

“Online Training on Understanding Linux Network Drivers” by Anil Pugalia

- + **Session 1: System Setup & Introduction**
 - Readyng your System
 - Network related Command Browsing

- + **Session 2: Linux Driver Verticals**
 - Comparison w/ Character Vertical
 - Why Network Drivers?

- + **Session 3: Getting started with a Network Driver**
 - OSI Layers & the Network (TCP/IP) Stack Placement
 - Network Driver & Device Registrations

- + **Session 4: Diving into Network Drivers**
 - Kernel Data Structures & Buffer Management
 - Network Device Operations

- + **Session 5: Open Discussion**
 - Doubt Clarification
 - Live Experiments

- + **Session 6: Dissecting the Packet & its Flow**
 - Structure of a Packet
 - Flowing w/ the Packet

- + **Session 7: Network related Experiments**
 - Experimenting w/ various Network related Applications

- + **Session 8: Wrap Up**
 - Discussion & Conclusion
 - What Next?

Hands-On Details

+ **System Setup**

- Setting Up compatible Driver Build Environment

+ **Command Introduction**

- Playing with various Commands
- Usage, Usability, Debug Techniques

+ **Writing the Network Driver**

- Setting Up the Device Interface
- Developing the Packet & SKB Management Framework
- Implementing the Network Operations

+ **Packet Tracing**

- Printing & Packet Tracing Tools
- Decoding the Packets

+ **Basic Protocol Analysis**

- Experiments with “ping”
- Experiments with “arp”

+ **Summing Up**

- Sum Up your learnings into a Network Application