

# AFIX-TF

## TECHNICAL WORKSHOP REPORT (IVORY COAST)

### I. Introduction

The African Internet Exchange Task Force (AFIX-TF) held a one-day EN-ISPA workshop and a two-day technical training workshop in Abidjan, Ivory Coast, at “Centre de Formation aux Technologies de l’Information et de la communication CFTIC-INPHB” from Monday 10 to Thursday 11 april 2006. Trainers: Matali Shabazz, Jean Robert Hountomey, Olivier Nana Nzépa, Yaovi Atohoun & Didier Kasole. This report is written by Didier Kasole, Workshop Team Leader.

### II. Planned Outcome and Benefit

Participants at the Workshop will be able to establish an ISPA, establish and maintain an Internet Exchange Point. The implicit benefit of the workshop will be to establish technical cooperation between ISPs.

### III. Workshop Structure

#### Day 1 AFIX

#### **Session 0: Opening Session** **08:30-09:00**

Souleymane Oumtanaga of CFTIC-INPHB (local host) did the official opening of the workshop. Didier Kasole presented AfrISPA’s perspectives.

#### **Session 1: High-level Overview** **09:00-09:45**

Presented by Didier Kasole, this session provided a brief look at the history and current status of Internet and its architecture, and introduced some key concepts.

#### **Session 2: Cost-savings exercise** **11:45-11:00** **(including pause café)**

Presented by Didier Kasole, this session explores the cost-savings dynamics associated with participation in an IXP by an ISP, including the dynamics for the overall ISP market.

#### **Session 3: Technical refresher (static & dynamic routing) 11:00-13:00**

Presented by Jean Robert and Didier Kasole, this session refreshed the concepts of static and dynamic routing.

**Session 4: Technical aspects of peering****14:30-17:30**

Presented by Jean Robert Hountomey and Didier Kasole, this session focuses more closely on how to set up peering, giving more detail on BGP parameters and configuration.

**Day 2: AFIX****Session 7: Business aspects of Internet Exchanges****08:30-10:30**

Presented by Matali Eddie, this session explores the business models applicable to an Internet Exchange, and the associated financial and business implications – including how to ensure financial sustainability and how to manage relationships.

**Session 4: Technical aspects of peering (continued)****11:00-13:00**

Presented by Jean Robert Hountomey, this session focused more closely on how to set up and configure an IXP. During this session participants set up an example IXP.

**Session 8: Final exercise and wrap****11:00-13:00**

Presented by Jean Robert Hountomey and Didier Kasole, this session was a recapitulation of BGP configuration and parameters. Student setup many configurations using different interfaces.

## IV. Participants attendees

N	NOM	PRENOMS	POSTE	STRUCTURE	EMAIL	TELEPHONE
1	AHISSI	Jean-François	Adm-Système	CI2M	ahissi@aviso.ci	07-00-94-84
2	KANDE	Baya	Technique	CI2M	kandeb@aviso.ci	07-57-89-73
3	KOUASSI	Hervé J.		AFNET	hervejoel@afnet.net	05-92-80-89
4	OUELLE	Alain Blagnon	Resp. supp technique	AFNET	support@afnet.net	05-95-42-23
5	PACODE	Lucien	Ing. Conducteur	GENERAL RELATION	pacode@gr.co.ci	05-88-58033
6	MONTHÉ	Idriss Martial	plate forme internet	CI MARKET	jomartial@cimarket.net	08-37-77-04
7	SOUNKERE	Mohamed	responsable technique	CI MARKET	sounkere@cimarket.net	05-00-00-46
8	BENIE	Herman		AROBASE	<a href="mailto:herman.benie@arobase.telecom.ci">herman.benie@arobase.telecom.ci</a>	05-96-00-50
9	KOUACOU	Célestin	Ingénieur	AROBASE	kkouacou@yahoo.fr	22-00-40-14
10	KOUAME	Kouakou C.	DT/DNT/SGL	OCIT	charles.kouame@ci-telecom.ci	08-0074-80
11	TETY	Pierre	Adjoint labtic	INP-HB	tety@nic.ci	05-89-79-19
12	KANDOU	Guillaume	Etudiant DESS RIT	INP-HB	kandougul@yahoo.fr	07-78-46-76
13	KHALIL	Tarek Abou	Stagiaire	INP-HB	kaliltarekabou1@yahoo.fr	08-42-13-49
14	KIMENYI	Philippe	Assistant	INP-HB	kimenii@yahoo.fr	06-08-12-45

N	NOM	PRENOMS	POSTE	STRUCTURE	EMAIL	TELEPHONE
15	OUMTANAGA	Souleymane	responsable du NIC	INP-HB	oumtana@nic.ci	07-90-02-31
16	N'DRI	Alexi	stagiaire du labtic	INP-HB	alexysndri@yahoo.fr	05-71-14-45
17	KOURAOGO	Laurent J.	stagiaire du labtic	INP-HB	jkouraogo@yahoo.fr	08-06-81-29
18	KONE	Nergué	stagiaire au labtic	INP-HB	nerguyefi@yahoo.fr	07-63-50-77
19	MATALI	Shabazz	Instructor		smatali@yahoo.fr	19
20	HOUNTOMEY	Jean Robert	Instructor		<a href="mailto:robert@ecoband.net">robert@ecoband.net</a>	
21	RUKERATABARO	Kasole Didier	Team Leader		Didier@afrispa.org	

## V. Workshop Evaluation

In general, the assessments were favorable, 92 % of responding participants were very satisfied by the workshop.

	Fourteen participants out of 19 completed the evaluation forms	
On the Question: How useful did you find the workshop?	Very useful	14
	Somewhat useful	
	Not useful	
On the Question: How did it match your expectations? (Were the aims communicated in advance?)	Exceeded	3
	As expected	11
	Below	

### ***Individual session evaluations and trainers evaluations***

#### **Session 1: Overall introduction**

Trainer's name: Didier Kasole

Please rate the following on a scale of 1 to 5:

	5 = Excellent, 4 = Good, 3 = Average, 2 = Poor, 1 = Very poor
Presentation skills	3.86
Presentation content	4.14

Handouts	3.93
Overall	3.93

Comment: Very hard to follow, improve Technical aspects

## Session 2: Cost-savings exercise

Trainer's name: \_Didier Kasole\_\_\_\_\_

Please rate the following on a scale of 1 to 5:

	5 = Excellent, 4 = Good, 3 = Average, 2 = Poor, 1 = Very poor
Presentation skills	3.57
Presentation content	4.00
Handouts	3.71
Overall	3.86

Comment: More time for this, as it will help convince decision makers. Table will be more useful if more flexible in the consultation. More comment on formulas. Explained more parameters that allow utilization of spreadsheet. Give parameters that can be modify.

## Session 3: Technical Refresh

Trainer's name: \_\_\_ Jean Robert & Didier Kasole \_\_\_

Please rate the following on a scale of 1 to 5:

	5 = Excellent, 4 = Good, 3 = Average, 2 = Poor, 1 = Very poor
Presentation skills	4.00
Presentation content	4.21
Handouts	3.79
Overall	4.00

Comment:

## Session 4: Technical Aspects of Peering (a)

Trainer's name: \_\_\_ Didier Kasole\_\_\_\_\_

Please rate the following on a scale of 1 to 5:

	5 = Excellent, 4 = Good, 3 = Average, 2 = Poor, 1 = Very poor
Presentation skills	4.21

Presentation content	4.29
Handouts	3.71
Overall	4.00

Comment: Improve quality of diagrams

### Session 3: Technical Aspects of Peering (b)

Trainer's name: \_\_\_ Jean Robert \_\_\_

Please rate the following on a scale of 1 to 5:

	5 = Excellent, 4 = Good, 3 = Average, 2 = Poor, 1 = Very poor
Presentation skills	4.21
Presentation content	4.29
Handouts	4.00
Overall	4.07

Comment:

### Session 6: Business aspects of Internet Exchange

Trainer's name: \_\_\_ Eddie Matali \_\_\_

Please rate the following on a scale of 1 to 5:

	5 = Excellent, 4 = Good, 3 = Average, 2 = Poor, 1 = Very poor
Presentation skills	3.93
Presentation content	3.93
Handouts	3.79
Overall	3.86

Comment: interesting exercises, well done

### Session 8: Final Exercise (BGP configuration, set up an IXP)

Trainer's name: \_\_\_ Jean Robert Hountomey & Didier Kasole \_\_\_

Please rate the following on a scale of 1 to 5:

	5 = Excellent, 4 = Good, 3 = Average, 2 = Poor, 1 = Very poor
Presentation skills	4.57

Presentation content	4.43
Handouts	4.00
Overall	4.29

Comment: Would like more exercises. Explain more BGP protocol

## Overall Workshop Evaluation

How did you find the length of the workshop?	Too short	62%
	About right	38%
	Too long	0%
How did you find the pace of the workshop?	Too slow	0%
	About right	46%
	Too fast	54%
How satisfied were you with the organisation of the workshop?	Not satisfied	0%
	Somewhat satisfied	8%
	Very satisfied	92%
<p>Any other comments?</p> <ul style="list-style-type: none"> <li>• If this kind of workshop can be done more frequently to build capacity in ISP industry and local regulatory body.</li> <li>• Alternating Technical Aspects and theoretical aspects help to understand more easily technical aspects.</li> <li>• On the simulation sheet, I would like to simulate Ivory Coast situation with present ISPs</li> <li>• More time to understand technical aspects</li> <li>• I appreciate open mind of instructors, well done</li> <li>• Too short, add 2 more days</li> </ul>		

## VI. Conclusion & follow up

Since the third workshop 100% of participants was very satisfied (for the first and the second only 36% & 86%) but now only **92%** are. The length of the workshop still a big problem, 62% of participants find the workshop too short (last score was 50%), I will suggest to add half day for the Technical Workshop. All instructors are rated **4.XX**, the reason can be: more familiar with documentation, take care of previous recommendations. As requested by participants, we did more exercises, and they appreciate. Keep doing more exercises for the future.

After the workshop, ISPs made decision to establish an IXP and chose the location .CI office. During the half day EN-ISPA, ISP took decision to continue talk to each other for the creation of ISPA, giving .ci manager the flow for the organization.