



NATO PROGRAMMING CENTRE

NIRIS SYSTEM ADMINISTRATION COURSE

SYLLABUS NIR – 12 – X (3.5.0.X)

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Next Review Date: 31 March 2013

Authority – H-TRB

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H-TRB – Training Branch

C-ITS – Chief Individual Training Section

NIRIS LE – NIRIS Lead Engineer

NIRIS – NIRIS Instructors

HES – Hardware Engineering Section

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PART I - INTRODUCTION

1. Aim of the course.

The aim of the NIRIS System Administration Course is to equip System Administrators with the knowledge and skills required for successful implementation and support of the NIRIS technology. The course explains the process of installing and configuring the product, and includes case studies that address which configuration settings are optional for a variety of customer needs as well as troubleshooting exercises.

2. Summary of Training Requirements.

The NIRIS System Administrator course is a single standing course, not linked to other NPC Courses.

3. Eligibility

Applicants for the NIRIS System Administrator course must have basic knowledge about UNIX, Solaris or successfully followed the NISP and/or Combined NISP/ICC System Admin training. The supervisor of the student must confirm in the joining notice that the student possesses this prerequisite; otherwise the applicant will not be accepted on the course. In case of more applicants than course seats SHAPE through Chairman ASC SC-1 will set priorities. All NIRIS user units are eligible to send students providing course pre-requisites are met.

4. Duration.

The duration of the course is 36 hours taught over 5 days.

a. Effective Training Time

The lessons will go from 09:00am until 17:00 every day.

b. Non-effective time

Coffee breaks (if duty allows) 10:00 – 10:20am and 15:00 – 15:20pm.

Lunch 12:30 – 13:30pm.

Small breaks will be at the discretion of the instructor.

5. Security Classification

Since the course is done in a NATO SECRET environment, the students must provide a copy of their Security Clearance before entering the NPC premises.

Without a Security Clearance the students will not be able to attend the course.

a. The Slides. NATO UNCLASSIFIED

b. The Network. NATO CONFIDENTIAL

c. The Classroom. NATO CONFIDENTIAL

d. The CD's. NATO UNCLASSIFIED

e. Discussion Topics. NATO CONFIDENTIAL

6. Sponsor

The overall Sponsor of the NIRIS System Administrator Course is the Commander of NPC.

7. Training Executive

The overall responsible for the conduct of these courses is the Chief Individual Training Section (C-ITS). The responsibility can be delegated to another person if required.

8. Course size

The maximum numbers of students is set to 14 due to workstations and instructor availability. Seats for observers (no workstation) are available. Minimum number of students is set to 6. H-TRB based on directions from Chairman ASC SC1 can change these numbers.

9. Syllabus Review Date.

This document is Version 6 of Syllabus for NIRIS System Administration Course and is valid from 01 June 2012.

This Syllabus is to be reviewed once a year and by every new NIRIS software baseline release, by the NIRIS PL or (by discretion of) H-TRB.

10. Additional Information.

a. Location

The NIRIS System Administration Courses will run at the NPC in the classroom B12/B13.

b. Nominations for Course.

Students apply by using the Application Form attached to the Invitation Letter and available in the NPC Homepages on both secret WAN and public internet.

c. Trade Qualification Annotation.

The students on the NIRIS System Administration Courses will receive a certificate indicating that they have participated in the NIRIS System Administrator Course.

d. Gender Terminology

Where the masculine gender is used (e.g. When a student has a problem **he** is to ...) it is actually applicable to both genders.

e. List of Abbreviations.

ACCS	–	Air Command & Control System
ASE/MASE	–	Aegis Site Emulator, Multi Aegis Site Emulator
CORBA	–	Common Object Request Broker Architecture
COSI	–	COrba Service for ICC
ITS	–	Individual Training Section
GUI	–	Graphical User Interface
ICC	–	NATO-Wide Integrated Command & Control Software for Air Operations.
ISP	–	Interactive Simulation Package
LAN	–	Local Area Network
LDAP	–	Lightweight Directory Access Protocol
NADGE	–	NATO Air Defence Ground Environment
NATO	–	North Atlantic Treaty Organization
NIS+	–	Network Information System Plus
NISP	–	NPC Integrated Solaris Platform

- NIRIS – **N**etworked **I**nteroperable **R**eal-Time **I**nformation **S**ervices
- NPC – **N**ATO **P**rogramming **C**entre
- SRV – **S**e**R**Ver
- SYNAX – **S**YNthetic **A**ir **e**Xercises
- TDL – **T**actical **D**ata **L**ink
- WAN – **W**ide **A**rea **N**etwork

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PART II - ALLOCATION OF TIME

Course Topic (a)	Daily Time Allocation						
	Section (b)	Total (c)	Day1 (d)	Day2 (e)	Day3 (f)	Day4 (g)	Day5 (h)
Module 0	0. Welcome	30 mins	30 mins				
Module 1	1. NIRIS Introduction	150 mins	150 mins				
Module 2	2. NIRIS Server Installation / Server Module / NIRIS WAN-GUI	120 mins	120 mins				
Module 3	3. NETmate/Serial Port Manager (incl. TDLs and Link Dialects)	210 mins	60 mins	150 mins			
Module 4	4. TSS NIRIS 3	40 mins		40 mins			
Module 5	5. Recording Manager	100 mins		100 mins			
Module 6	6. Correlation Manager	60 mins		60 mins			
Module 7	7. Conversion Manager	60 mins		20 mins	40 mins		
Module 8	8. Network Port Manager (incl. Wrapper Formats)	230 mins			230 mins		
Module 9	9. TIES, OANT, NIRIS tools (titote, tracktote,...)	100 mins			100 mins		
Module 10	10. JREAP Protocol Manager	290 mins				290 mins	
Module 11	11. Web Service Relay Manager File System Relay Manager	60 mins				60 mins	
Module 12	12. CSD Helpdesk Introduction	20 mins				20 mins	
Module 13	13. Test – Theory and Hands-On	170 mins					160 mins
Module 14	14. General Review and Questions	50 mins	20 mins	20 mins	20 mins	20 mins	20 mins
Module 15	15. Students receive their certificate						
Totals		1700 mins	380 mins	380 mins	370 mins	390 mins	180 mins

PART III - SUMMARY OF COURSE CONTENT

Subject (a)	Training Objective Number (b)	Objective (c)	Remarks (d)	Syllabus Time (e)
<u>Conditions and Standards.</u>				
All training, both lessons and practical exercises are to be conducted in the classrooms B12-B13.				
All practical exercises are to be completed with using the training manual and the personal notes of the student.				
TMS Briefing	0.1	Welcome new students	TMS	Theory 30 mins
NIRIS Introduction - General overview	1.1	Know the NIRIS 3.5.0 purpose and functionalities	ITS	30 mins
NIRIS Introduction - Documentation	1.2	Get to know NIRIS 3.5.0 relevant documents (SVD, SUM, SIP, SIDs, BTA), TBs and be able to locate solution hints in case of questions and problems to NIRIS 3.5.0	ITS	40 mins
NIRIS Introduction - Folder structure (Solaris 10 / NISP)	1.3	Get knowledge	ITS	20 mins
NIRIS Introduction - Hardware familiarization	1.4	Know, which HW can be used with NIRIS 3.5.0	ITS	25 mins
NIRIS Introduction - Client applications for NIRIS feeds	1.5	Know possible client applications for NIRIS feeds (ICC, Igeosit, Brite, JTS, GoogleMaps)	ITS	15 mins
NIRIS Introduction - NIRIS feed mechanisms	1.6	Understand the different NIRIS feed mechanisms	ITS	20 mins

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NIRIS 3.5.0 Server Overview / Installation	2.1	Get knowledge about NIRIS 3.5.0 Server and available Managers, be able to perform a fresh Installation of NIRIS 3.5.0 on NISP 3.5.0 with a check of the Installation i.a.w. SIP	ITS	20 mins
NIRIS Server Configuration	2.2	Know the location of the NIRIS 3.5.0 Server configuration files and how to configure them	ITS	10 mins
NIRIS User Management / WAN GUI	2.3	Know the "useradmin" GUI to configure users (=> WAN GUI) and get to know the WAN GUI (NIRIS managers - users)	ITS	10 mins
NIRIS Server Logging	2.4	Get knowlegde about NIRIS 3.5.0 log files location and how to set up logging within the WAN GUI	ITS	10 mins
NIRIS and DNS	2.5	Known problems of NIRIS and DNS resolution	ITS	10 mins
Tactical Data Links and Link Dialects	3.1	Know different Tactical Data Links (TDLs); Identify possible link dialects for SPM / NPM configuration	ITS	20 mins
Serial communication devices	3.2	Identify purpose of serial communication devices and configure a NETmate Device	ITS	20 mins
NETmate NM9021	3.3	See the configuration of a serial feed for a NETmate Device and perform the configuration	ITS	20 mins
Stream/Site Data configuration	3.4	Identify purpose and location of as well as configure the NirisStreamInfo.xml via the WAN GUI	ITS	20 mins
Serial Port Manager (SPM)	3.5	Identify purpose of and configure the NIRIS SPM with a Link 1 and Link 11B serial feed	ITS	10 mins

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NIRIS 3 TSS overview and configuration	4.1	Know the NIRIS 3 Trackstore Synchronization Server (Trackstores), configure it for the Link 1 / 11B feed out of the SPM	ITS	10 mins
Client configuration (NIRIS 3 TSS)	4.2	Configure an ICC-Client using a NIRIS 3 TSS and display the feeds	ITS	5 mins
NIRIS 3 TSS and Client compatibility	4.3	Understand the compatibility problem and know where to find the respective table	ITS	5 mins
Recording Replay Manager (RM) - Overview, configuration and logging	5.1	Know the possibilities, configuration and logging of the RM	ITS	10 mins
RM - Recording configuration	5.2	Identify purpose of and configure the RM for the available Link feed (input from SPM => recording)	ITS	15 mins
RM - Replay configuration	5.3	Configure the RM for replay, make the feed available on the LAN and generate a Trackstore within the TSS => check in ICC for availability	ITS	10 mins
Conversion Manager (CM) - Overview, configuration and logging	6.1	Know the possibilities, configuration and logging of the CM	ITS	10 mins
Conversion Manager (CM) - configuration example	6.2	Configure the CM (within the different subnets => usage of the generated feed from the SPM) and generate a Trackstore within the TSS => check in ICC for availability	ITS	25 mins
Correlation Manager (CORM) - Overview, configuration and logging	7.1	Know the possibilities, configuration and logging of the CORM	ITS	25 mins

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Correlation Manager (CORM) - configuration example	7.2	Configure the CORM (within the different subnets => usage of the generated feeds from the two adjacent workstations) and generate a Trackstore within the TSS => check in ICC for availability	ITS	15 mins
Network Port Manager (NPM)	8.1	Identify purpose of and configure the Network Port Manager (NPM)	ITS	60 mins
Network Port Manager (NPM)	8.2	Establish a WAN connection (different TDL-formats possible) to receive a NIRIS feed from the instructor via WAN GUI / config-files	ITS	0 mins
Network Port Manager (NPM)	8.3	Establish a WAN connection (different TDL-formats possible) to send and receive a NIRIS feed from another student via WAN GUI / config-files	ITS	0 mins
TIES	9.1	Identify purpose of and configure NIRIS TIES	ITS	15 mins
OANT	9.2	Identify purpose of and configure Online Analyzer for Networked Tactical Data Links (OANT) → available Trackstores	ITS	15 mins
NIRIS Tools	9.3	Identify purpose of NIRIS Tools (titote, tracktote, ...) [SUM 3.4.1.15]	ITS	40 mins
JREAP Protocol Manager - Overview, configuration and logging	10.1	Identify purpose of and configure the JREAP Protocol Manager	ITS	40 mins
JREAP Protocol Manager - configuration example	10.2	JREAP practical exercise with additional usage of OANT	ITS	0 mins
Web Service Relay Manager (WSRM)	11.1	Identify purpose of the WSRM	ITS	20 mins
File System Relay Manager (FSRM)	11.2	Identify purpose of FSRM	ITS	20 mins

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Lecture of Customer Service Desk (CSD)	12.1	Students know the tasks, hours of operation and statistics of the CSD and know which procedures are necessary to request assistance	CSD	20 mins
NIRIS End of Course Test	13.1	Students prove their knowledge (theory and practical exercise) about all aspects of the NIRIS software (Server, WANGUI, NIRIS Managers)	ITS	85 mins
Review/Questions	14.1	General Review and Questions	ITS	50 mins
Certificates	15.1	Students receive their certificate	TMS/ITS	

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PART IV - SERVICE DIVERSIONS

Subject (a)	Detail (b)	Remarks (c)	Syllabus Time		
			C (d)	P (e)	T (f)
<u>Conditions and Standards.</u>					
Dress code is duty uniform in accordance with national rules for military personnel. For civilians casual, office style. All students need to provide valid Security Clearance, and must provide Training Section with a copy of the NATO Travel Order if they wish to get access the Rationed Items Store (RIS).					
Arrival Belgium	The students must arrange to arrive at the hotel by means of own transportation. There are no resources available at NPC to perform airport pick up etc.				
Hotel	All students are recommended to stay in Holiday Inn in Liege. Students must get to NPC on their own.				
Arrival NPC	The students should arrive 45 minutes prior to course start. This to allow time to go through Security Procedures.				45 min
Beverage	The cafeteria at NPC will be open for all students during their stay at NPC. They serve coffee, cakes or a hot meal during the lunch break.				
Shopping	The students can use the RIS during their stay, but only by providing a valid NATO Travel Order.				
Travel to and from NPC.	Students must travel to and from the NPC by their own transportation.				60 min
Total					105 mins

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PART V - PUBLICATIONS, EQUIPMENT AND RESOURCES

Serial number (a)	Subject (b)	Equipment (c)	Maximum Overall Quantity (d)
1	Hardware	Projector	1 (combined OWL and NIRIS SRV)
2	Hardware	OWL-Computer for Instructor	1
3	Hardware	X86 Workstation for Instructor	1
4	Hardware	X86 Workstation (File Server / Link Generator Link 1 / Link 11B)	1
5	Hardware	X86 Workstations	14
6	Hardware	Monitors	17
7	Hardware	CISCO Router	1
8	Hardware	Serial Tactical Data Links (HES) Link 1	2
9	Hardware	NETmate Devices	14
10	CDs for Training (Remain in Classroom and/or IMS)	NIRIS 3.5.0 Software CD	15
		Tactical Data Link CD from Test Team	1 (For Instructor)
		CD with preconfigured NIRIS configuration files	1 (For Instructor)
11	Paper copies	SIP Software Installation Plan NIRIS 3.5.0	15
		SUM Software User Manual NIRIS 3.5.0	15
		NIRIS 3.5.0 Slides as Printout	15
		NIRIS Hand Out #1-7 (NPM, CORM, CM, RM, JREAP, WSRM, FSRM)	15
		NIRIS Course Setup Document	15
		4 Quizzes (Day 1-4)	15
		End of Course Test (Day 5)	15
12	NETmate Materials	NETmate Operators Manual	15
13	Student CD Burning	Course CDs	15

PART VI - ASSESMENT STRATEGY

Pre-Requisites:

The students are required to have basic Solaris System Administrator knowledge or successfully followed the NISP and/or Combined NISP/ICC System Admin training. Additionally, they are required to have basic TCP/IP – UDP knowledge and basic serial data communication background. Basic TDL knowledge is essential. Their supervisor in the joining notice must confirm these prerequisites otherwise the applicant will not be accepted for the course. If this prerequisite cannot be met the H-TRB will generally not allow the applicant to participate in the course.

Learning assessment:

The NPC NIRIS System Administration Course is based on learning by doing. Assessment of whether the student has reached the training objective is performed in an active dialog between student and instructor, mainly during the practical exercises and labs.

At the last day of the course an examination (multiple choice questions) is given.

PART VII - CLASS SIZE

Maximum Class size: **14**

Minimum Class size: **6**

Syllabus Authority	H-TRB
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