



Department of Computer Science and Business Systems

Academic Year 2024 – 2025 (Even Semester)

Degree, Semester & Branch: B.Tech. VI & CSBE

Course Code & Title: CCS372 & Virtualization

Name of the Faculty member (s): Mrs.M.Jeya Sundari, AP/CSBE

Innovative Practice Description

- **Unit / Topic: Unit III / Network Virtualization**
- **Course Outcome: CO3**
- **Topic Learning Outcome: TLO3**
- **Activity Chosen: Inquiry Based Learning**
- **Justification:**

Inquiry-based learning is highly effective for teaching *Network Virtualization* as it encourages students to actively explore how virtual networks are created, managed, and optimized in real-world environments. Rather than passively receiving information, students investigate key questions like “How does VLAN segmentation improve network efficiency?” This approach fosters deeper understanding by promoting problem-solving, critical thinking, and hands-on experimentation with tools such as VMware or VirtualBox. As network virtualization is a dynamic and technical subject, inquiry-based learning allows students to connect theoretical knowledge with practical applications, making the learning process both engaging and industry-relevant.

Time Allotted for the Activity: 45 Minutes

- **Details of the Implementation:**
 - The activity was conducted after the completion of basic concepts related to Network Virtualization.
 - The students were divided into small groups and given a real-world scenario related to cloud networking challenges to initiate inquiry.
 - Each group explored key questions on Network Virtualization, such as the roles of VLAN, SDN, NFV, and how virtual networks operate on physical infrastructure.
 - Students discussed, researched, and created a visual summary or infographic based on their inquiry.
 - Finally, each group presented their findings, followed by a short peer review session to promote deeper understanding and idea sharing.

- **CO – PO / PSO mapping:**

CO	PO1	PO2	PO3	PO4	PO9	PO10	PSO1	PSO2
CO1	3	3	2	1	1	2	3	1

(1 – Low 2 – Moderate 3 – High)

- **PO / PSO mapped:**

Innovative practice	PO1	PO2	PO4	PO9	PO10	PSO1	PSO2
	3	3	1	1	1	3	1
Justification for correlation	Students apply foundational networking and virtualization knowledge during inquiry and exploration.	The real-world scenario prompts students to identify and analyze challenges in traditional networks.	Students explore open-ended questions and synthesize data from various sources during group inquiry.	Activity involves collaborative learning and effective team coordination.	Students present findings and explain concepts clearly during group presentations.	Students demonstrate understanding of network virtualization concepts and technologies relevant to their discipline.	The inquiry-based task reflects practical analysis and solution design related to modern networking environments.

- **Images / Screenshot of the practice:**



Reflective Critique:**❖ *Feedback of practice from students and other stakeholders:***

- All the students are very much interested to do the Inquiry-Based Learning approach for enhancing critical thinking, collaboration, and practical understanding of network virtualization concepts.

❖ *Benefit of the practice:* (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)

- Outcome attainment has improved as Inquiry-Based Learning encourages deeper conceptual understanding, critical thinking, and active engagement compared to conventional lecture-based methods.

❖ *Challenges faced in implementation:*

- Some students initially struggled with open-ended questioning and self-directed learning.
- Time management was challenging as students needed more time to explore and present their findings.

References:

- [https://www.youtube.com/inquiry based leaning?v=iILLdQuer0E](https://www.youtube.com/inquiry%20based%20learning?v=iILLdQuer0E)
- [https://www.ritrjpm.ac.in/images/computer-science/2022-2023/MKS_II_Inquiry based summarization/pdf](https://www.ritrjpm.ac.in/images/computer-science/2022-2023/MKS_II_Inquiry_based_summarization/pdf)

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