

Networking

You have heard all of these networking terms before: TCP/IP, VPN, sockets, SSL, frame relay, NAT, IPv6, routers, Ethernet, fiber channel, DSL, ISPs and many more. This COS will provide sessions that cover these subjects from introductory sessions to advanced configuration sessions and labs. If you want to learn how a network works from the physical layer all the way up to the top of the application network interface layer, these sessions are for you.

Setting up an 8F06 Miami Sessions: Thursday, 9/21/2006

22MD: Mon 9:30 - 10:45, B116, Miami Conv Ctr

ID:470053

Level:
Beginner

Course:
Networking

Speaker:
Dave
Boutcher
IBM Corporation

This session will cover the technology and practical considerations for setting up a WiFi (802.11) network in a home or small business. WiFi provides a great opportunity to improve the connectivity of your users. There are a number of considerations, particularly related to security, that have to be considered.

By the end of this session, attendees will be able to:

1. Understand 802.11 technology.
2. Understand how to secure a WiFi network.
3. Understand the options available.

Introduction to TCP/IP

23MD: Mon 11 - 12:15, B116, Miami Conv Ctr

 **BRONZE**
ID:402985

Level:
Intermediate

Course:
Networking

Speakers:
Tom Hadley

Laura J.
Knapp
IBM Corporation

TCP/IP is the protocol of the past, present and future of network computing. With its basis as the access mechanism to the Internet, everyone needs to understand the fundamentals of TCP/IP.

In this session, learn:

1. The TCP/IP protocol architecture and how it has evolved.
2. The background required to understand the basics of TCP/IP.
3. How TCP/IP works in layers, and what each layer does.
4. Some of the strengths of TCP/IP.
5. The core components and how vendors have enhanced these to fit within existing environments.
6. The new elements Internet networking brings to the table.

IP Addressing, Routing and iSeries IP Configuration

25MD: Mon 2 - 4:45, B116, Miami Conv Ctr

ID:490010

Level:
Advanced

Course:
Networking

Speaker:
Larry Bolhuis
Arbor Solutions,
Inc.

In this session we will explain IP addresses, why they are needed, how they are formed and used. Next we will discuss IP routing and how that works. In the second half of the session we will discuss configuring IP on the iSeries. We will discuss virtual IP addresses, load balancing and routing. Finally we will discuss some of the IP servers that run in OS/400 such as everyone's favorite QZDASOINIT and how to make it behave.

What you will learn:

1. What IP Addresses are; how they are formed and used.
2. How IP Routing works.
3. How to configuration IP in OS/400, including virtual IP, Load. 4. Balancing and Network Redundancy.

TCP/IP Problem Determination

31MM: Tue 8 - 9:15, B212, Miami Conv Ctr

ID:430029

Level:
Intermediate

Course:
Networking

Speaker:
Christy
Norman
IBM Corporation

If you have difficulty diagnosing TCP/IP problems, this session is for you! This session shows you where to look in OS/400 to solve TCP/IP problems. This session will cover where to begin, where to look for messages, TCP/IP related jobs and job logs, running traces, the use of TCP/IP utilities such as Netstat, Ping, Traceroute, ARP, and more.

By the end of this session, attendees will understand:

1. Where to look to solve TCP/IP problems.
2. TCP/IP problem determination tools.
3. TCP/IP related jobs.

F06 Miami Sessions: Thursday, 9/21/2006

Why Can't I Connect to the Wireless Network? A Practical Exploration of the Technologies

32MD: Tue 9:30 - 10:45, B116, Miami Conv Ctr

ID:480101

Level:
Advanced

Course:
Networking

Speakers:
Laura J. Knapp
IBM Corporation
Tom Hadley

Wireless Local Area Networks (WLANs) are an accepted part of our business and daily lives. When they work and we can connect they provide unparalleled freedom while allowing us to stay in touch. But what about the times when you cannot connect and others appear to have no problems getting in? This session explores the overall wireless world and explains the technology and why you might be having problems in getting a stable connection!

Securing a Wireless LAN

35MD: Tue 2 - 3:15, B116, Miami Conv Ctr

ID:420041

Level:
Intermediate

Course:
Networking

Speaker:
Tom Hadley

Wireless LANs offer a whole new security challenge at the office. This session will review some of the vulnerabilities you face as you move off the wire, and what security solutions you can implement to solve them.

Another challenge we face is combination of wireless LANs and always on connections at home, plus the use of telecommuting by companies large and small. This combination of technologies means that security needs to be a major consideration, not just at home, but for the office access as well. Come explore the potential vulnerabilities that implementing a telecommuting rollout can produce and more importantly find ways to deal with these vulnerabilities.

By the end of this session, attendees will be able to:

1. Understand wireless LAN security options today.
2. Describe the limitations of the existing options.
3. Evaluate emerging solutions to provide better security.

Introduction to TCP/IP Sockets Programming

36ME: Tue 3:30 - 4:45, B117, Miami Conv Ctr

ID:402218

Level:
Intermediate

Course:
Networking

Speaker:
John Kasperski
IBM Corporation

Now that you have your TCP/ IP network all set up and the basic applications such as TELNET and FTP running, you need to consider providing applications that are specialized to your business's networked environment. This means that you need to do some sockets programming. 'How do you do that?'

In this session, learn:

1. An overview of i5/OS sockets.
2. What an address family is and which ones are supported.
3. The basics of i5/OS sockets programming - including code examples (in C, RPG, and Java) that can be used as building blocks for your sockets application.

iSeries VPN Technologies and Solutions

41ME: Wed 8 - 9:15, B117, Miami Conv Ctr

ID:404135

Level:
Intermediate

Course:
Networking

Speaker:
Chris Gloe
IBM Corporation

What are VPNs? Virtual Private Networks (VPNs) can be effective in extending the reach of your networks in a secure manner. The session will cover the VPN technologies natively supported on the iSeries, how the IP Security Protocol (IPsec) coexists with Network Address Translation (NAT) and the latest technology developments in the VPN area.

In this session, learn:

1. The technologies of VPNs (IKE and IPsec).
2. How access control and address translation affect VPNs.
3. How VPNs can be extended to work with firewalls (UDP encapsulation and NAT Traversal).
4. How to configure and use these technologies on the iSeries.
5. What's new in V5R4 and what are the latest emerging VPN technologies?

F06 Miami Sessions: Thursday, 9/21/2006

Tips and Techniques for Optimizing TCP/IP Throughput

42ME: Wed 9:30 - 10:45, B117, Miami Conv Ctr

ID:510055

Level:
All

Course:
Networking

Speaker:
John Kasperski
IBM Corporation

This session will provide information about how to optimize throughput for TCP/IP connections. Proper TCP/IP configuration settings on i5/OS and in the network are necessary and need to be consistent. A discussion of what types of traces to capture and how to capture them will also be discussed. Finally, information will be provided on how to design and develop a socket application so that optimal performance and throughput can be obtained.

What's New in i5/OS Networking

43MQ: Wed 11 - 12:15, B216, Miami Conv Ctr

ID:500122

Level:
All

Course:
Networking

Speaker:
Chris Gloe
IBM Corporation

This session will provide an overview of the major networking enhancements that are available in i5/OS V5R4. Please plan to attend this session to find out how these various networking enhancements can help improve your networking environment. Topics will include enhancements for TCP/IP networking such as IPv6, Virtual Private Networks, and Intrusion Detection as well as a major enhancement for SNA networking called Enterprise Extender.

Securing a Home LAN

45MD: Wed 2 - 3:15, B116, Miami Conv Ctr

ID:410061

Level:
Beginner

Course:
Networking

Speaker:
Tom Hadley

As you implement a home LAN security becomes a major concern. This session looks at security functions important to a home user and two products that provide support. One is integrated security in a DSL/Cable router modem from Linksys, and the other is Zone Alarm, a free software home security solution. During the discussion key points explored will include what the products can provide from an information standpoint and what is missing from a security solution standpoint. Come and have some fun!

By the end of this session, attendees will be able to:

1. Determine what is needed in a home LAN from a security standpoint.
2. Understand how to review products for functions.
3. Know the limitations of existing solutions.

RFID Technology iSeries Connectivity & Integration

47MF: Wed 5 - 6:15, B118, Miami Conv Ctr

ID:480073

Level:
Beginner

Course:
Networking

Speaker:
Marc R. Doyon
Quatred, LLC

This session breaks down all the pieces of the RFID puzzle to help you understand how to select, build, and deploy a complete RFID solution. A real life example of a Wal-Mart top 100 supplier and other implementations will be discussed in detail with attendees.

By the end of this session, attendees will understand:

1. The components of an RFID solution.
2. Where RFID works and where it does not.
3. The challenges associated with implementing RFID.

F06 Miami Sessions: Thursday, 9/21/2006

OPEN LAB: i5/OS TCP/IP

51LB: Thu 8 - 9:15, A201, Miami Conv Ctr

52LB: Thu 9:30 - 10:45, A201, Miami Conv Ctr

ID:403139

This is a work-at-your-own-pace lab.

Level:

All

In this lab, learn:

Course:

Networking

1. How to do basic TCP/IP configuration on i5/OS.
2. Introduction to IPv6 and how to configure an IPv6 interface.
3. How to configure a Virtual IPv4 interface and use it for fault tolerance.
4. How to view active TCP/IP interfaces, routes, and connections.
5. A way to see if another system is active on the network.
6. How to use TELNET, FTP, and LPD/LPR.

Speakers:

John

Kasperski

IBM Corporation

Christy

Norman

IBM Corporation

OPEN LAB: Advanced TCP/IP Server Configuration

51LB: Thu 8 - 9:15, A201, Miami Conv Ctr

52LB: Thu 9:30 - 10:45, A201, Miami Conv Ctr

ID:404084

This advanced lab is best suited for those having some basic understanding of TCP/IP and communications.

Level:

Advanced

In this lab, learn:

Course:

Networking

1. Advanced TCP/IP features on the iSeries.
2. How to configure and run both the TCP/IP stack and some of the more popular applications using Operations Navigator, including IP routing and filtering, Network Address Translation (NAT), Domain Name Server (DNS), and Dynamic Host Configuration Protocol (DHCP).

Speakers:

John

Kasperski

IBM Corporation

Chris Gloe

IBM Corporation

OPEN LAB: TCP/IP Sockets Programming

51LB: Thu 8 - 9:15, A201, Miami Conv Ctr

52LB: Thu 9:30 - 10:45, A201, Miami Conv Ctr

ID:450043

Level:

Intermediate

Course:

Networking

Speakers:

Christy

Norman

IBM Corporation

John

Kasperski

IBM Corporation

Are you currently an iSeries Programmer that would like to try writing programs that communicate across a network? This open lab will allow you to do just that. Most of the exercises will be provided in C, but some will be provided for RPG and Java as well. These examples will allow you to write a client/server application, secure it with SSL, and convert it to support an IPv6 network.

It is suggested that you attend the Intro to TCP/IP Sockets Programming (402218) class prior to this class or have a high level understanding of C programming and the sockets programming interfaces.

By the end of this session, attendees will be able to:

1. Develop a simple TCP/IP sockets application
2. Develop a simple SSL sockets application
3. Develop a simple IPv6 sockets application

OPEN LAB: Playing with VPNs

51LB: Thu 8 - 9:15, A201, Miami Conv Ctr

52LB: Thu 9:30 - 10:45, A201, Miami Conv Ctr

ID:490005

Level:

Advanced

Course:

Networking

Speakers:

Chris Gloe

IBM Corporation

Christy

Norman

IBM Corporation

Virtual Private Networks (VPN) are a relatively new networking technology paradigm. They were first introduced on the iSeries in V4R4. With the explosive growth of the Internet, companies are asking: How can we best exploit the Internet for our business?

This LAB is intended to introduce those who have some TCP/IP and communications experience to two key VPN customer scenarios. These are: branch office connections, and remote user connections. Each team will have hands-on configurations exercises, of both Windows and the iSeries.

By the end of this session, attendees will be able to:

1. Understand the basics of VPN technologies.
2. Configure and use a Branch Office VPN.
3. Configure and use a remote user VPN.

F06 Miami Sessions: Thursday, 9/21/2006

FTP Techniques & Tools

53MD: Thu 11 - 12:15, B116, Miami Conv Ctr

ID:470057

Level:

All

Course:

Networking

Speaker:

Drew Dekreon

Techniques for making the most of the FTP client on the system - creating scripts, adding notes to results, evaluating success of transfers, and how to create a dynamic script for file transfers using sample programs included in the handouts.

By the end of this session, attendees will be able to:

1. Manage FTP transfer scripts.
2. Programmatically handle results of transfers.
3. Use FTP scripts with substitutable values.

i5/OS Communications Trace Analyzer

54MD: Thu 12:30 - 1:45, B116, Miami Conv Ctr

ID:510072

Level:

All

Course:

Networking

Speaker:

Christy
Norman
IBM Corporation

In the i5/OS v5r3 time frame the Rochester's eSupport web team developed the Communications Trace Analyzer, a client/server tool to do automated analysis on Communications Traces. This tool is a java based tool that uses a Rules Based Language (ABLE) for determining the possible causes of a problem in the network. The tool diagnoses the most common types of TCP/IP communication problems in an IP network.

In i5/OS v5r4 this tool was migrated to the base operating system. By having specialized agents for each of the problems, supplying a master agent that gathers all the information and produces the final analysis, and providing an easy to use user interface this tool has proven to be a powerful resource for problem determination in the field of communications.

By the end of this session, attendees will be able to:

1. Install Communications Trace Analyzer in v5r4.
2. Use Communications Trace Analyzer to find problems on their network.

Moving to Voice Over IP

56MD: Thu 3:30 - 4:45, B116, Miami Conv Ctr

ID:480100

Level:

Advanced

Course:

Networking

Speaker:

Tom Hadley

Voice over IP technologies have been with us for years. Finally there is a growing install base. Hear about some of the technology involved, and why some organizations have moved to Voice Over IP (VoIP) in place of circuit-switched PBXs.

You have a high-speed broadband connection at home; does it make sense for you to use VoIP? You can eliminate the need (and the cost!) to have your telephone service provided by a phone company. Is this a good idea? What are the pluses and minuses in doing this? How easy is it really to have mobility with this type of a solution?

Come hear (and share) real-life experiences of using VoIP at home and business.