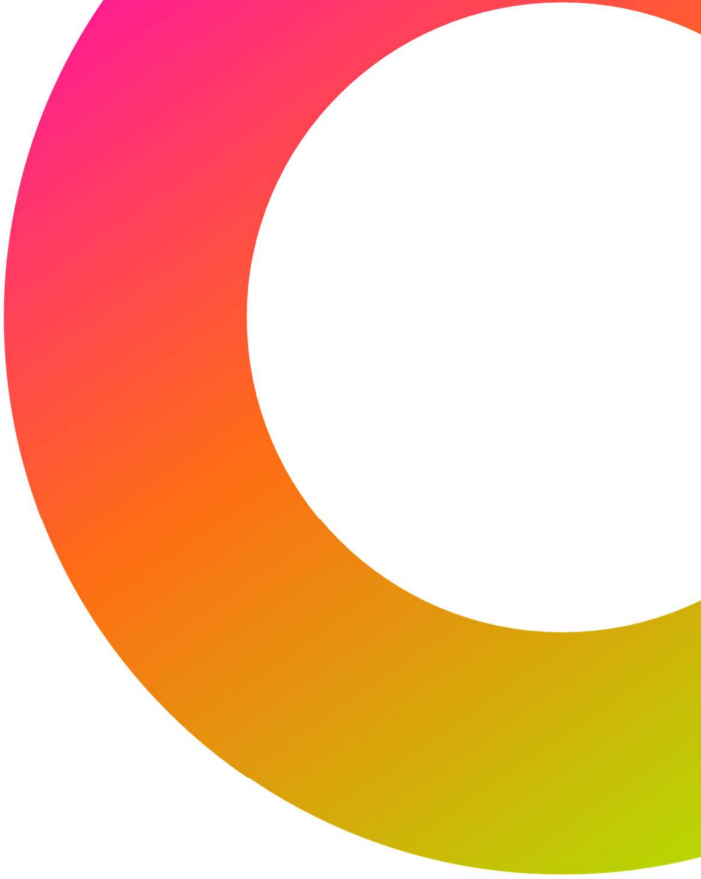

Application User Guide 1.0

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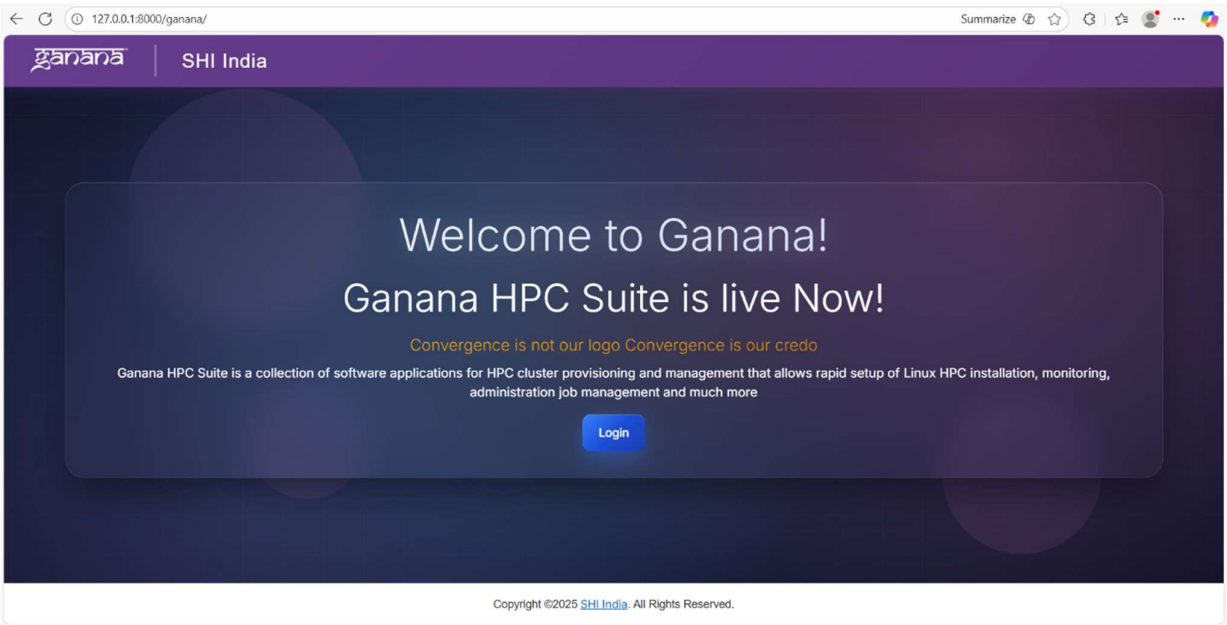
1 Ganana Home

Ganana application is a browser-based application, and it can be access through below URL

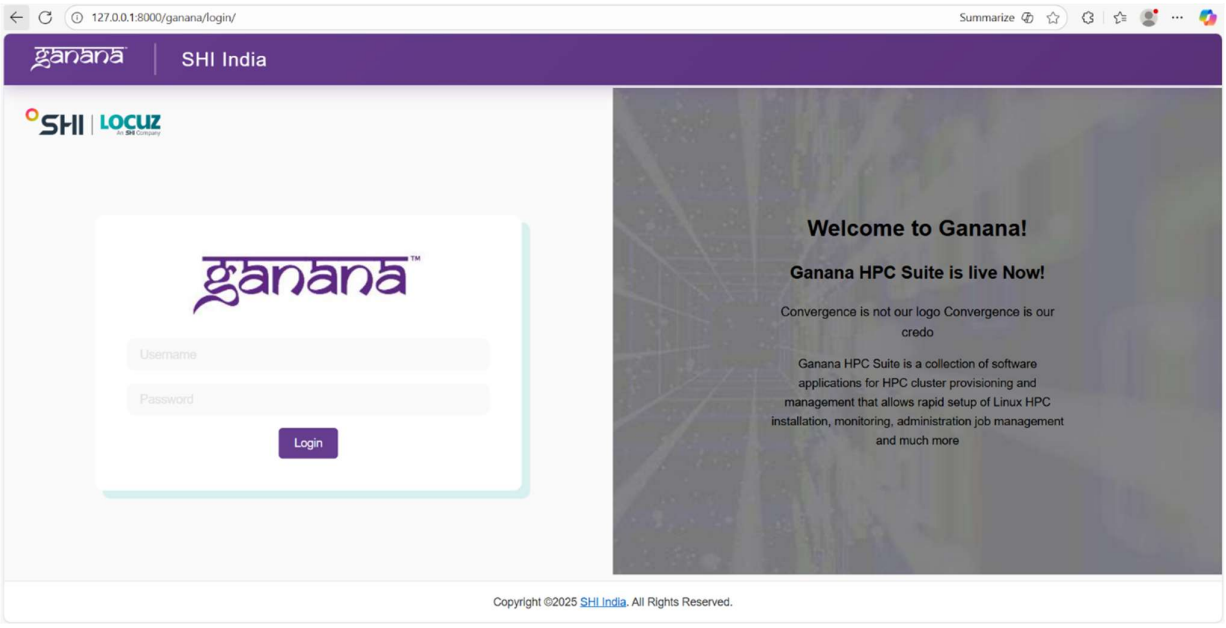
https://<host name or Public IP>/ganana



2 User Login

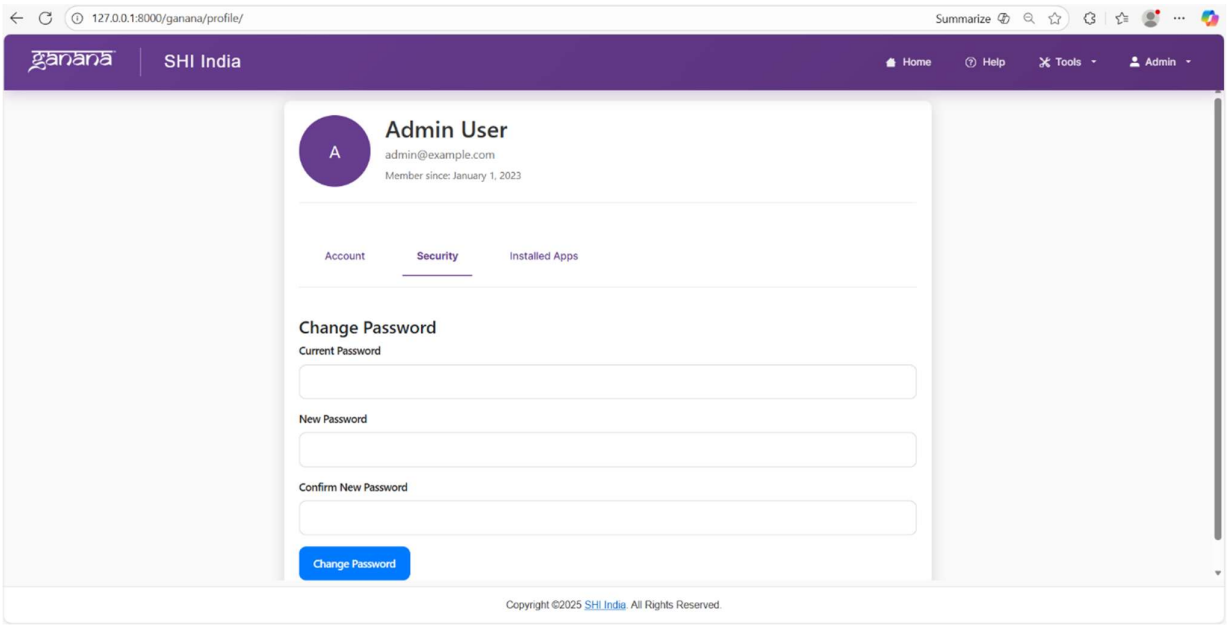
2.1 Login Screen

Users navigate to Login screen, when click Login button on home screen. Application has a default user ID. **A default administrator user ID and Password will be admin and admin**. On first time, application will force to change default password. Admin user has access of all modules of the application.



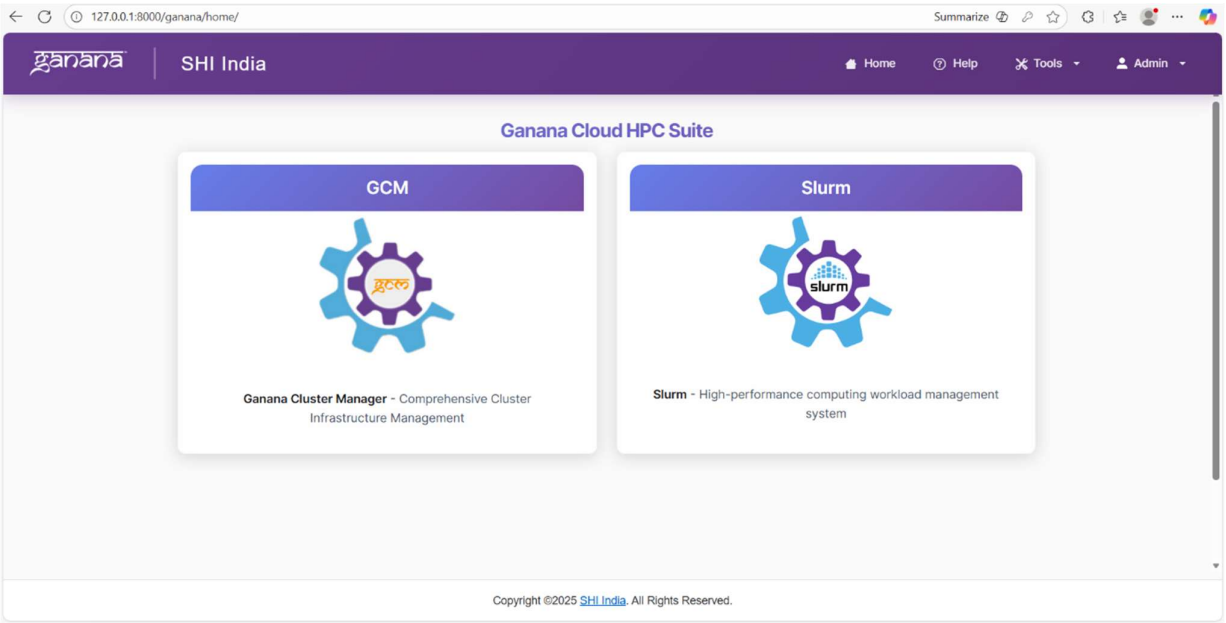
2.2 Password Change

Application force user to change default password.



3 Ganana Application Screen

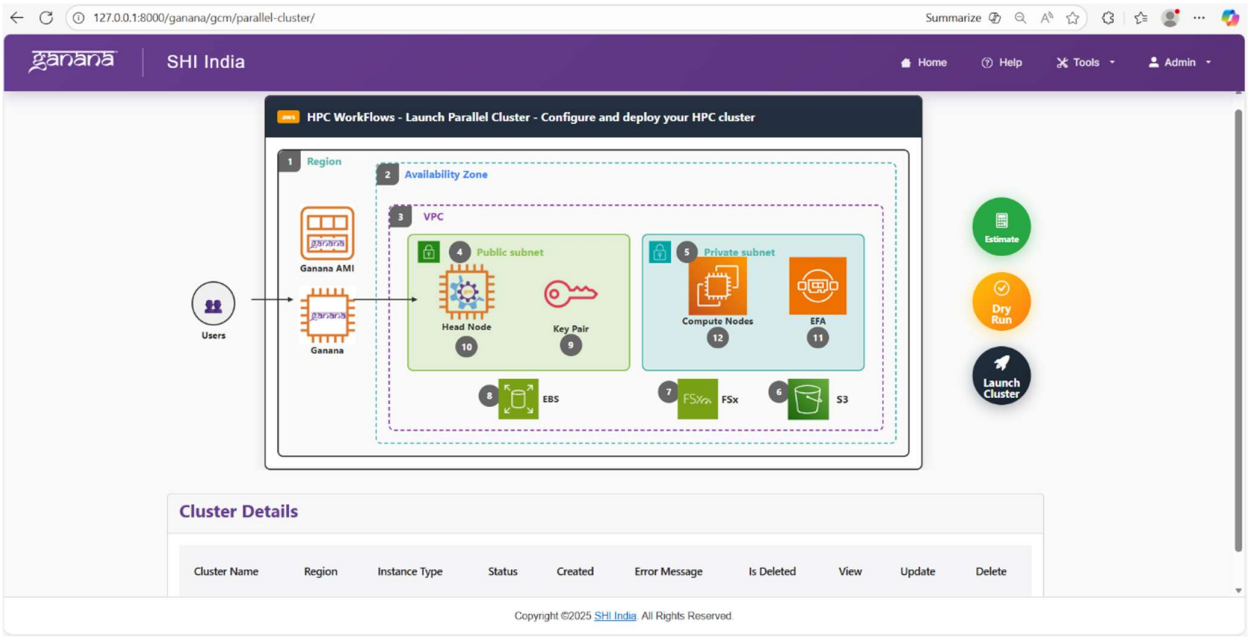
Users navigate to Ganana application screen on successful login. If users credential fails five times continuously, her access will be deactivated. It will be reactivated either by Administrator or auto activated after an hour.



4 Ganana Cluster Manager (GCM)

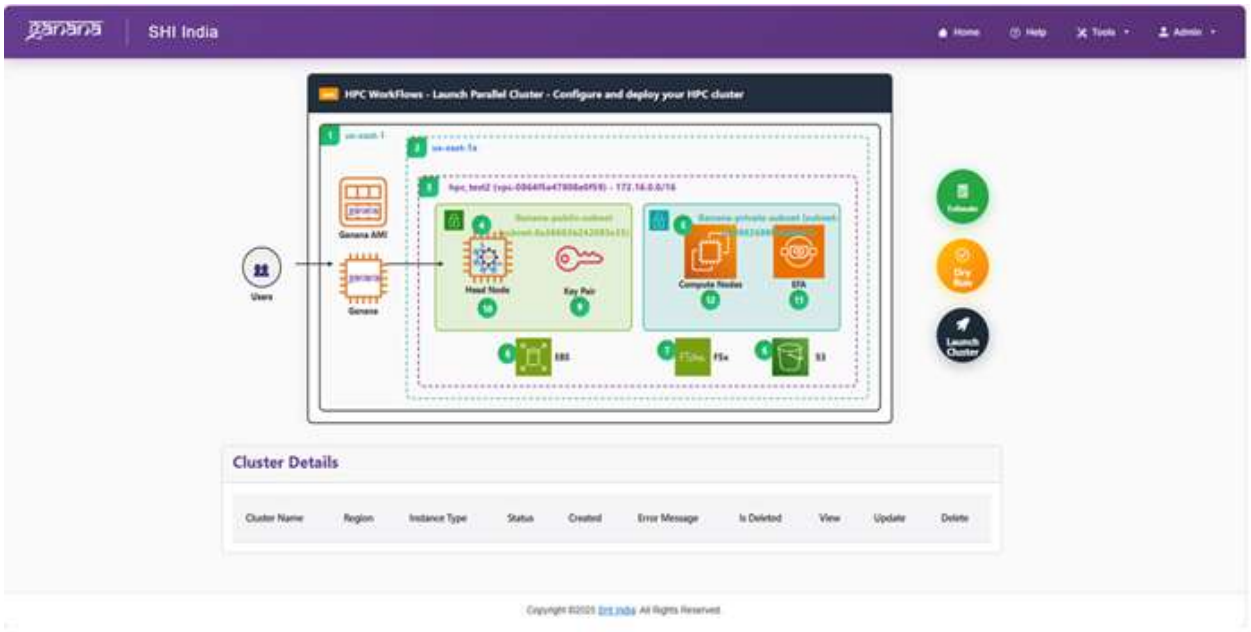
4.1 GCM Home

Application has an interface to create Parallel cluster. Cluster will be created in the same region in which Application is launched in AWS and running. User has complete flexibility to select or create resources required for Parallel cluster. After configuration of Head Node and Queues (Compute Nodes), estimated cost can be calculated by clicking the Estimate button. Application will calculate estimated running cost. User can validate the Cluster configuration by clicking “Dry Run”. Application will validate designed cluster configuration and list down, if there are any issue to correct. Once dry run successful, Launch Cluster button will enable to create designed cluster. Usually, cluster creation will take around 20-30 minutes. Cluster detail with real time status will be listed in Cluster Details table. Application also has Stop & Start Fleet option available for running compute nodes. Running Queues can be stop/start any time.



4.2 GCM View

User will have option to view, update and delete created cluster.



4.3 GCM Update

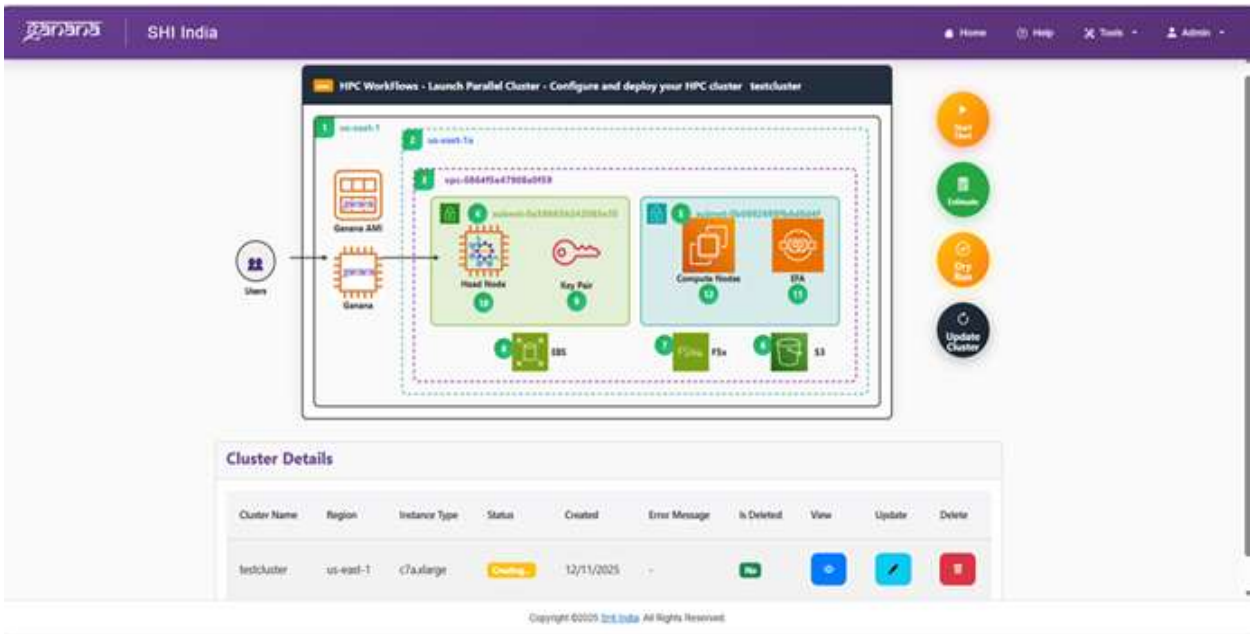
User will have option to update configured Queues (Compute Nodes) as per her real time requirement, by using update functionality of Cluster. **Before update the cluster, fleet must be stopped**. **Dry run must be successful after update cluster configuration**. **After successful update the cluster configuration, fleet must be started**.

Start Fleet

Starts the fleet and brings up the compute resources required for the cluster after maintenance, updates, or when the cluster is in a stopped state. Use this option to make the cluster available for job execution.

Stop Fleet

Stops the fleet and shuts down the associated compute resources before performing cluster updates, maintenance activities, or when the cluster is not in use. This helps avoid update conflicts and reduces unnecessary resource usage and cost.



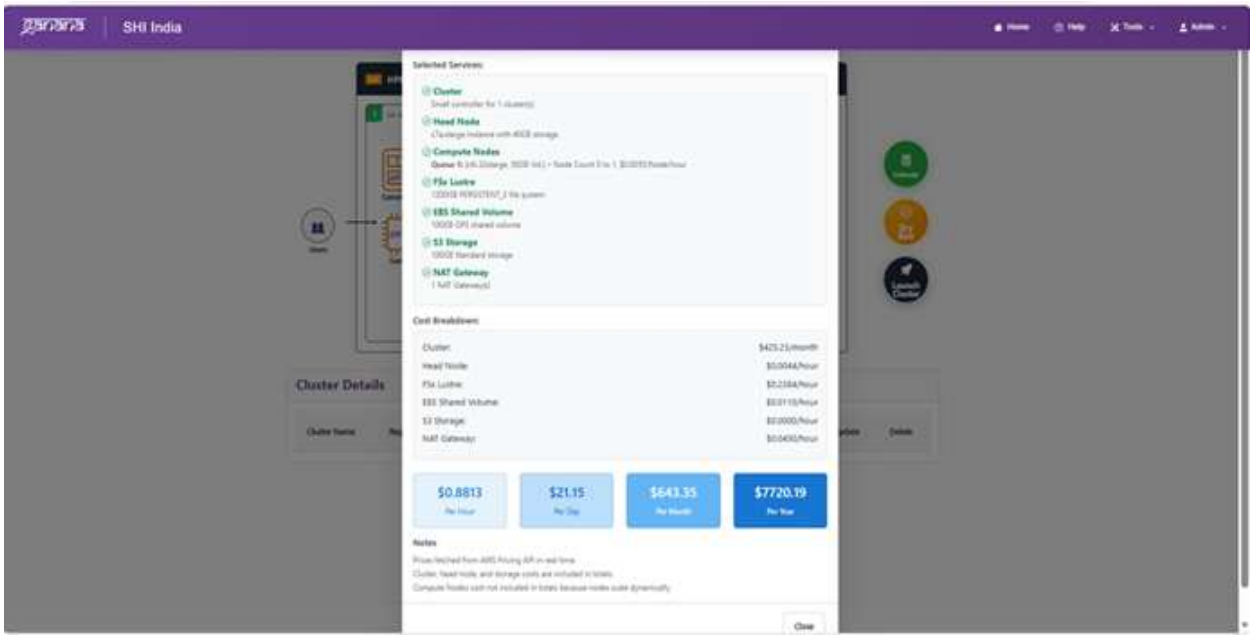
4.4 GCM Delete

User can delete complete cluster any time. Once cluster is deleted, all associated resources will also be deleted.

Note:- If any paid license is activated for the specific cluster, license will also be deactivated, and it can't be use again.

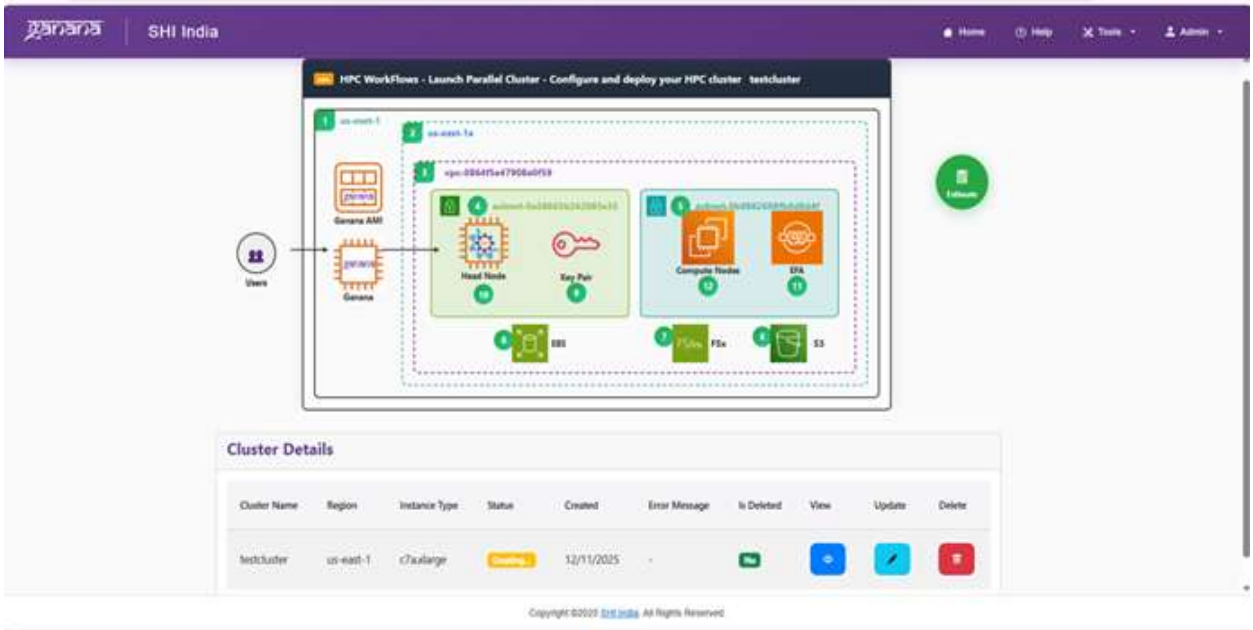
4.5 GCM Cost Estimation

Application has functionality to estimate running cost of designed Cluster infrastructure.



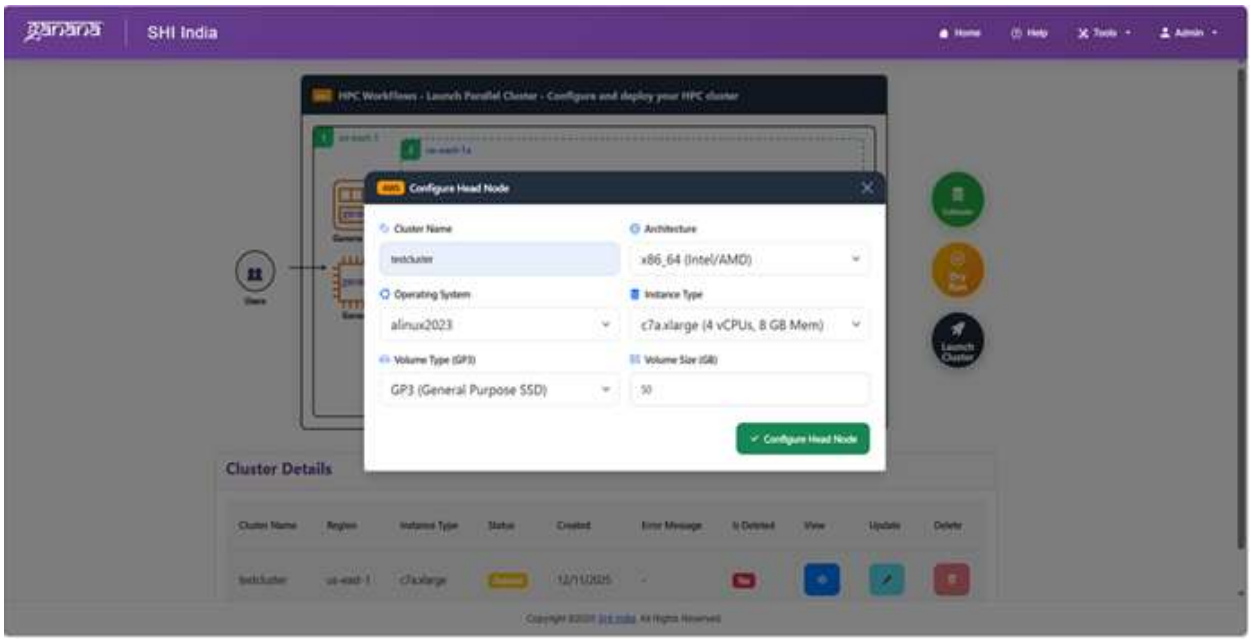
4.6 GCM Cluster Creation

All created resources will be tagged with tag key – **Application** and value – **Ganana**. If you want to use preconfigured VPC and Key Pair. **They must have tag key** – **Application and value – Ganana**. They will be listed under specific step to select.



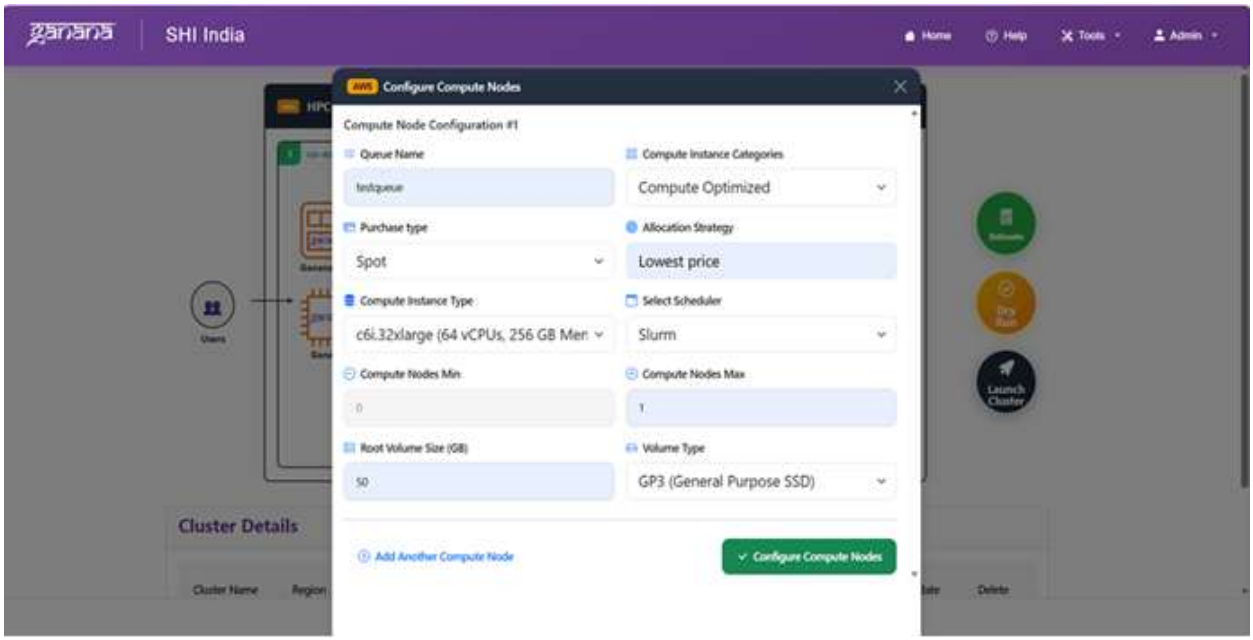
4.7 GCM Head Node Creation

Cluster name must start with parallelcluster. Only a-z, A-Z & 0-9 are allowed in cluster name.



4.8 GCM Queue Creation

As per requirements, any number of queues can be configured. Total number of Compute Nodes depends on quota of purchased license. Please check license details in license details screen under user menu, upper right corner.

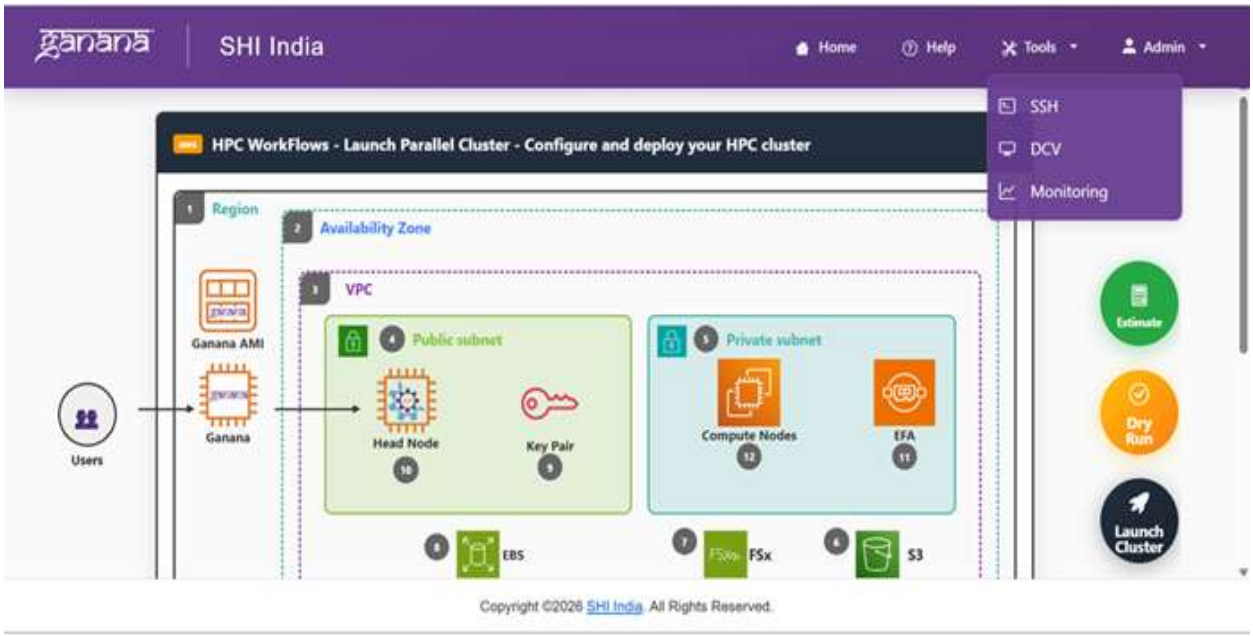


5 Cluster Monitoring

The Cluster Monitoring module enables users to monitor real-time resource utilization and performance of the selected HPC cluster. It provides insights into CPU usage, memory consumption, and overall system health.

To access Cluster Monitoring:

- Login to the GCM application
- Navigate to **Tools → Monitoring**
- Select a cluster
- Click **Load Monitoring**
- Install the monitoring components
- After installation, the system redirects to the dashboard page

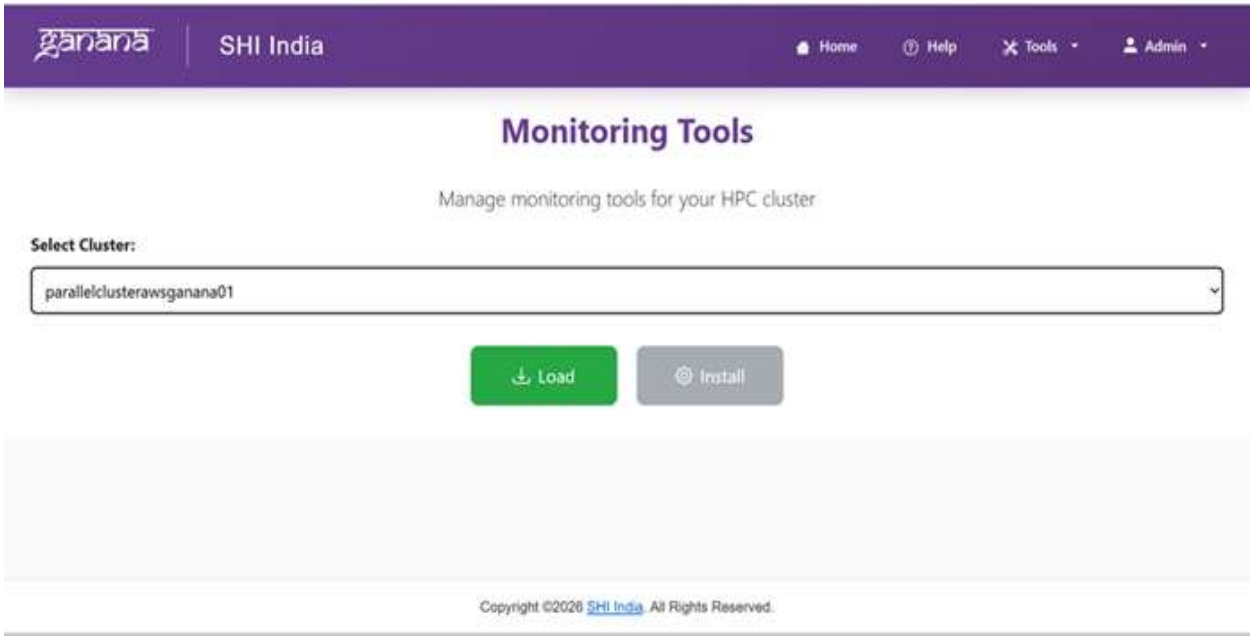


5.1 Cluster Selection

This step is mandatory before loading monitoring tools.

Description:

- User selects the required cluster from the dropdown list
- Ensures monitoring data is fetched for the selected cluster only
- Without cluster selection, monitoring cannot proceed

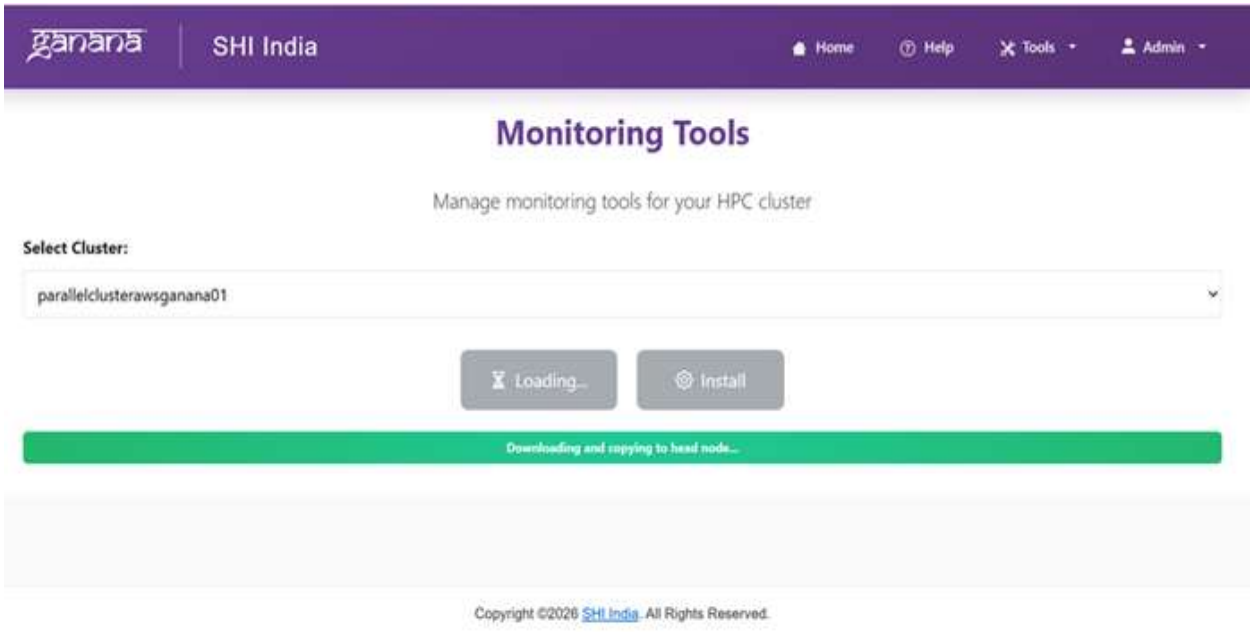


5.2 Load Monitoring

This step downloads the required monitoring components.

Description:

- User clicks on **Load Monitoring**
- System downloads necessary monitoring packages
- Prepares the environment for installation

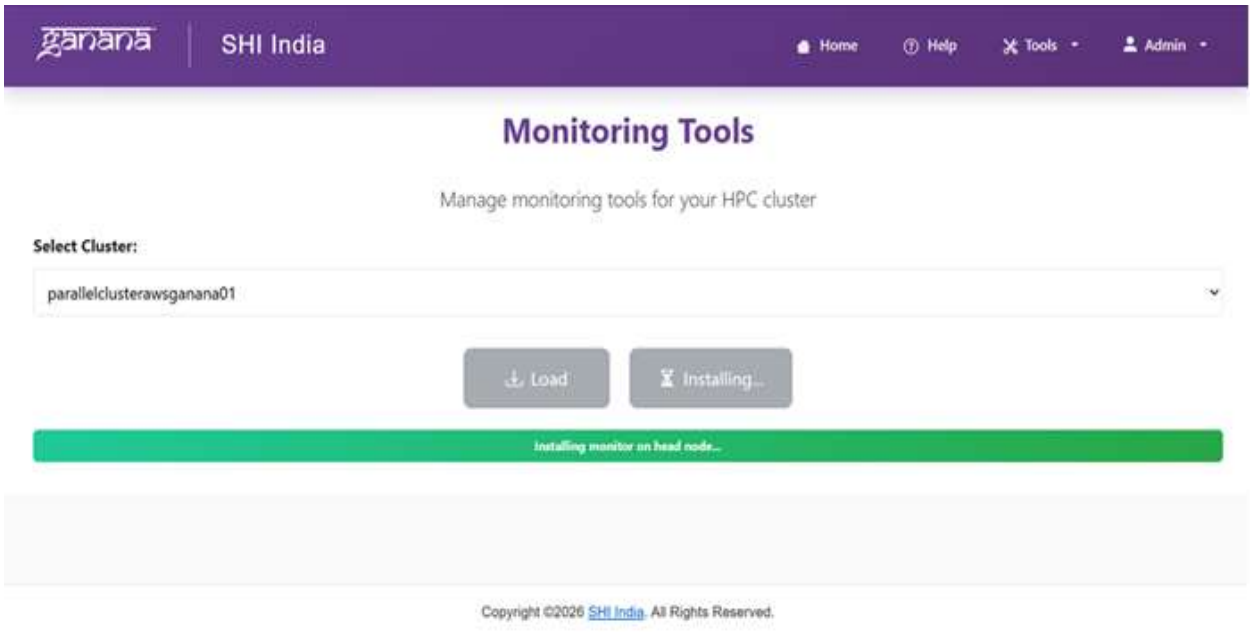


5.3 Install Monitoring

This step installs the monitoring application.

Description:

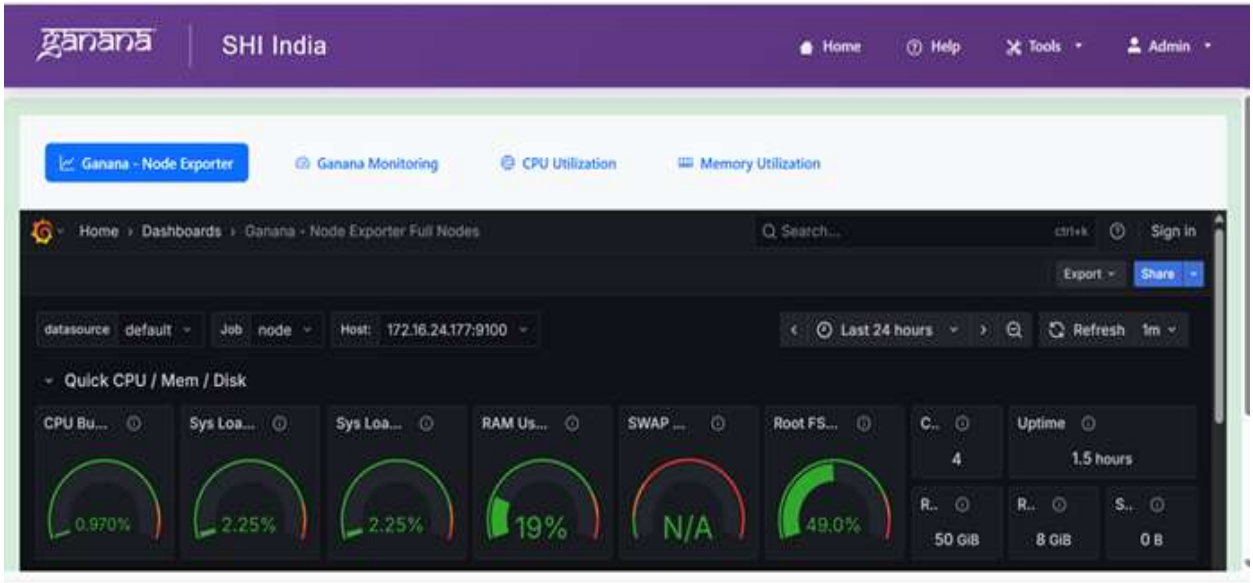
- User clicks on **Install** after download completion
- System installs monitoring services on the cluster
- Installation may take a few minutes
- Ensures monitoring agents and services are configured properly



5.4 GCM Monitoring Dashboards Page

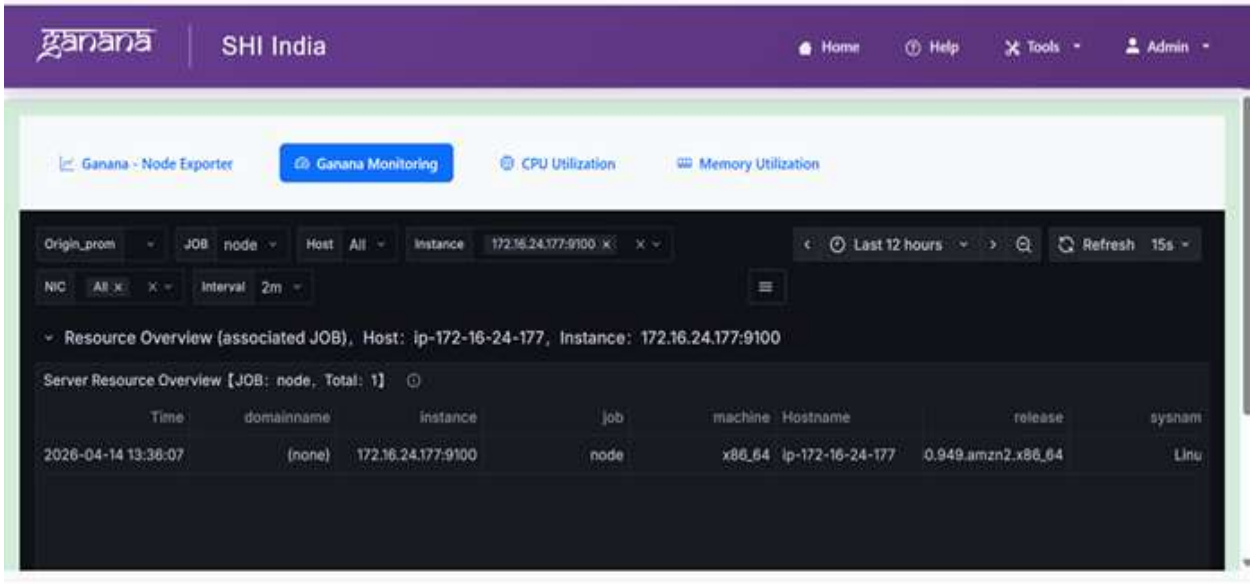
After successful installation, the user is redirected to the dashboard.

Ganana Monitoring Dashboard (Node Exporter), which provides real-time system metrics for the selected cluster node. It displays key resource utilization details such as CPU usage, memory consumption, system load, disk usage, and uptime. The dashboard helps users monitor cluster performance and quickly identify any resource bottlenecks.



5.5 GCM Monitoring-Resource Overview

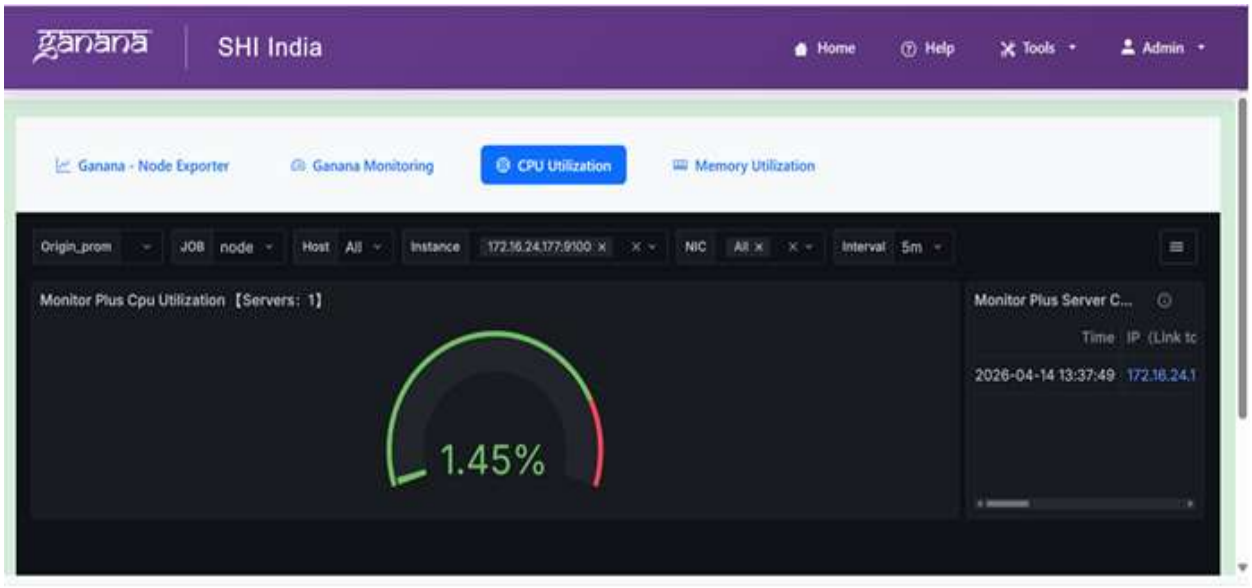
Ganana Monitoring – Resource Overview page, which provides detailed information about the selected node/instance. It displays system-level details such as host name, instance IP, machine type, operating system, and job association. Filters like job, host, and time range allow users to view specific monitoring data for better analysis.



5.6 CPU Utilization Dashboard

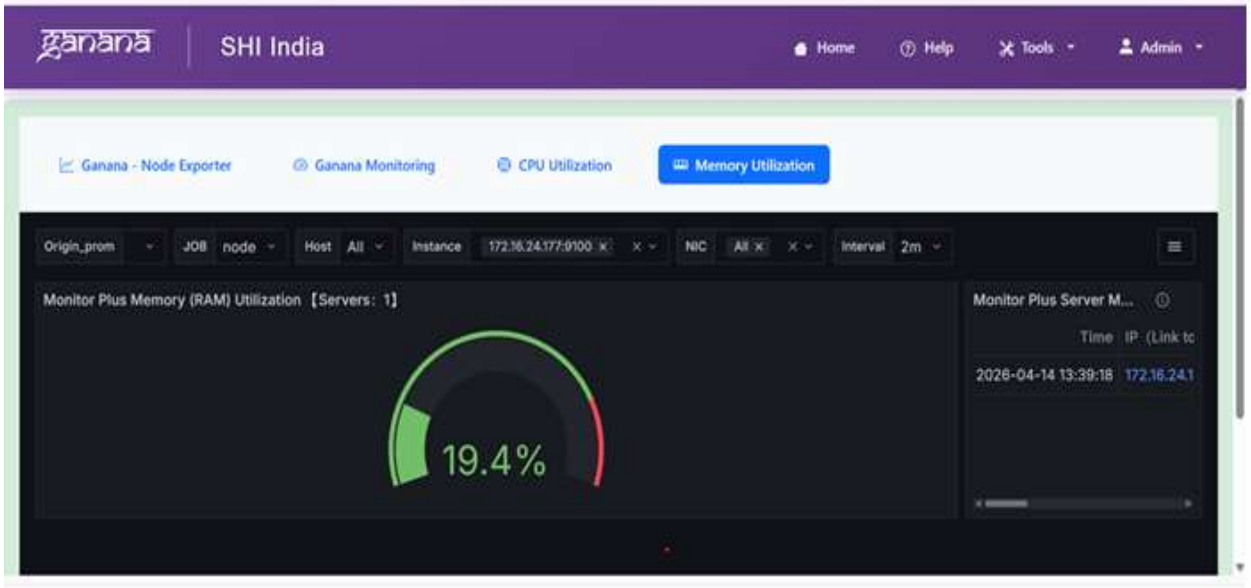
CPU Utilization Dashboard in Ganana Monitoring. It shows real-time CPU usage of the selected server/node in a graphical format, along with filtering options such as job, host,

instance, and time interval. This helps users monitor processor load and analyse system performance.



5.7 Memory Utilization Dashboard

Memory Utilization Dashboard in Ganana Monitoring. It shows real-time RAM usage of the selected server/node in a graphical format, along with filters such as job, host, instance, and time interval. This helps users monitor memory consumption and identify potential memory bottlenecks.

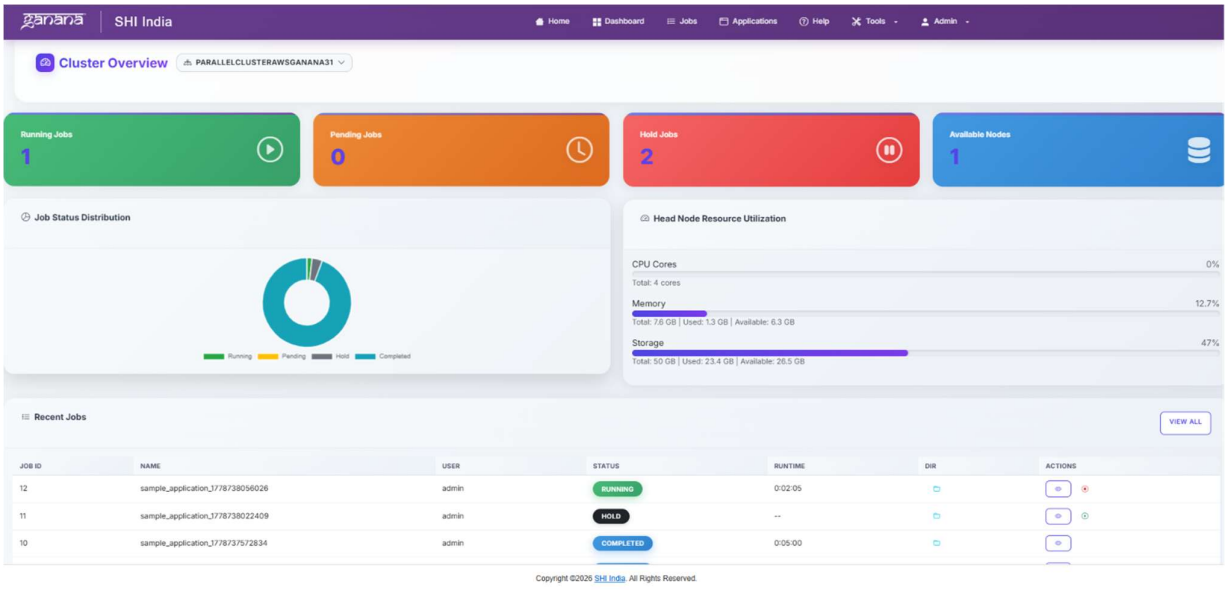


6 Slurm Dashboard

After logging into the SLURM application, the user is required to **select a cluster** from the **Cluster Dropdown** available at the top of the dashboard (e.g., TESTCLUSTER02). Once a cluster is selected, the dashboard automatically loads and displays all relevant information for that cluster, including:

- **Running Jobs** – Total number of currently running jobs
- **Pending Jobs** – Jobs waiting in the queue
- **Hold Jobs** – Jobs placed on hold
- **Available Nodes** – Number of compute nodes accessible in the selected cluster
- **Job Status Distribution** – Visual representation of job states (Running, Pending, Hold, Completed)
- **Resource Utilization** – Real-time CPU, Memory, and Storage usage
- **Recent Jobs** – List of recently submitted or executed jobs with details (Job ID, Name, User, Status, Runtime, Directory, and Actions)

This cluster selection step is mandatory. Without choosing a cluster, the dashboard will not display job statistics, resource details, or recent job history.



6.1 Create Application

On the Home Screen, click on **SLURM**. The user will be redirected to the SLURM Portal.

From the portal, open the **Profile Dropdown** located at the top-right corner and select **Job Admin**.

Navigate to the **Applications** section from the left-side menu.

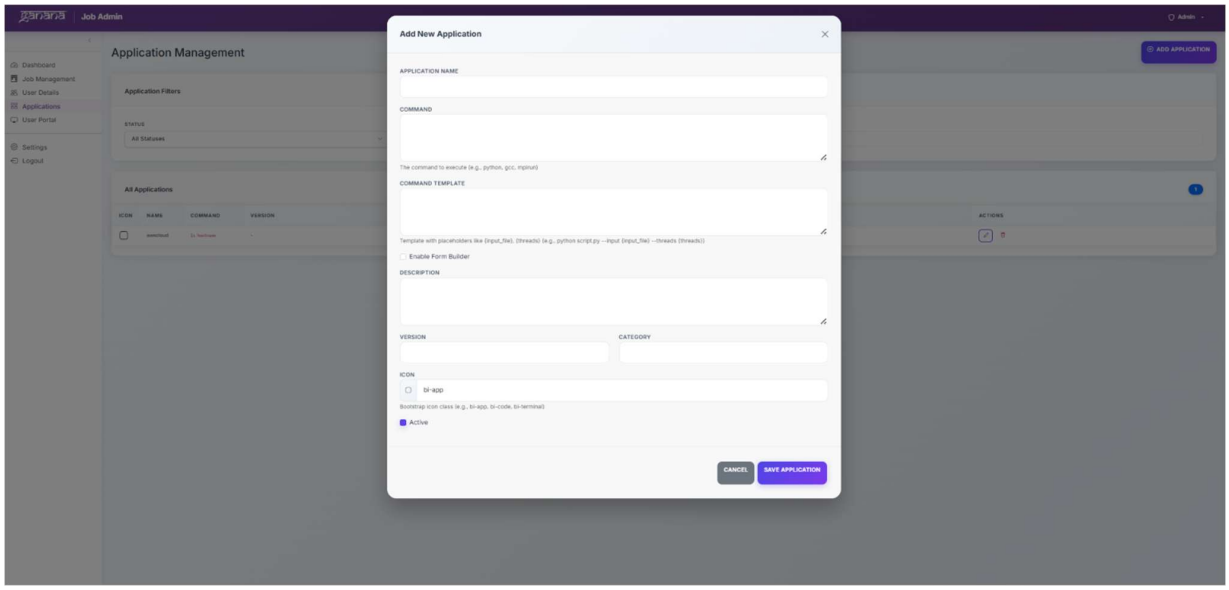
Click on **Add Application** to create a new application.

Enter the required application details such as:

- Application Name
- Command
- Command Template
- Description
- Version
- Category
- Icon
- Status (Active/Inactive)

If application input parameters are required, enable the **Form Builder** option and add the required form fields/parameters.

After entering all details, click on **Create Application** to save the application.



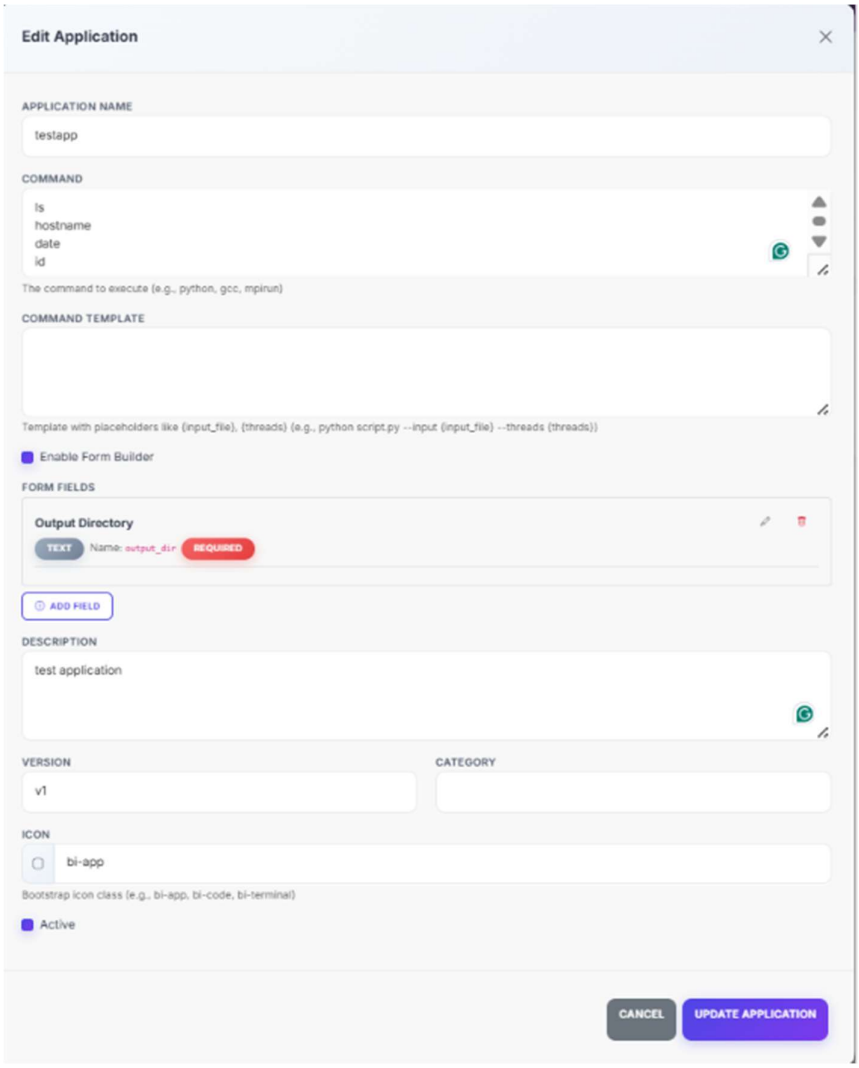
6.2 Update Application

Existing applications can be modified by clicking the **Edit** icon available under the **Actions** column in the Applications list.

Users can update:

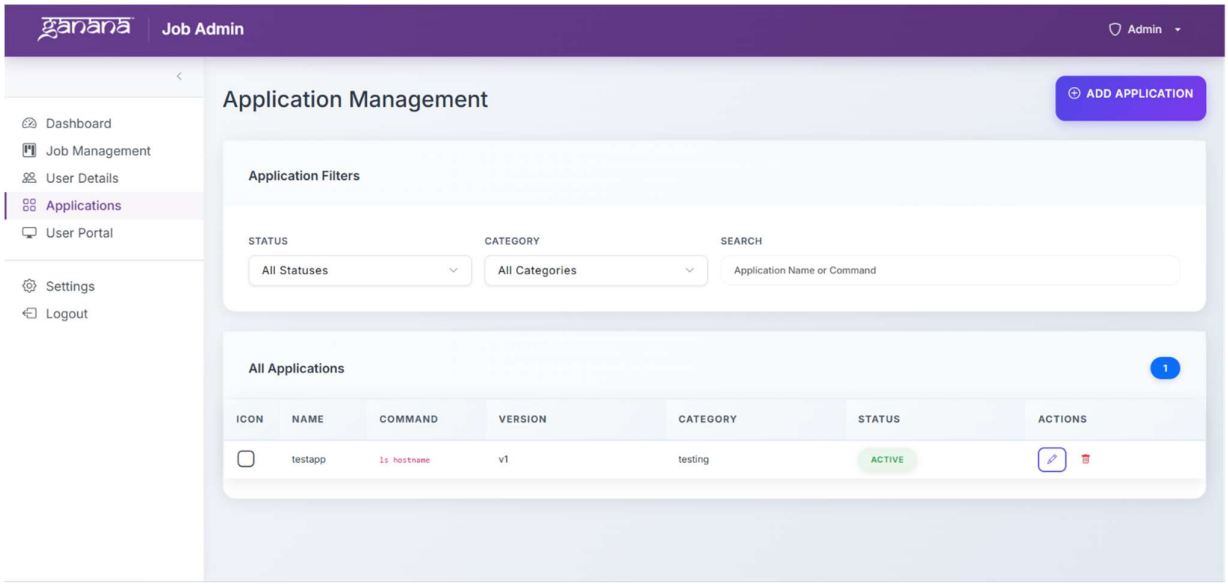
- Application details
- Commands
- Templates
- Parameters/Form Fields
- Status and other configurations

After making the required changes, click on **Update Application** to save the modifications.



6.3 Delete Application

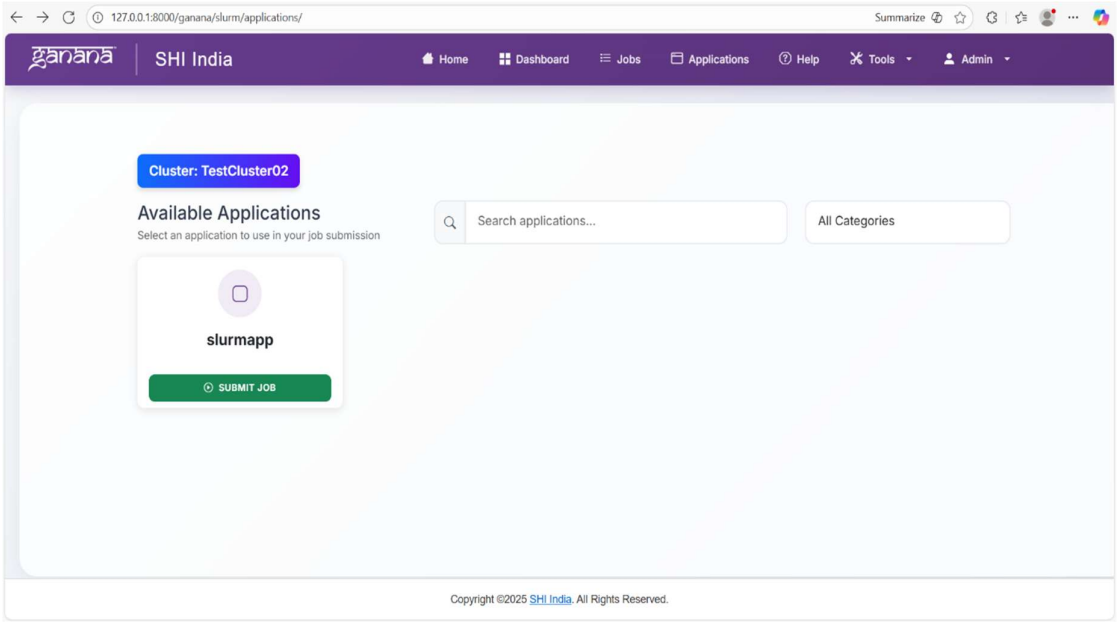
Applications can also be deleted using the **Delete** icon available under the **Actions** column in the Applications list.

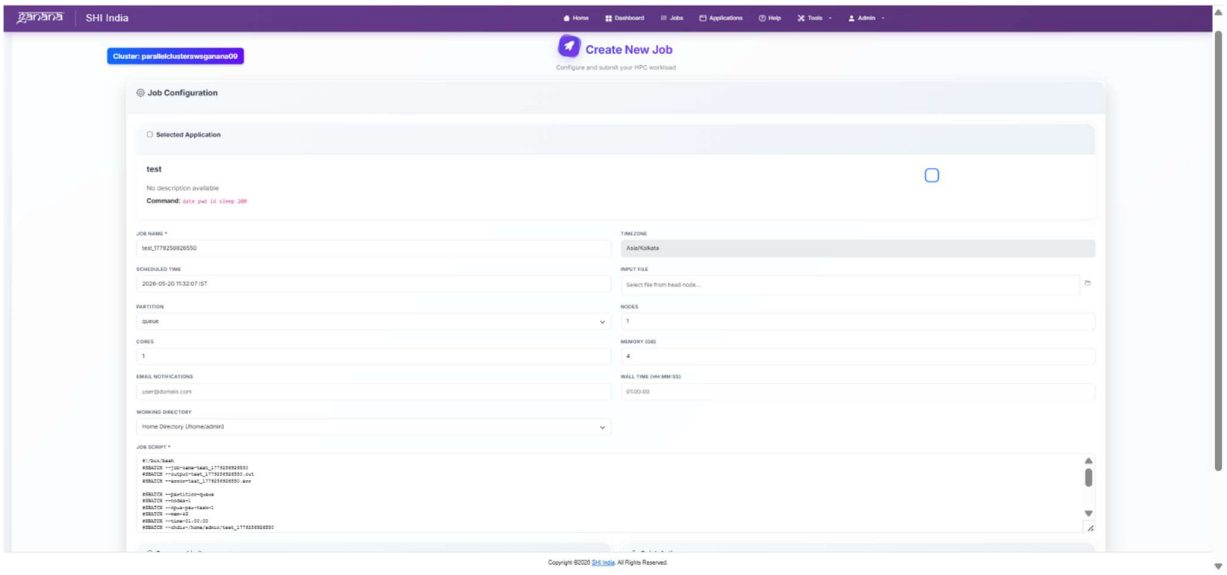


6.4 View Application

Field	Description
Selected Application	Application to execute
Job Name	Unique name for the job
Scheduled Time	Time when the job should start
Timezone	User-selected or configured timezone
Input File	Input data/script file from head node
Partition	SLURM partition/queue
Nodes	Number of nodes required
Cores	CPU cores required
Memory (GB)	Memory allocation for the job
Wall Time	Maximum execution time
Email Notifications	Email for job status updates
Working Directory	Execution directory path
Job Script	Generated SLURM job script

- User selects application and fills job details
- Scheduled time is validated
- Backend generates SLURM job script
- Time is converted to cluster timezone if required
- Job is submitted using `sbatch`
- Submitted job appears in the **Jobs** page after successful submission





6.5 Slurm Job Dashboard

In the **Job Management** page, users can view all jobs for the selected cluster (e.g., **TestCluster02**). The page displays job-related information such as:

- Job ID
- Job Name
- User
- Status
- Nodes

- Runtime
- Submit Time

Users can also perform various job management actions, including:

- Hold
- Resume
- Stop/Cancel
- Resubmit
- View Job Details

Additionally, filters are available to view:

- All Jobs
- Running Jobs
- Pending Jobs
- Hold Jobs

Users can also search for specific jobs and export the job list as needed.

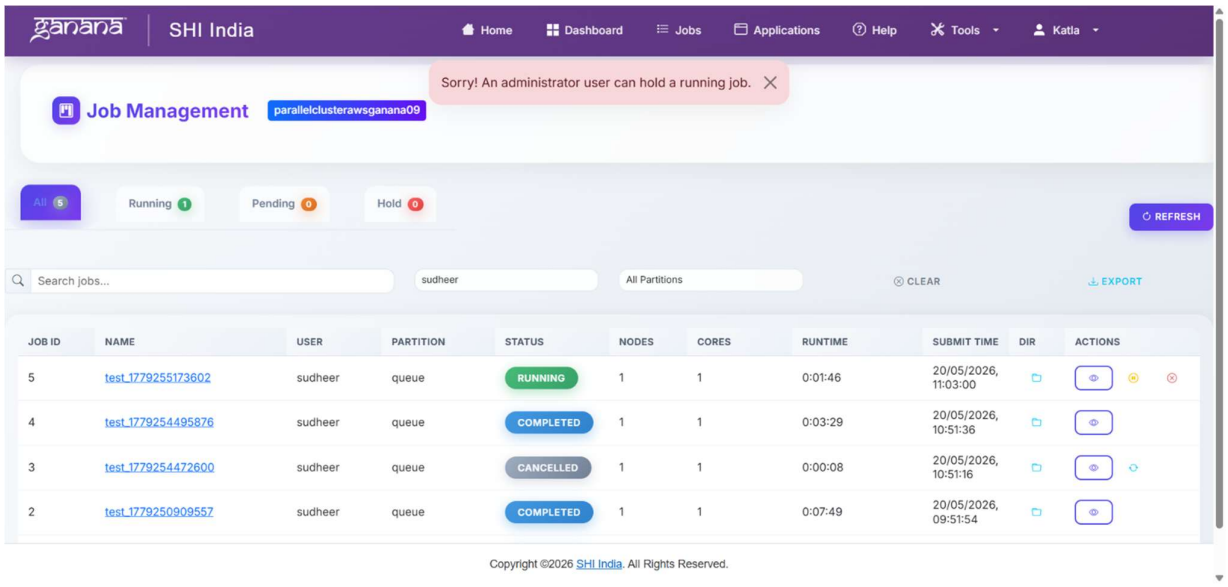
The **Job Hold** functionality allows users or administrators to temporarily pause a submitted job from being executed by the scheduler.

- **Pending jobs** can be placed on hold by all users.
- **Running jobs** can only be placed on hold by users with **Administrator privileges**.

When a job is placed on hold:

- The job remains in the queue but will not continue execution until the hold is removed.
- Resources will not be allocated to pending jobs while they are in the Hold state.
- The job status will be displayed as **Hold** in the Job Management page.

Users or administrators can later use the **Resume** action to release the hold and allow the scheduler to process the job normally. This functionality is useful for maintenance activities, dependency checks, scheduling priorities, or administrative control over cluster workloads.

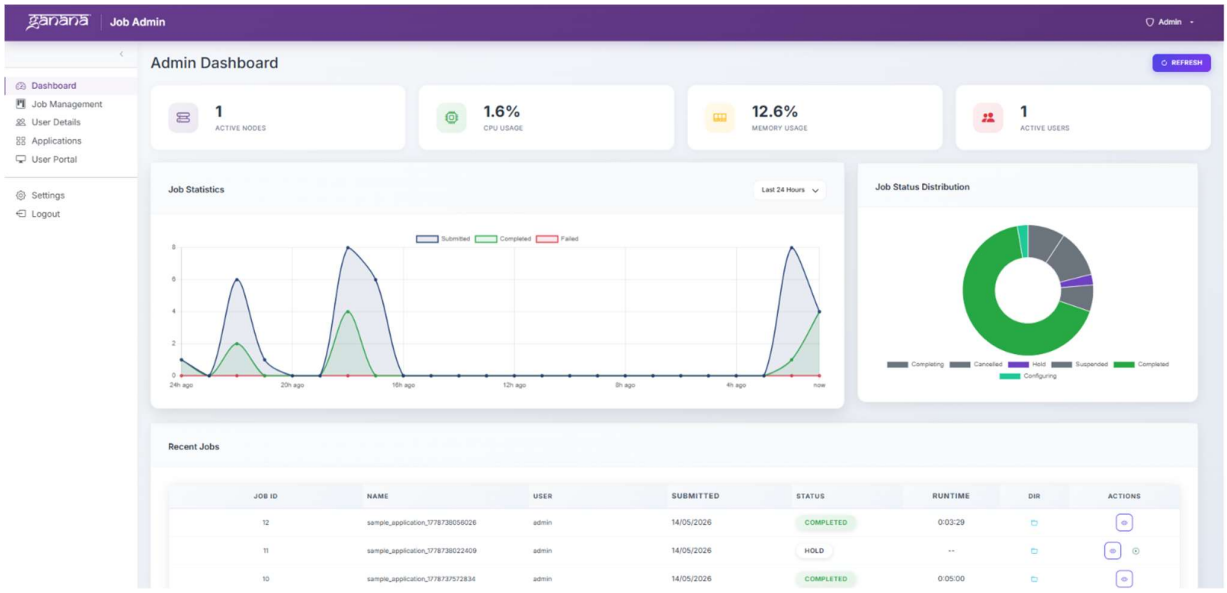


7 Slurm Job Administration

7.1 Administrator Dashboard

On this page, the administrator user can view overall cluster activity, including:

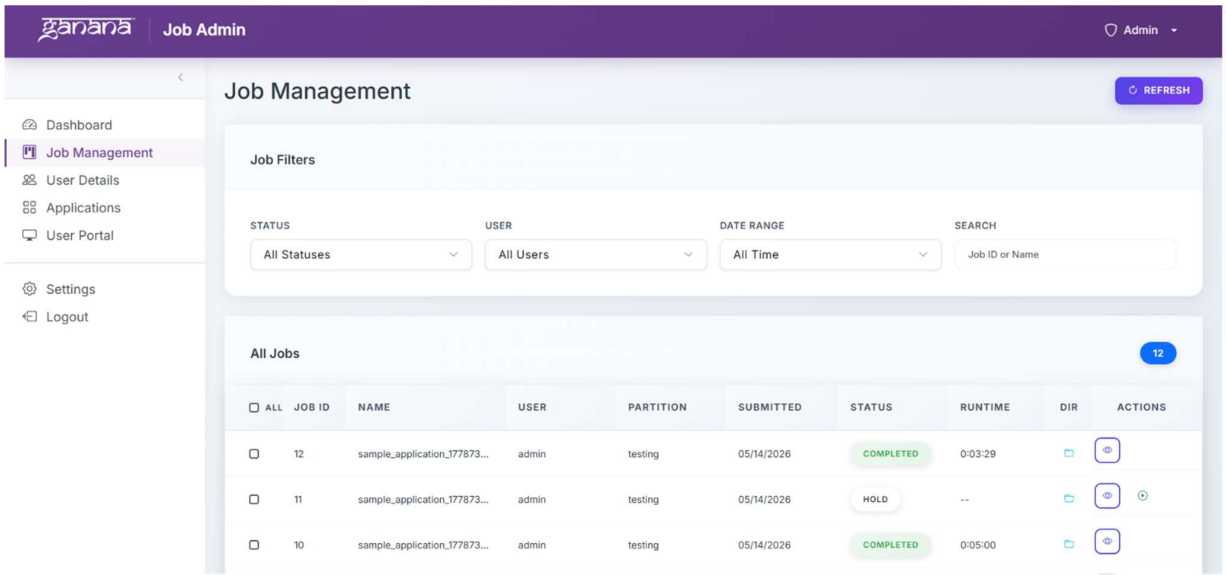
- **Active Nodes**, **CPU Usage**, **Memory Usage**, and **Active Users** (both **web active** and **SSH active** users)
- **Job Statistics** showing submitted, completed, and failed jobs over time
- **Job Status Distribution** showing the overall job state
- **Recent Jobs** list with job details and actions



7.2 Job Management

On this page, the administrator user can view **all jobs** and apply filters based on **status**, **user**, **date range**, or by searching with **Job ID or Name**.

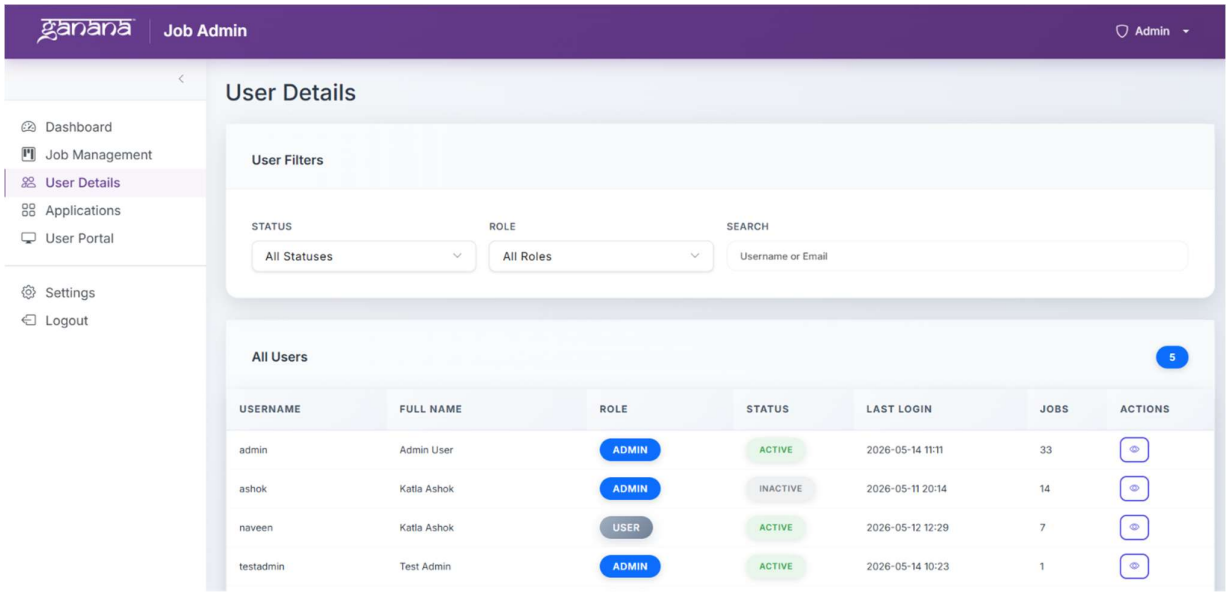
Admins can also perform job actions like **Cancel**, **Hold**, and **Release** for selected jobs.



7.3 User Detail

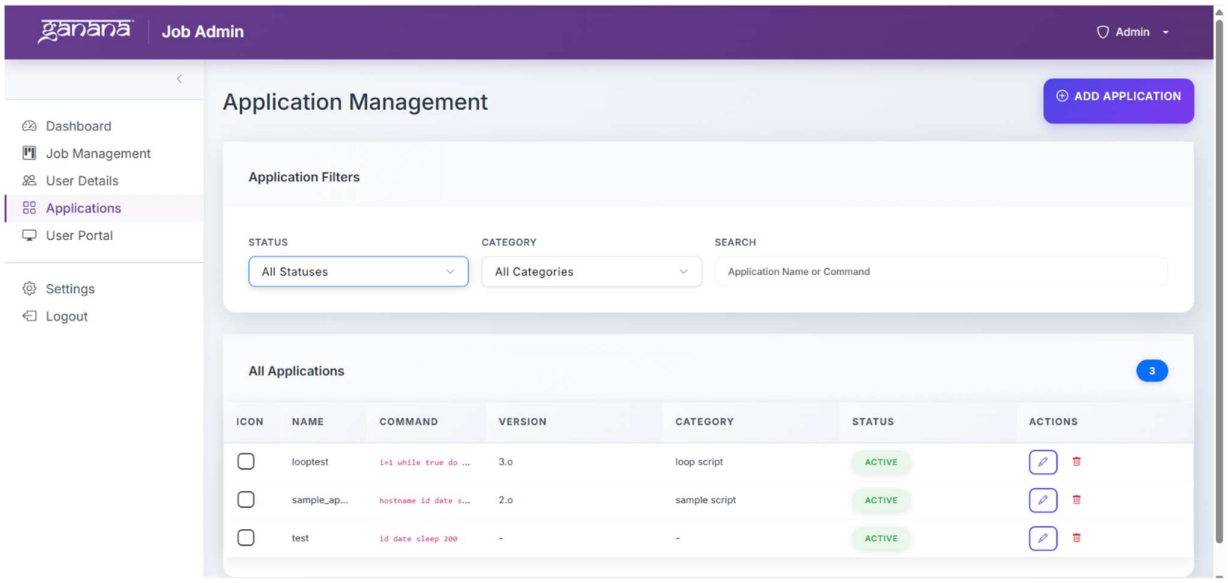
On this page, the admin can view all registered users and filter them by status, role, or by searching with username or email.

Admins can also see key user information such as full name, role, account status, last login, and total jobs submitted, and can open detailed profiles using the action button.



7.4 Application Management

On this page, the admin can view all applications available for job submission and filter them by status, category, or by searching with the application name or command. Admins can add new applications, and also edit or delete existing ones using the action controls. Number of applications can be created as per quota of purchased license. Please see allowed quota in license details under User menu, top right corner.



7.5 Slurm Job Settings

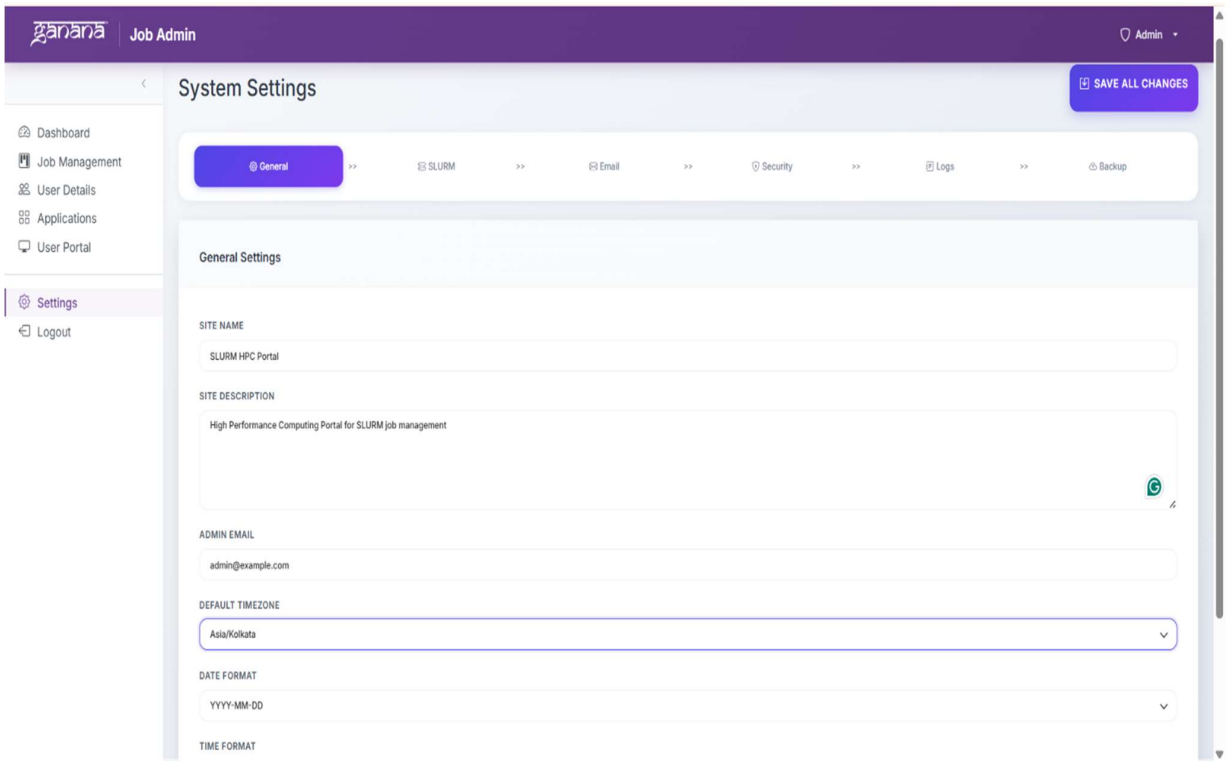
The **Default Timezone** setting is available under:

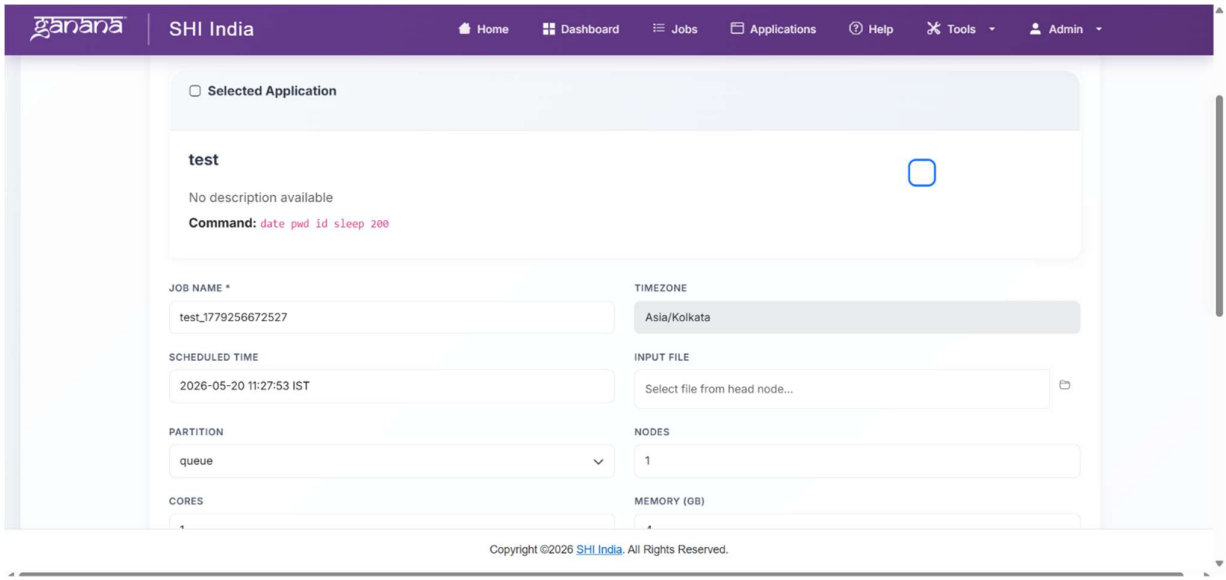
Settings → General Settings → Default Timezone

From this dropdown, the admin can select the required timezone (Example: UTC, America/New_York, Asia/Kolkata) and save the configuration.

After saving:

- The selected timezone is stored in SystemSettings
- Submit Job page displays time in the configured timezone
- Backend converts scheduled time to cluster timezone (UTC) before sending to SLURM
- Jobs run at the correct scheduled local time across regions




ganana
SHI India
Home
Dashboard
Jobs
Applications
Help
Tools
Admin
Selected Application
test
No description available
Command: date pwd id sleep 200
JOB NAME *
test_1779256672527
TIMEZONE
Asia/Kolkata
SCHEDULED TIME
2026-05-20 11:27:53 IST
INPUT FILE
Select file from head node...
PARTITION
queue
NODES
1
CORES
MEMORY (GB)
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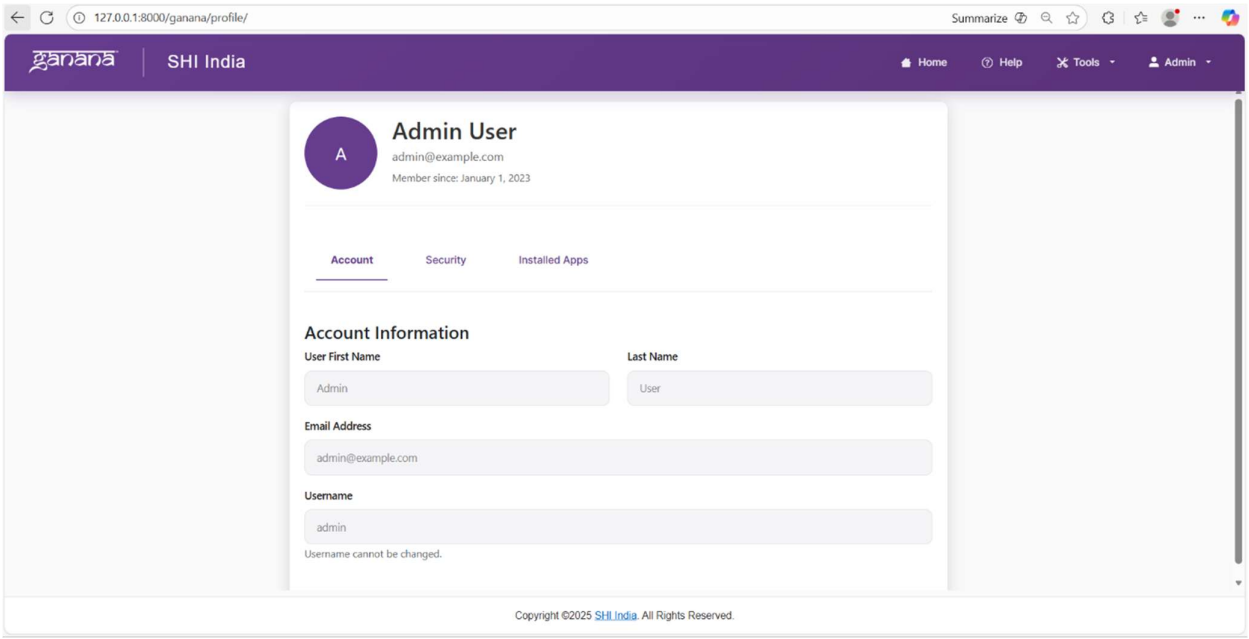
7.6 User Management

Administrator user has option to create new user. There will be two type of application roles, Administrator & User. Administrator users have option to perform Cluster, Slurm Application and User administration. User can only create, submit and view status and result of jobs.

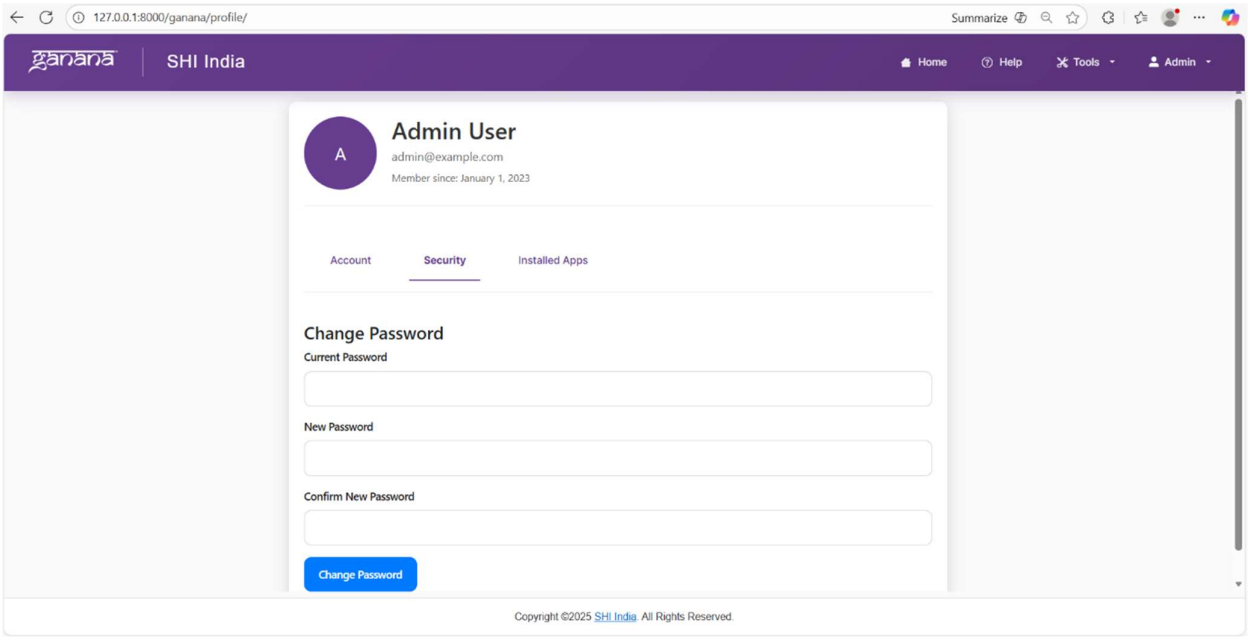
7.6.1 User Detail

User has view profile option under her name.



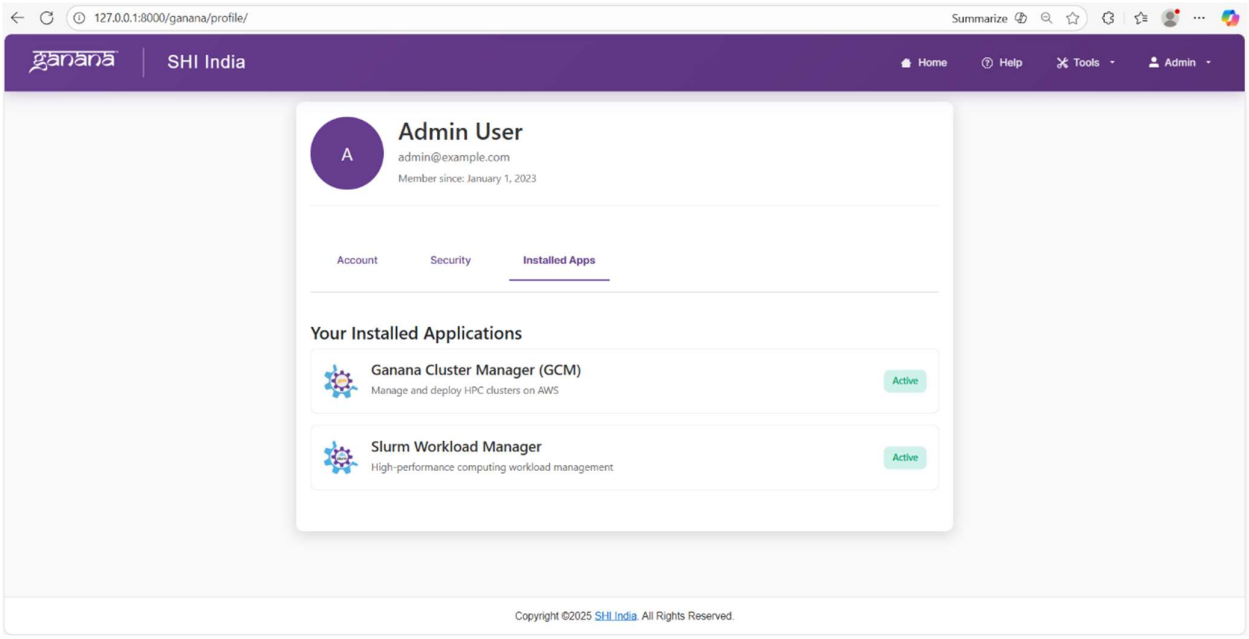
7.6.2 Password Change

User has option to change password any time, providing her current password.



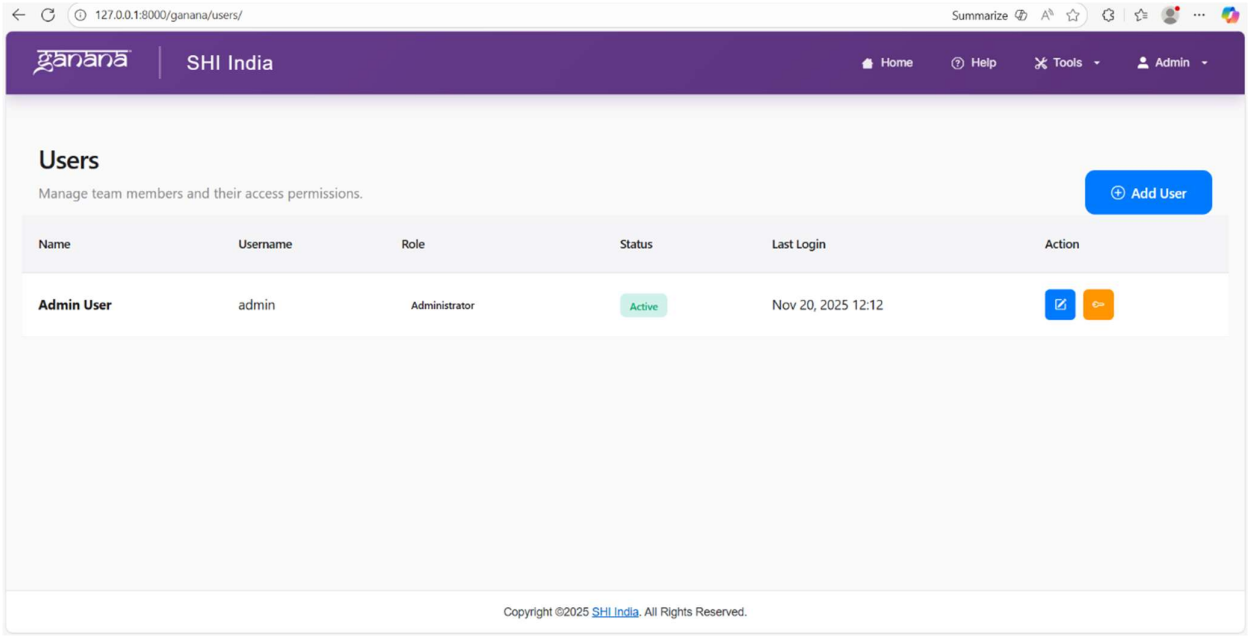
7.6.3 Application Access

User can view list of active applications for which she has access.



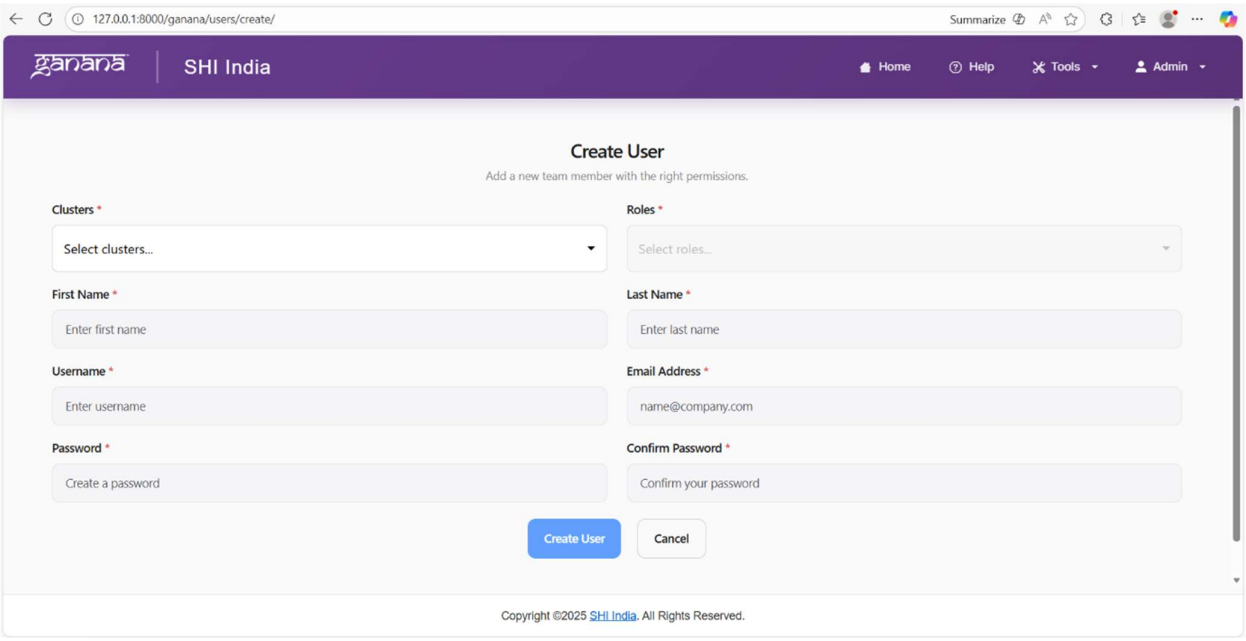
7.6.4 User List

Administrator user has privilege to view, edit and reset user's credential.



7.6.5 User Creation

Administrator user has privilege to create user of application. User can perform operation on specific Cluster only.


127.0.0.1:8000/ganana/users/create/
Summarize
ganana
SHI India
Home
Help
Tools
Admin
Create User
Add a new team member with the right permissions.
Clusters *
Select clusters...
Roles *
Select roles...
First Name *
Enter first name
Last Name *
Enter last name
Username *
Enter username
Email Address *
name@company.com
Password *
Create a password
Confirm Password *
Confirm your password
Create User
Cancel
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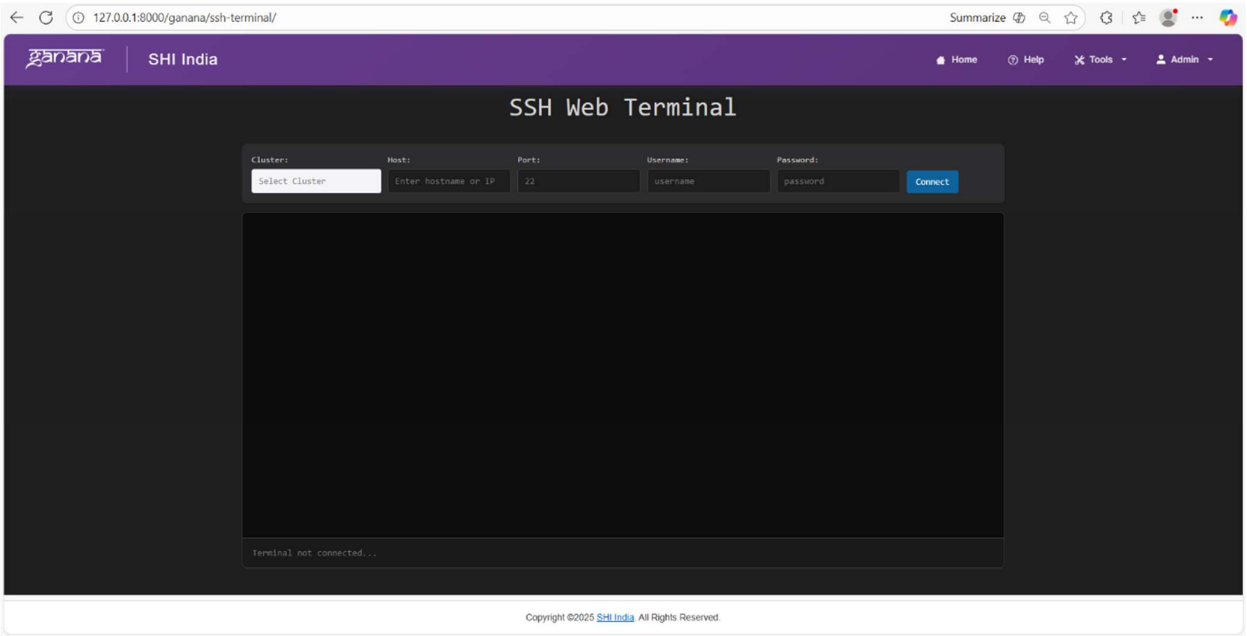
8 Utility Tools

8.1 SSH Web Terminal

In the **SSH Web Terminal**, the user can connect to any instance directly from the browser.

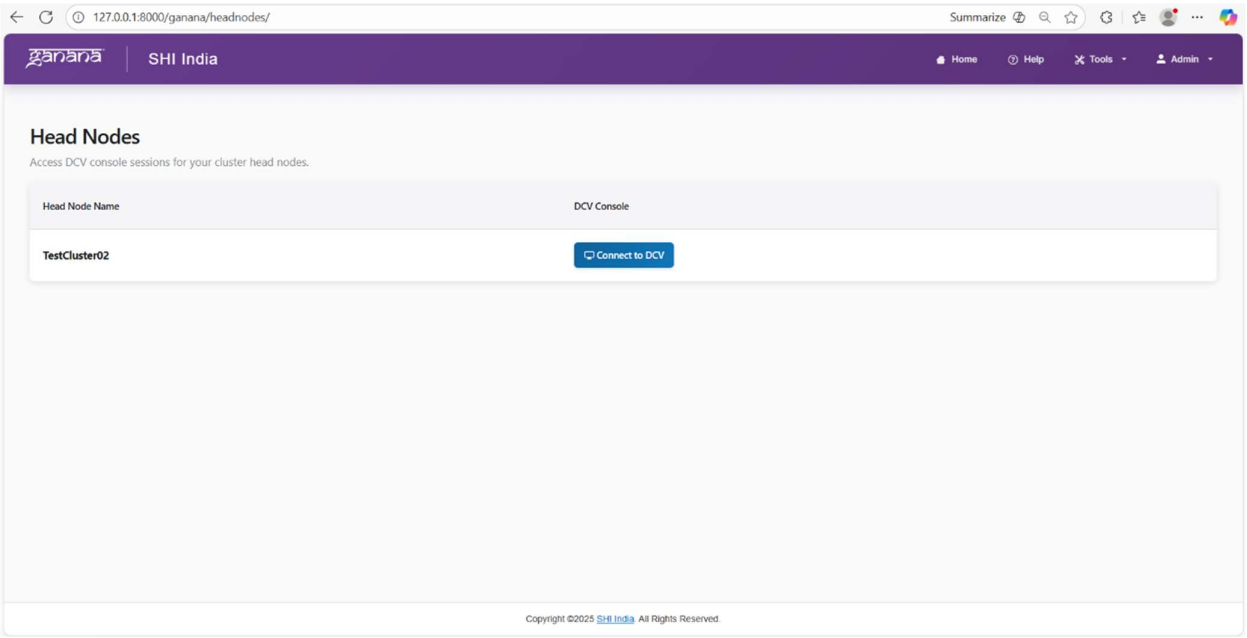
- If a **cluster is selected**, the host/IP is automatically populated.
- If no cluster is selected, the user can manually enter the **host/IP**.
- The user must provide **Port**, **Username**, and **Password**, then click **Connect** to open an SSH session.
- Once connected, the user can run commands just like a normal SSH terminal.



8.2 Nice DCV

On the **Head Nodes** page, the user can access the DCV console for the cluster head node.

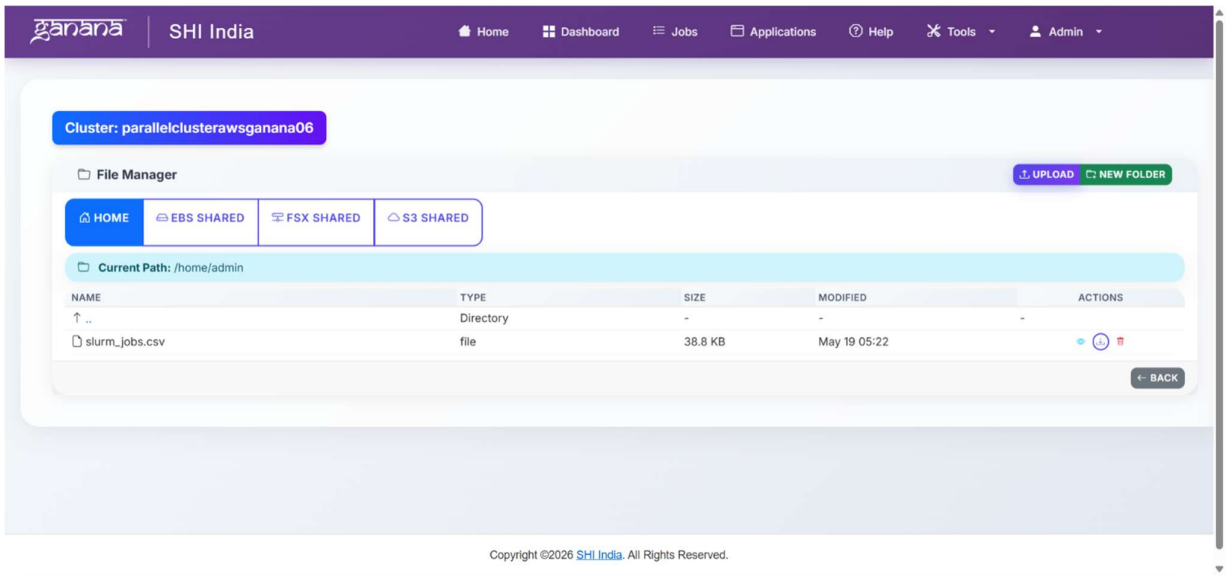
- Clicking **Connect to DCV** redirects the user to the DCV console.
- The user enters their **username** and **password** to log in.
- After logging in, they can perform all required GUI-based operations on the head node.



8.3 File Manager

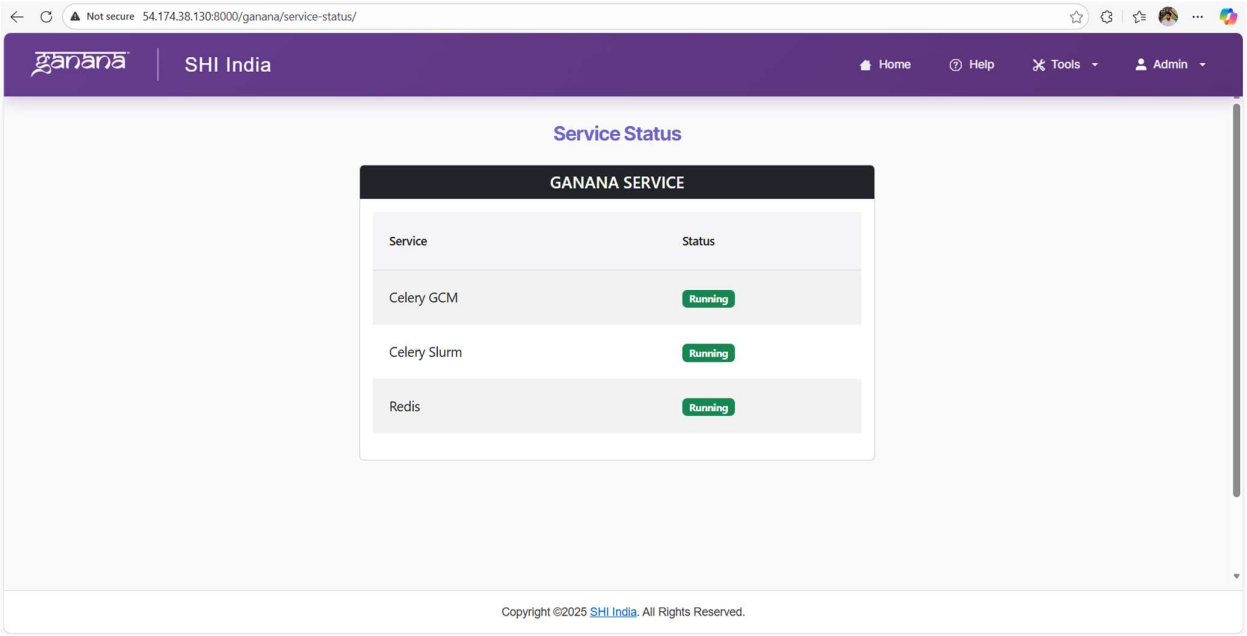
The **File Manager** lets users manage files inside the selected cluster (TestCluster02).

- Users can **upload files**, **add new folder, download**, **view**, and **delete** files only from her user directory/folder of head node or any selected storage device.
- The current working directory path (e.g., /home/<username>) is shown at the top.
- All files and folders appear in the list with actions available for each item.



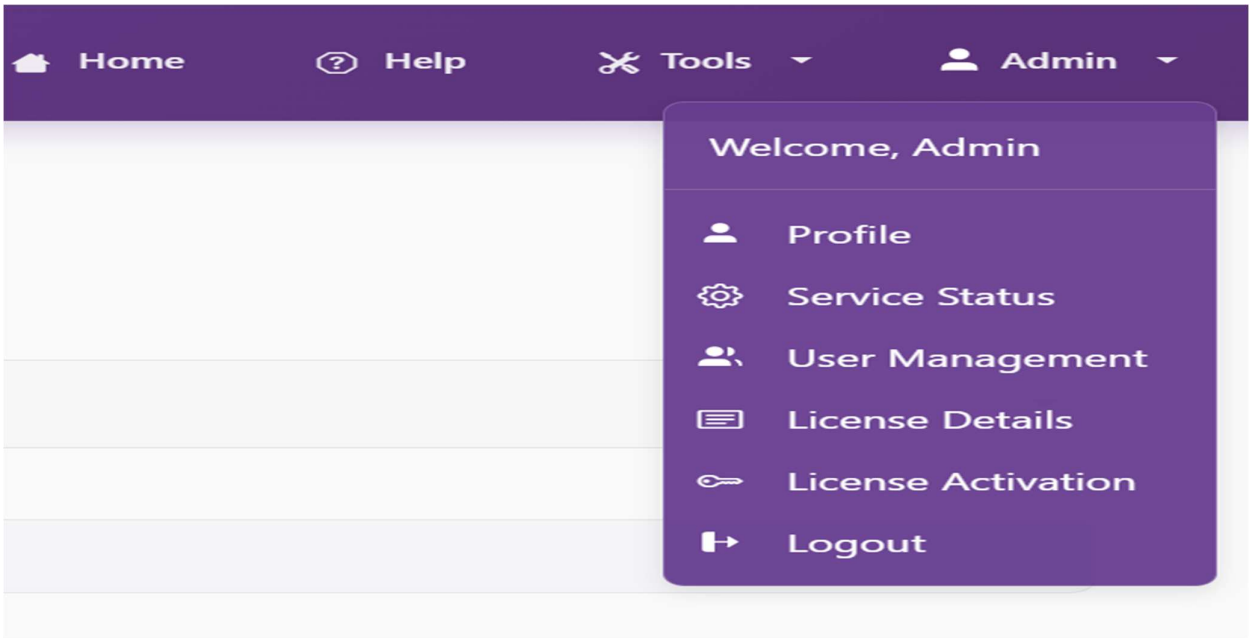
9 Service Status

On this page, the user can view the real-time status of core backend services required for the platform to function. It displays whether critical services such as Celery GCM, Celery Slurm, and Redis are currently running, helping administrators quickly verify system health and diagnose issues.



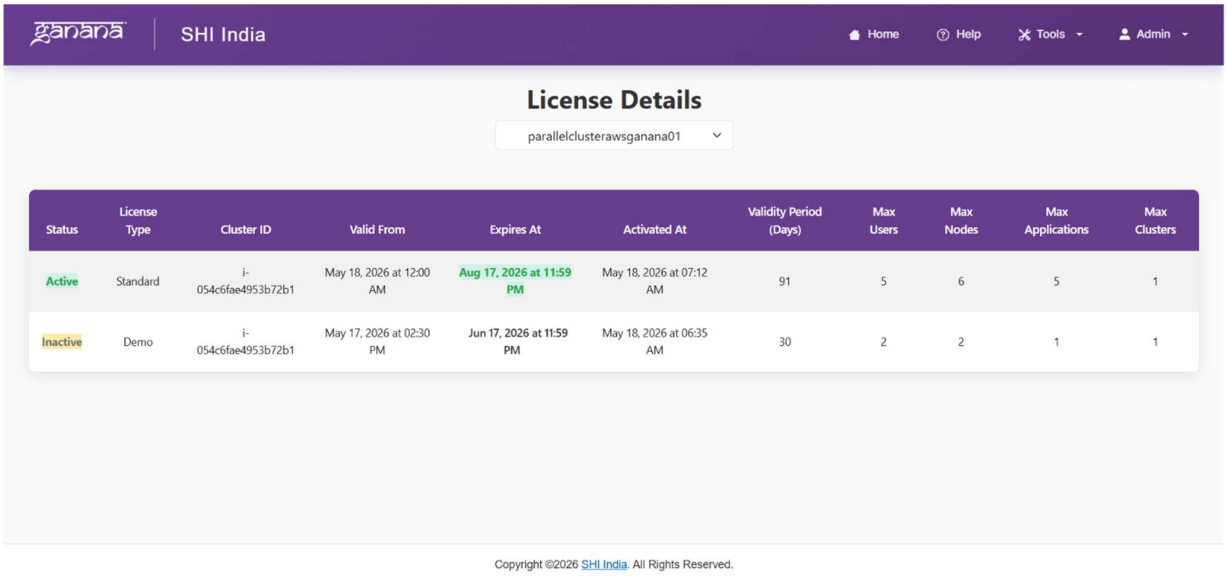
10 License Management

Administrator user has option to view details of current active license and activate new license. By default, demo license will be activated with limited functionalities and for limited period. User must contact to SHI Help Desk for paid license for full functionality of Application for specific period.



10.1 License Details

User view current license details.



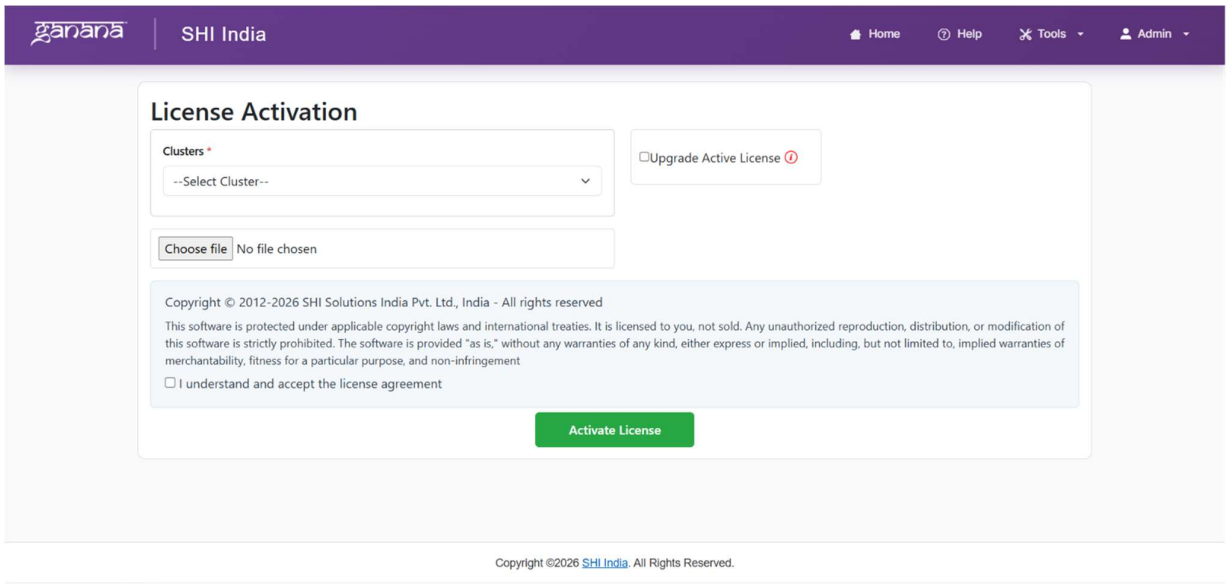
10.2 License Activation

Administrator user can activate paid license for specific cluster. User must create a cluster first by using Demo license and then share Cluster ID with vendor with her requirement to issue paid license. Issued license to be activated to issued Cluster.

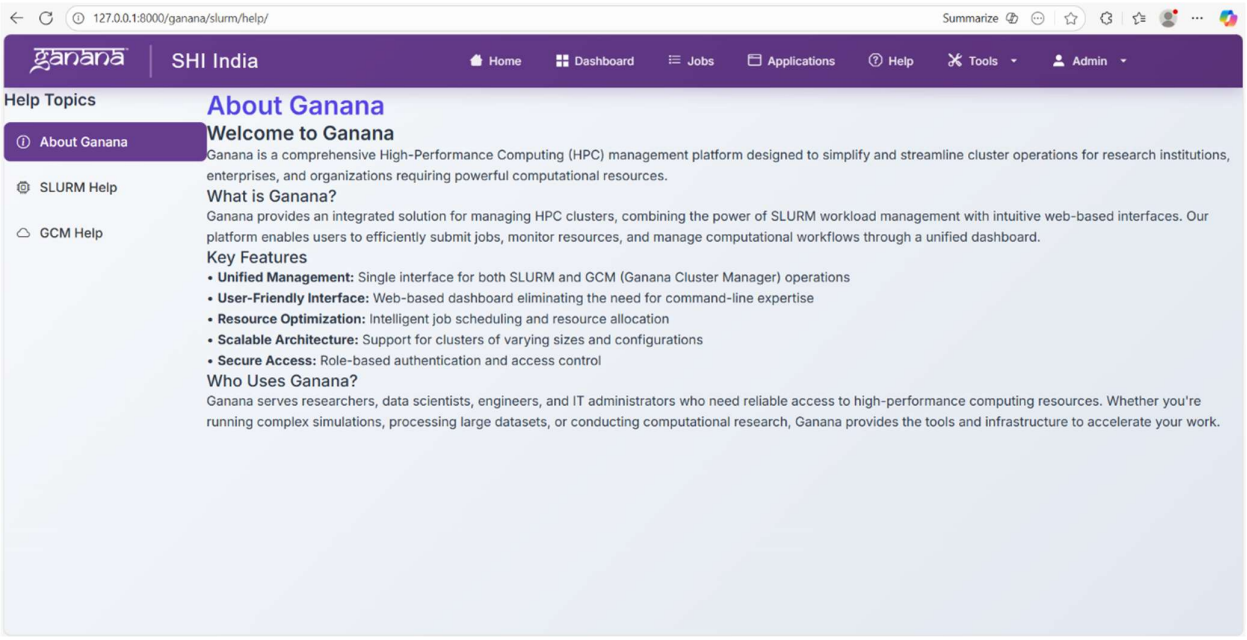
Activate license can be upgraded any time by selecting “Upgrade Active License”. If user select, this option, active license will be inactive and new license will be activated on immediate effect.

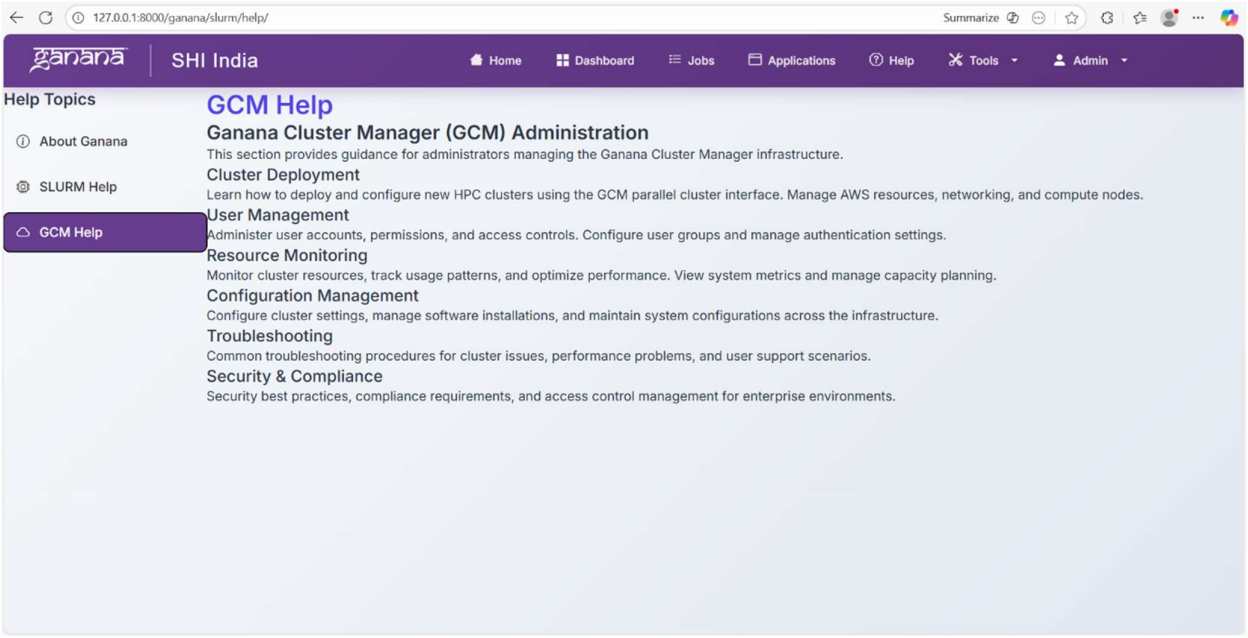
User can also activate a license of future start date. Assume today is March 1st, 2026, and current licence will expire by March 31st, 2026. User can issue license with validity start date April 1st, 2026, and upload any time before expiration. License will be marked as Pending status and it will auto activate at 00:00 hour on April 1st, 2026.

Note: - License is valid only for issued cluster and will be activated only one time. If Cluster is deleted, issued license will also be deactivated and it will be used for new cluster or any other cluster.



11 Ganana Help





12 Support information

12.1 Sales Information

vishal.shah@locuz.com
+91 8850285980

12.2 SHI Helpdesk

Service desk No: 040-69394666
Toll Free Num:1800 103 6971
Email: nochelpdesk@locuz.com, awscloud@locuz.com & ganana.support@locuz.com
Timings: 24*7