

We invite to join us for a workshop on  
**THE JOURNEY OF A DATA PACKET IN NETWORKS**

**What is the Workshop about?**

**The journey of a data packet in networks**

is the topic of our workshop proposed.

A networking subject that is prominent in today's age of the internet, data security and mobility

**Who is it for?**

University/ College faculty from any institution who take up Networking subjects as part of the graduation curriculum.

**How to enrol?**

University/ College representatives may get in touch with us by either mail or phone to confirm their participation with specifics of participants and official contact information by 31<sup>st</sup> March 2018

**When is this happening?**

The Workshop is scheduled between the

**05<sup>th</sup> and 06<sup>th</sup> of April 2018**

*It would be a 2 full day program*

**What Does The Program Involve?**

Participants shall gain insight into technical topics covered with access to case study and fully equipped lab sessions at an individual level

**What are the benefits?**

- Gain practical knowhow
- Develop efficient teaching strategies
- Spend time with similar faculty
- Preparation for Professional Schooling
- Learn latest industry trends
- Deliver better value to students

## ACADEMICS ENRICHMENT PROGRAM

Academics Enrichment is an Axone CSR initiative to assist faculty in academics to equip themselves with sound practical know how and up to date expertise enabling them to impart better quality of education.

We offer workshops in areas that we specialize in on a periodic and on-demand basis by partnering with institutions

Sponsored by AXONE, the Academics Enrichment program provides for academic advancement and career knowledge for college faculty interested in furthering their skill base.

There is no fee to participate in these programs

## ABOUT THE WORKSHOP

A sound understanding of the OSI Model is a fundamental requirement for any successful engineer in the IT Networking & Security domain. However due to the theoretical nature of the topic aspiring Network engineers often find it challenging to comprehend the differences between the layers in the OSI Model and therefore delivering this topic possesses a real challenge for any lecturer/trainer. At AXONE we provide a state of the art lab and specialize in training our students by mapping real time examples against the OSI Model making them fall in love with the packets as they traverse various networking elements (routers, switches, firewalls, load balancers etc.). A lot of attention to detail is given by capturing a packet at various points of the network, and then dissecting it to understand the individual elements which make it up. This gives students a step by step understanding of the construction of a packet giving them a depth of knowledge that will assist them in the future when troubleshooting complex network issues

Come join us in the journey a packet takes in the Networking & Security world

The following topics are covered with practical demonstration;

### *topic coverage*

#### TCP/IP ADDRESSING SCHEME

IPv4 Address notation  
 Class A, Class B, Class C addresses  
 Format prefix  
 Subnet mask  
 IPv6 Address notation  
 Globally unique IP addresses, Site local IP address, Link local IP address  
 Modified extended unique identifier

#### MULTICAST ING

Multicast addressing scheme  
 Predictable MAC address

#### UNDERSTANDING ROUTING LOGIC

Routing table and routes  
 Default gateway and default route  
 IP routing functionality of a router  
 Static Routing and Dynamic Routing

### *packet capture demo*

#### ARP PACKETS

Address resolution  
 Duplicate address detection

#### ICMP PACKETS

Echo request and Echo reply  
 Destination host unreachable  
 Destination is administratively prohibited  
 TTL Expired in Transit

#### TCP PACKETS

TCP connection establishment  
 TCP connection termination  
 TCP Flags  
 Sequence numbers  
 Window size  
 Forward Acknowledgment  
 Port numbers

#### UDP PACKETS

DNS query  
 DNS query response

#### FTP & HTTP PACKETS

Control session  
 Data session, active mode and passive mode

#### DNS PACKETS

DNS recursion process  
 Root DNS servers, top level domains  
 MX records  
 Conditional forwarding

#### DHCP PACKETS

Discover, offer, request and ACK packets  
 DHCP relay agent

#### PACKETS THROUGH ROUTERS & FIREWALLS

## ABOUT AXONE

The Axone-team is a group of experienced IT professionals in Software Development, Testing, Networking and Big Data with over 80 Years of combined Enterprise experience

The founders, each experts in diverse fields, have a firm belief in the power of technology to provide meaningful everyday solutions making individuals, organizations and societies succeed. We are all about your success. We only exist to help our students and customers succeed.

With a motto of 'MAKING IT MATTER', our offerings in the noble service of training & development is a pursuit of excellence catering to practical needs of working professionals and fresh engineers & be better equipped to meet the expectations of today's workplace demands

We offer to enhance a competitive edge by learning with us, leveraging upon our industry expertise, lab facilities and our simplified learning approach. Our assurance is delivering utmost value, by means of programs designed to experience real time scenarios and emphasis on quality education from the very best faculty

## ABOUT THE TRAINER



Mr. Koti Reddy specializes in Network & Security design and implementation. He has trained thousands of Network & Security professionals for over 20 years. His consultancy is sought by clients including MNC's, government departments & academic Institutions.

His lab based workshops on 'Cyber-Crimes & their Prevention' and 'Enterprise-Wide Network Security' at Chennai attracted record audiences in thousands. He is credited with setting new standards for teaching NW & Security using real life Topologies.

An Engineering Graduate with several certifications in Network and Security, he is the founder of the reputed "Sans Bound Solutions" in Chennai and "Koti Concepts" in Bangalore.

He now is the Principal Faculty at Axone

## CONTACT US

### AXONE TECHNOLOGY SERVICES

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