Getting Started 201

Arcus

makes users more successful, productive and secure in <u>any</u> cloud, using <u>any</u> technology.

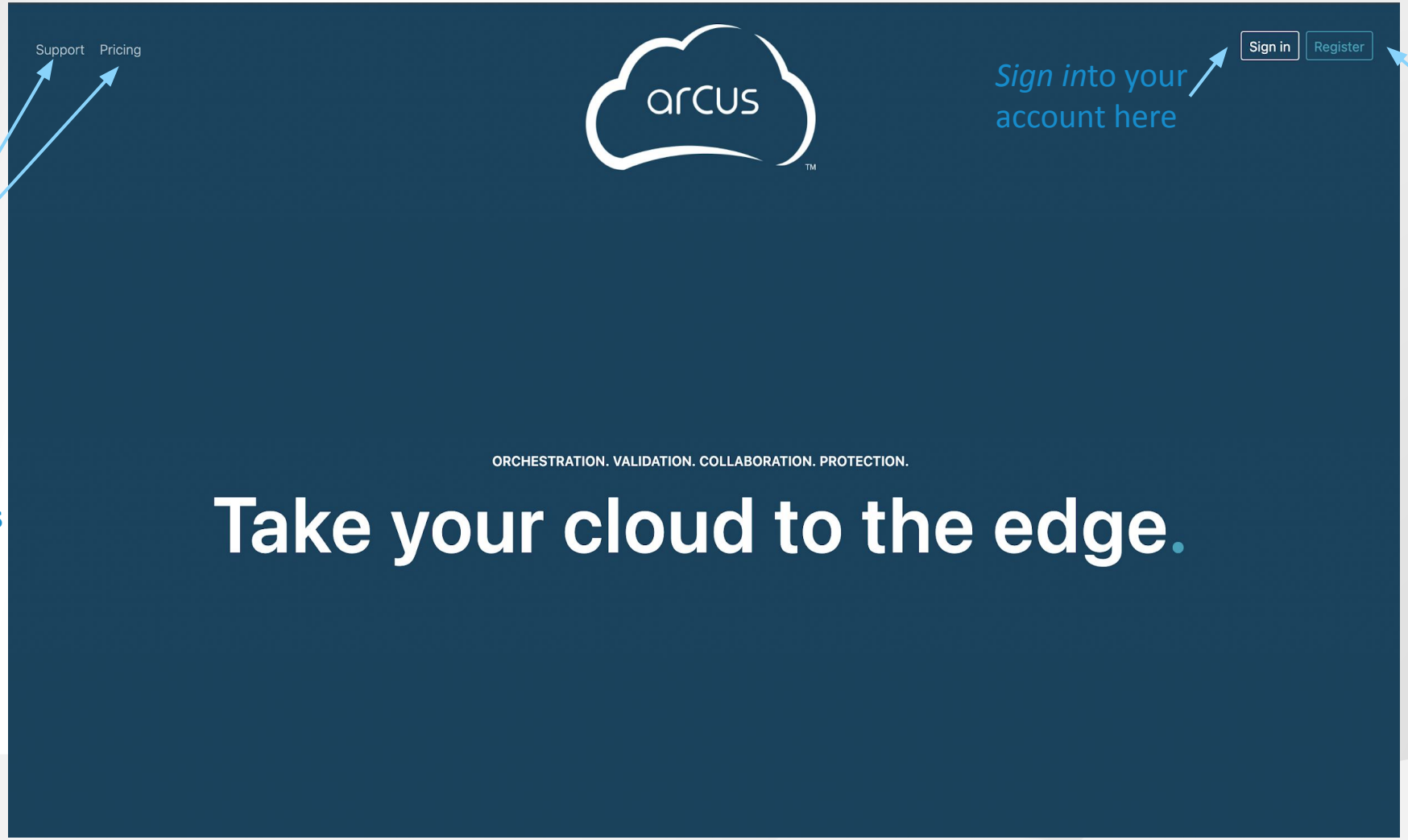
It is the platform for where & how to get things done!

Topics

- Getting Started
- The Standard User Interface
- The Express User Interface
- Building…
  - Systems
  - Containers
  - Scenarios
  - Deployments
- Launching Deployment Runs
- Remote Access
- Support & Troubleshooting

Getting Started

Getting Started: Home Page



Explore these links, or scroll down to learn more about **Arcus**

*Sign in*to your account here

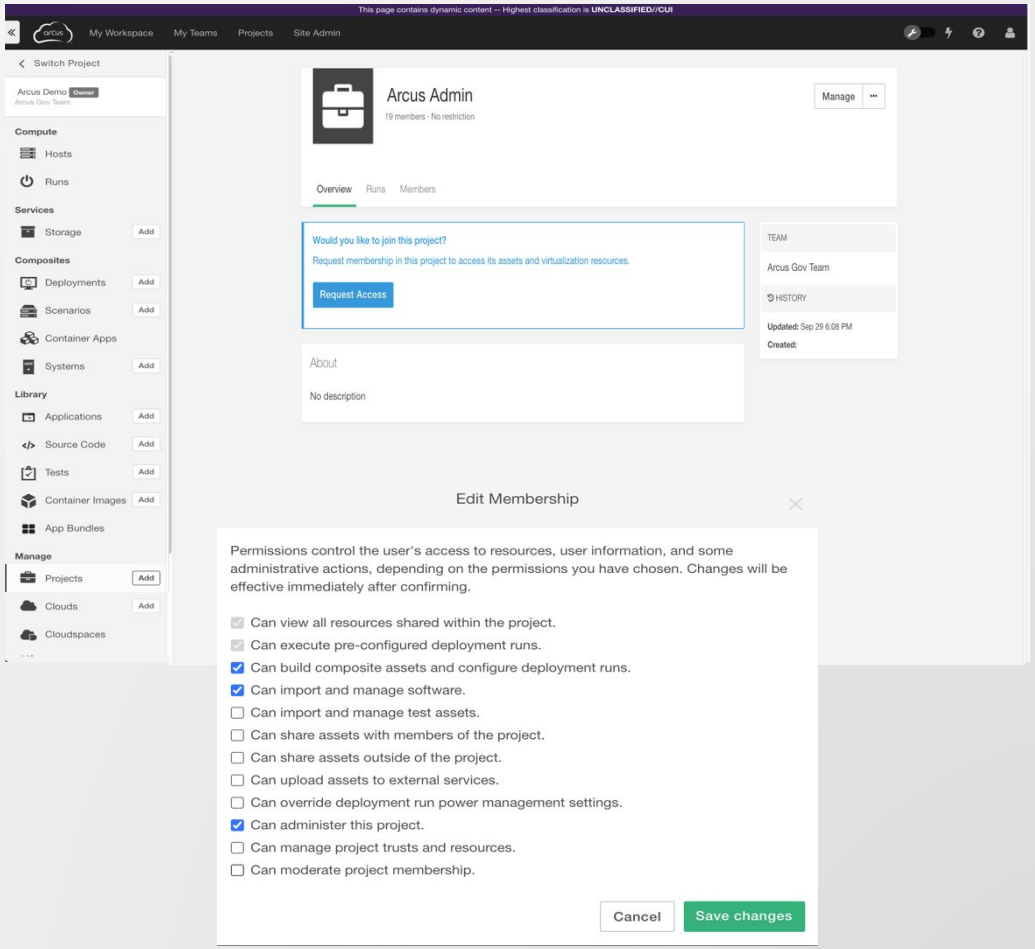
Click *Register* to request an account

Getting Started: Accounts

- New **Arcus** account requests with DoD credentials are activated
  - *Accounts idle for 30 days become inactive and must request reactivation/renew sponsorship.*
- New members can explore the Asset Library but cannot build nor launch anything until they added to a Project.
- If there is an error logging in, click the Account Assistance link…
  - *If the site requires certificate-based authentication, check the Knowledge Base for more information on troubleshooting account issues.*
- Users can:
  - Update their username, email, and phone
  - Set their default Project
  - Generate API tokens

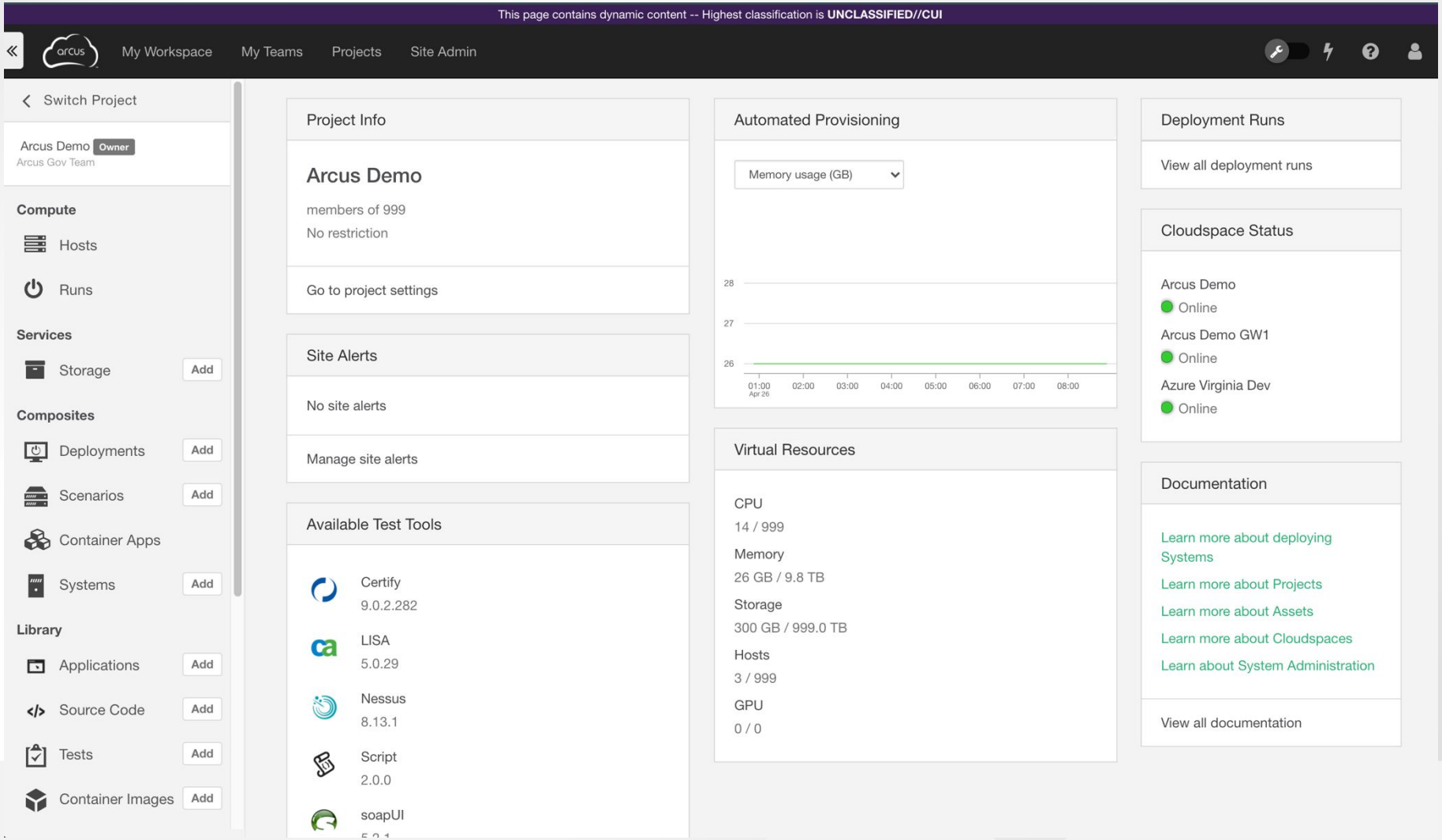
Getting Started: Projects & Permissions

- Requesting Access to a Project
  - From the top menu bar select *Projects*
  - Choose a Project to join
  - Click the blue *Request Access* button
  - A Project Manager will approve the request
- Adding Users to your Project as a Manager
  - Using the Project Management menu to add exiting user accounts to the project
  - Send email invitations to create an account & join the Project in one step
- In either method, the Project Manager will then set each user's permissions within the Project.



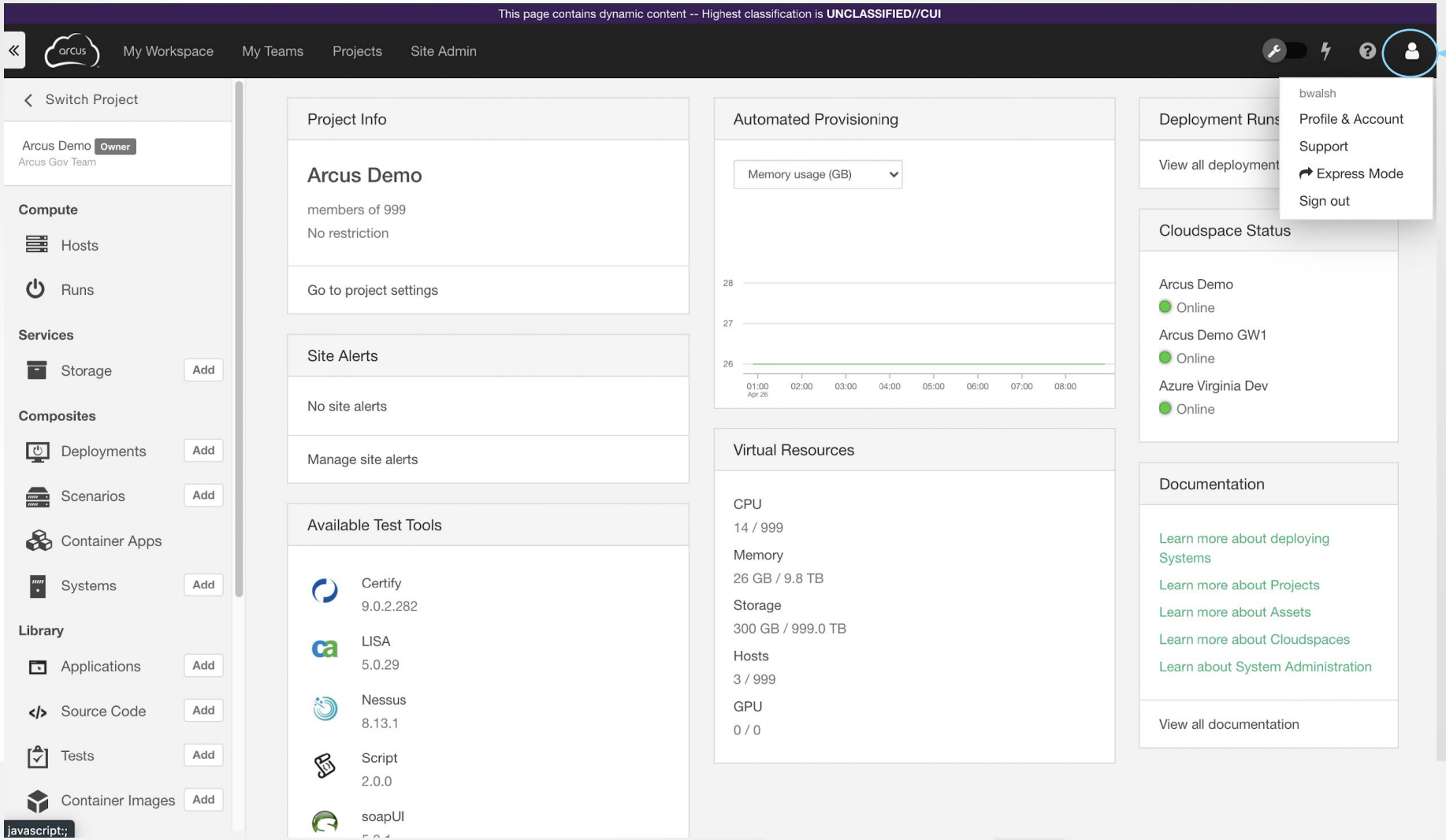
The Standard User Interface

UI: Dashboard



Note: Some overly restrictive IE policy enforcement may block the main navigation icons, but the menus still work.

UI: Accounts



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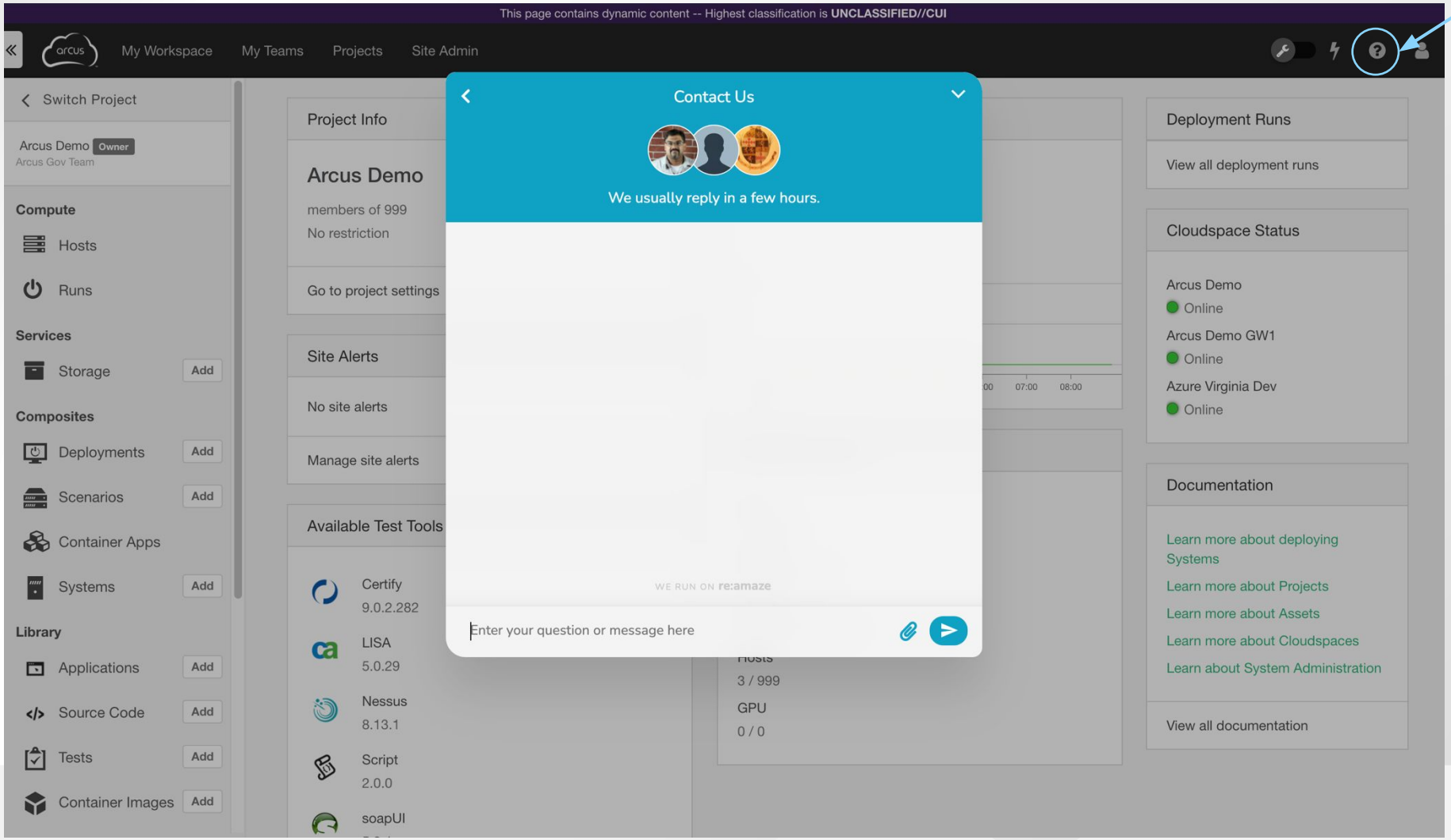
UI: Support



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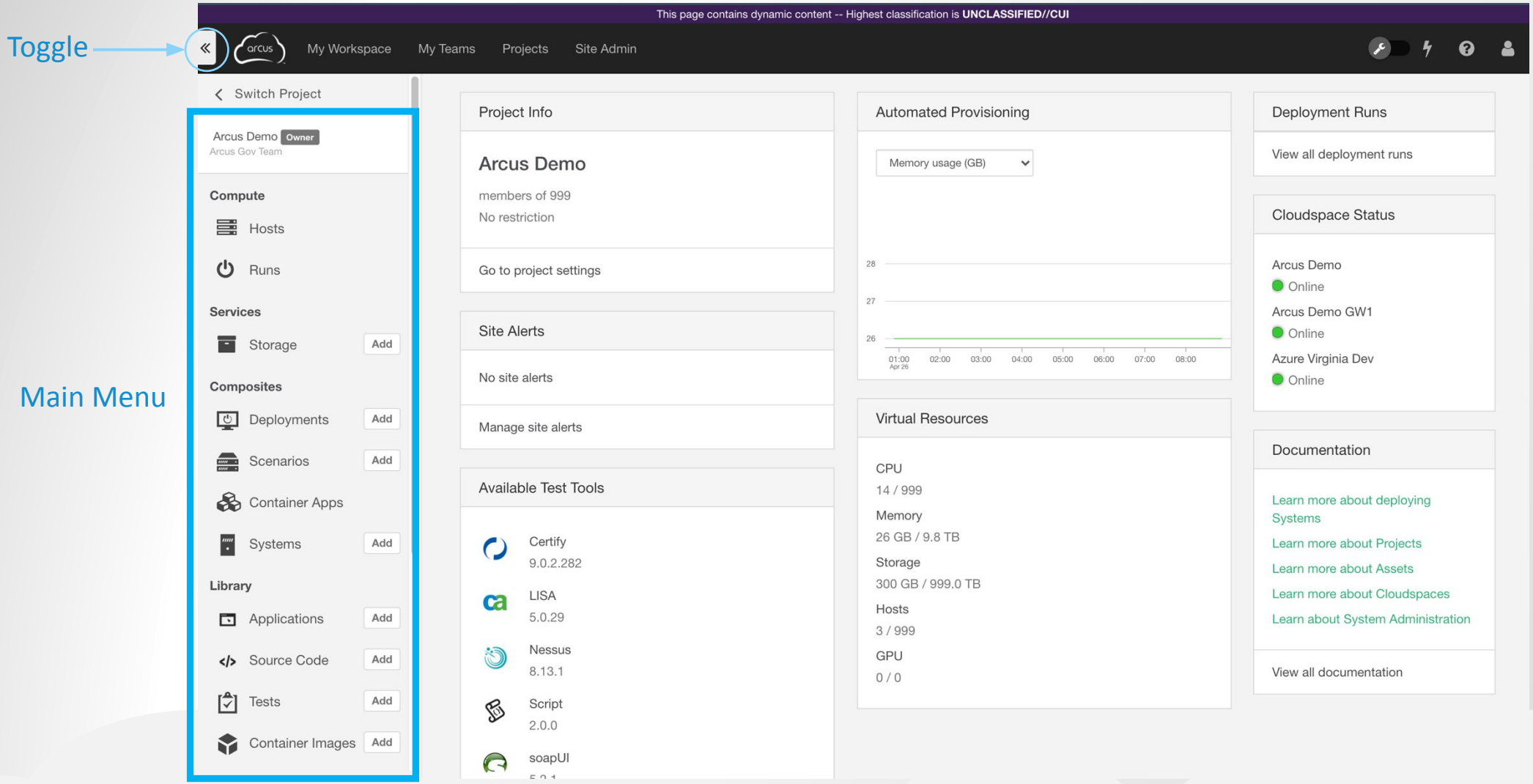
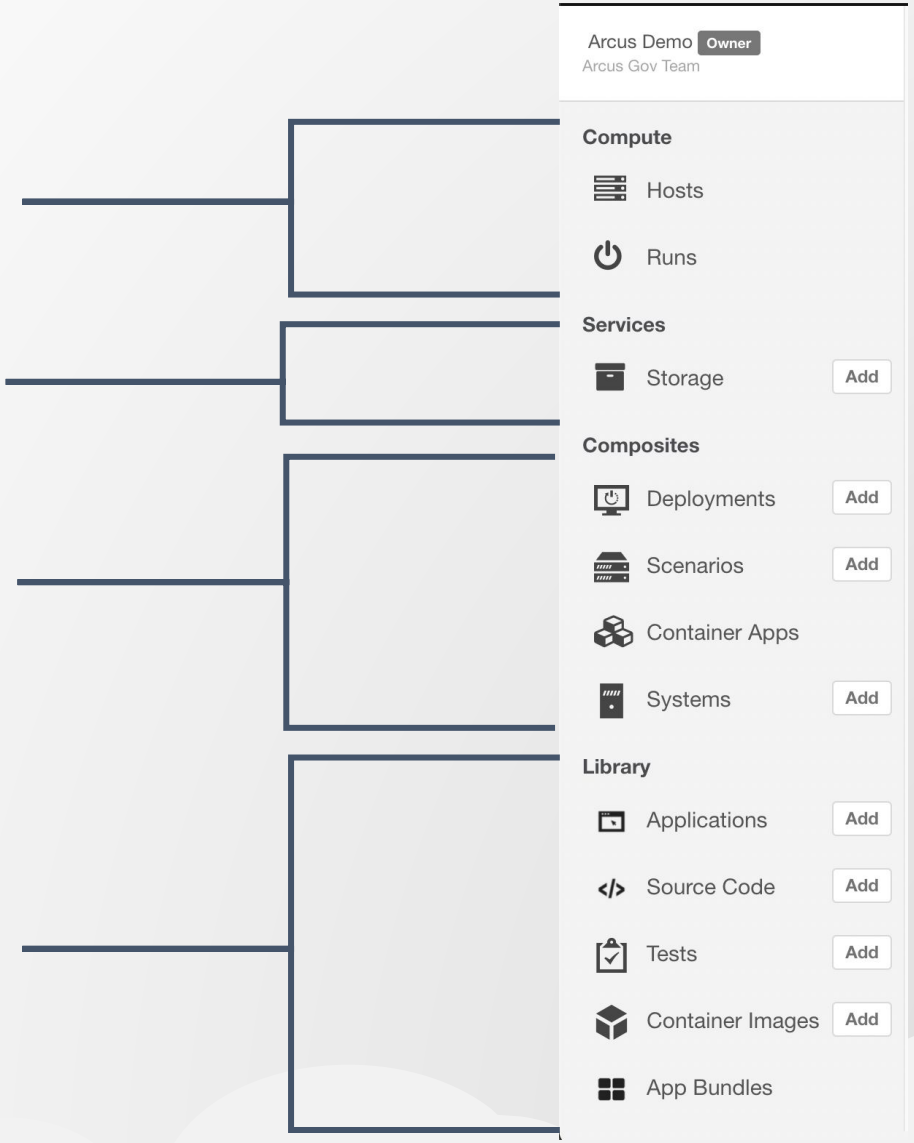
UI: Main Menu



Note: Some overly restrictive IE policy enforcement may block the main navigation icons, but the menus still work.

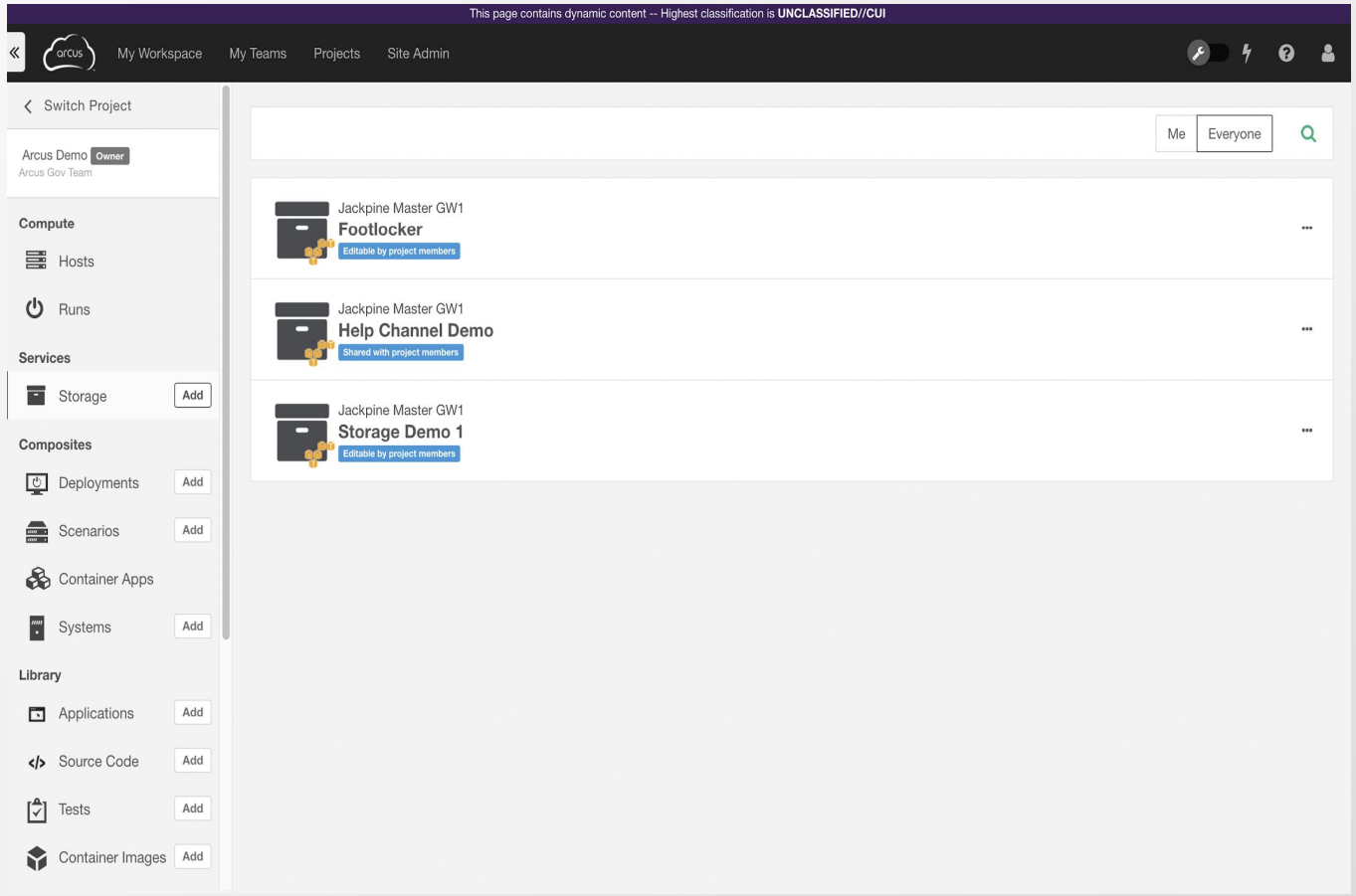
UI: Main Menu - A Closer Look

- Compute
  - Hosts – Remote access to individual VM hosts
  - Runs – Remote access to deployed VMs
- Services
  - Storage Service – Credentialed file storage
- Composites
  - Deployments – Set deployment properties and testing
  - Scenarios – Combine multiple systems
  - Systems – OS with software assets
- Library
  - Applications – Build or import software assets
  - Tests – Create elastic tests
  - Container Images – Import container images
  - App Bundles – Combine packages of assets



UI: Storage Service

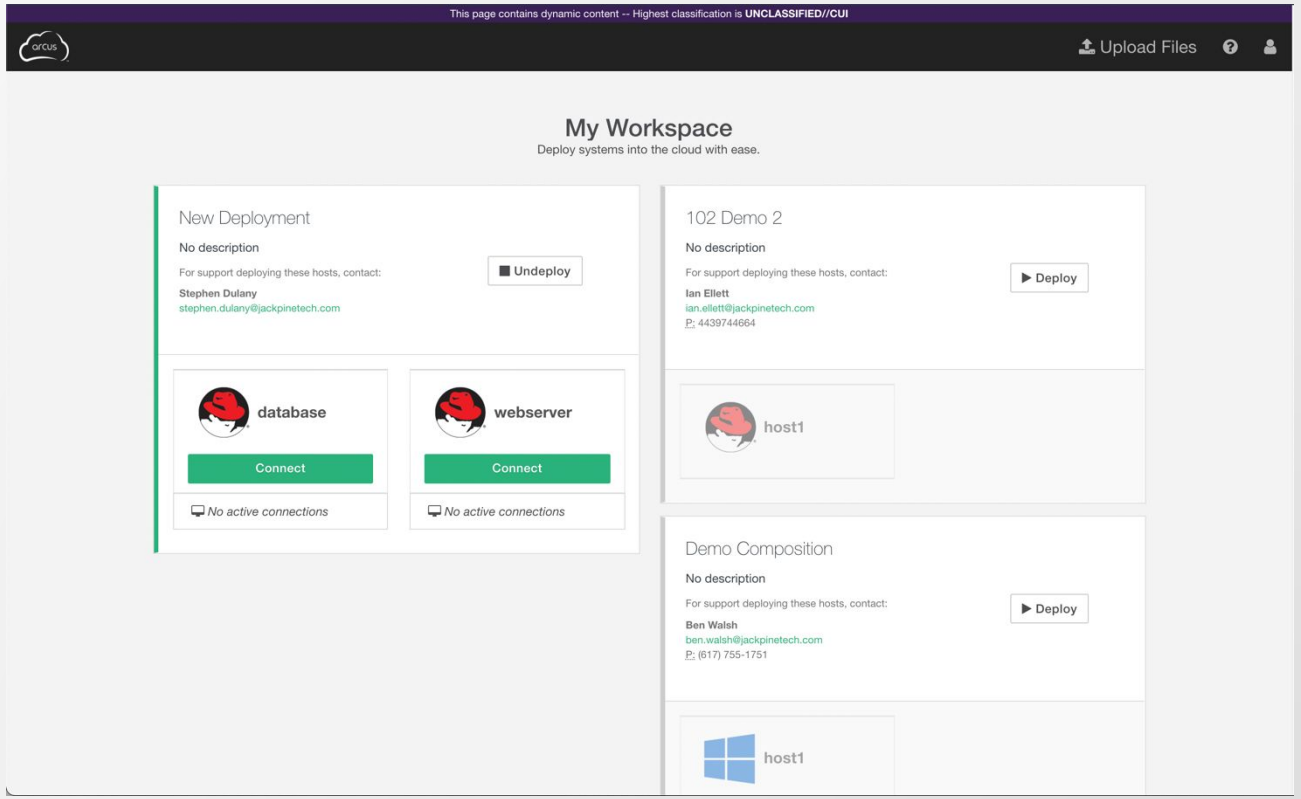
- Create and manage storage resources in your chosen cloud provider via the Arcus UI
- Upload and download files up to 4GB in size
- Generate credentials to access these services from virtual hosts
  - Temporary
  - Host-specific
  - Reflect user roles and permissions



The Express User Interface

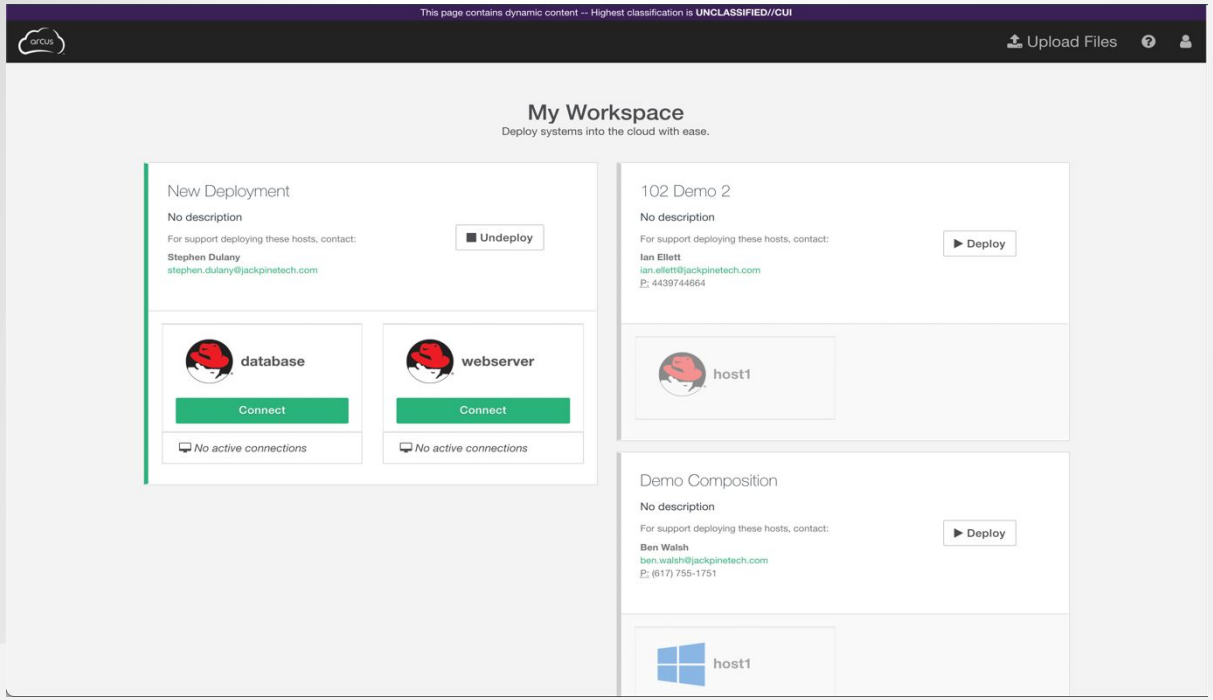
Express UI: Overview

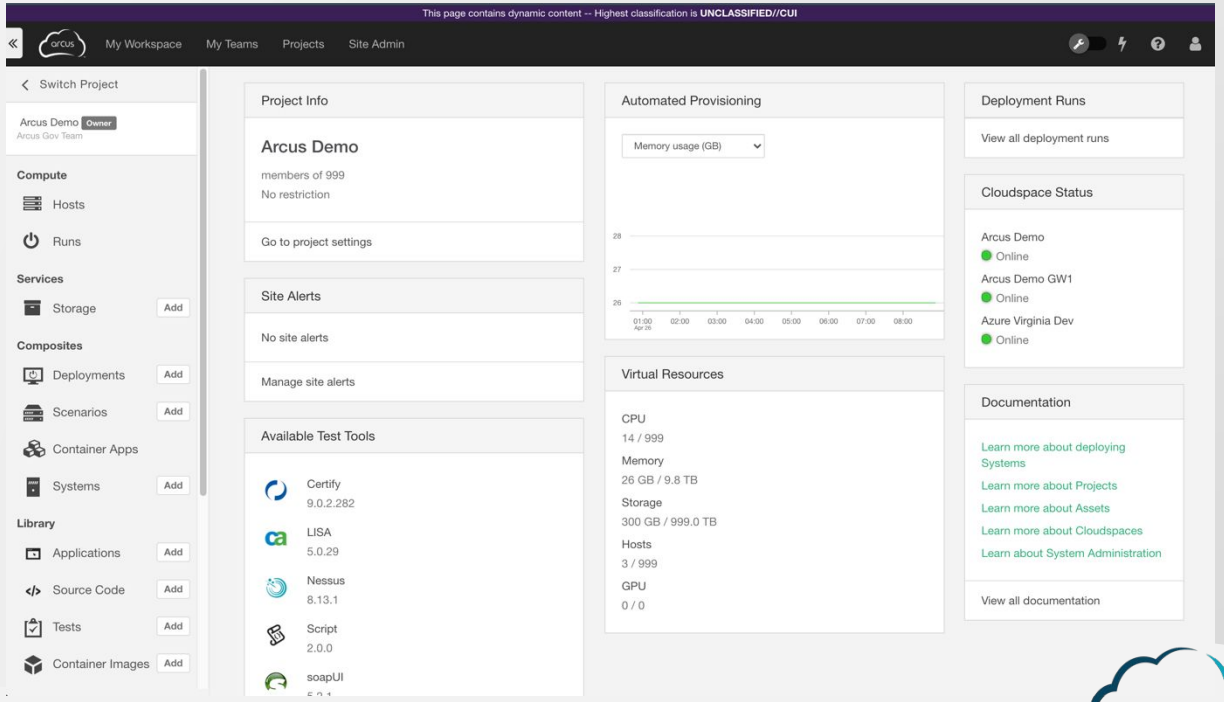
- A way to deploy, access, and un-deploy selected Composite Assets in a simplified view
- Designed for users that do not need to create or modify Assets
- Express Users can connect to Runs and Scenarios that have been published as Compositions
- Project Managers can set the Express UI as the default mode for new users via the Project settings menu



Express UI & Standard UI

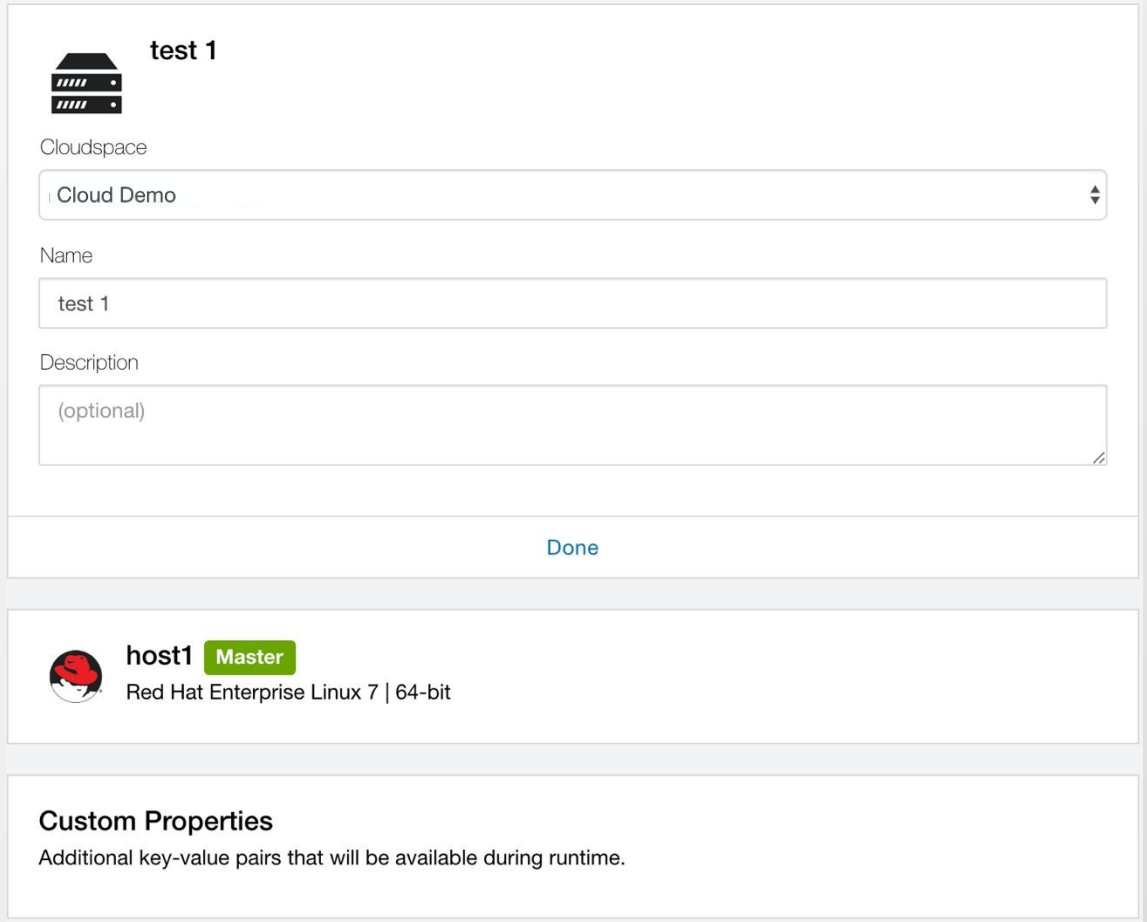
- Express Users can…
  - Deploy and ‘Undeploy’ Compositions
  - Connect to deployed Host(s) through Remote Access
  - Upload files via the Storage Service
- Standard Users can…
  - Build Composite Assets (ex. Systems, Scenarios, and Deployments)
  - Create credentialed Storage Services
  - Perform tests on Host(s) and Source Code





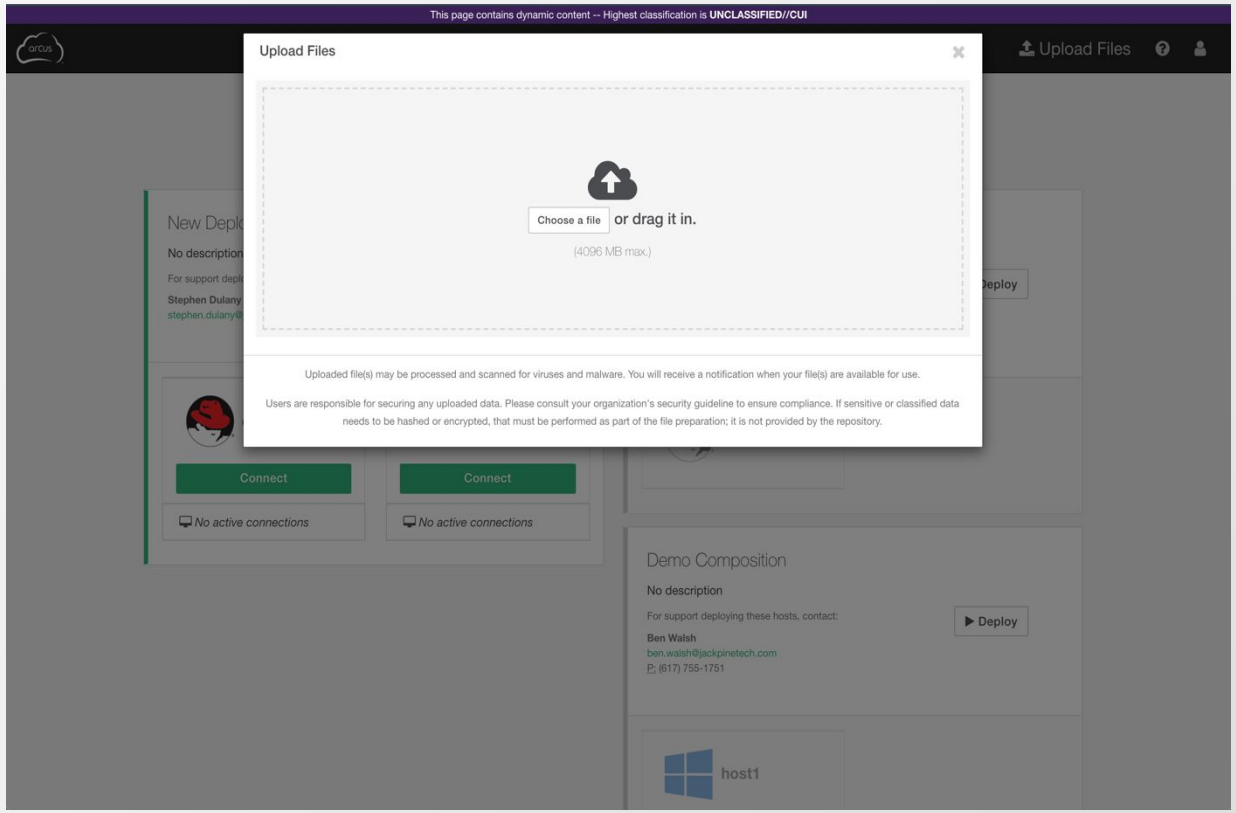
Express UI: Compositions

- Compositions are created by Standard or Power Users for consumption by the Express Users in their Project
- Compositions can be published from an active Deployment Run or Scenario by clicking on the **Publish** button located in the upper right of the screen
- The author of a Composition can alter the name, Cloudspace, and any custom properties of the Composition



Express UI: Storage Service

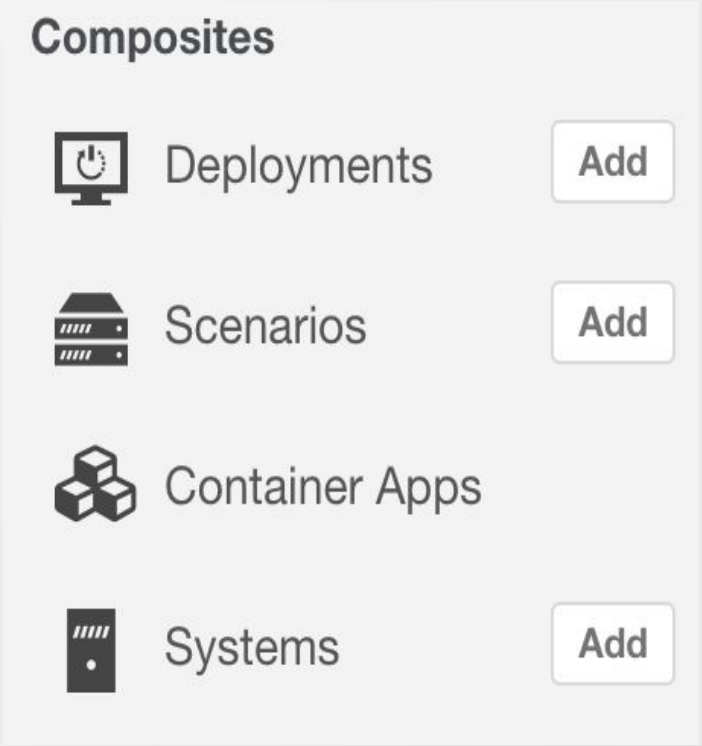
- Upload files to the storage service by clicking the **Upload Files** button
  - Choose a file
  - Drag & drop
- These files will be uploaded to the Project's default storage service
- Upload files up to 4GB in size



Building Systems, Scenarios, and Deployments

Builders

- Where you create & save Composite Assets
- These are designs and specifications for what will be built
- Builders persist during the session until they are saved or reset
- Each Builder has four steps



Building a System

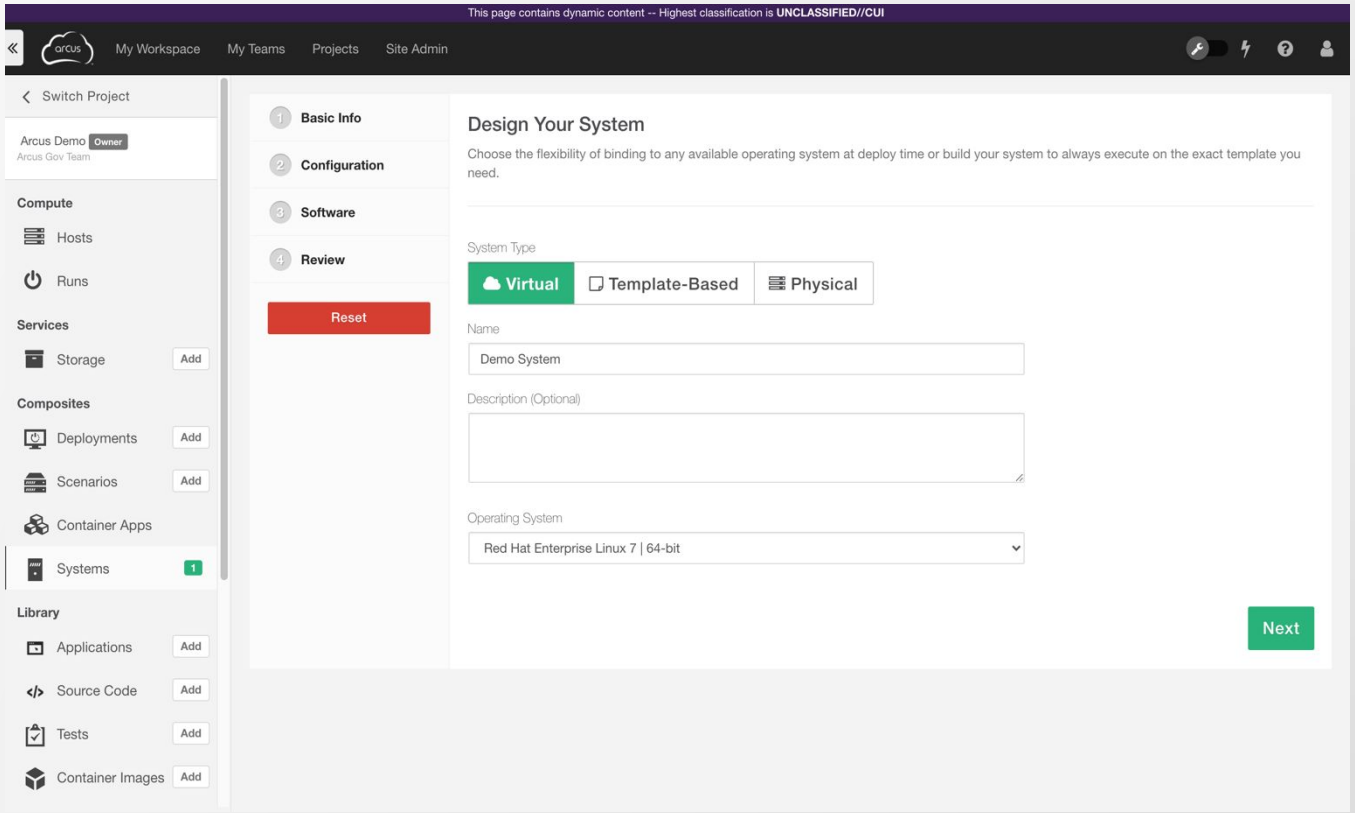
Systems: What is a System?

- A **System** is the design of a single Virtual or Physical machine in Arcus

- This typically consists of an **Operating System** (OS) with **Software Assets**

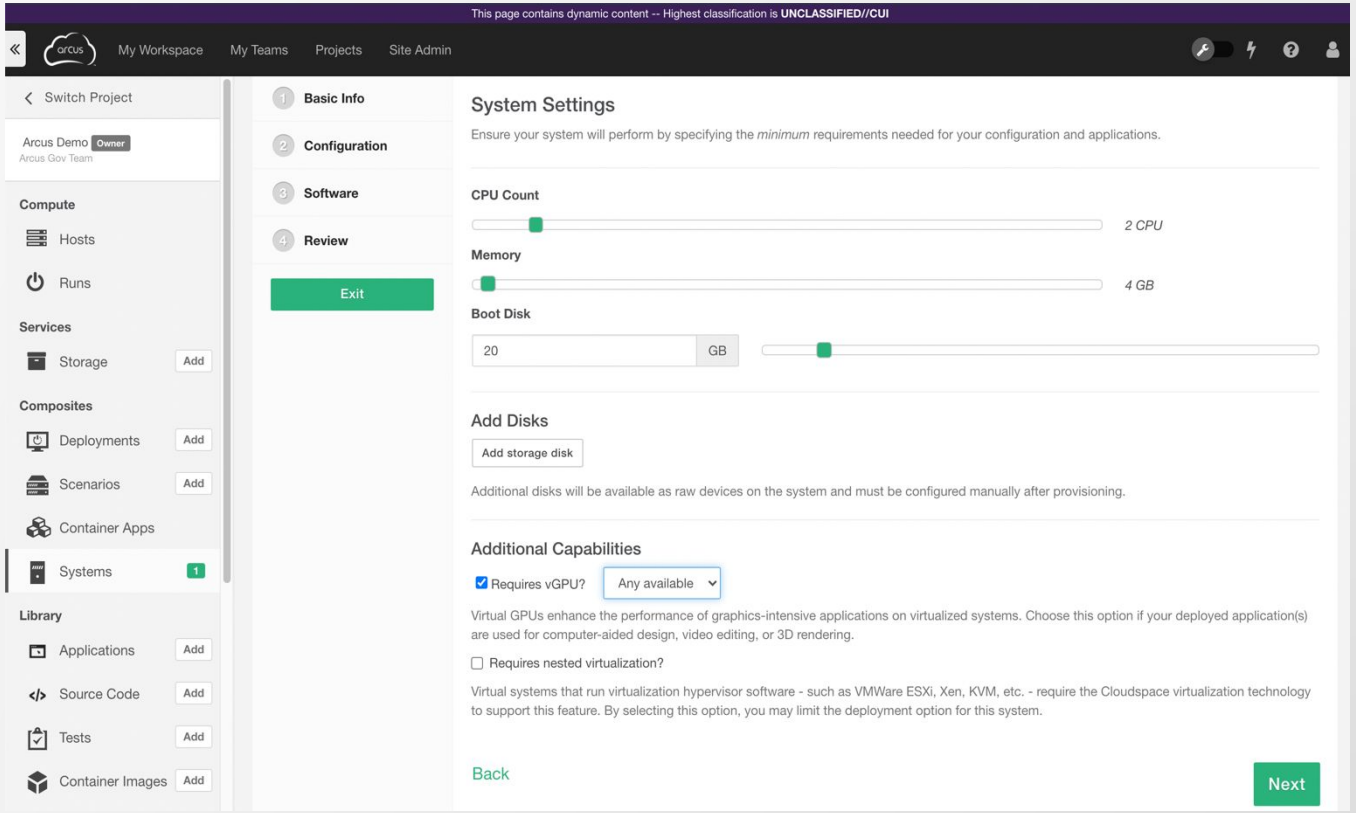
Systems: Basic Info

- Select the type of System:
  - Virtual
  - Template-Based
  - Physical
- Enter a Name for the System
- Enter a Description (optional)
- For a…
  - Virtual System, select an Operating System
  - Template-Based, select a specific Operating System Template
  - Physical, select a registered Physical Machine
- Only Virtual Systems are deployable across different Cloud technologies
- Not all Operating Systems will be available in all Clouds



Systems: Configuration

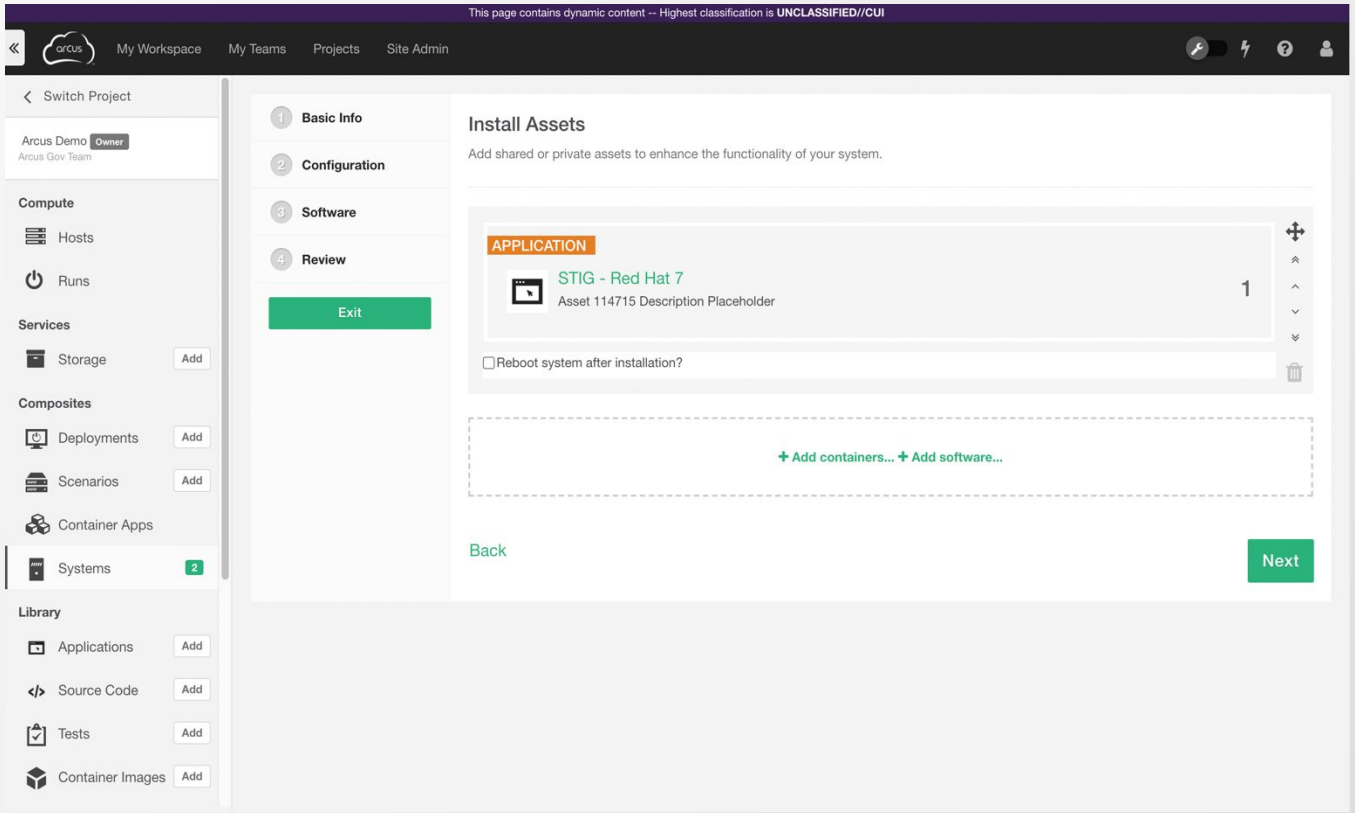
- Set requested CPU count
- Set requested Memory
- Set requested minimum Boot Disk size
- **Add** up to four additional disks (unformatted)
- Specify request number of Network interfaces
- Enable Remote Access
- Request vGPU capabilities
- Enable Nested Virtualization



*Configuration not applicable to Physical Systems

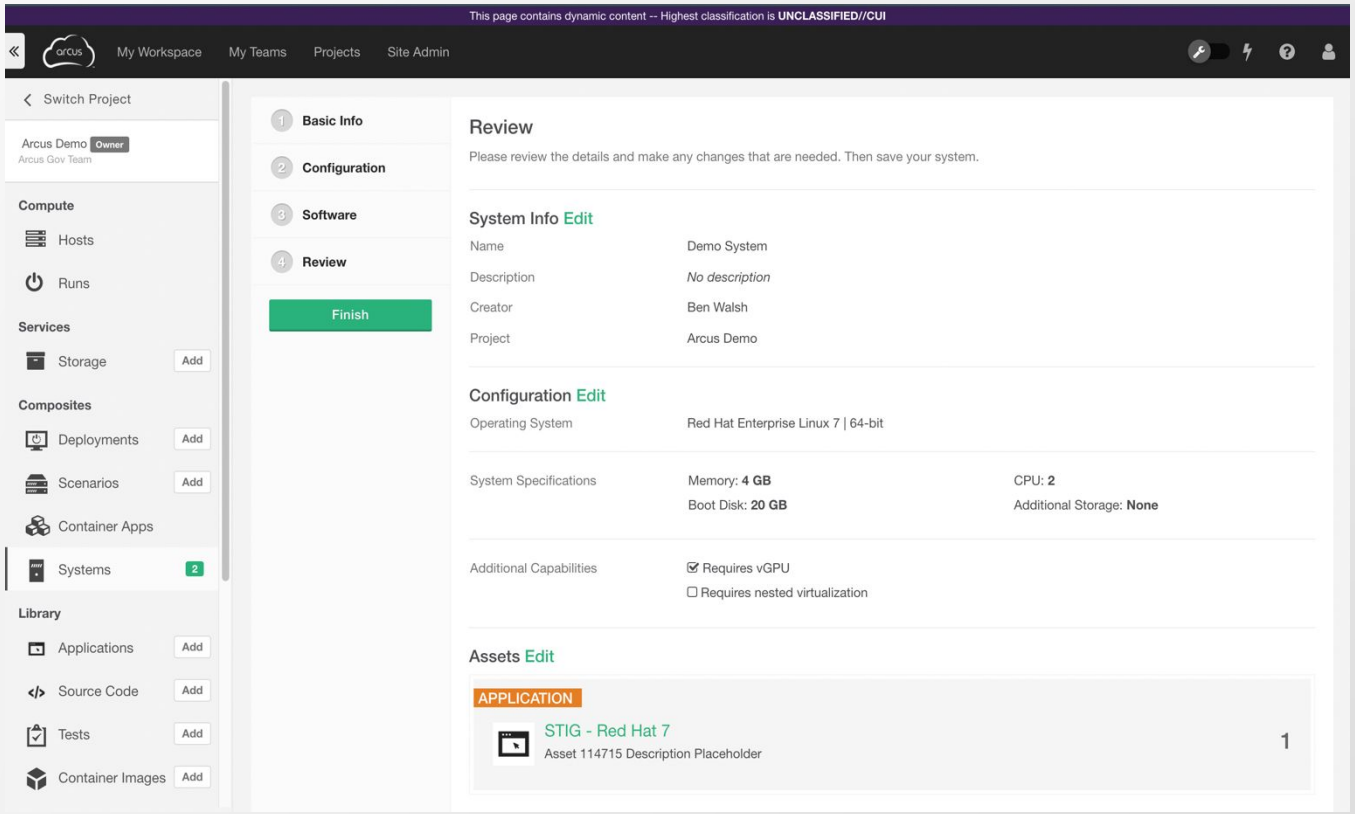
Systems: Software

- Select Software Assets and/or Container Images from the Library
- Change the load orders using the arrows or by dragging
- Select **optional** reboot for each Asset and set reboot delay
- The reboot delay is the time the System waits to reboot AFTER the Asset completes its install. This is more common on Windows Assets.



Systems: Review

- Review the Basic Info, Configuration, and Software sections
- Click **Edit** to make changes
- Finish will save the System and empty the Builder



Building a Scenario

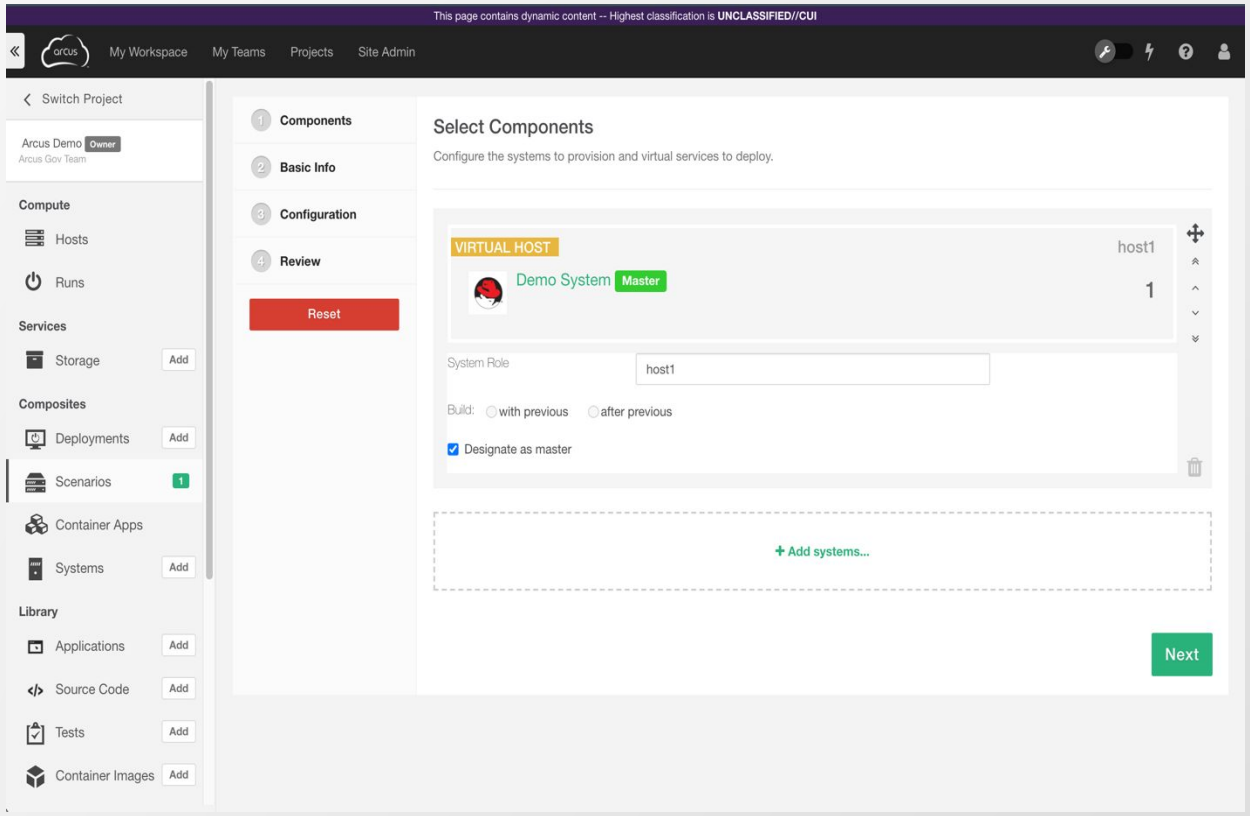
Scenarios: What is a Scenario?

- A **Scenario** is a design consisting of multiple interconnected **Systems** with a build order.

- Common examples include:
  - Kubernetes stacks with Master and Worker nodes

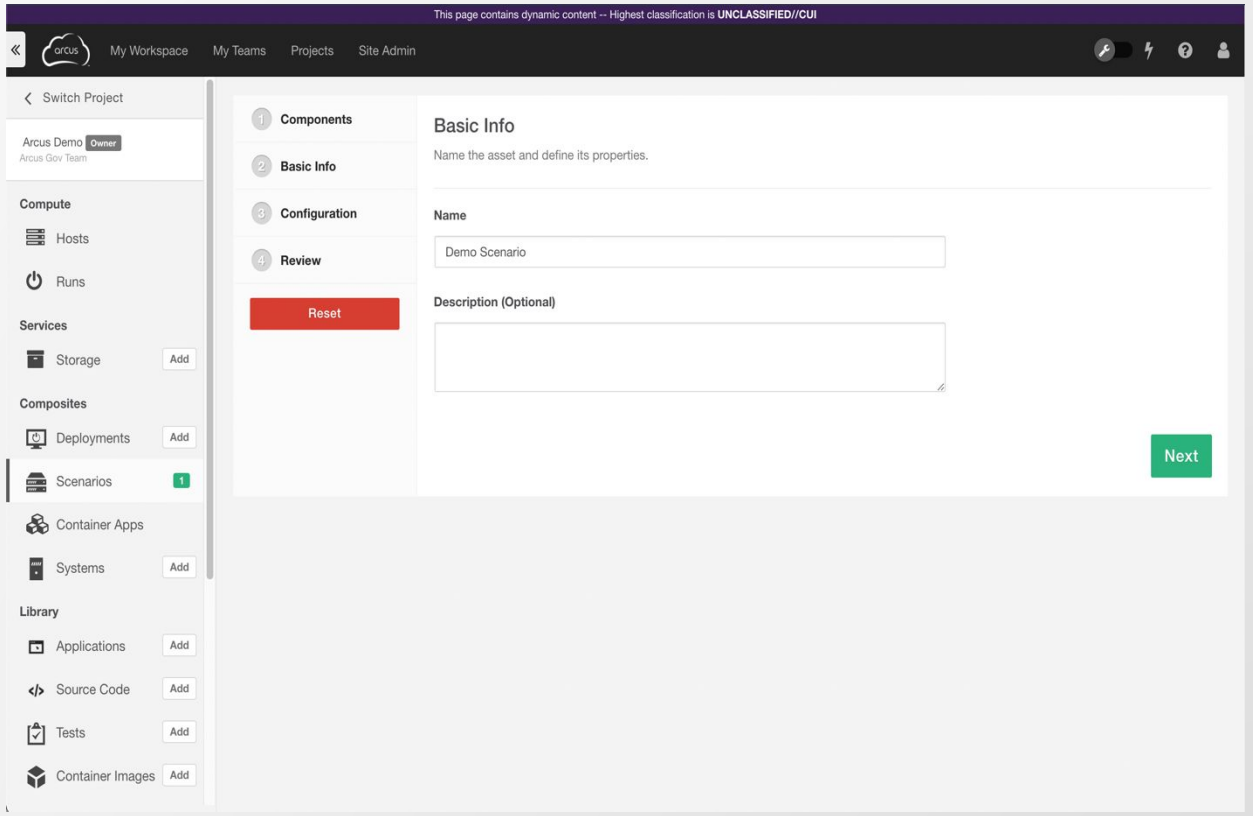
Scenarios: Components

- Select Systems from the Library
- Change the load orders using the arrows or by dragging
- Assign a System Role name to each System
- The System Role will be used to identify the Systems in a Scenario to each other and in Software Assets for configuration
- Chose for each System to be built with previous (in parallel) or after previous (serially)
- Designate a master System in the Scenario
- The master System runs any Scenario configuration scripts



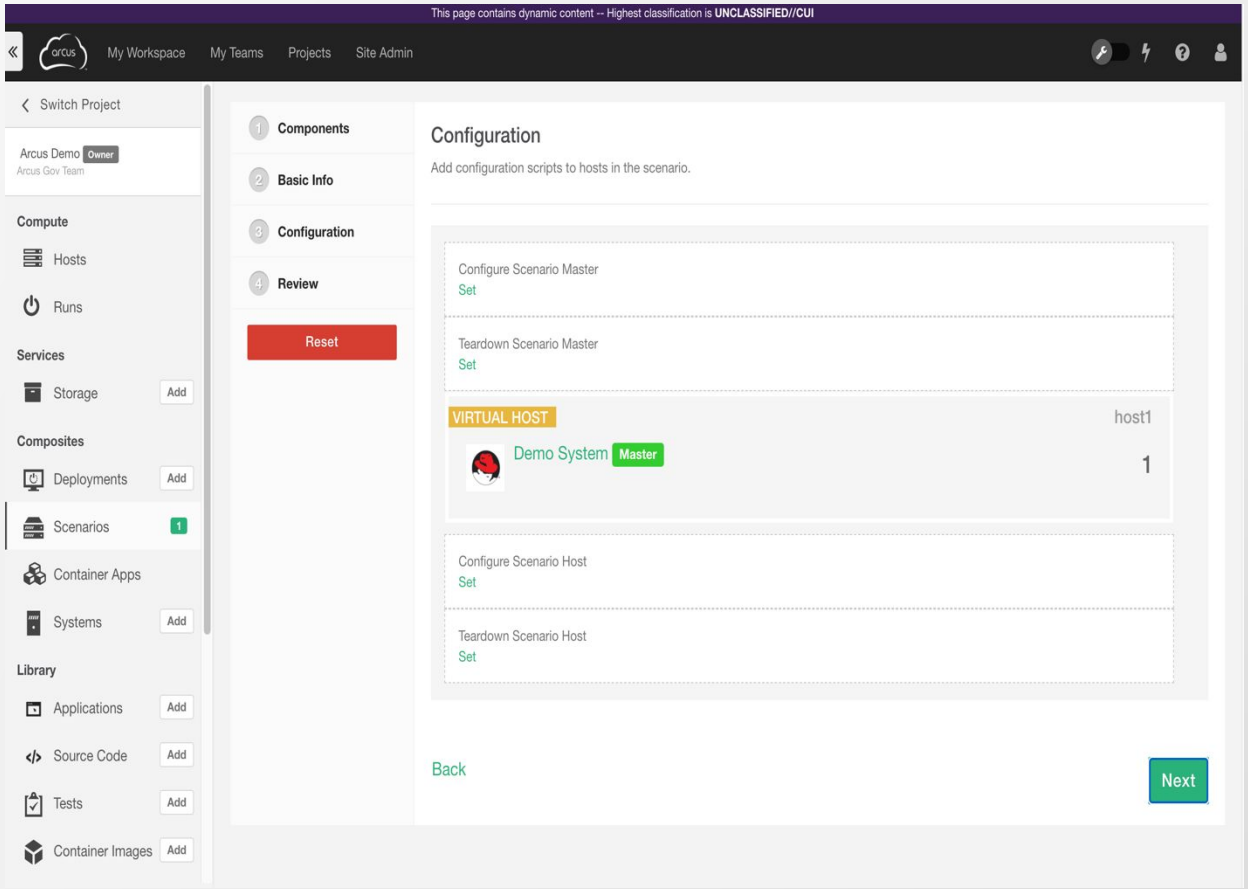
Scenarios: Basic Info

- Enter a Name for the Scenario
- Enter a Description (optional)



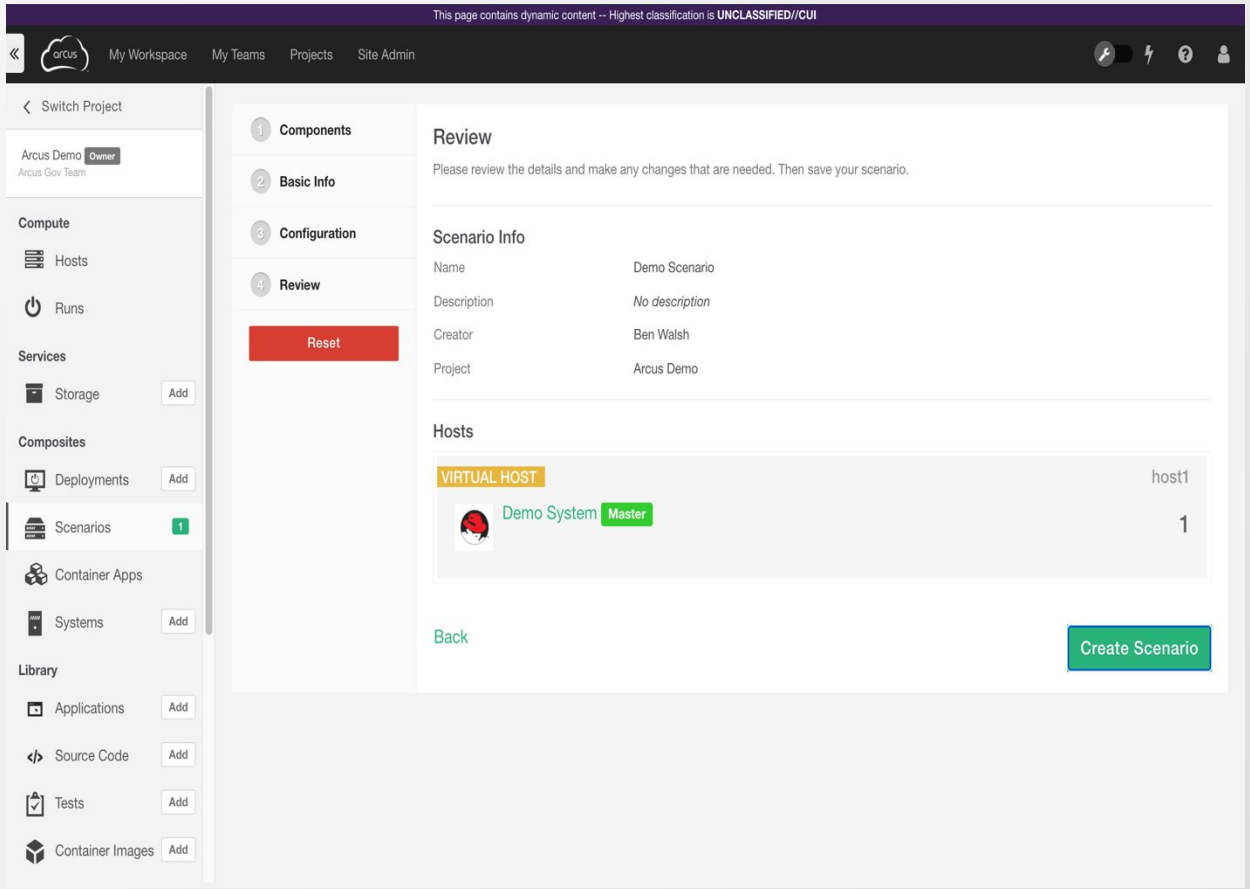
Scenarios: Configuration

- Set optional scripts:
  - Configure Scenario Master
  - Teardown Scenario Master
  - Configure Scenario Host
  - Teardown Scenario Host
- The Scenario Master scripts run on the designated master
- The Scenario Host scripts are specific to that host
- Configure scripts are executed immediately after all Assets have completed
- Teardown scripts are executed when the Run is released



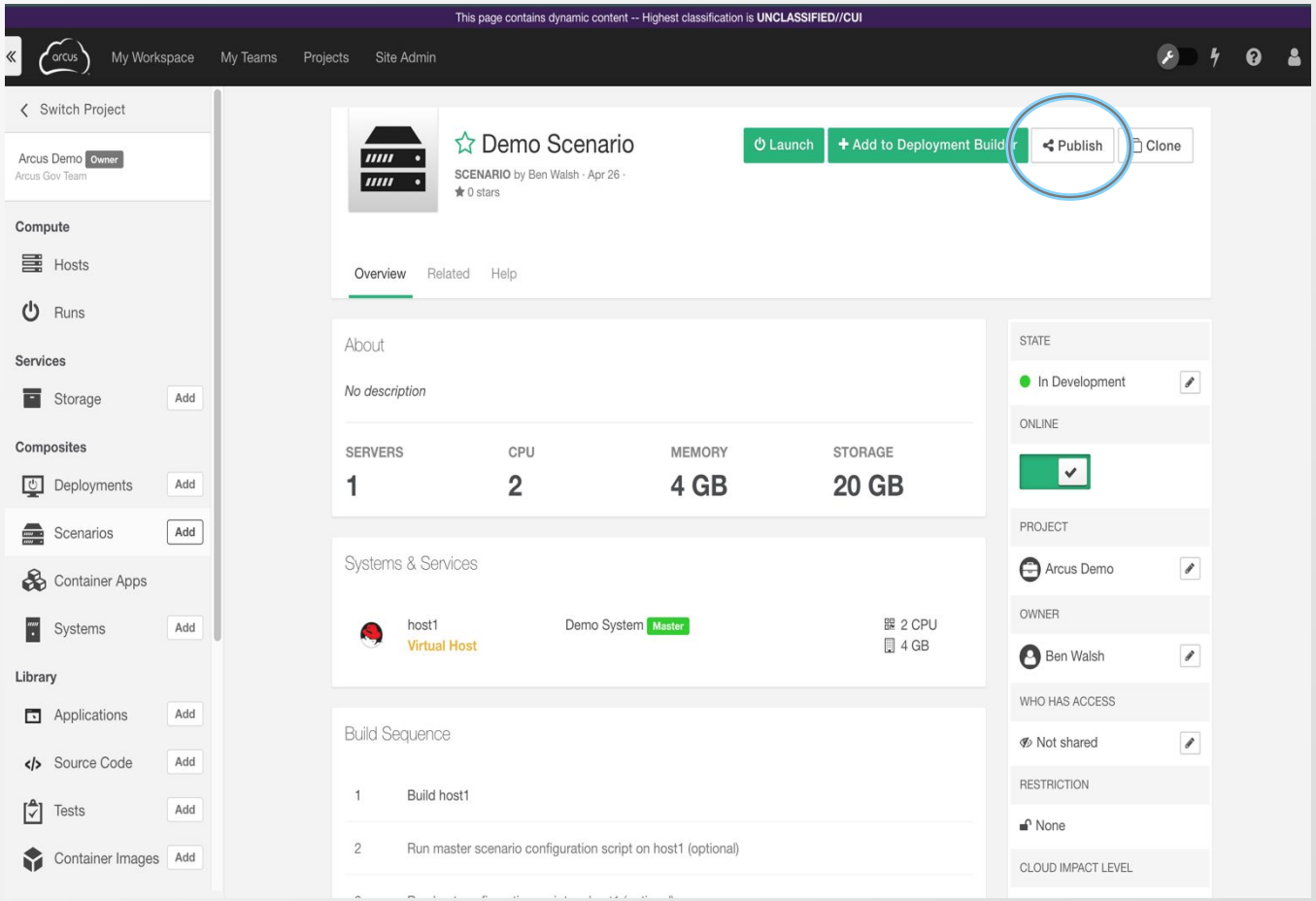
Scenarios: Review

- Review the Scenario Info, Configuration, and System (Hosts) selection
- Go Back to make changes
- Click Reset to empty the Builder
- Create Scenario will save the Scenario and empty the Builder



Scenarios: Publish

- Creates a **Composition**
- For consumption in the Express User Interface



Scenarios: Compositions

Basic Info:

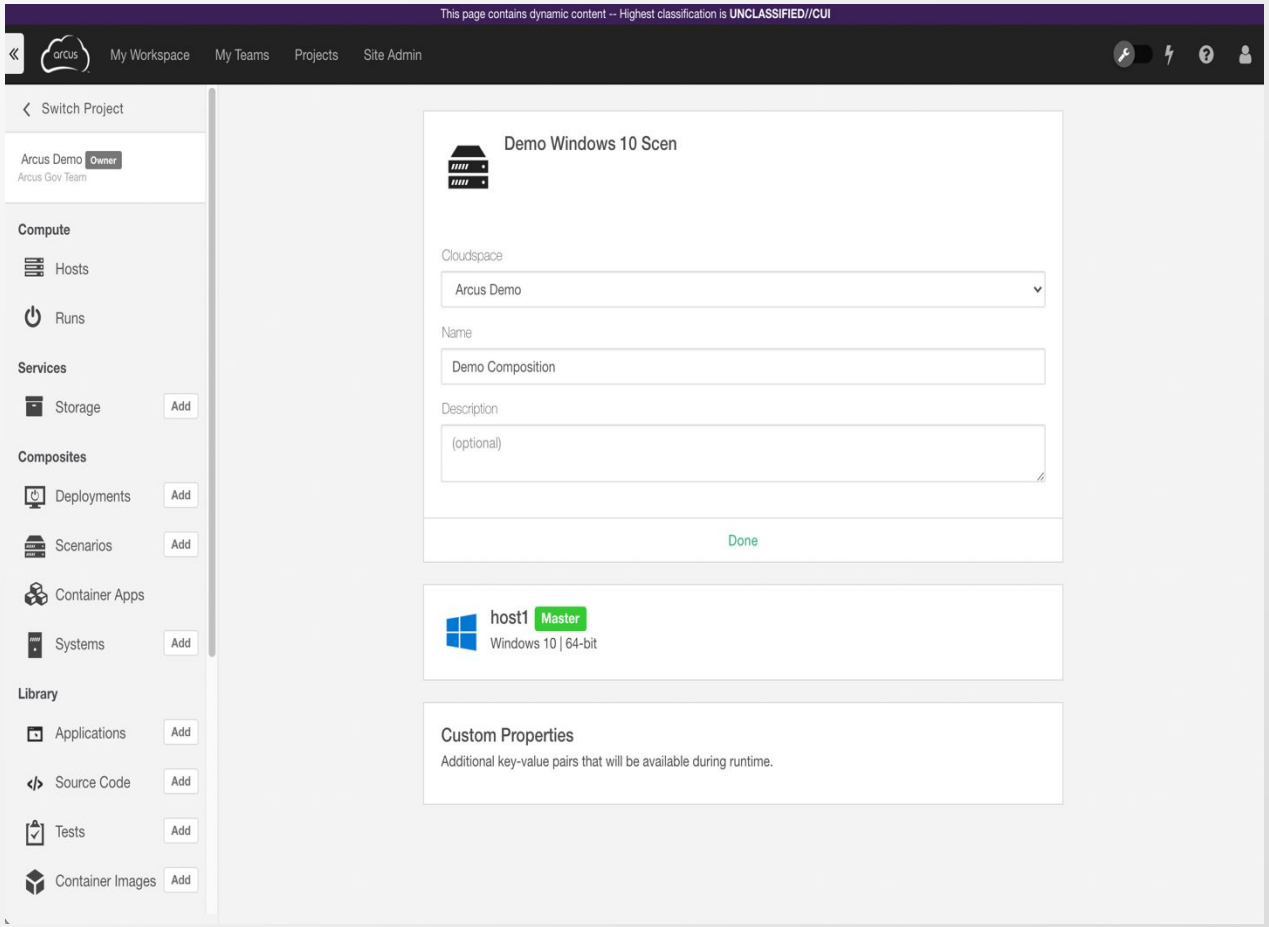
- Select a Cloudspace
- Enter a Name
- Enter a Description (optional)

Virtual Hosts:

- Option to resize RAM and CPU

Properties:

- Enter properties as key value pairs (`name=value`)



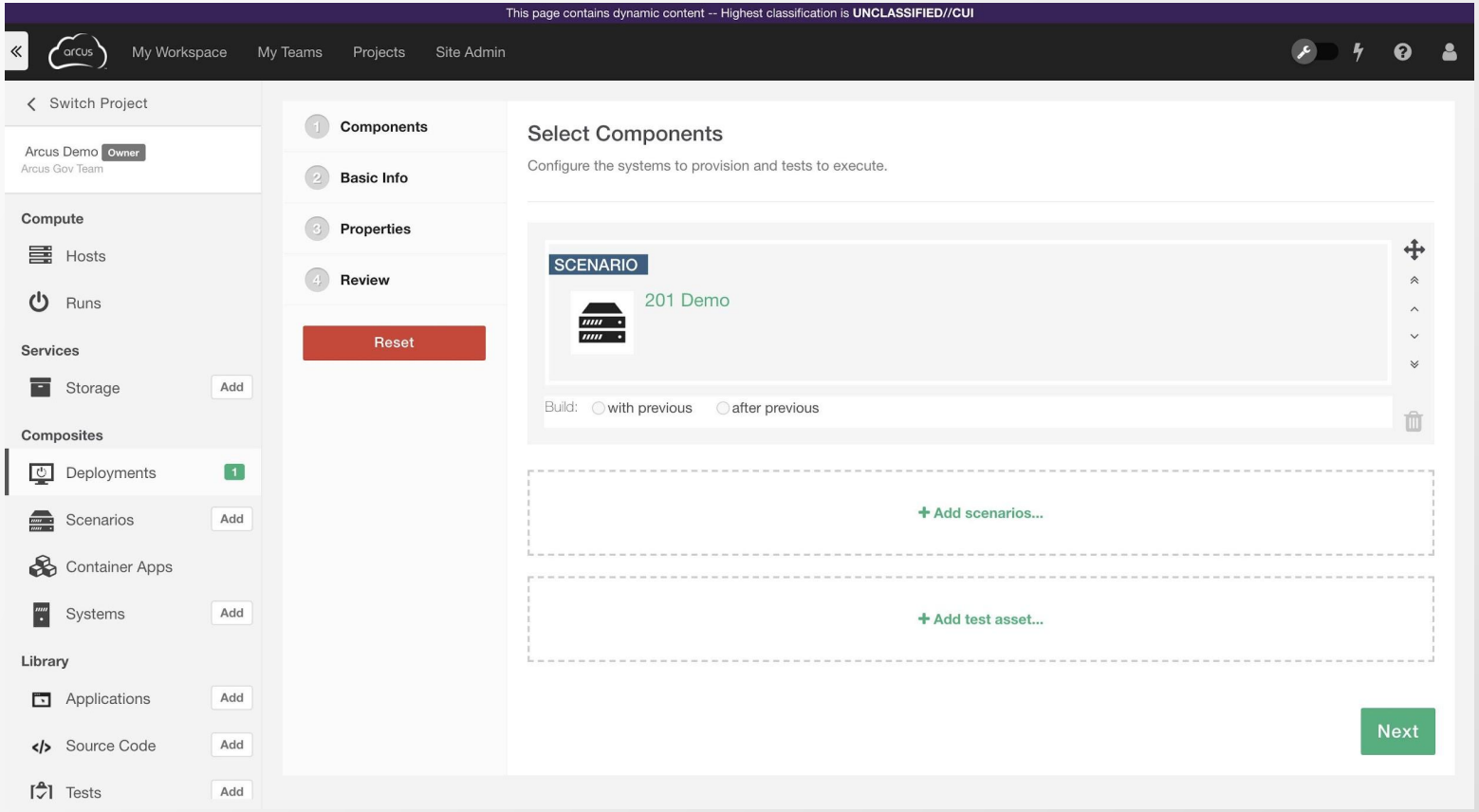
Building a Deployment

Deployments: What is a Deployment?

- A **Deployment** consists of a customized Scenario or multiple Scenarios with optional automated testing or security scanning.

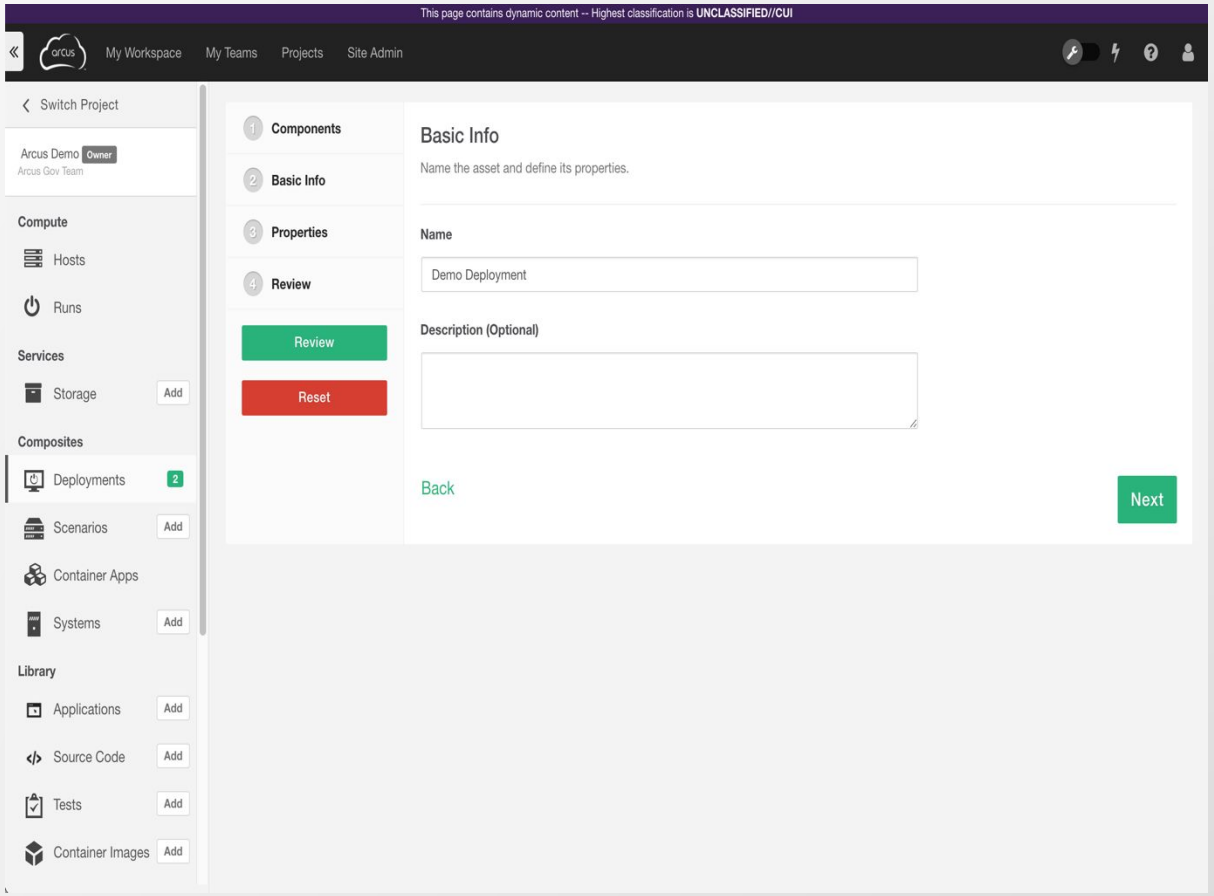
Deployments: Components

- The best practice is to always build up to Deployment
- Deployments have more history, logging, debugging, etc.
- Select Scenario(s) from the Library
- Select a Test Case (optional) from the Asset Library



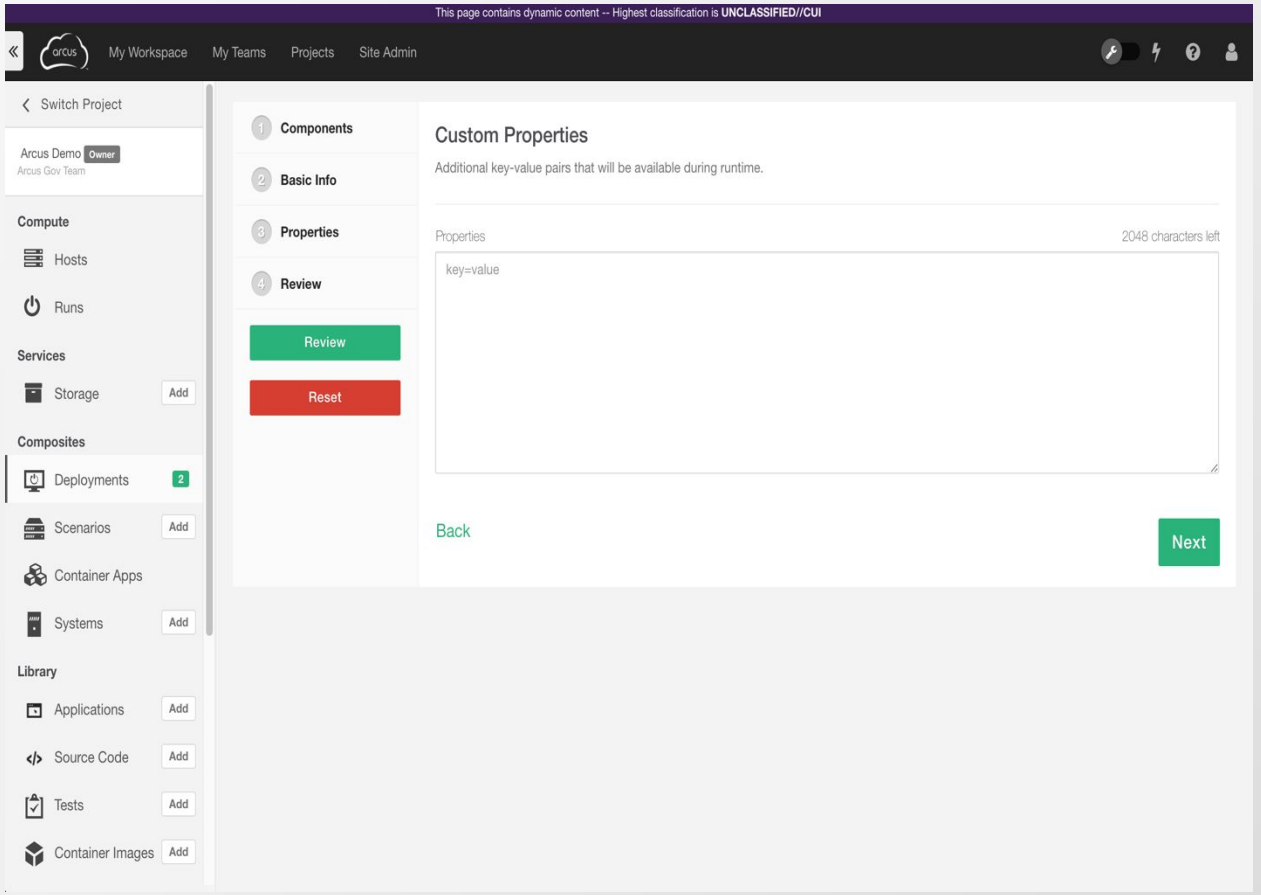
Deployments: Basic Info

- Enter a Name for the Deployment
- Enter a Description (optional)



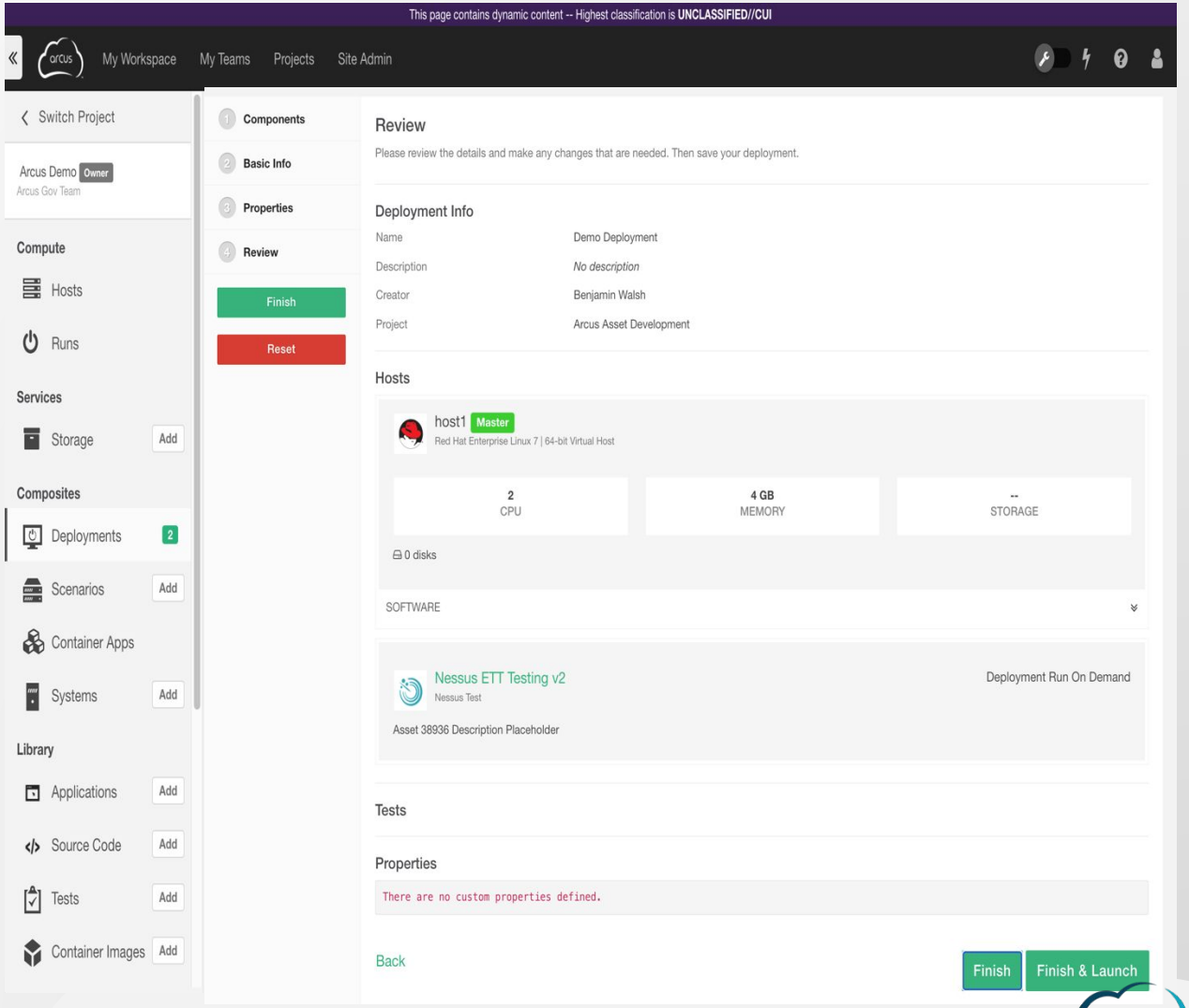
Deployments: Properties

- Enter properties as key value pairs (`name=value`)
- These user defined properties get added to the `deployment.properties` files along with the standard properties
- The role name (defined in the Scenario) maps properties to a specific System
- Properties are defined in the Software Assets
- Review the Help tab on Assets for information on required properties



Deployments: Review

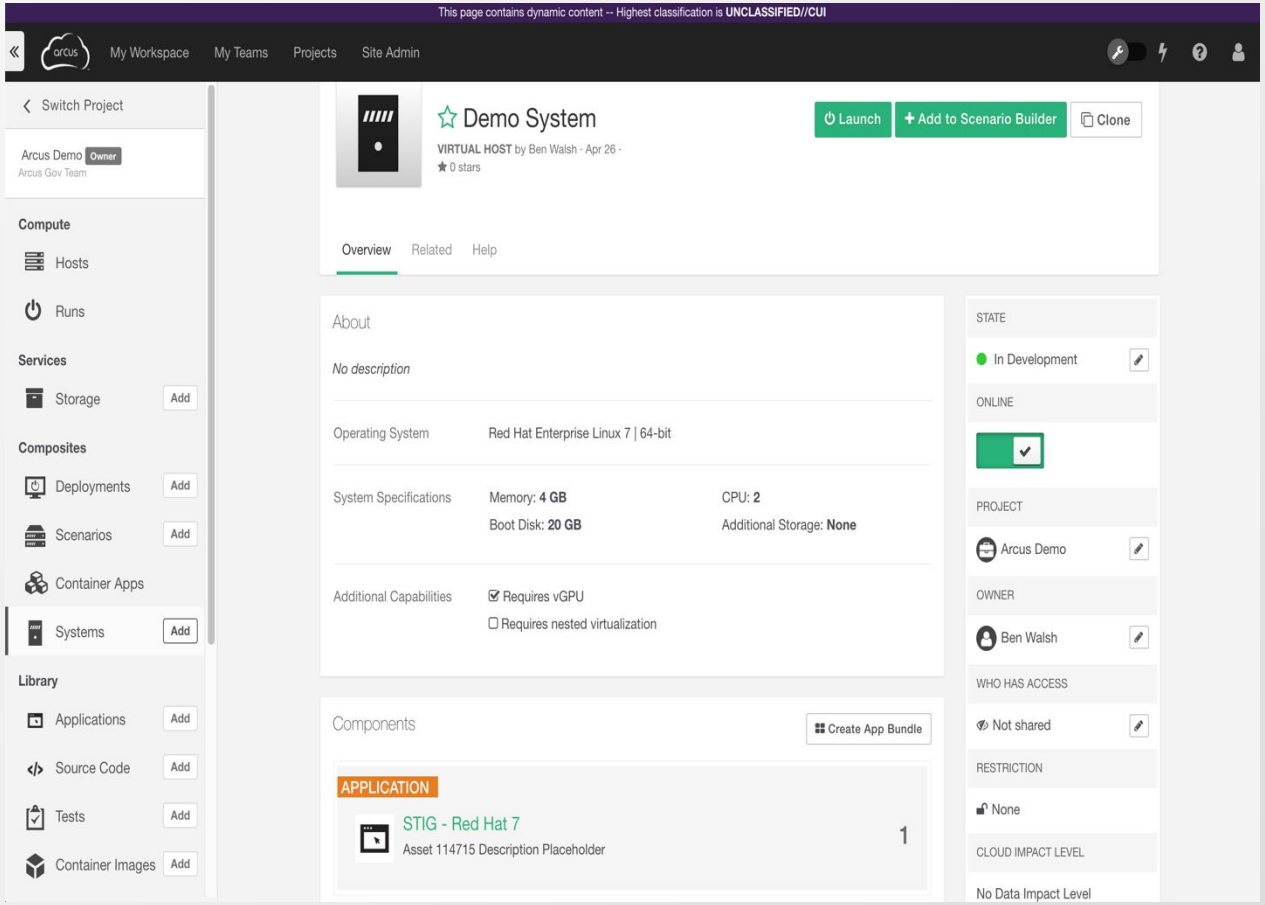
- Review the Deployment Info, Hosts and Properties selection
- Go Back to make changes
- Click Reset to empty the Builder
- Clicking Finish will save the Deployment and empty the Builder



Launching Deployment Runs

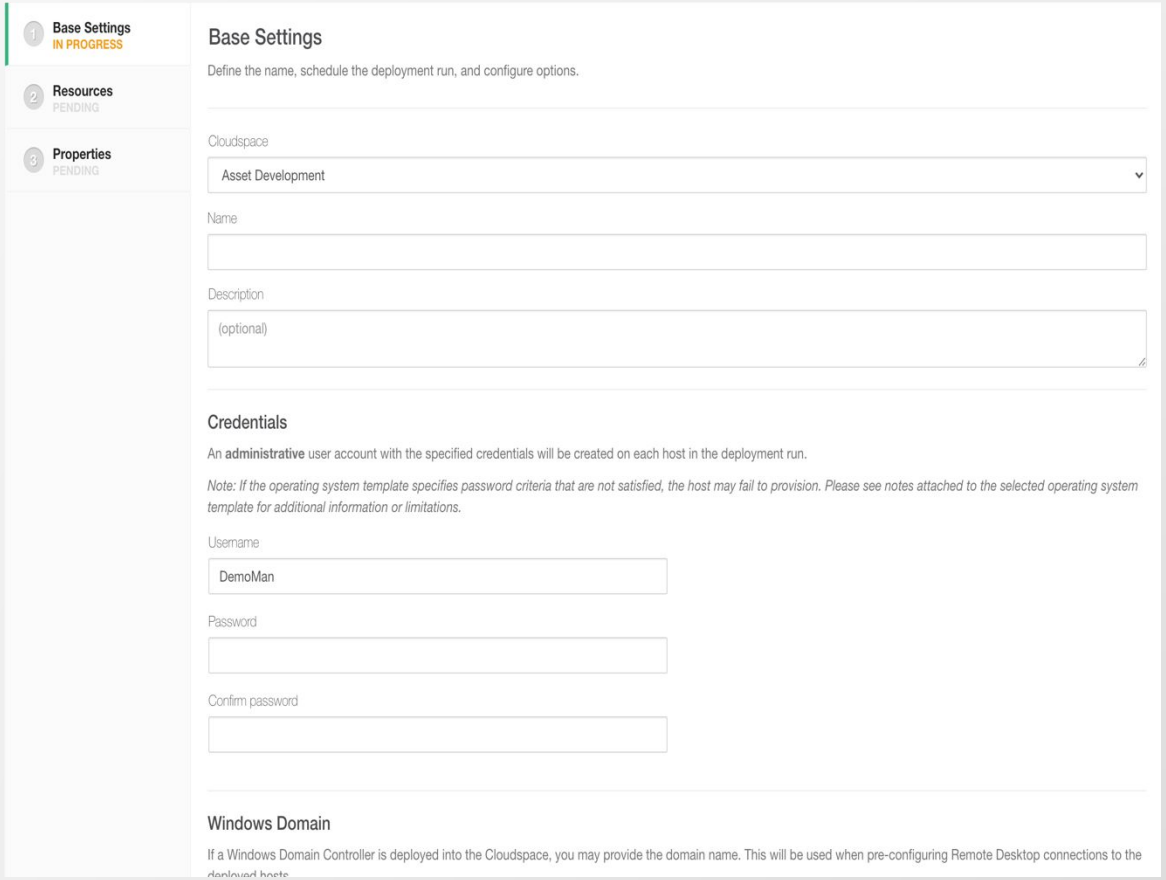
Launching DRs:

- Users can choose to launch a System, Scenario or Deployment Asset from the Library
- This is called a **Run**
- There are three steps to configure/confirm a Run for launch:
  - Base Settings
  - Resources
  - Properties



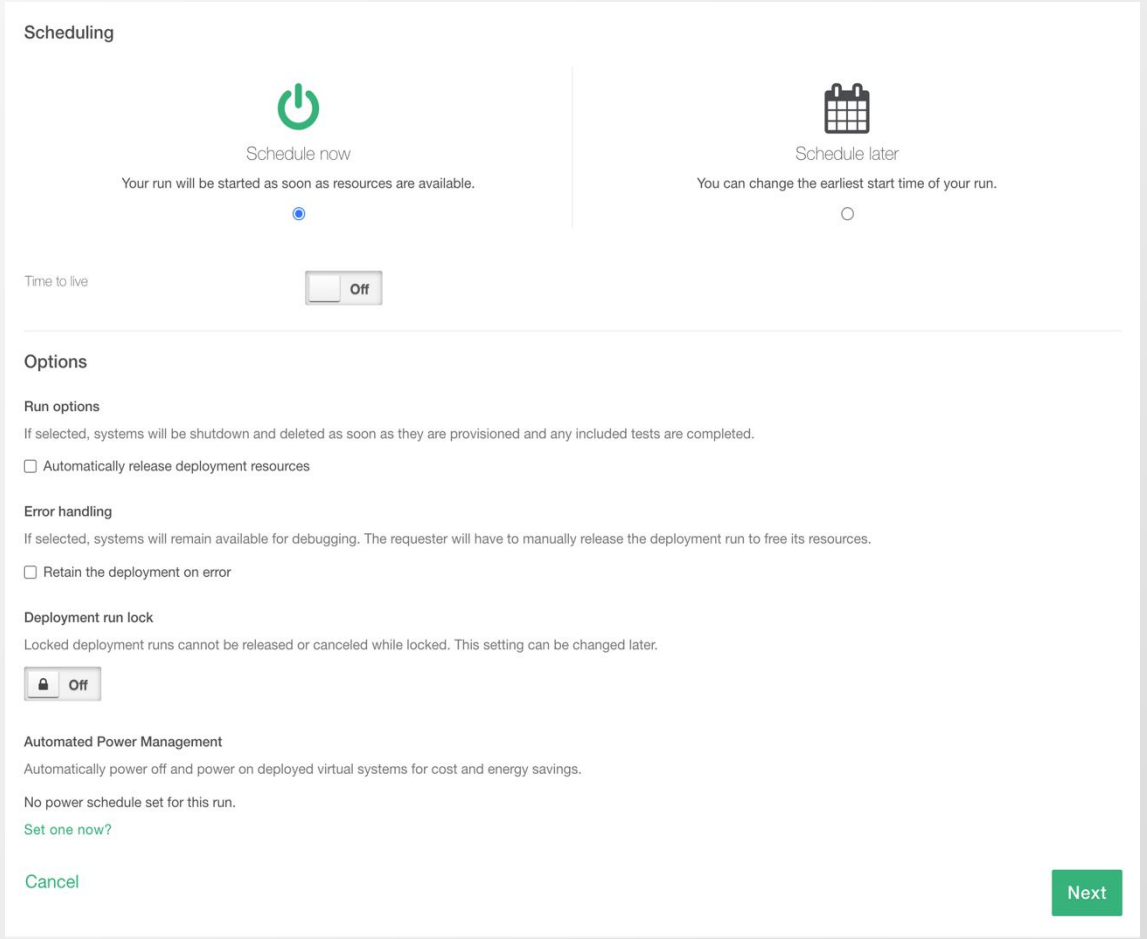
Launching: Base Settings Pt.1

- Select the target *Cloudspace* to launch the Run into
- Give the Run a name and (optionally) a description
- Define the default user credentials for remote access
  - Note: the password complexity must meet the base OS requirements



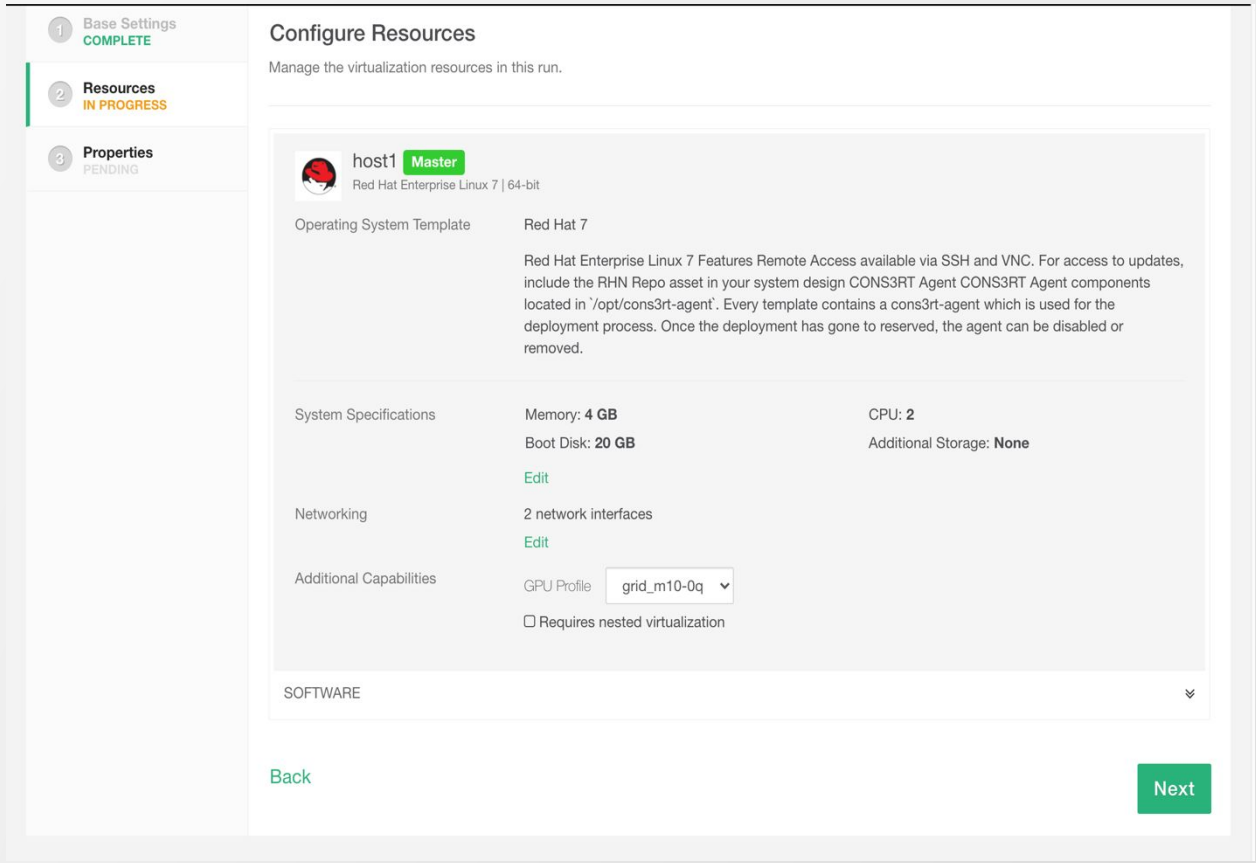
Launching: Base Settings Pt.2

- Scheduling
  - The Run can be scheduled to execute immediately, or at a determined date and time.
  - *Time to live* will automatically release the Run after the specified time
  - The *Recurring Schedule* allows for planning a set number of repeating Runs
- Options
  - *Automatically release deployment resources* will shutdown and release runs after testing completes
  - *Retain the deployment on error* will keep an errored run alive for debugging
  - *Deployment run lock* will prevent anyone other than the original creator or the Project Manager from releasing the run
- Automated Power Management
  - *Power schedules* can be configured to power off systems at given times, cutting down on cost and conserving resources.



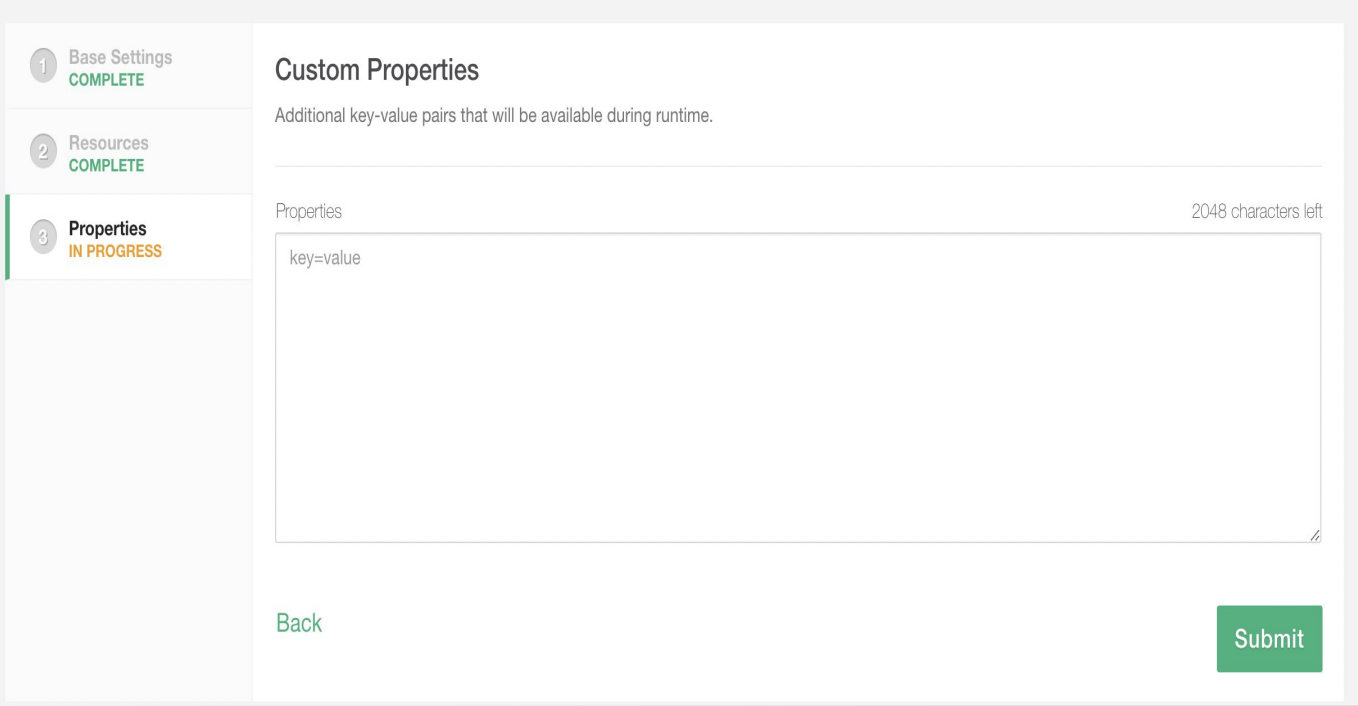
Launching: Resources

- System Specifications
  - Users may edit the resources assigned to this Deployment Run
    - RAM
    - CPU
    - Storage
- Networking
  - Users can edit the networking configuration for the Run
- Additional Capabilities
  - For Runs with vGPUs enabled, the template or instance type (cloud-dependent) must be specified
- Note: Any changes made here will only apply to this Run



Launching: Properties

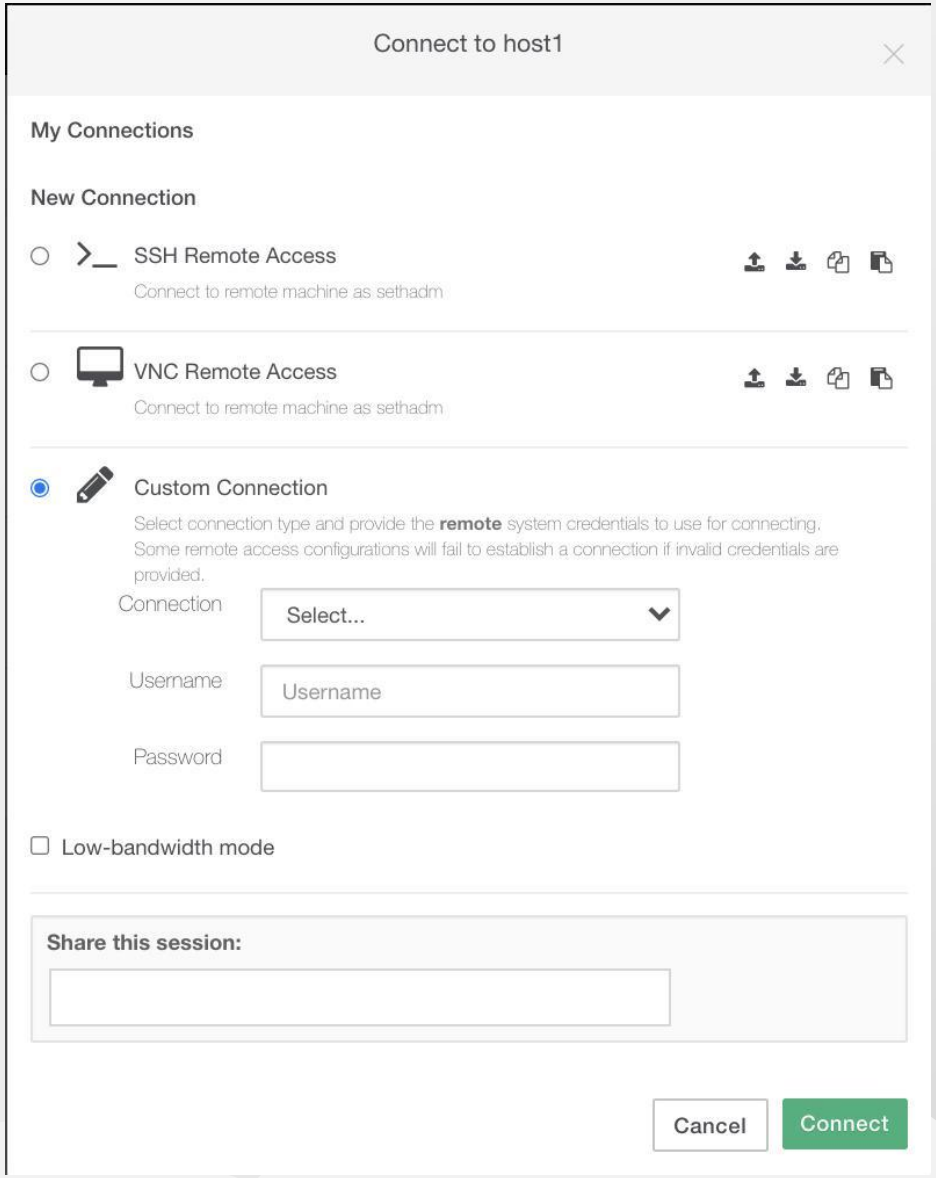
- Deployment Properties are used in Assets for configuration and set-up
- Not all Assets will require properties
- In practice, if the user has not reviewed the Asset readme, the Properties field can be left blank



Remote Access

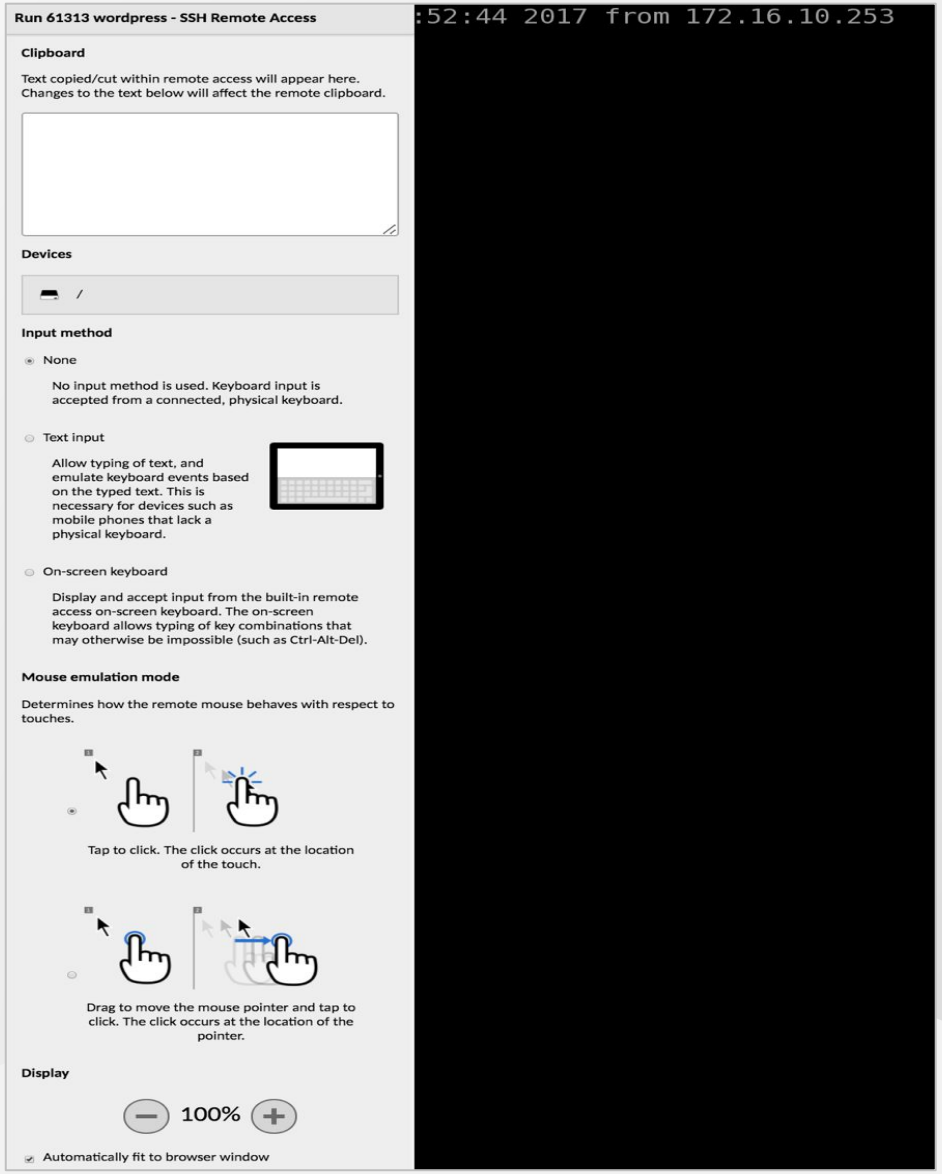
RA: Basic Features

- Web browser-based to deployed Systems through RDP, VNC, and/or SSH
- Multiple methods of File Transfer
- Clipboard to/from local machine
- Click the *Connect* button on a deployed system
  - A **standard** connection will use the credentials set on the System at launch time
  - A **custom** connection will allow the user to enter different credentials
  - A session can be shared to other members of the Project by filling in their username when the connection is opened
- The remote session opens in a new tab/window
- The 4 icons to the right of the connection options depict file upload, download, copy, and paste
  - If any of these icons are greyed out, that capability has been restricted in your Project by your Team Manager
- ***A browser pop-up blocker will prevent a connection tab from opening***



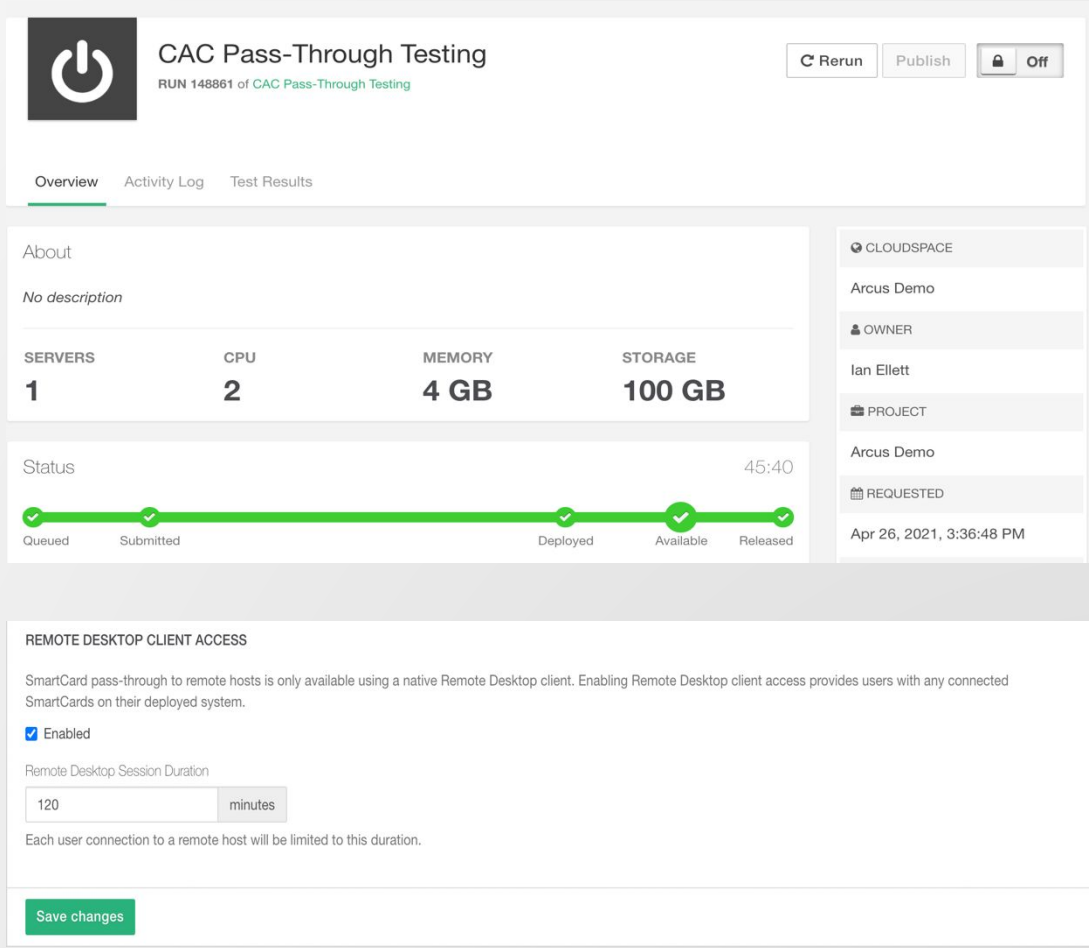
RA: Additional Features

- Additional features:
  - Clipboard to/from local machine
  - Copy/Paste from local machine
  - Virtual keyboard
  - File transfer
  - Zoom
- How to access Remote Session Menu:
  - Open a Remote Access connection
  - Hold down the the CTL and ALT keys then press the SHIFT key to toggle the menu
  - Use the clipboard to pass data in & out of the remote session
  - Use the Devices icon to transfer files
  - The file transfer feature is designed for smaller files. For large files or data sets, use an Asset.
  - Note: Basic text copy/paste can be achieved without using the Remote Session Menu



RA: CAC Pass-Through

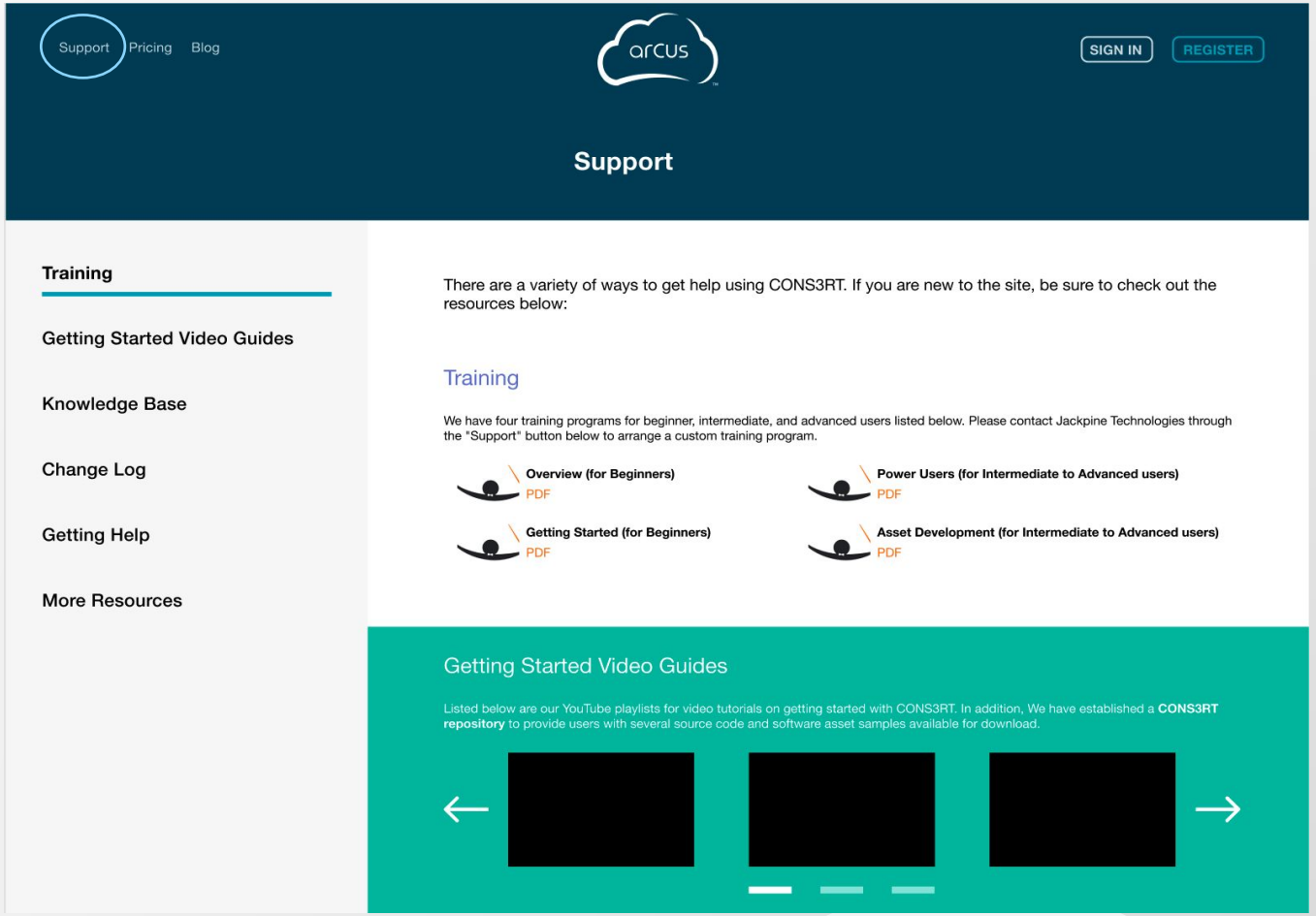
- CAC Pass-Through allows users to use their CAC in an Arcus remote access session
- Use CAC Pass-Through by clicking “connect” on the desired host
  - Select *Using a Remote Desktop Client*.
  - Click this button to download an RDP file, which will open a remote access session in a new tab/window on your local machine
- By default, RDP session files are valid for 60 minutes
- CAC Pass-Through is enabled at the Team level by a Team Manager



Support & Troubleshooting

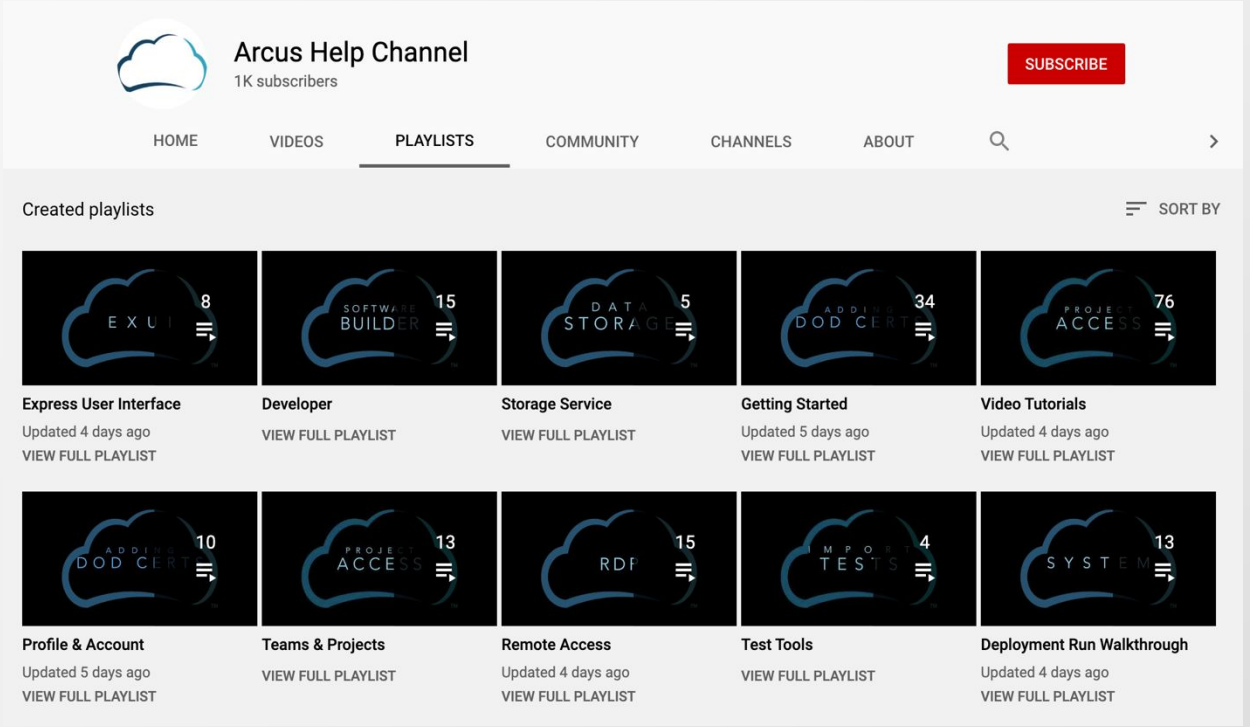
Support

- Support
  - https://arcus.mil/support
  - Submit a ticket through…
    - the *Support* link on the home page
    - the *Help* icon when signed in
  - Help icon tickets provide more data on what the user was working on
- Email
  - support@arcus-cloud.io
- Knowledge Base
  - https://arcus.mil/kb/
  - The Knowledge Base expands on all the topics covered in this training.
- Github Sample Assets
  - https://github.com/cons3rt



Video Tutorials

- If you would like to see **Arcus** in action, feel free to check out the video tutorials:
  - On the Arcus Help Channel at https://www.youtube.com/c/arcushelpchannel
  - Embedded in the articles on our Help Site
- If you have any suggestions for future videos, let us know by submitting a ticket



Thank you!

arcus
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