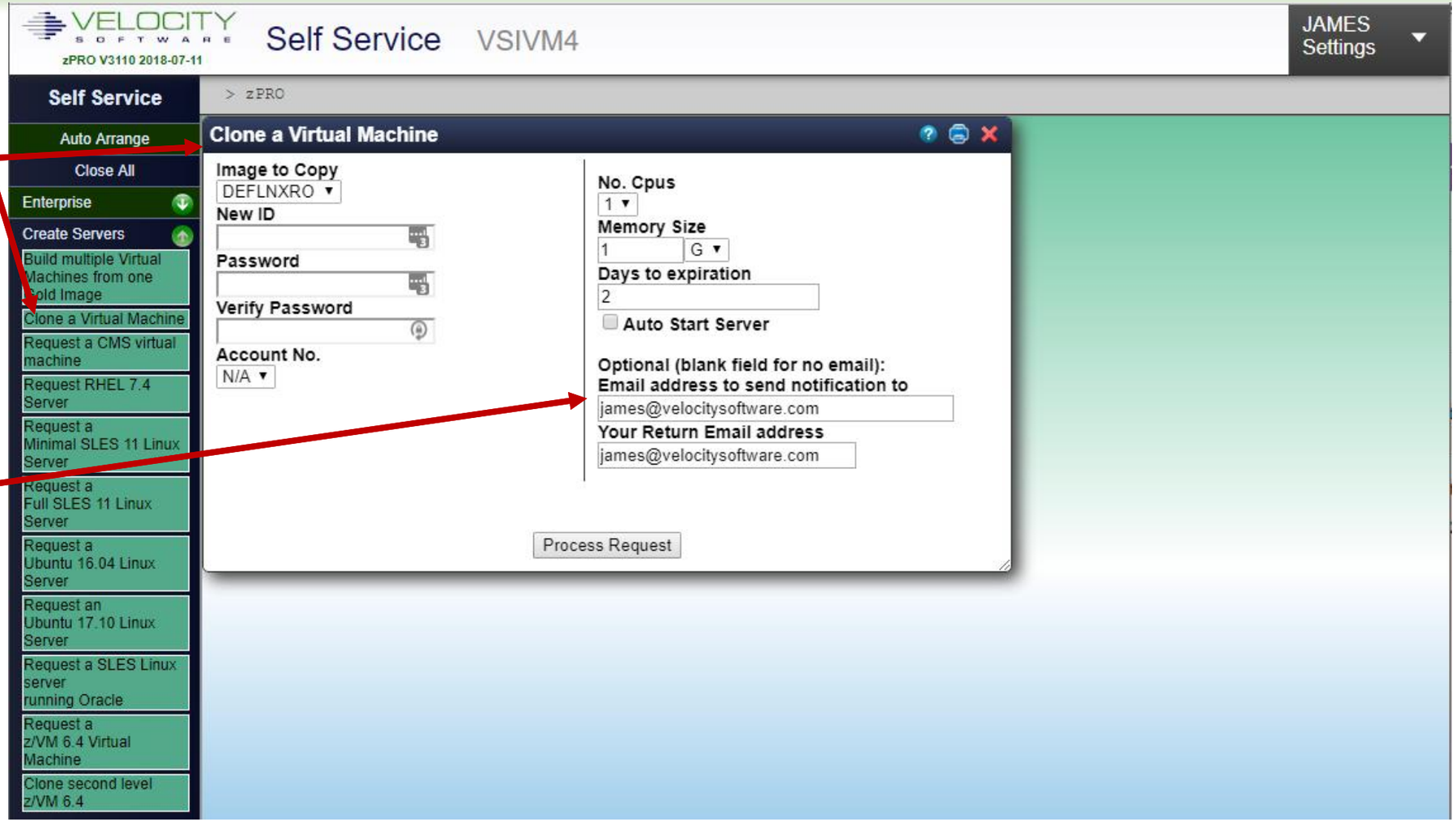
Expiration target date/time can also be edited at any time.



Virtual Demo: Provisioning

There are many ways to provision servers in zPRO. This shows you two different ways. The first is a self-defined server creation (Clone a Virtual Machine). This approach allows the user to define a new server and set specific resource characteristics.

Upon successful creation, this process will cause an email notification to be sent to the requestor. Optionally, the target email address can be changed if perhaps it is being built for someone else.

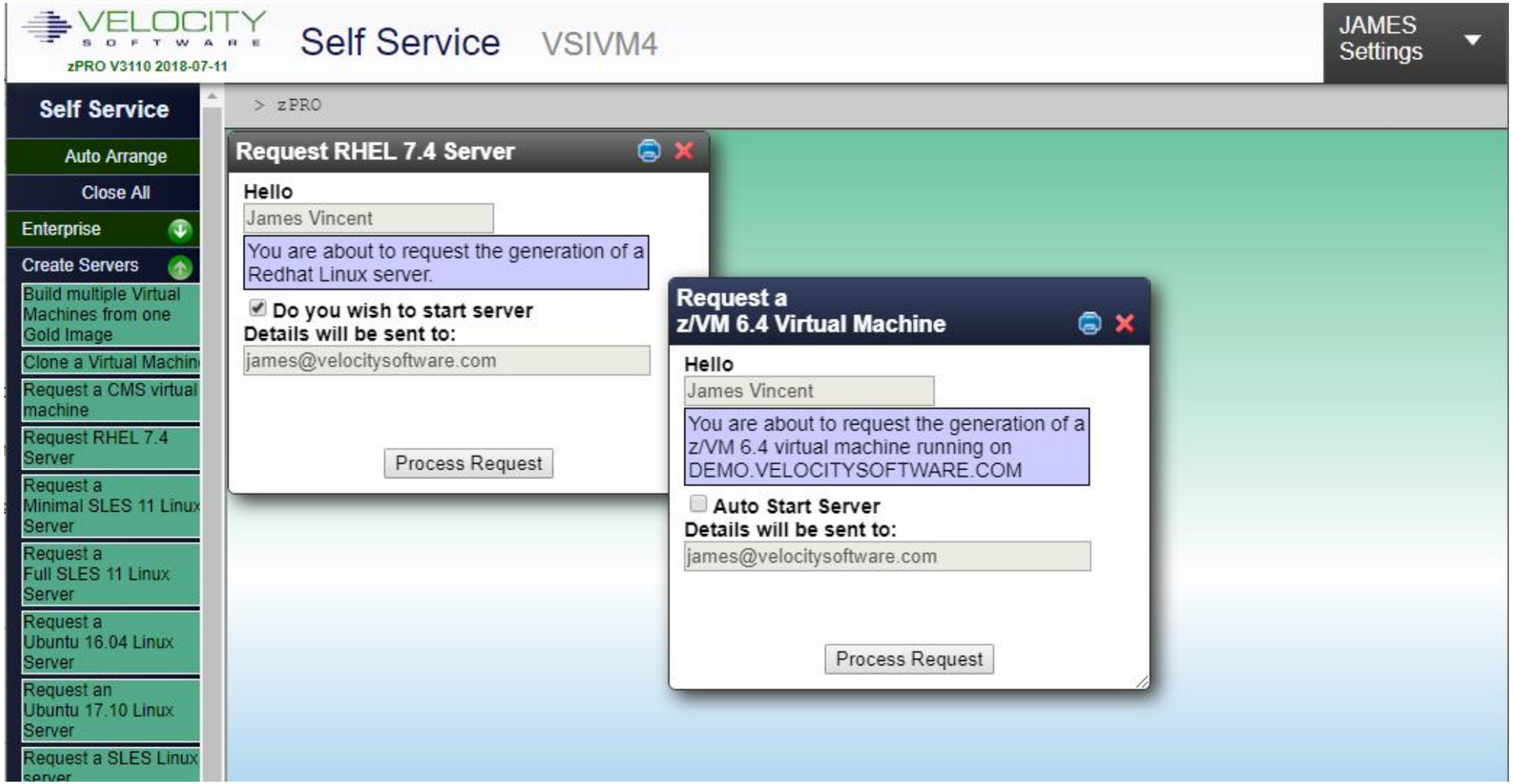


Virtual Demo: Provisioning (cont.)

The second provision model is a self-contained definition where all the details are pre-defined for the user.

In this example, a provision model for a RHEL 7 server and one for a z/VM 6.4 2nd level guest is presented.

All the user has to do is click one button to provision the new server. They will receive an email on completion with any additional instructions or information on the new server.

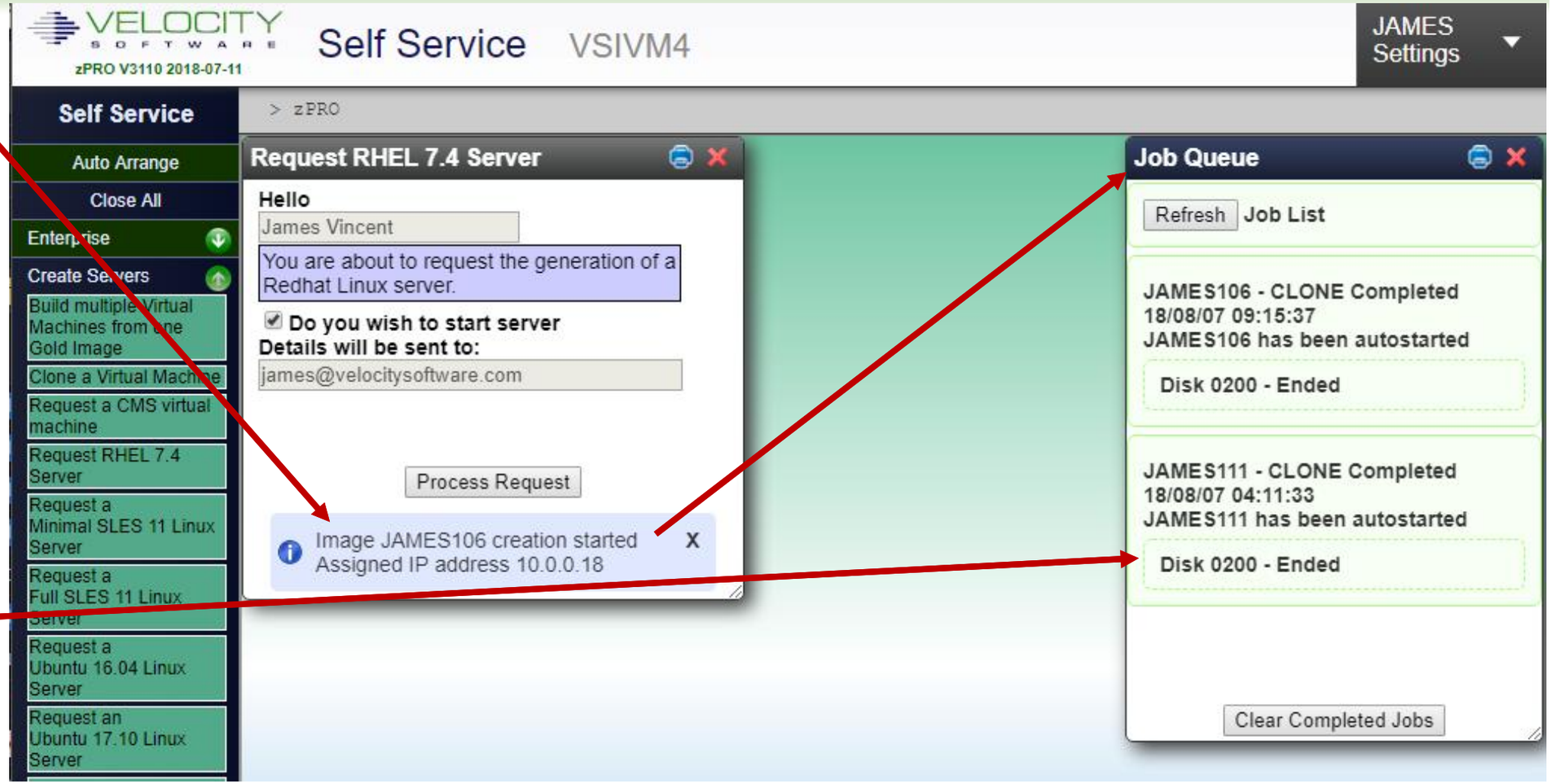


Virtual Demo: Provisioning Status

When you create a new server, zPRO will give you the initial status and IP (if assigned). It will also open the Job Queue window to allow you to know the status of the new server generation process.

Some server clone processes will take time; the Job Queue gives you a way to know what the status is of the new servers.

Clicking on the server information in the Job Queue will open the Audit log for that server… (see next slide)

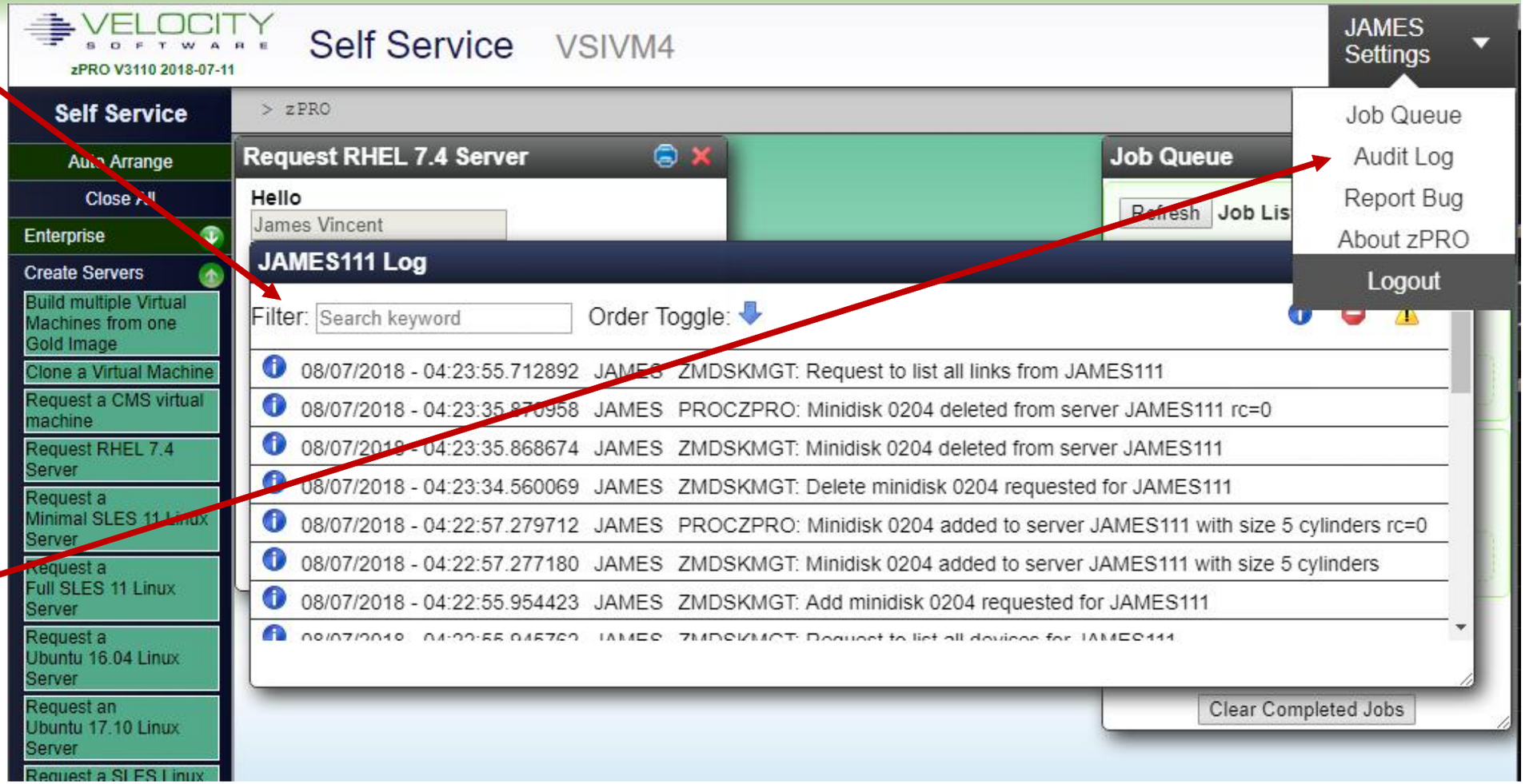


Virtual Demo: Auditing

The Audit Log provides step by step details on each action zPRO performed to complete a request on behalf of the end-user. This information is a useful way to see what steps were done, any issues that may have occurred and an audit-trail of processes for problem determination and resolution.

The Audit Log is also available from the Userid drop-down. This drop-down also gives you access to the Job Queue, Reporting a bug and Logout.

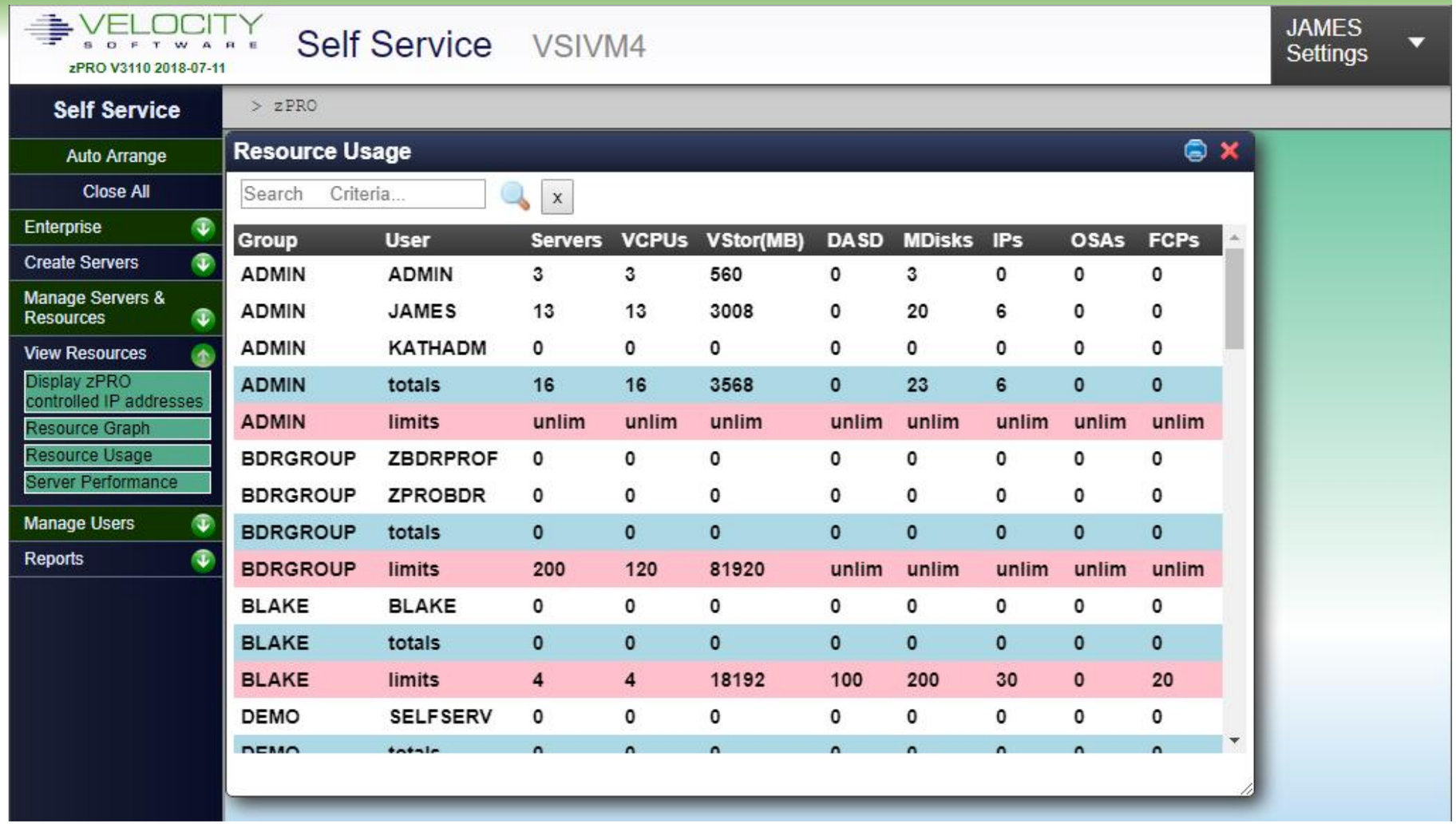
Only audit information that falls within the scope of the end-user's authorizations is displayed.



Virtual Demo: Managed Resources

The View Resources menu items give you a view into resource consumption.

Resource Usage shows you a break-down by user and group of the number of servers and the amount of resource consumed by each. These totals are used in conjunction with installation defined resource-limits. These limits are used to control resource allocation by Groups and/or Users. You can configure a limit on any of the resources so that any group or user does not consume more than they should. You can also limit resources at a server level. For example, if you do not want servers to have memory in excess of 10G for instance, you can set a memory limit for all servers.



Group	User	Servers	VCPUs	VStor(MB)	DASD	MDisks	IPs	OSAs	FCPs
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ADMIN	JAMES	13	13	3008	0	20	6	0	0
ADMIN	KATHADM	0	0	0	0	0	0	0	0
ADMIN	totals	16	16	3568	0	23	6	0	0
ADMIN	limits	unlim	unlim	unlim	unlim	unlim	unlim	unlim	unlim
BDRGROUP	ZBDRPROF	0	0	0	0	0	0	0	0
BDRGROUP	ZPROBDR	0	0	0	0	0	0	0	0
BDRGROUP	totals	0	0	0	0	0	0	0	0
BDRGROUP	limits	200	120	81920	unlim	unlim	unlim	unlim	unlim
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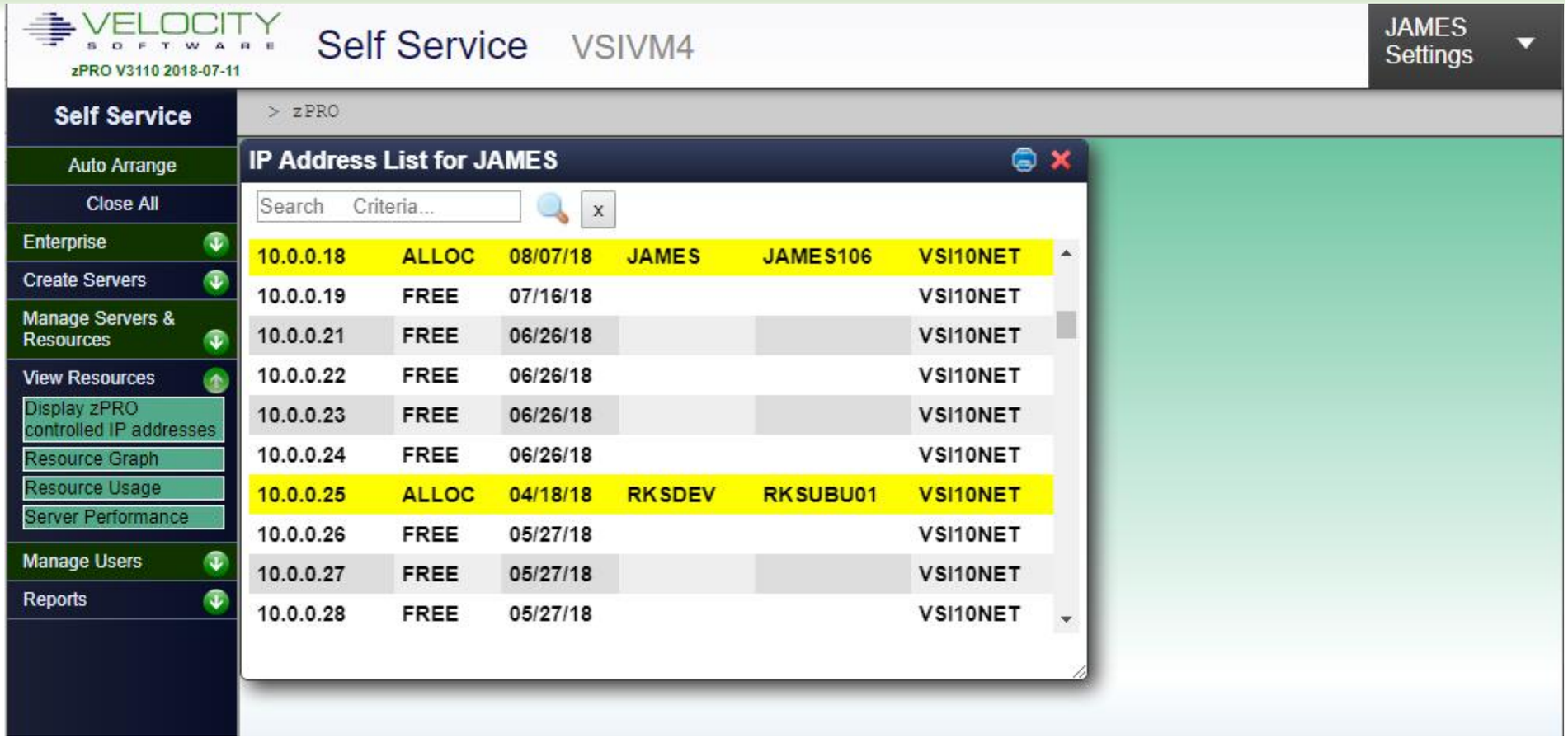
BLAKE	totals	0	0	0	0	0	0	0	0
BLAKE	limits	4	4	18192	100	200	30	0	20
DEMO	SELFSERV	0	0	0	0	0	0	0	0

Virtual Demo: IP Address Allocation

Display zPRO controlled IP Addresses is a view to present a list of IP addresses managed by zPRO. The display shows whether an IP address is available or, if allocated, which end-user allocated it and to which server it has been allocated.

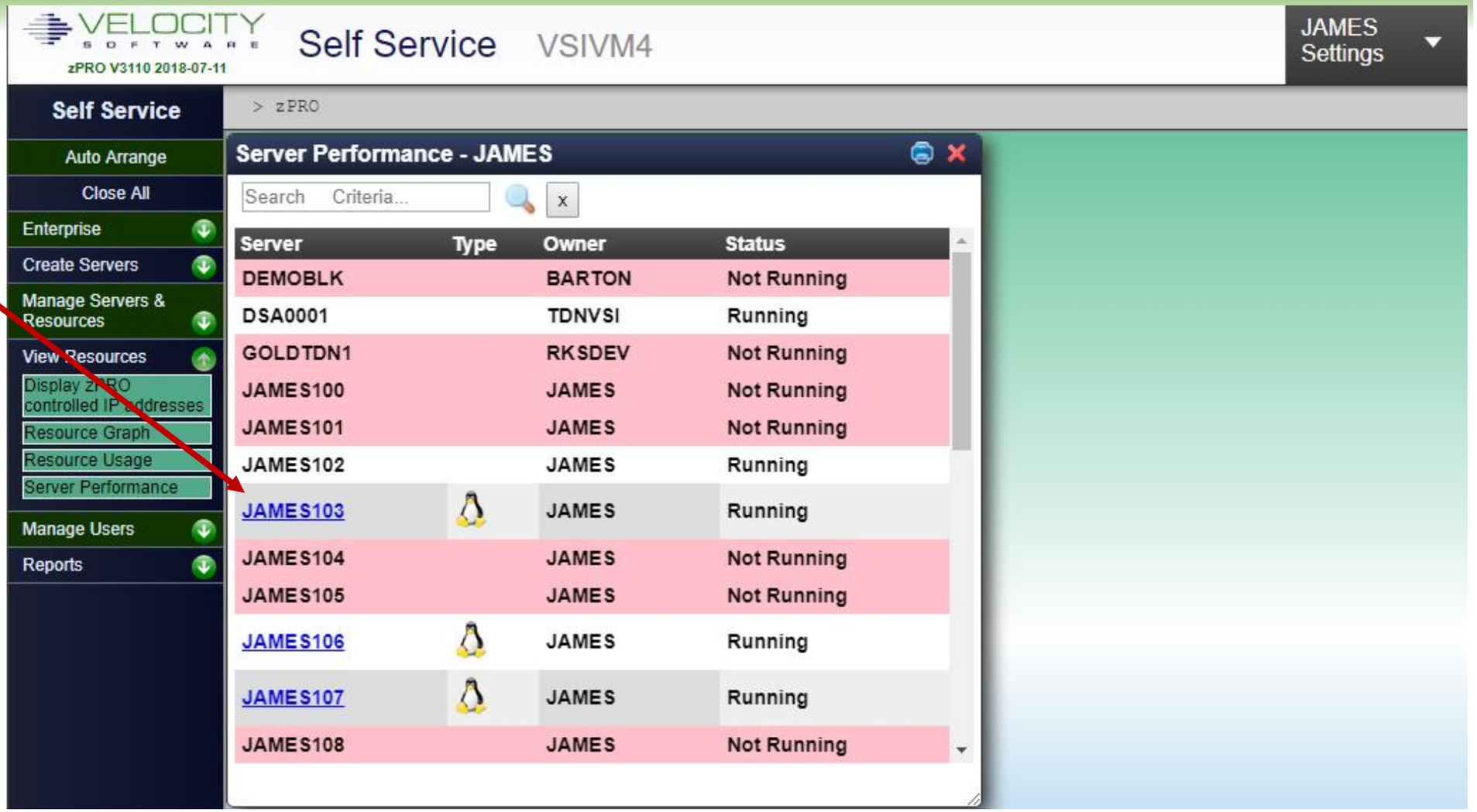
IP addresses are maintained within a table, described in the zPRO Admin Guide. You can define Tables for Groups and Users also to help contain what they use for the servers. For instance, in a Lab you may want them to only use a Lab VSWITCH and IPs and not the production VSWITCH/IPs.



Virtual Demo: Performance Link

The Server Performance model gives you a direct link into zVIEW to show details on your Linux servers.

For any Linux server running, you can click the server name link and it will open zVIEW in another tab with the MYLINUX views. That view setup is predefined for you in zVIEW.

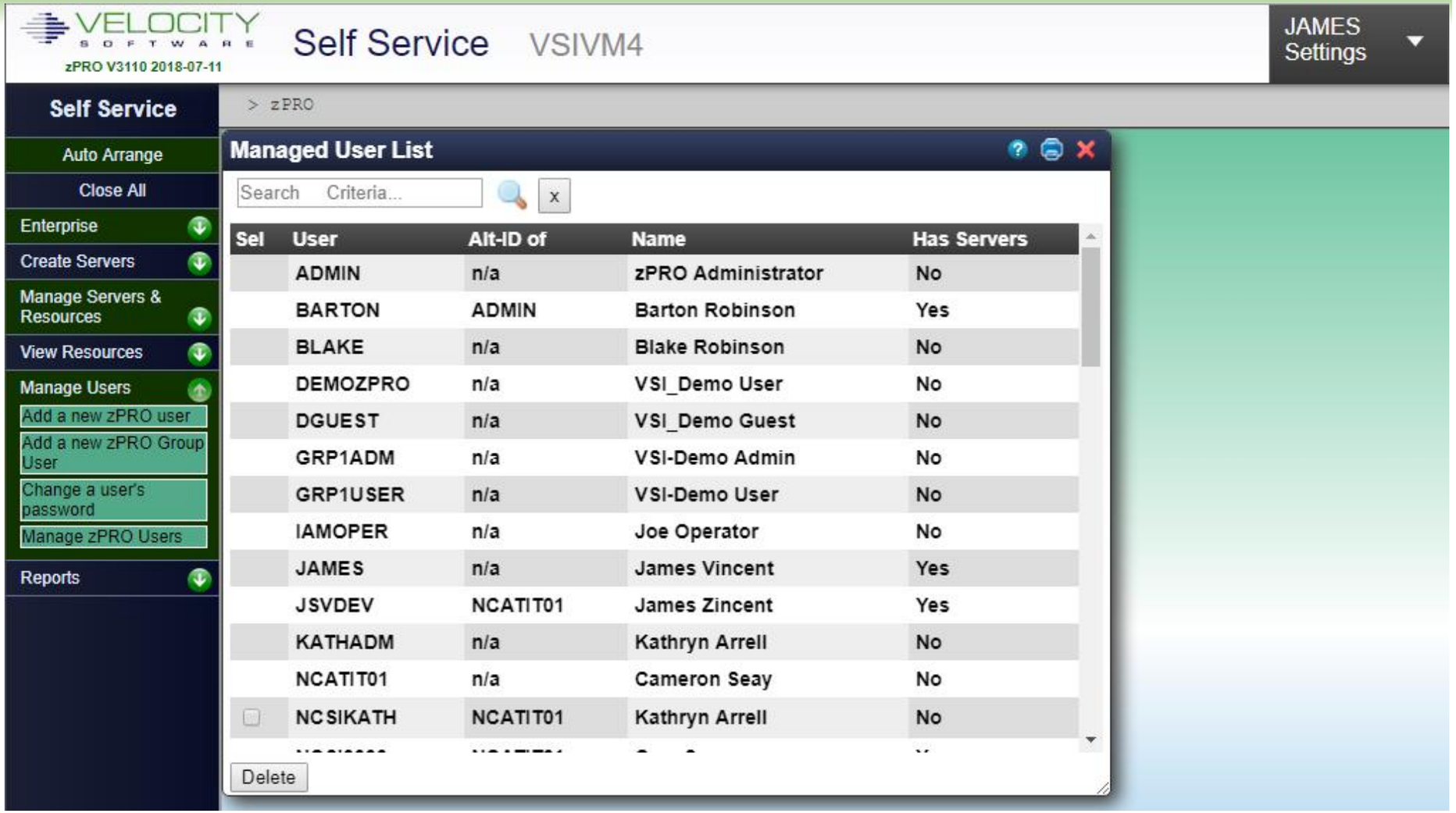


Virtual Demo: zPRO User Management

The Manage zPRO Users menu items allow you to manage your zPRO end-user userids.

The Manage zPRO Users model shows you all the users defined as zPRO end-users, their name and if they have servers defined. You can delete any ALT-ID user if they do not own servers.

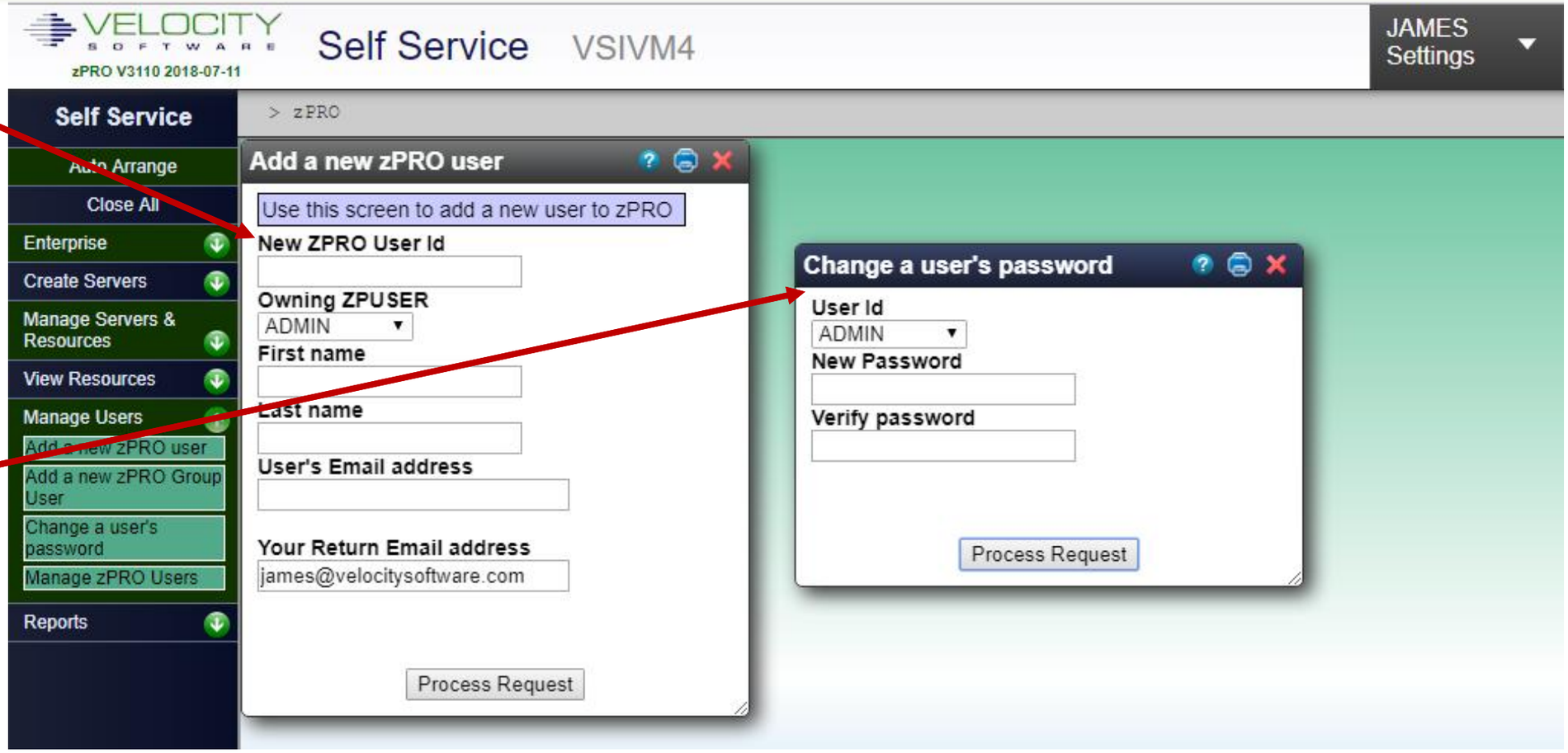
An ALT-ID is defined within another zPRO user. That ALT-ID has its own userid, but it uses/inherits all the authorities and resource limits of the base zPRO user. ALT-IDs is also a means to allow users to authenticate via LDAP/AD with greater than 8 character userids.



Virtual Demo: Add End-user

Within Manage zPRO Users, you can Add a new zPRO user as an ALT-ID of another zPRO user. This process emails the new user with information on how to login to zPRO.

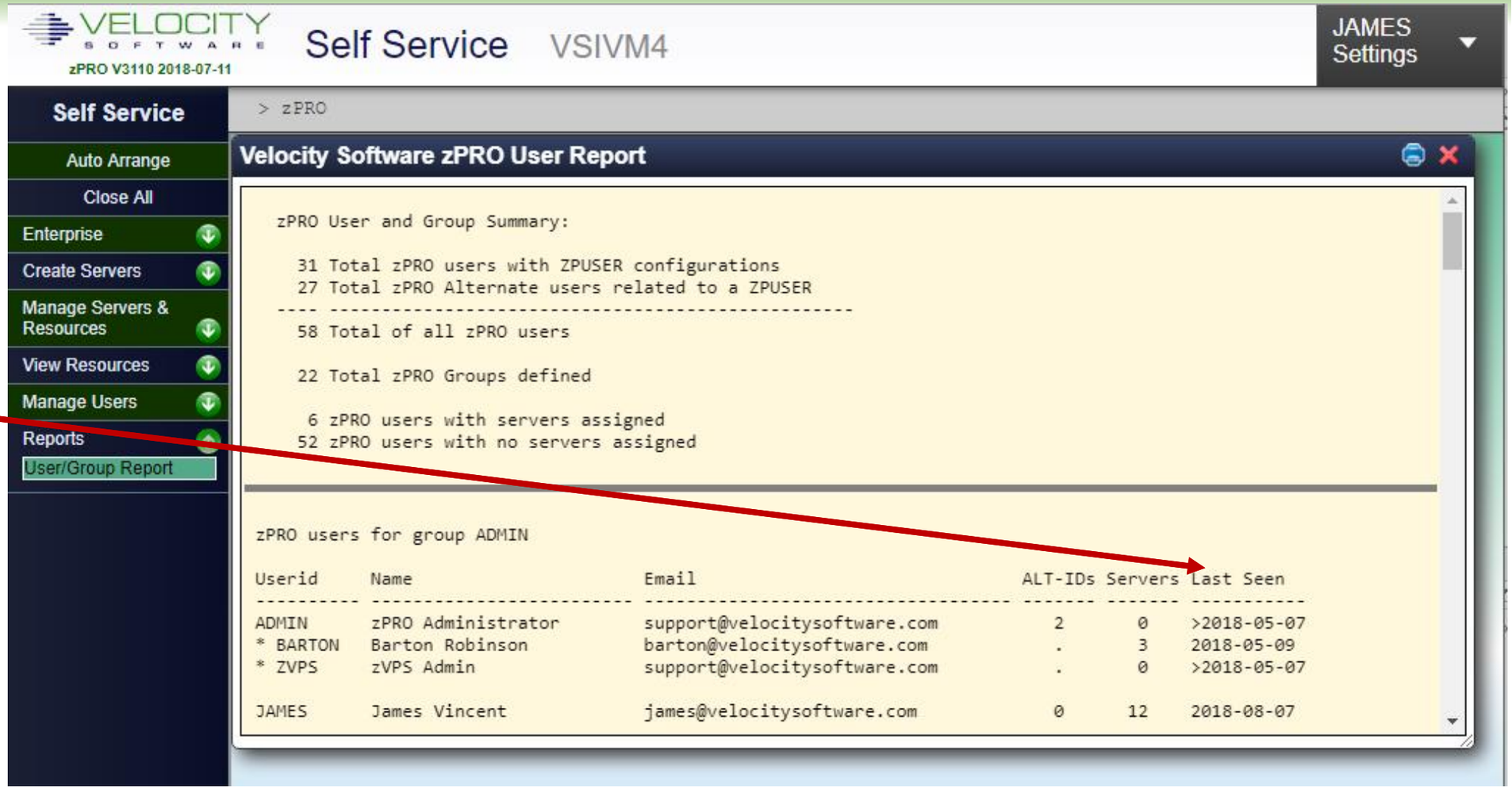
You can also manage zPRO end-users' passwords. Any user that forgets their password or that you simply need to change a password for, can be done from this self-service model.



Virtual Demo: Resource Reports

Currently, zPRO ships with a report for User/Groups summary. This report shows you not only the counts of defined users/groups, but details on each user. This includes servers built, if the zPRO user has ALT-IDs defined to it and the last time zPRO saw that user in the system (based on the available Audit logs).

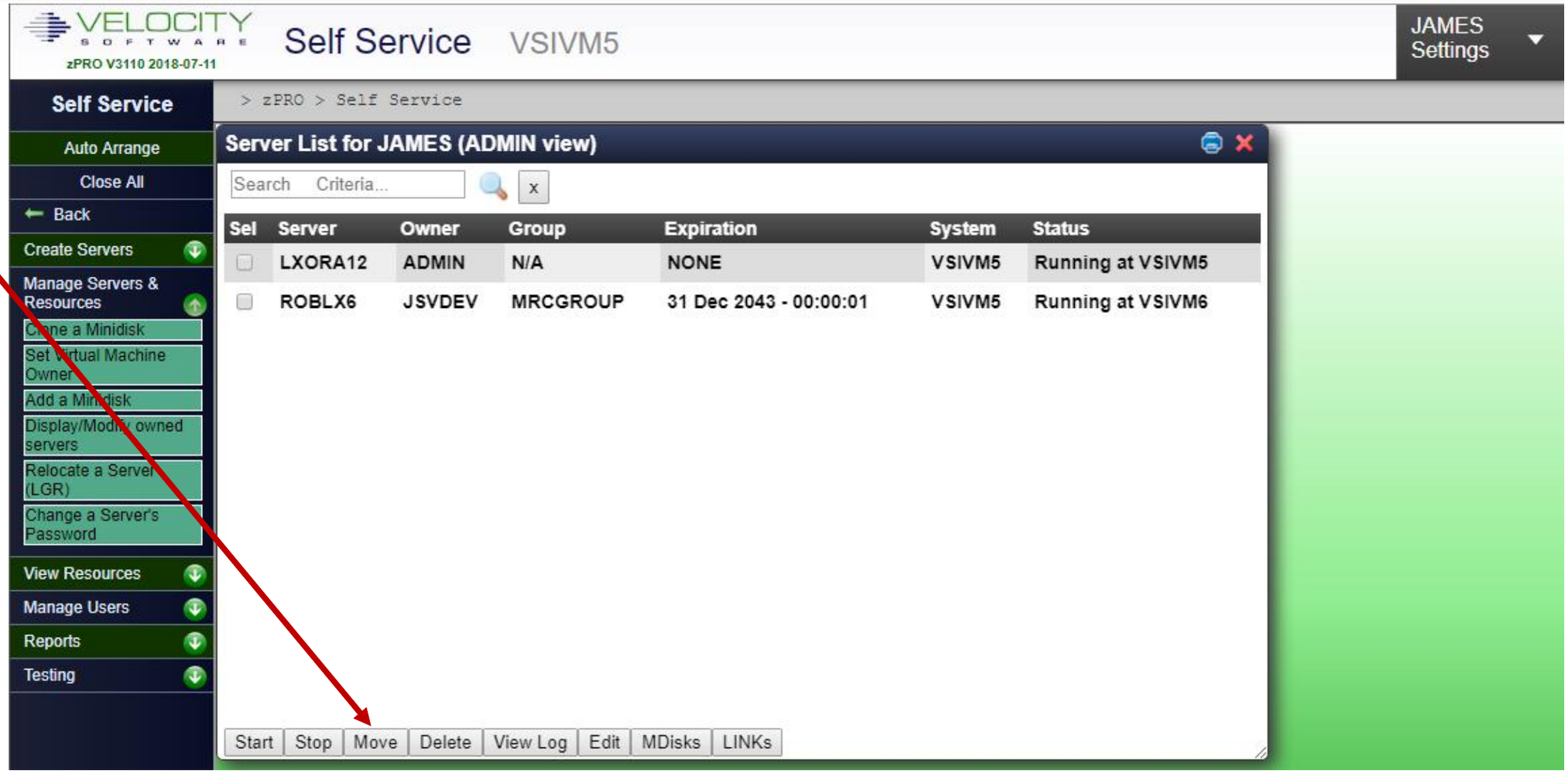
More reports will be added as more releases of zPRO are made available.



Virtual Demo: Server Relocation (LGR)

zPRO has multiple ways to manage relocating servers, via LGR(Live Guest Relocation), within your SSI clusters.

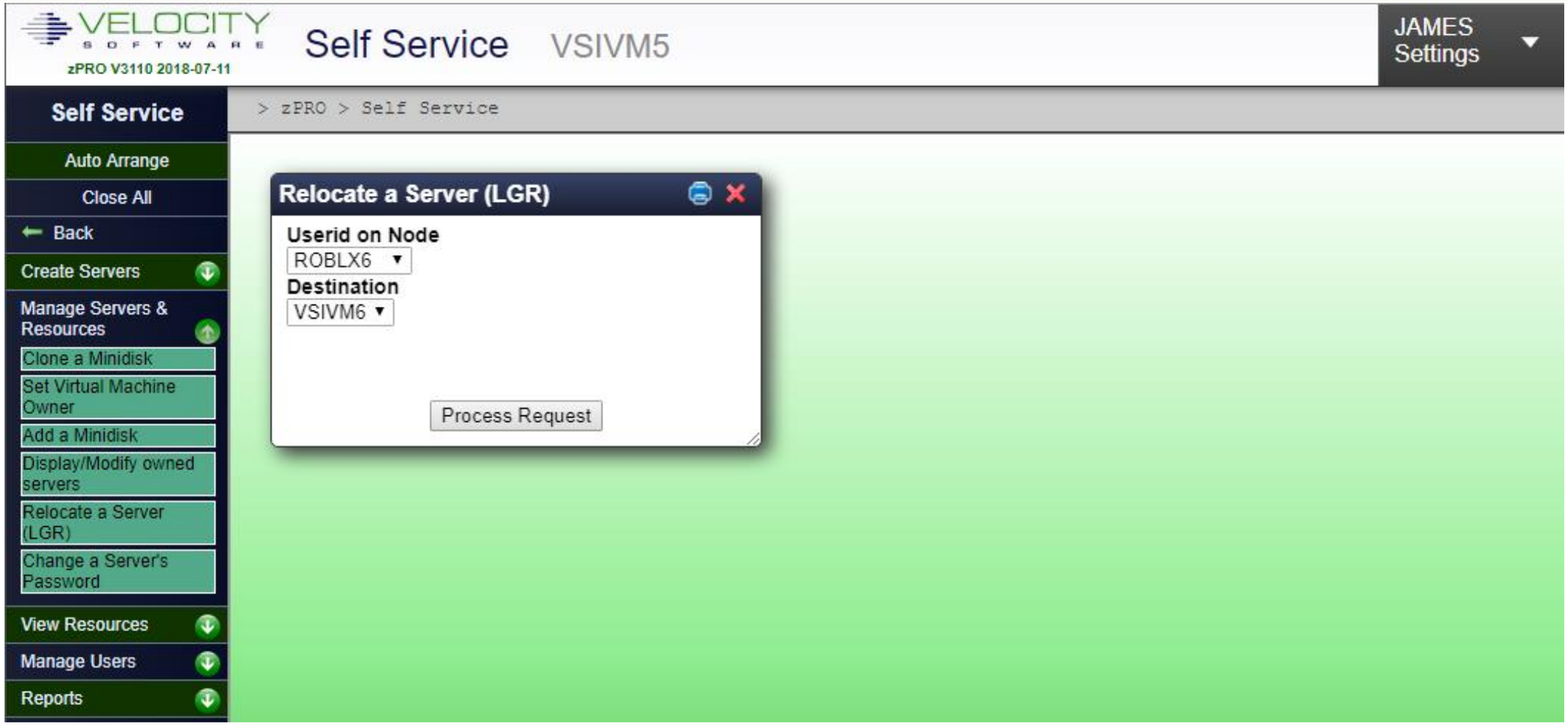
zPRO is aware when it is running in an SSI cluster and will present the Move function in the Server List model if you are authorized for it. You can select and move servers by selecting the target member to move them to, or zPRO will ask to move it to the other member for a two-member cluster.



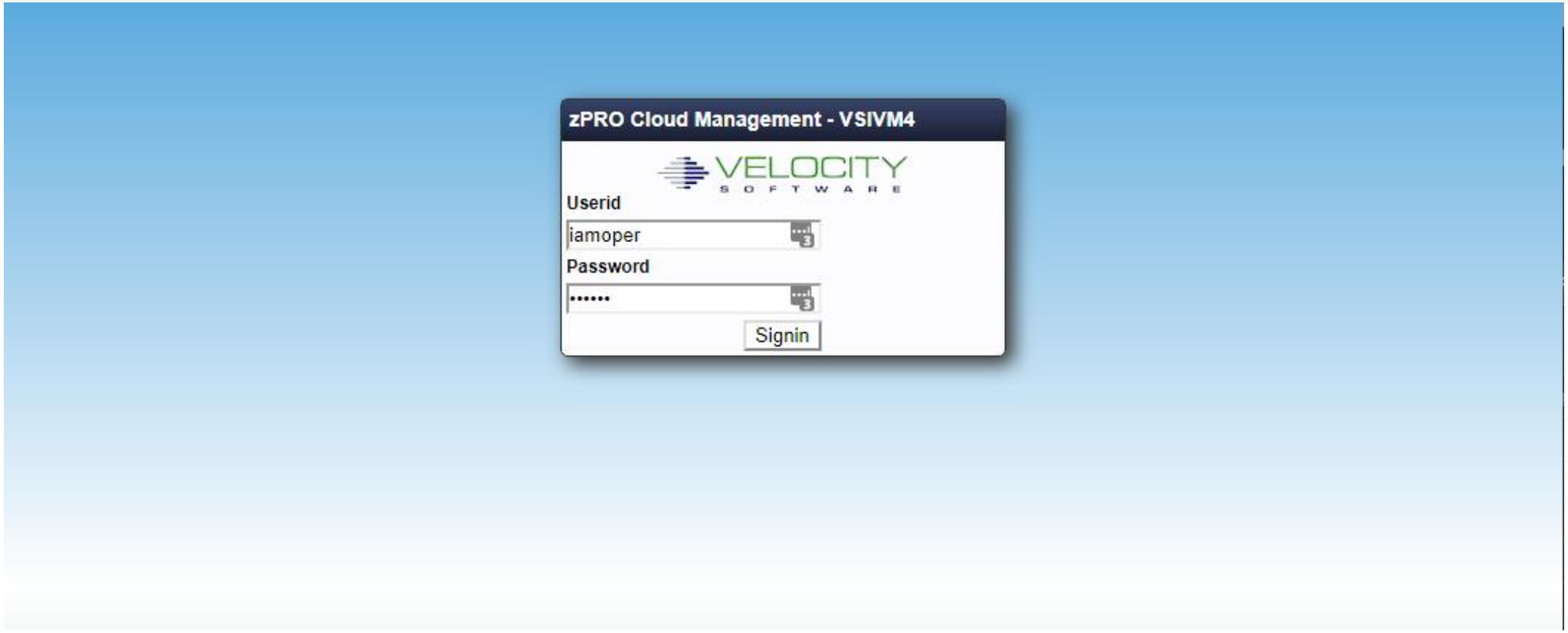
Virtual Demo: Server Relocation (cont)

You also have the option in zPRO to use the Relocate a Server model. Under SSI, zPRO will enable the model to let you select a userid and the target member within the SSI cluster.

The destination list will show all members, including the member the server may be running on but will tell you so and let you chose another member easily.



Virtual Demo

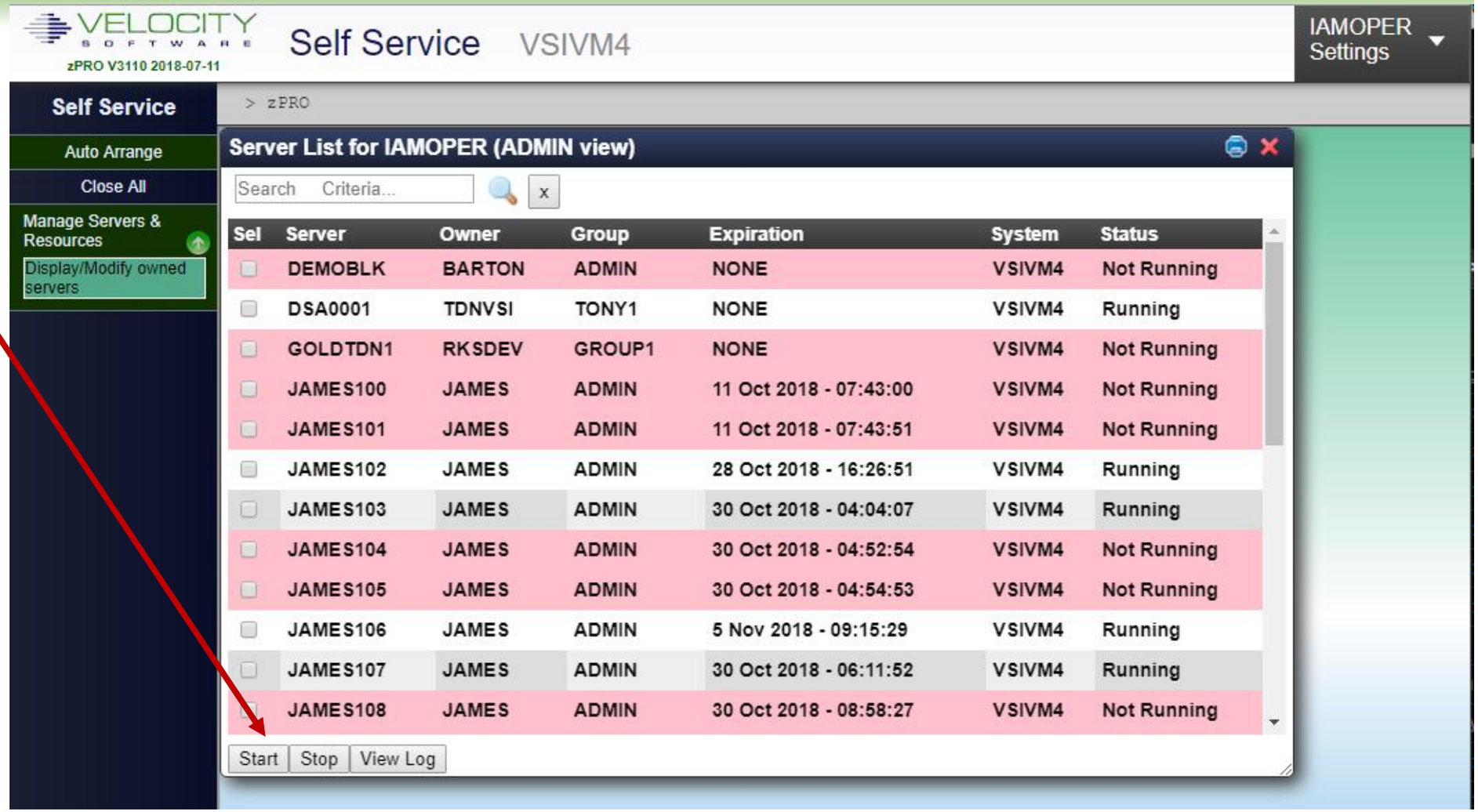


The next examples will show you just a hint of how you can utilize zPRO with other groups in your organization. In this case we will login with an Operations userid.

Virtual Demo: Sample Operations User

This Operations zPRO user has very limited access to self-service functions and actions. In this example, they can see every server zPRO has through the Server List model as shown, but they can only Start, Stop and View Log for any server.

zPRO can be configured, exactly as needed to for each group or user, to whom you wish to grant access to. There are a multitude of options available for scope and authorizations.



zPRO's Management Benefits

Management of an enterprise, from the resource perspective, requires knowledge of resource allocation, usage, and growth. zPRO keeps track of system resources which are defined within the scope of zPRO management.

Managers can:

- View resource consumption by individuals and/or groups of individuals
- Keep track of activities related to system usage and/or provisioning (Auditing)
- Provide a more responsive environment for end-users. In a mainframe environment, the procurement process for a new collection of Linux servers is generally eliminated. zPRO can be used to "spin up" one or more new servers in the amount of time it takes for the end-user to click and get a cup of coffee.

For even more details, see zPRO Product Highlights at

https://www.velocitysoftware.com/zPRO.html

Thank you!

- **We at Velocity Software sincerely hope you found this zPRO Virtual Demo useful**

  and remember,

- **Contact us to learn more or to schedule a real-time demo of the product!**
  - We would love the opportunity to show you more about zPRO and how it can help you and your organization be successful with Linux on z/VM

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