



Asia Pacific & Japan Student Technology Forum Sep 2010



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APJ Technical Advocacy Team



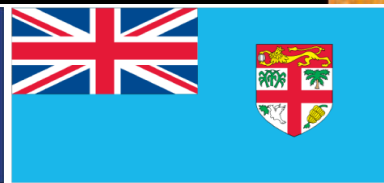
Cisco | Networking Academy®
Mind Wide Open™



Australia



New Zealand



Fiji



Tonga



Samoa



India



Sri Lanka



Maldives



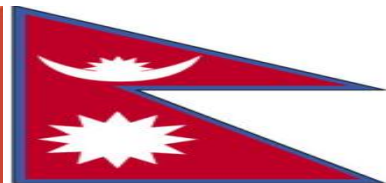
Bangladesh



Papua New Guinea



Bhutan



Nepal



China



Hong Kong



Taiwan



Macau



Mongolia



Korea



Singapore



Cambodia



Malaysia



Indonesia



Thailand



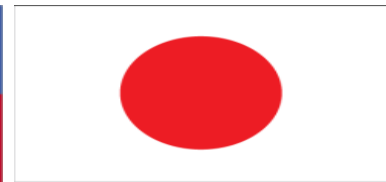
Laos



Vietnam



Philippines



Japan

ASIA PACIFIC & JAPAN



Agenda

- Who are we?
- Open your mind, enter the interactive world of aspire! Thank you Maria!
- What do you need to know about port negotiation?
- Effective use of telnet
- IOS tips and tricks which may make you a hero
- Backup and restore IOS configuration within 10 seconds!
- Recording for previous APJ Student Technology Forum
- Feed back & Evaluation



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Open your mind, enter
the interactive world of
aspire! Thank you Maria!



John Lim

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**Senior Manager, Technical Advocacy
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Cisco Aspire

Simulation-based Game for Experiential Learning



- Multiple levels, multiple paths
- Multiple contract choices
- Simulated time and economy
- Money management
- Problem injector
- Skills proficiency indicator
- Networking simulation



Cisco Aspire

Game Pedagogy

Skills	Game Scenario Examples
Decision making	<ul style="list-style-type: none"> ▪ Refurbished vs. new equipment
Social responsibility	<ul style="list-style-type: none"> ▪ Fire at local food bank ... donate money, time, or do nothing
Ethics	<ul style="list-style-type: none"> ▪ Over shipment of equipment ... return, keep it or make a deal with supplier to purchase at lower cost
Financial management	<ul style="list-style-type: none"> ▪ Take out loans to pay bills, buy equipment without contract ▪ Profits ... spend, give raise, donate to local business incubator
Customer relations	<ul style="list-style-type: none"> ▪ Angry customers calling because helper tracked mud over customer's carpet



Aspire Beta 3 - What's new?

This version of the game includes fixes and the following enhanced functionality:

- More than 24 new technical challenges related to contracts
- Additional game play with new leaderboards (optional)
- Enhanced Learning Center with new technical lessons
- Improvements to the user interface and Help content

Cisco Aspire is part of the Passport21 offerings that supplement the Networking Academy curricula and help students prepare for 21st century careers.

Cisco Aspire is a simulation-based game that challenges students to apply and practice the business and financial skills introduced in the Passport21 case studies within simulated networking environments.

AC ->Cisco Passport21 Course Catalog page



What you need to know about port negotiation



Eric Kwok
Technical Manager, Technical Advocacy
Hong Kong

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Making Ethernet Connection



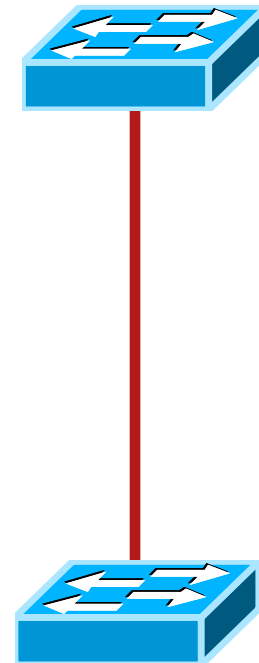
- Cable Type
 - Connectivity issue



- Duplex
 - Performance issue



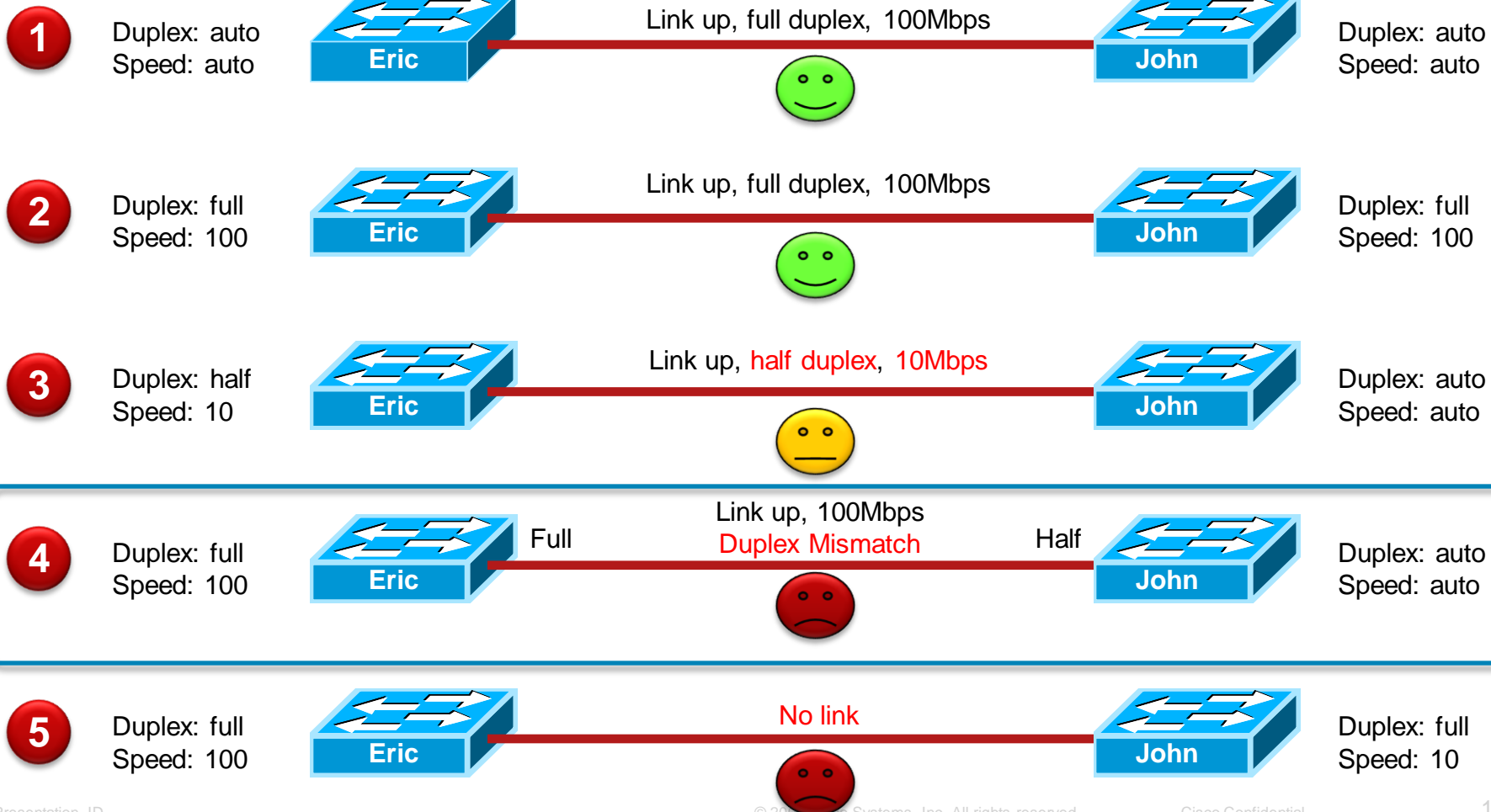
- Speed
 - Connectivity issue





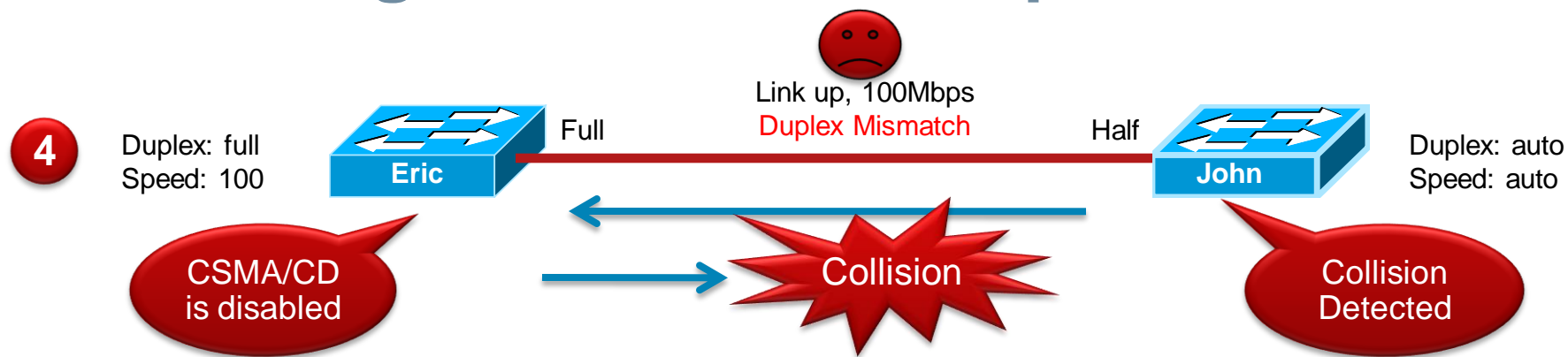
Scenario

Connecting 2 Fast Ethernet Switches





Auto Negotiation Fail – Duplex Mismatch



- The standard requires that the system configured for auto negotiation must use half duplex
 - Switch# show interface fa0/1
 - Eric: Full-duplex, 100Mb/s, 100BaseTX/FX
 - John: Auto-duplex (Half), Auto Speed (100), 100BaseTX/FX
- Halfduplex side: late collisions, alignment errors, and FCS errors go up
- Full duplex side: collision counter is not active. FCS, CRC, alignment, or runt counters go up



What you need to know

- Cause of Auto-Negotiation Fail
 - nonconforming implementation, hardware incapacibilities, or software defects.
- When Auto-Negotiation Fail
 - Force to run half duplex
 - Duplex mismatch = performance issue
 - Speed mismatch = link down
- CSMA/CD is not used on Full Duplex Ethernet networks.
- Gigabit Ethernet only support full duplex
- AutoMDIX is disable when manual speed/duplex



Command for troubleshooting

- `show interface fastethernet 0/1`
- `show interfaces fastethernet 0/1 status`
- `show controller ethernet-controller fa0/1`



More Reading

- **Troubleshooting Cisco Catalyst Switches to NIC Compatibility Issues**

–http://www.cisco.com/en/US/products/hw/switches/ps700/products_tech_note09186a00800a7af0.shtml

- **Troubleshooting Ethernet**

–<http://www.cisco.com/en/US/docs/internetworking/troubleshooting/guide/tr1904.html>

- **Introduction to LAN Protocols**

–<http://www.cisco.com/en/US/docs/internetworking/technology/handbook/Intro-to-LAN.html>

- **Errdisable Port State Recovery on the Cisco IOS Platforms**

–http://www.cisco.com/en/US/tech/tk389/tk621/technologies_tech_note09186a00806cd87b.shtml



Effective use of telnet



Masato Fujiwara

**Technical Manager, Technical Advocacy
Japan**

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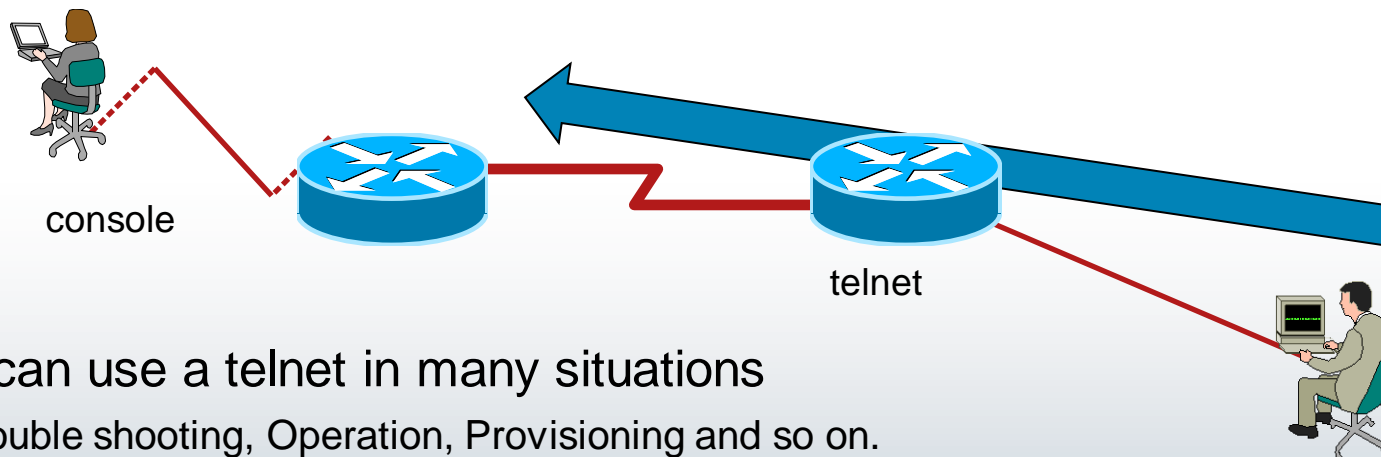


Telnet is very important

- Telnet is very basic feature.

We can login to routers/switches from distant location.

Command is very simple.



- We can use a telnet in many situations

Trouble shooting, Operation, Provisioning and so on.

- Telnet x.x.x.x & ctrl shift 6 + X

You can go back to the RT1 from RT2. (session remains) with “Ctrl Shift 6 + X”.

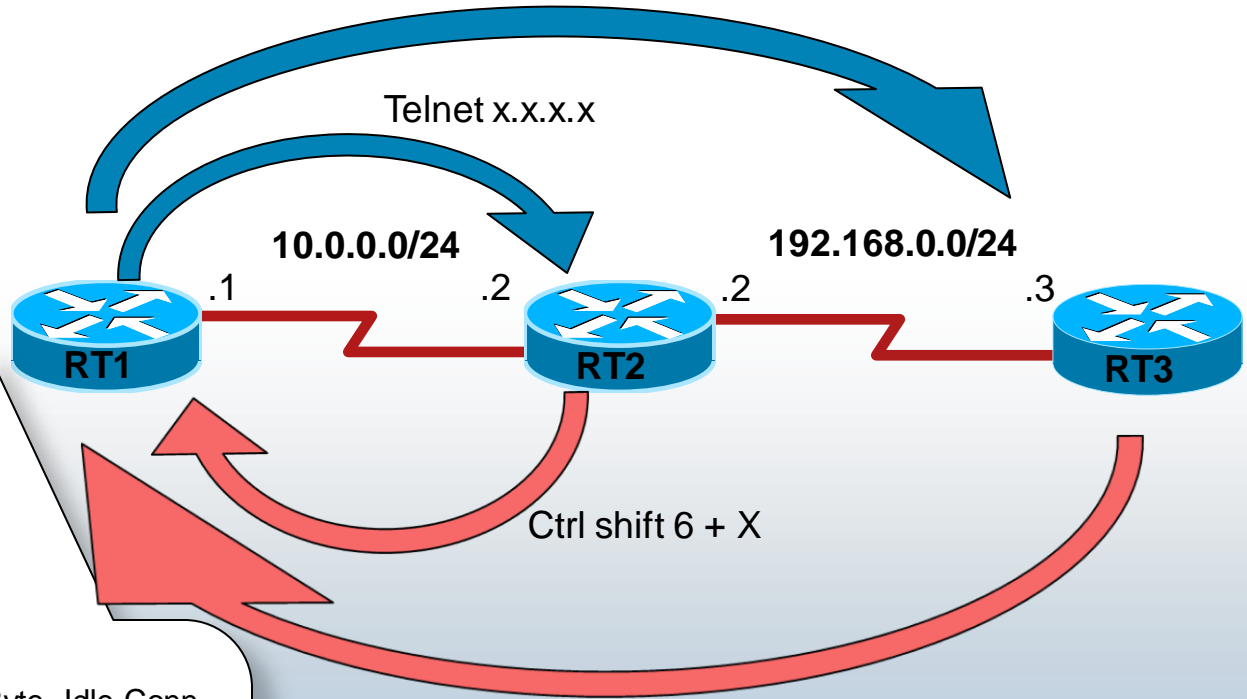
Resume command will help you to go back to RT2 again.

Need to be proficient, quick and correct!!

How to use telnet

- Resume x

You can jump any routers with "Resume X".



```

R1#sh sessions
Conn Host      Address      Byte Idle Conn
Name
  1 10.0.0.2    10.0.0.2     0  0 10.0.0.2
  2 192.168.0.3 192.168.0.3  0  0
192.168.0.3
R1#resume 1
[Resuming connection 1 to 10.0.0.2 ... ]
  
```

R2>



IOS tips and tricks which will make you a hero



Ananth B. S

**Technical Manager, Technical Advocacy
India**

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IOS tips and tricks which will make you a hero

- Do command
- Begin Filter
- Include Filter
- Exclude Filter
- Section Filter (Only after 12.3(2)T)
- Ping repeat
- Alias



Commands we learnt

do show run

do show ip route

show ip route | begin Gateway

show run | include ospf

show ip int brief | exclude down

show run | section ospf

ping 1.1.1.1 repeat 1

alias exec sip sh ip interface brief

alias configure dsip do sh ip interface brief

alias configure dping do ping

Backup and restore IOS
configuration within 10
seconds



Liu Kang

**Technical Manager, Technical Advocacy
Beijing, China**



What is your way to “import” config into routers

- Copy and paste from configuration backup text files
- Copy from usb flash to startup/running (ISR with usb port)
- Copy startup running
- Re-configure everything by using my own memory...

Problems may occur
when using those
“traditional ways”





problems

- Need remove garbled lines from backup files
- Some terminal application may not have enough buffer (copy and paste issue)
- Need do “no shutdown” for each interface manually

```

!
interface FastEthernet0/1.12
 encapsulation dot1Q 12
 ip address 9.9.12.1 255.255.255.0
 no ip redirects
 no ip unreachable
 --More-- 00000000000000000000000000000000 no ip proxy-arp
 ip nat inside
  
```

A better way to
backup & rollback
configuration



Cisco IOS Configuration Replace and Configuration Rollback



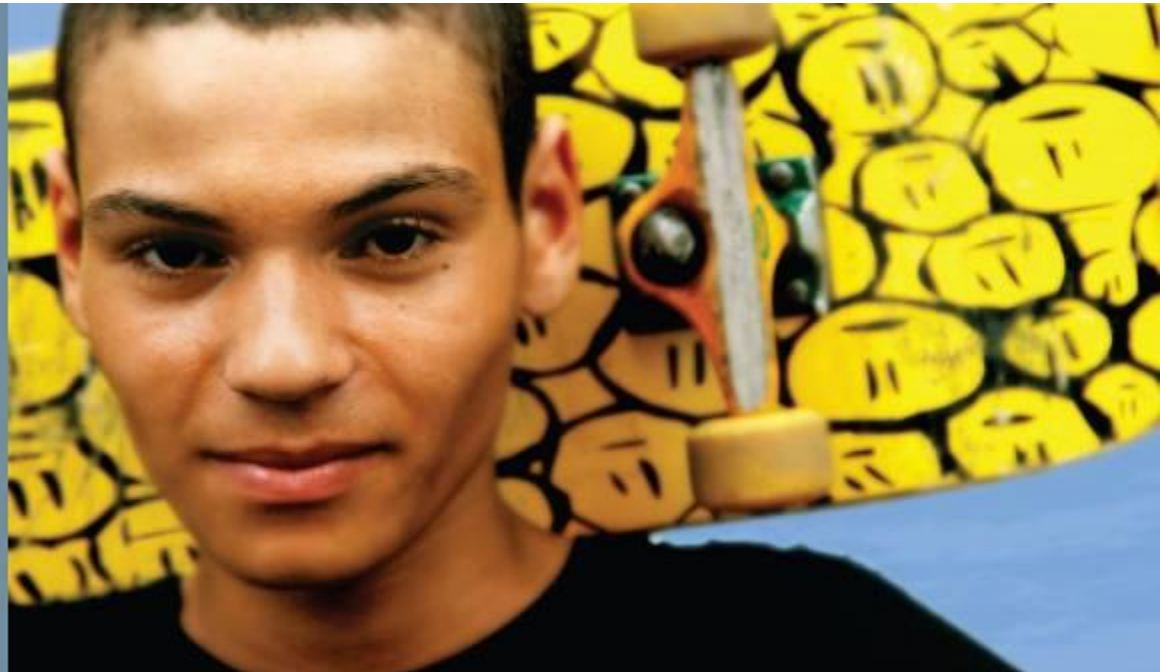
Related Commands

Command	Description
archive config	Saves a copy of the current running configuration to the Cisco IOS configuration archive.
configure confirm	Confirms replacement of the current running configuration with a saved Cisco IOS configuration file.
maximum	Sets the maximum number of archive files of the running configuration to be saved in the Cisco IOS configuration archive.
path	Specifies the location and filename prefix for the files in the Cisco IOS configuration archive.
show archive	Displays information about the files saved in the Cisco IOS configuration archive.
time-period	Sets the time increment for automatically saving an archive file of the current running configuration in the Cisco IOS configuration archive.

http://www.cisco.com/en/US/docs/ios/12_3t/12_3t7/feature/guide/gtrollbk.html

*IOS 12.3(7)T & 12.2(25)S

Recording for APJ
Student Technology
Forum is available!



John Lim

CCIE #2977

**Senior Manager, Technical Advocacy
Asia Pacific & Japan**



Recording for previous Student Technology Forum

Alumni advantage



- The Cisco Learning Network
- The interview
- UNESCO work for yourself
- technical skill
- business skills

Skills | Student Webinars |

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Topic & Description

Asia Pacific & Japan Student Technology Forum (Sep 09)

Password recovery in ISR in less than 60 sec & understand it!
 PT: Multiuser, King of the Hill Game across China, Hong Kong, India and Singapore
 NetSpace game
 Games In Cisco Learning Network
 CCNA Quiz winner

Presenters: The Cisco Networking Academy Technical Team

Date	Topic	Presenter	Duration	Size	Total number of recordings: 5
Sep 24, 2009	APJ Student Technology Forum Sep 2009 (4) Games in Cisco Learning Network, Cisco Student SingleShot	Eric Kieck	15 minutes	28.8 MB	View
Sep 24, 2009	APJ Student Technology Forum Sep 2009 (3) Games in Cisco Learning Network, Cisco Student SingleShot	Anaeth B S	15 minutes	29.8 MB	View
Sep 24, 2009	APJ Student Technology Forum Sep 2009 (2) Packet Tracer, Multiuser, King of the Hill Game across China, Hong Kong, India and Singapore	Liu Kang	15 minutes	9.2 MB	View
Sep 23, 2009	APJ Student Technology Forum Sep 2009 (1) Introduction to APJ Student Technology Forum	John Lim	9 minutes	1.6 MB	View
Sep 23, 2009	APJ Student Technology Forum Sep 2009 (1) Password recovery in ISR in less than 60s, and understand it!	John Lim	35 minutes	17.5 MB	View

- ❖ http://www.alumni-advantage.com/skills/technical/Student_Webinars.html
- ❖ 1000+ students from 27 different countries joined previous online session!

Feedback & Evaluation

Thank You!



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