FINISHING COLLEGE BROCHURE

FINISHING COLLEGE
Knowledge is power...

Who We Are?

Finishing College has been started as a sister concern of Computer Port IT Solutions, 10+ year old End to End IT Infrastructure Solutions Provider having offices in Hyderabad, Bengaluru, Chennai and Vizag.

- *Computer Port IT Solutions is recognized as a Asia Pacific Community Champions of OpenNebula.*
- *Also recognized as one among 8 Professional Integrators of oVirt (Which RedHat sells as RedHat Virtualization)*
- India's Partner for Wazuh- No 1 Open Source Cyber Security Tool

What We Do?

- *Establishment of AI / ML Labs*
- *Setting up of Private/Hybrid Clouds*
- *Establishment of Cyber Security Labs*
- *Setting up of High Performance Computing Labs (HPC)*
- *Setting up of Software Defined Storage Labs (SDS)*
- *Implementing Identity Access Management Labs*
- *Workshops on Latest Technologies*
- *Seminars on Latest Technologies*
- *Setting up of Cost effective Innovative Labs*

SETTING UP OF COST EFFECTIVE INNOVATIVE LABS LIKE

- *Raspberry Pi Labs in Engineering Colleges:*
- *Virtual Desktop Infrastructure (VDI) Labs for accessing Windows and Linux from a Browser*
- *Diskless Windows Client Labs with Windows Server OS & Linux OS*

AI / ML LABS

"Components in setting up of AI/ML Labs"

Setting up AI (Artificial Intelligence) and ML (Machine Learning) labs requires careful planning and investment in various components to create a conducive environment for research, development, and experimentation. Here are the key components required for setting up AI and ML labs:

01 *Hardware:*

High-Performance Computing (HPC) Clusters: These clusters typically consist of multiple powerful servers with GPUs (Graphics Processing Units) or TPUs (Tensor Processing Units) to accelerate AI and ML workloads.

Workstations: High-end workstations for researchers and engineers to develop and test algorithms.

Storage Solutions: Large-scale storage systems to handle the vast amounts of data involved in AI and ML projects.

02 *Software:*

Operating System: Choose a suitable operating system like Linux (e.g., Ubuntu, CentOS) for compatibility with popular AI/ML libraries and tools.

AI/ML Frameworks: Install popular frameworks like TensorFlow, PyTorch, scikit-learn, Keras, etc.

Development Tools: IDEs (Integrated Development Environments) and code version control systems like Git.

Data Management Tools: Databases and data management tools to organize and preprocess data.

03 *Data Sources:*

Data Collection Hardware: Sensors, cameras, IoT devices, or data feeds, depending on the nature of your AI/ML .

Data Sets: Curated datasets for training and testing models, and access to real-world data if applicable.

04 *Networking:*

High-Speed Internet: Robust internet connectivity for data retrieval, model sharing, and collaboration with external partners.

Intranet: Secure local network infrastructure for lab resources.

05 *Infrastructure Management:*

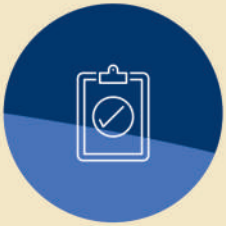
Virtualization and Containerization: Tools like Docker and Kubernetes to manage environments and applications.

Orchestration: Tools to automate deployment, scaling, and monitoring of AI/ML workloads.

Setting up AI and ML labs is a substantial investment, but it's essential for research, development, and innovation in these fields. Tailor your lab setup to the specific needs of your organization and research projects.

ESTABLISHING PRIVATE CLOUDS

To set up a private cloud, you will need the following components:



Compute, Network, and Storage Resources:

- Set up clusters of servers, storage devices, and networking equipment to provide the necessary resources for your private cloud.

Backend Components:

- These include the infrastructure and software that enable the functioning of your private cloud, such as hypervisors, virtual machines, and storage systems.

Security and Control:

- Implement security measures to protect your private cloud, including firewalls, encryption, and access controls.

Disaster Recovery:

- Plan and implement strategies to ensure the availability and integrity of your private cloud in the event of a disaster, such as data replication and backup systems.

Support of Legacy Systems:

- Consider the integration of existing legacy systems into your private cloud infrastructure to ensure compatibility and smooth operation.

Virtualization:

- Use virtualization technologies to create and manage virtual machines and resources in your private cloud.

Service Catalog:

- Develop a catalog of services and resources that can be provisioned and managed by users in your private cloud.

Self-Service Portal:

- Provide a user-friendly interface for users to access and manage resources in your private cloud, allowing them to provision, monitor, and scale their own services.

Resource and Workload Management:

- Implement tools and processes to efficiently allocate and manage resources and workloads in your private cloud.

Standardization:

- Establish standardized processes and technologies to ensure consistency and compatibility across your private cloud infrastructure.

Consolidation:

- Identify and eliminate duplicate or underutilized resources to optimize the efficiency and cost-effectiveness of your private cloud.

Automation:

- Use automation tools and processes to streamline and simplify the management of your private cloud, reducing manual tasks and improving efficiency.

ESTABLISHMENT OF CYBER SECURITY LABS

To set up a cyber security lab, you will need the following components:

Host PC:

- A powerful computer with sufficient processing power, memory, and storage to run the lab environment and its components.

Virtualization Software:

- Use virtualization software such as Oracle VirtualBox or VMware Workstation Player to create and manage virtual machines for your lab.

Operating Systems:

- Install various operating systems, including Windows, Linux distributions, and vulnerable machines like Metasploitable and DVWA, to simulate different components of a business network.

Network Infrastructure:

- Set up a network with routers, switches, and firewalls to simulate a real-world network environment.

Security Monitoring and Log Management:

- Configure tools like Security Onion as an all-in-one IDS, Security Monitoring, and Log Management solution to monitor and analyze network traffic and security events.

Attack Simulation:

- Configure Kali Linux as an attack machine to simulate real-world cyber attacks and test the effectiveness of your security measures.

Windows Server and Active Directory:

- Set up a Windows Server as a Domain Controller and configure Windows desktops to simulate a Windows-based network environment.

SIEM and Vulnerability Scanning:

- Install a System Information Event Management (SIEM) solution like Splunk and a vulnerability scanner to monitor and manage security events and identify potential vulnerabilities.

Email Server and VPN Services:

- Set up an email server and VPN services or servers to simulate secure communication and remote access scenarios.

Security Testing and Development:

- Use the lab environment to practice and improve your cybersecurity skills, including developing and testing security rules, SIEM content, and attack scenarios.

Network Security Device:

- Run a network security device like Sophos UTM to evaluate its pros and cons and enhance your understanding of network security.

Isolated Development Environment:

- Maintain a separate and isolated development environment within your lab to avoid conflicts and ensure the security of your main network.

SETTING UP OF

HIGH PERFORMANCE COMPUTING LABS (HPC)

Setting up a High-Performance Computing (HPC) lab requires specialized hardware, software, and infrastructure to facilitate complex computations and research tasks. Here are the key components required for setting up an HPC lab:

1.Hardware Infrastructure:

HPC Clusters: High-performance computing clusters comprising multiple interconnected servers or nodes. These nodes often include CPUs, GPUs, or other accelerators.

Interconnects: High-speed interconnects like InfiniBand or Ethernet for low-latency communication between nodes.

Parallel File System: Scalable and high-speed storage systems optimized for HPC workloads.

2.Compute Nodes:

CPUs: Powerful multicore processors with support for parallel computing.

GPUs or TPUs: Graphics Processing Units (GPUs) or Tensor Processing Units (TPUs) for accelerating specific tasks like deep learning or scientific simulations.

Memory: Large and high-speed memory to accommodate data-intensive computations.

3.Networking:

High-Speed Network Fabric: Low-latency, high-bandwidth network infrastructure to facilitate efficient communication between nodes.

Network Switches and Routers: Specialized network hardware to support the HPC environment.

4.Storage Infrastructure:

Parallel File System: High-throughput, low-latency storage systems optimized for HPC workloads.

Tiered Storage: Implement storage tiers to accommodate data access patterns, with fast storage for active data and slower, more extensive storage for archives.

Backup and Data Recovery: Robust backup and data recovery solutions to prevent data loss.

5.Software Stack:

HPC Operating System: Choose a suitable operating system, often Linux distributions like CentOS or Red Hat, optimized for HPC.

HPC Libraries and Tools: Install and configure HPC libraries and tools like MPI (Message Passing Interface), OpenMP, and CUDA for parallel computing.

Job Scheduling and Resource Management: Use job schedulers like Slurm or Torque to efficiently allocate and manage computing resources.

Development Tools: Provide compilers, debuggers, and performance analysis tools for software development and optimization.

Scientific Software: Install domain-specific software and applications for research purposes, such as computational chemistry, physics simulations, or genomics analysis.

HPC LABS

6. Cooling and Power:

Cooling Systems: Implement efficient cooling systems to prevent overheating in the data center.

Uninterruptible Power Supply (UPS): Ensure power stability and provide backup power to prevent data loss during outages.

7. Remote Management:

Out-of-Band Management: Remote management interfaces for system administrators to monitor and manage the HPC cluster.

8. Security Measures:

Firewalls and Intrusion Detection: Implement security measures to protect the HPC infrastructure from cyber threats.

Access Control: Strong access controls and authentication mechanisms to restrict physical and logical access.

9. Documentation and Training:

Documentation: Create detailed documentation on hardware and software configurations, best practices, and troubleshooting guides.

Training: Provide training for lab users and administrators to maximize the efficiency and effectiveness of the HPC resources.

10. Budget and Cost Management:

Develop a budget for initial setup, ongoing maintenance, and upgrades.

Implement cost-tracking mechanisms to optimize resource allocation.

11. Compliance and Ethics:

Ensure compliance with data privacy regulations and ethical considerations, especially when handling sensitive research data.

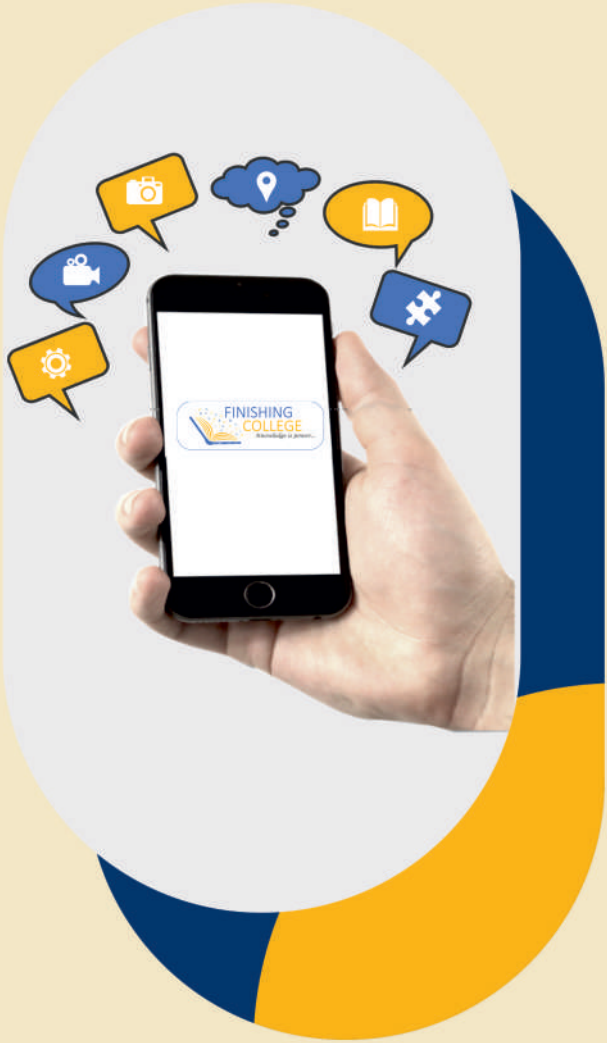
Setting up an HPC lab is a significant undertaking that requires careful planning, substantial investment, and ongoing maintenance. It's crucial to tailor the infrastructure and software stack to meet the specific needs of your research or computational tasks.

WHY CHOOSE
FINISHING COLLEGE?

Why Educational Institutes should consider and partner with Finishing College?

Finishing College founders have extensive knowledge of the Industry and experience in training many reputed Engineering Colleges like:

- *JNTU, Hyderabad*
- *BVRIT, Hyderabad*
- *Pulla Reddy Engineering College*
- *Vishnu Institute of Technology, Bhimavaram*



TESTIMONIALS

VIDEO SHOWING THE APPRECIATION FROM:

1. *Dr.Kamakshi Prasad, HoD CS, JNTU Hyderabad*
   (https://www.youtube.com/watch?v=J7bY90ypVrk&t=95s)
2. *Community Champions of OpenNebula*
   (https://opennebula.io/community-champions)
3. *One among 8 Professional Integrators of oVirt*
   (https://www.ovirt.org/community/user-stories/users-and-providers.html)
4. *Online Labs*
   (https://www.youtube.com/watch?v=KkcxHRhr5NM&t=389s)
5. *Testimonials from Redington for various services implemented.*
   (https://www.youtube.com/watch?v=6LCJuZZika0&t=22s)

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