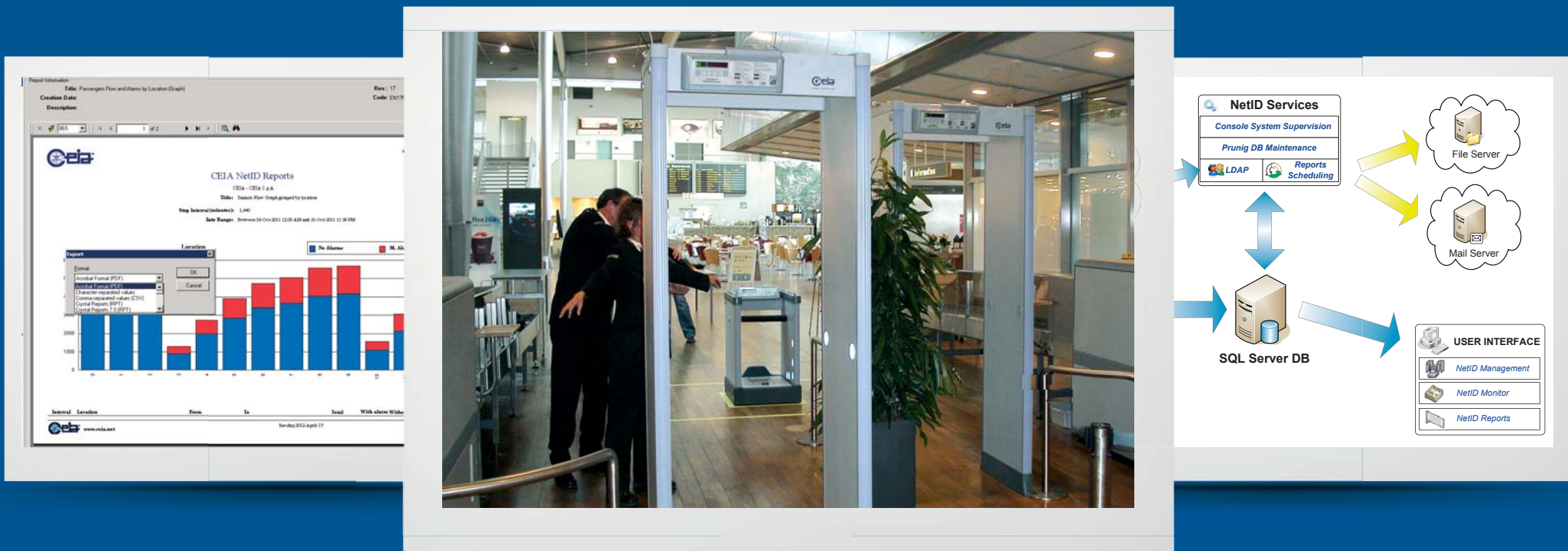




# CEIA NetID Network Management System



## Overview

[www.ceia.net](http://www.ceia.net)

# CEIA NetID Network Management System

## NetID System Goals



- **Data collection from each CEIA Security Device** detailing the information on every single screening check
- **Monitoring of the functionality** of each Security Device
- **Real time verification** of the security and operational configuration
- **Detailed reporting** of the passengers data and the Security Device configuration data



# CEIA NetID Network Management System

## NetID System Layout



### NetID SERVER



### Terminal #N

EMD #N

### Terminal #2

EMD #1

EMD #N

### Terminal #1

EMD #1

EMD #N

APSiM3Plus

APSiM3Plus

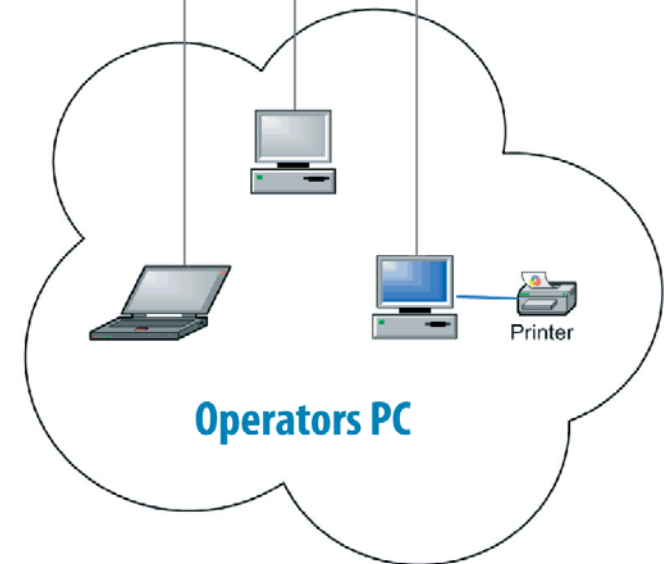
APSiM3Plus

APSiM3Plus

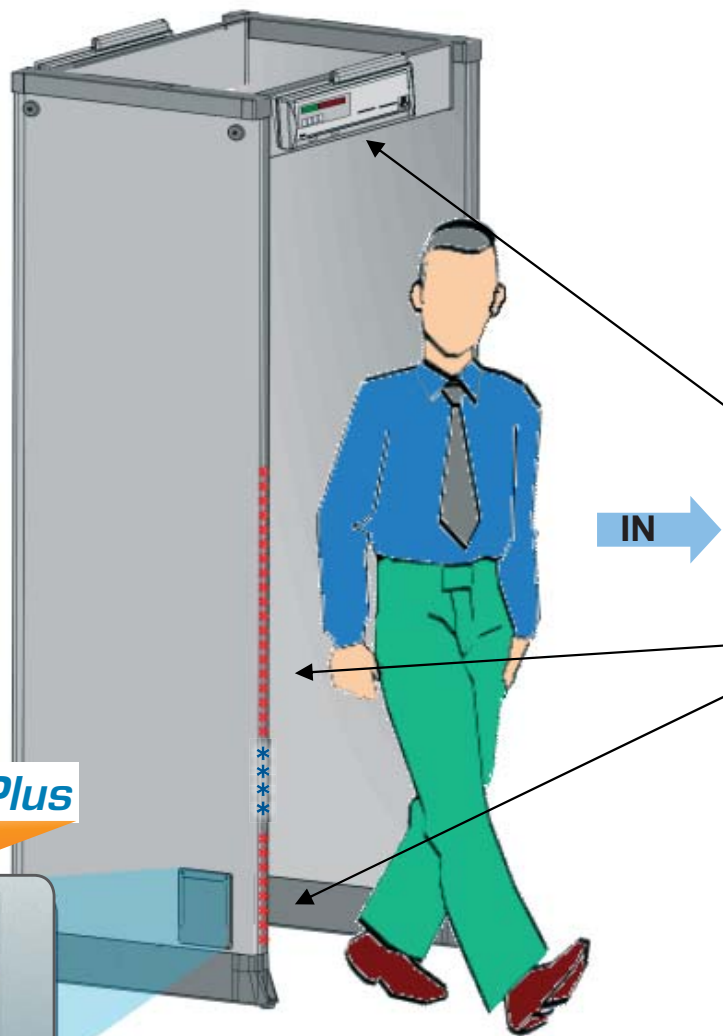
APSiM3Plus

SAMD

EMA



# EMD Transits logging



## Data saved for each transit

- ➔ **Date and time**  
(dd-mm-yyyy hh:mm:ss)
- ➔ **Transit direction**
- ➔ **For Metal and radiological threats**
  - Alarm levels
  - Alarm zones

to the server

# Network AP*SiM3*Plus

(1-3)



## Advanced Power Supply and Interface Module

- Ethernet 100base-TX connection from bottom and ceiling
- 802.11 b/g Wi-Fi
- Bluetooth 2.1
- USB host and device interface
- RS-232 interface
- Zero Configuration Networking (Zeroconf)



# Network AP*S*iM3Plus

(2-3)



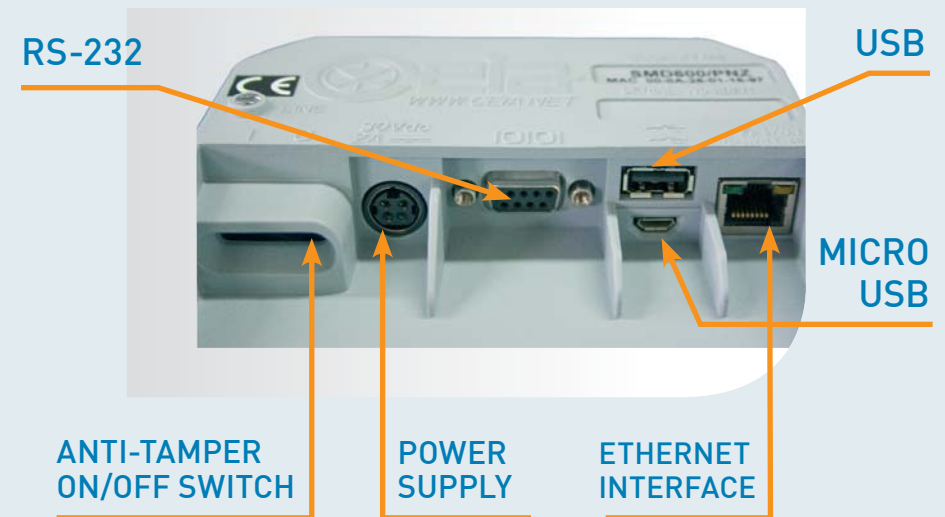
- The Transits events are stored in a FIFO queue in the *APSiM3Plus* persistent memory that is able to contain up to 50,000 records.

---

- If the network connection with DeviceLink is lost, the events will be afterwards automatically retrieved by the DeviceLink Service when the network connection is restored.

---

## Panel type



Part # AP*S*iM3Plus/P

# Network AP*Si*M3Plus

(3-3)

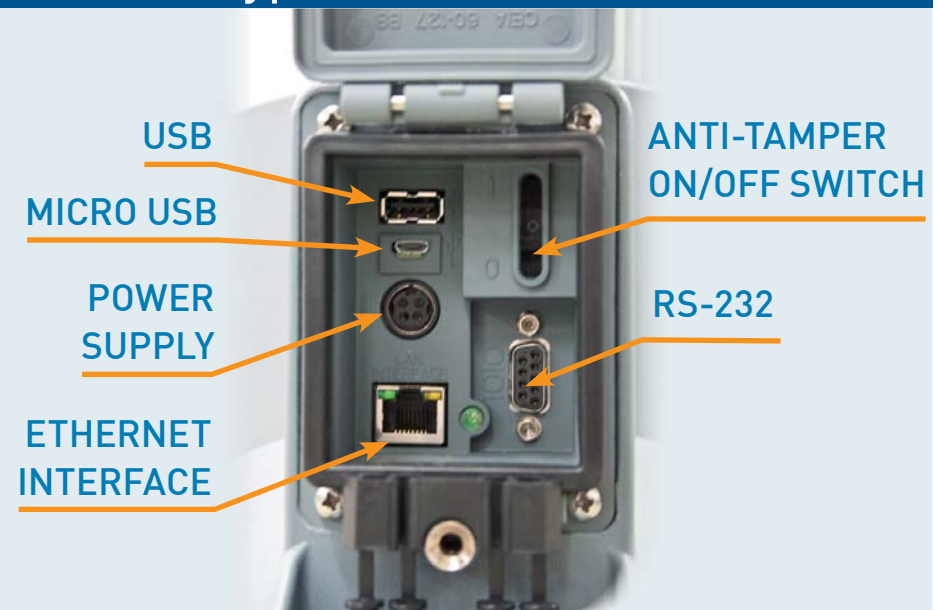
- The *APSiM3Plus* device is provided with a real time clock **daily** synchronized with time and date of the Airport temporal reference server by the NetID DeviceLink service.

---

- The Ethernet communication over TCP/IP uses the AES-1 encryption algorithm to protect the data on the network

---

## Column type



Part # AP*Si*M3Plus/E



# *User Applications*

[www.ceia.net](http://www.ceia.net)



# User Applications

## NetID SERVER



### NetID Management

The program used **for the configuration and the management** of the Security Devices

### NetID Monitor

The program used **for real time monitoring** of Metal Detector and other Security Devices operation and configuration

### NetID Reports

The program used **for production and scheduling of the statistics on the transit data acquired and on the configuration** of the Security Devices

# NetID Management



(1-2)

## Metal Detector Management

The software is used to configure a Security Device in the network and to enter all the parameters that must be monitored.



Ceia NetID - Add Device

Device Installation Parameters

Device Type: 02PN20  
Device Name: GATE1  
Location: Terminal A  
Password:   
Device Link: DL1   
Activation Key:

Network Device:  
IP Address: 111.111.111.1

Serial COM Device:  
Serial Port:

Device Controller:

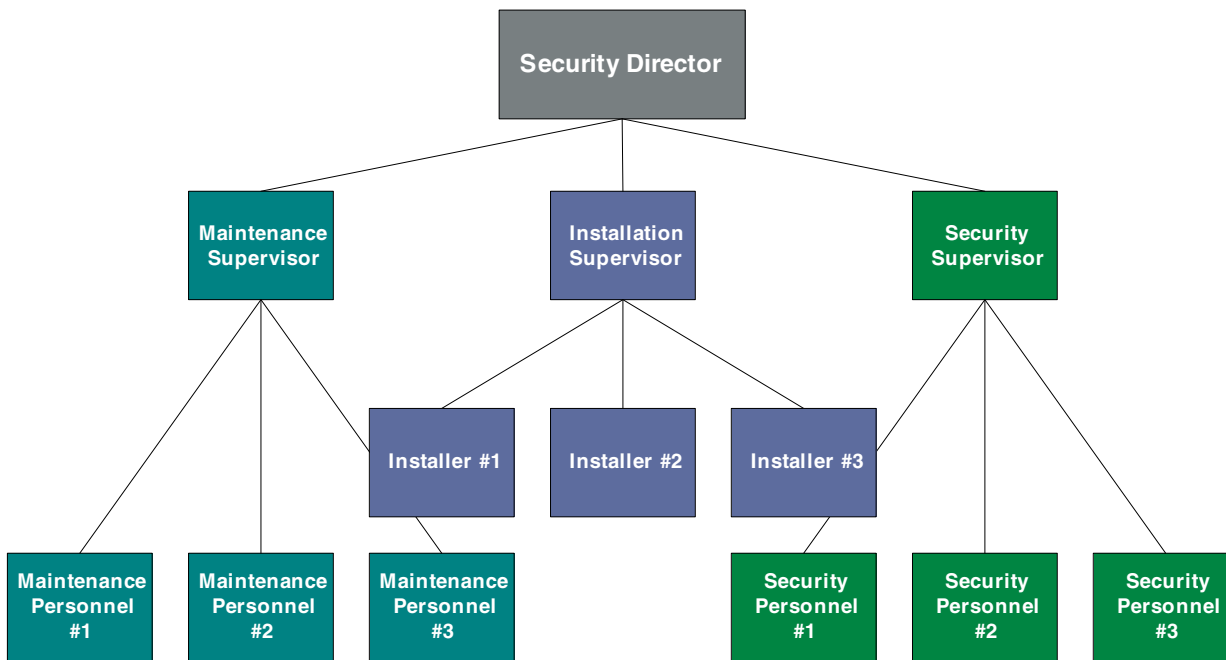
Parameter	Description	Value
SN	Serial Number (Read Only)	(not read yet)
IS	International Security Standard	NILECJ1
SE	Sensitivity of Metal Detector [0..99] (Read Only)	65
MV	Minimum alarm Volume [0..9]	2
AV	Alarm Volume [0..9]	3
AD	Alarm Duration	1P
AT	Alarm Tone [0..9]	2
BM	Display Bar Mode	CONT
CH	Transmission Channel [0..99]	50
DS	Maximum Detection Speed [0..9]	5
DV	Diagnosis Volume [0..9]	0
GD	Gate Direction [1..9]	1

9:54 AM 10/13/2004

# NetID Management



(2-2)



## Example of 3-level user hierarchy with three main categories

- Installers
- Security personnel
- Maintenance personnel

## Operator Management

The software is used to create and assign all the user profiles for the operators who will use the NetID applications.

Every operator belongs to a profile that has access to the functions required.

User profiles are organized hierarchically, based on the type of operations assigned to them.

# CEIA NetID System: User Applications

## NetID Monitor

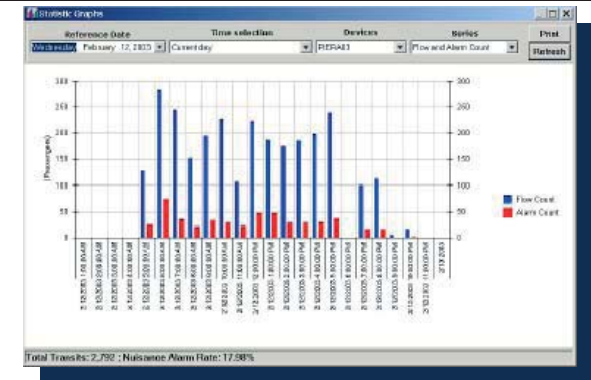
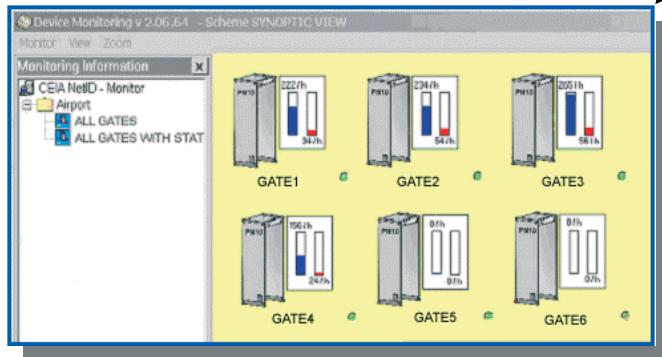


(1-2)

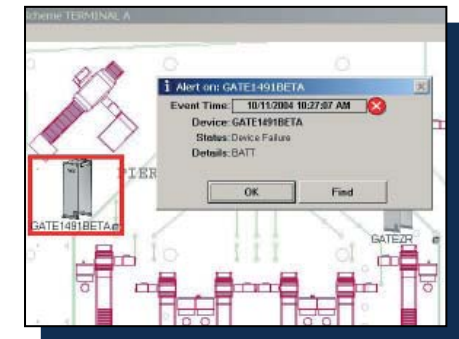
Using the NetID Monitor program, the status and configuration of the Metal Detectors can be displayed

### Main Functions

Display of passenger flow rates in real time



Warning of system anomalies



List of variations in status and parameters

ID	Date & Time	Name	Serial Number	Type	Location	Parameter	Value	Old Value
↓	Oct-07-2004 11:21:10 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	DS	4	5
↓	Oct-07-2004 11:21:07 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	CH	3	50
↓	Oct-07-2004 11:21:06 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	AD	2P	1P
↓	Oct-07-2004 11:21:04 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	MV	1	0
↓	Oct-05-2004 11:53:50 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	DS	4	5
↓	Oct-05-2004 11:53:45 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	CH	3	50
↓	Oct-05-2004 11:53:43 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	AT	3	2
↓	Oct-01-2004 11:46:23 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	ZN	FLOA	2
↓	Oct-01-2004 11:38:36 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	ZN	FLOA	NONE
↓	Oct-01-2004 11:38:55 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	ZN	NONE	2
↓	Oct-01-2004 11:24:12 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	ZN	NONE	NONE
↓	Oct-01-2004 09:46:57 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	ZN	NONE	FLOA
↓	Oct-01-2004 09:46:03 AM	GATE1491BETA	999999	02PN20	OSS Laboratory	AT	3	2

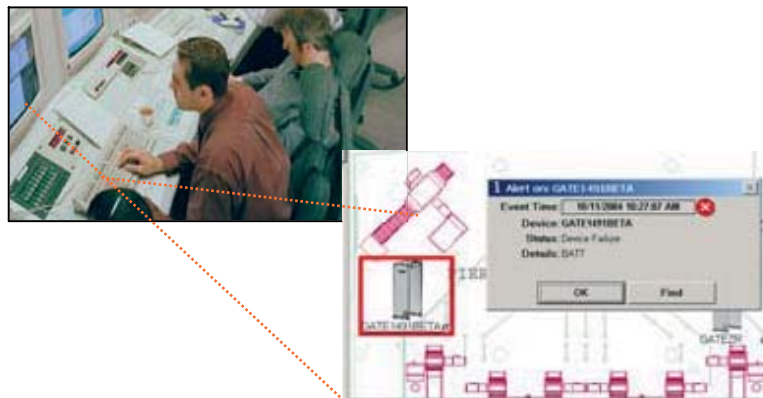
# NetID Monitor



(2-2)

## Metal Detector real time monitoring

The EMD functionality is verified in real time and incidental failures are immediately signaled



➔ Video message digest by the NetID Monitor software



➔ Message by e-mail



# CEIA NetID System: User Applications

## NetID Reports



(1-2)

- The software allows statistics based on the data acquired by the system in real time
- The Report Application includes a rich library of predefined reports

Reports Tools

Ceia Net ID - Reports Design Mode ON

1) Standard Reports

- Administration
  - Daily External Backup
  - Group Access Rights
  - Operator Hierarchical Groups
  - Operator Statistics
- Devices
  - Metal Detector Network Configuration
  - Metal Detector Parameters Summary
  - Metal Detector Security Level
  - Metal Detectors Parameter change log
  - Metal Detectors Parameter Value by selection
  - Metal Detectors Status
  - Metal Detectors Status Change Logs
  - Operator Functionality Verification (OFV)
- Statistics
  - Grouping by device
    - Pass. Flow, Alarms, Random Alarm, Body, Shoes
    - Passenger Flow and Alarms (no empty intervals)
    - Passenger Flow and Alarms (Tabular)
    - Random Alarm Statistic
    - Transits List
    - zH\_IN&OUT Transits count
    - zH\_Nuisance Alarm Rate Summary
    - zH\_Passengers Percentage grouped by gate
  - Grouping by Location
    - Metal Detector & SAMD Statistic
    - Pass., Alarms, Random Alarm, Body, Shoes (by Location)
    - Passengers Flow and Alarms by Location (Graph)**
    - zH\_Daily Passengers Flow and Alarms (Graph)
    - zH\_Passengers Percentage by location (Graph)

2) Custom Reports

- EMA
  - EMA Equipment Functional Test
  - EMA-3 Analysis Log Report
  - EMA-3 Summary Report

Report Information

**Title:** Passengers Flow and Alarms by Location (Graph)

**Creation Date:**

**Description:**

86% 1 of 2

**CEIA NetID Reports**

CEIA - CEIA S.p.A

**Title:** Transits Flow Graph grouped

**Step Interval (minutes):** 1,440

**Date Range:** Between 19-Oct-2011 12:00

**Export**

Format:

- Acrobat Format (PDF)
- Character-separated values
- Comma-separated values (CSV)
- Crystal Reports (RPT)
- Crystal Reports 7.0 (RPT)

OK Cancel

Location

Interval	Location	From	To
0			
1			
2			
3			
4			
5			
6			
7			

# ***NetID Reports***

(2-2)



- The reports can be printed or exported in various formats
- The ability to display, print and export the reports depends on the operator's access profile
- Reports can be scheduled for automatic delivery to an e-mail server or a network folder with a programmed periodicity

# CEIA NetID System: User Applications

## Examples of Reports



New report - (HP LaserJet 2200 Series PS)

99% 1 of 4

### ceia® NetID Reports

**Report description:** Graph of the Nuisance Alarm Percentage for each gate  
**Print time:** 9:22:54AM  
**Print Date:** Wednesday, 5 March, 2003

**Data range:** Data between 9-Feb-2003 10:32 and 13-Feb-2003 09:22  
**Device:** ALL

For CREW01

**DEVICE:** CREW01  
**TYPE:** PN10  
**LOCATION:** Terminal  
**TOTAL TRANSIT:** 1,620  
**NUISANCE ALARM COUNT:** 348  
**NUISANCE ALARM %:** 21.48%

For KERN0401

**DEVICE:**  
**TYPE:**  
**LOCATION:**  
**TOTAL TRANSIT:**

### ceia® NetID Reports

**Report description:** Report on changes in device parameters  
**Print Time:** 11:23:58AM  
**Print Date:** Tuesday, 30 July, 2002

**Filter criteria:**  
**Gate:** All gates

**GATE1**

GATE1	29-Jul-2002	8:25 pm	AV	Alarm Volume [8-->2]	ADMINISTRATOR
GATE1	29-Jul-2002	7:36 pm	AV	Unable to change value [AV 0 -> Not valid parameter]	MROSSI
GATE1	29-Jul-2002	7:36 pm	AV	Unable to change value [AV 0 -> Not valid parameter]	MROSSI
GATE1	29-Jul-2002	7:31 pm	AV	Unable to change value [AV 0 -> Not valid parameter]	MROSSI
GATE1	17-Jul-2002	4:26 pm	AV	Alarm Volume [1-->8]	ADMINISTRATOR
GATE1	12-Jul-2002	6:00 pm	IS	International Security Standard [2-->1]	ADMINISTRATOR
GATE1	08-Jul-2002	11:14 pm	IS	International Security Standard [1-->2]	ADMINISTRATOR
GATE1	08-Jul-2002	11:14 pm	SN	Serial Number [---123321]	NSMITH
GATE1	08-Jul-2002	11:14 pm	PV	Program Version [---6310]	NSMITH
GATE1	08-Jul-2002	11:14 pm	DS	Maximum Detection Speed [0-->5]	VSTINE
GATE1	08-Jul-2002	11:13 pm	MV	Minimum alarm Volume [0-->1]	NSMITH
GATE1	08-Jul-2002	11:13 pm	SE	Sensitivity of Metal Detector [22-->1]	ADMINISTRATOR

**Device changes:** 12

### ceia® NetID Reports

**Print Time:** 10:02:30AM  
**Print Date:** Wednesday, 5 March, 2003

**Filter Criteria:** Transits Between 9-Feb-2003 10:01 and 13-Feb-2003 10:01

**Location:** Pier A

**Transits (%) for each Device in selected Zone**

PIERA01	19.9%
PIERA02	12.5%
PIERA03	26.3%
PIERA04	28.1%
PIERA05	10.3%
PIERA06	2.9%
<b>Total:</b>	<b>100.0%</b>

For Pier A



# Transit Reports



Statistics on the passenger flow rate and the alarm percentage calculated, with time detail



## NetID Reports

CEIA SpA - Arezzo

Time Interval: Between 9/1/2004 10:22:17AM and 10/13/2004 10:22:17AM

Location	Gate	Security Level	Date & Time	Direction	Alarms
<b>GATE1</b>					
Location A	GATE1	NILECJ 1	2004/09/21 11:11:16AM	OUT	
Location A	GATE1	NILECJ 1	2004/09/21 11:11:12AM	IN	
Location A	GATE1	NILECJ 1	2004/09/20 2:31:48PM	IN	
Location A	GATE1	NILECJ 1	2004/09/20 2:31:35PM	OUT	
Location A	GATE1	NILECJ 1	2004/09/20 2:31:13PM	OUT	
Location A	GATE1	NILECJ 1	2004/09/20 2:28:53PM	OUT	
Location A	GATE1	NILECJ 1	2004/09/20 10:13:09AM	OUT	
Location A	GATE1	NILECJ 1	2004/09/20 8:40:58AM	IN	X
Location A	GATE1	NILECJ 1	2004/09/20 8:40:52AM	IN	X
Location A	GATE1	NILECJ 1	2004/09/20 8:40:44AM	IN	
Location A	GATE1	NILECJ 1	2004/09/20 8:40:38AM	IN	
Location A	GATE1	NILECJ 1	2004/09/20 8:40:25AM	IN	
Location A	GATE1	NILECJ 1	2004/09/14 9:49:14AM	IN	X
Location A	GATE1	NILECJ 1	2004/09/14 9:49:07AM	IN	
Location A	GATE1	NILECJ 1	2004/09/14 9:49:01AM	IN	
Location A	GATE1	NILECJ 1	2004/09/13 4:38:05PM	IN	
Location A	GATE1	NILECJ 1	2004/09/13 4:38:00PM	IN	X
Location A	GATE1	NILECJ 1	2004/09/13 4:37:55PM	IN	

Alarm	Display status	Body Alarm	Shoes Alarm	Direction	IN	OUT	Transits
				IN	1		1
				IN	1		1
				IN	1		1
X	XXXXXXXXXX	X		IN	1		1
X	XXXXXXXXXX	X		IN	1		1
X	XXXXXXXXXX	X	X	IN	1		1
				IN	1		1
X	XXXXXXXXXX	X		IN	1		1
X	XXXXXXXXXX	X		IN	1		1
X	XXXXXXXXXX	X		IN	1		1
				IN	1		1
				IN	1		1
X	XXXXXXXXXX	X		IN	1		1
X	XXXXXXXXXX	X	X	IN	1		1
				IN	1		1

Alarm:  Display status:

Body Alarm:

Shoes Alarm:

---

Alarm:  Display status:

Body Alarm:

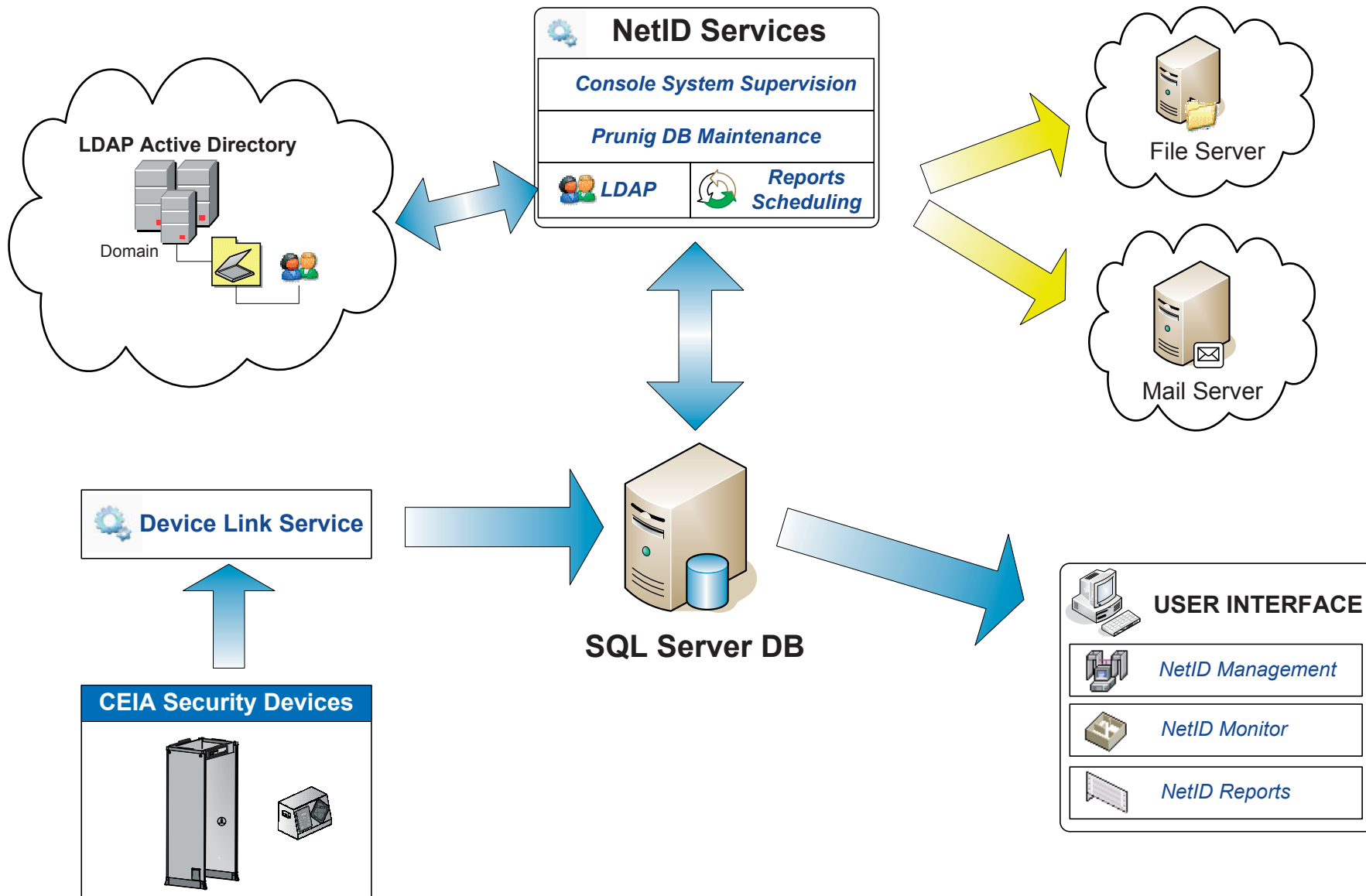
Shoes Alarm:



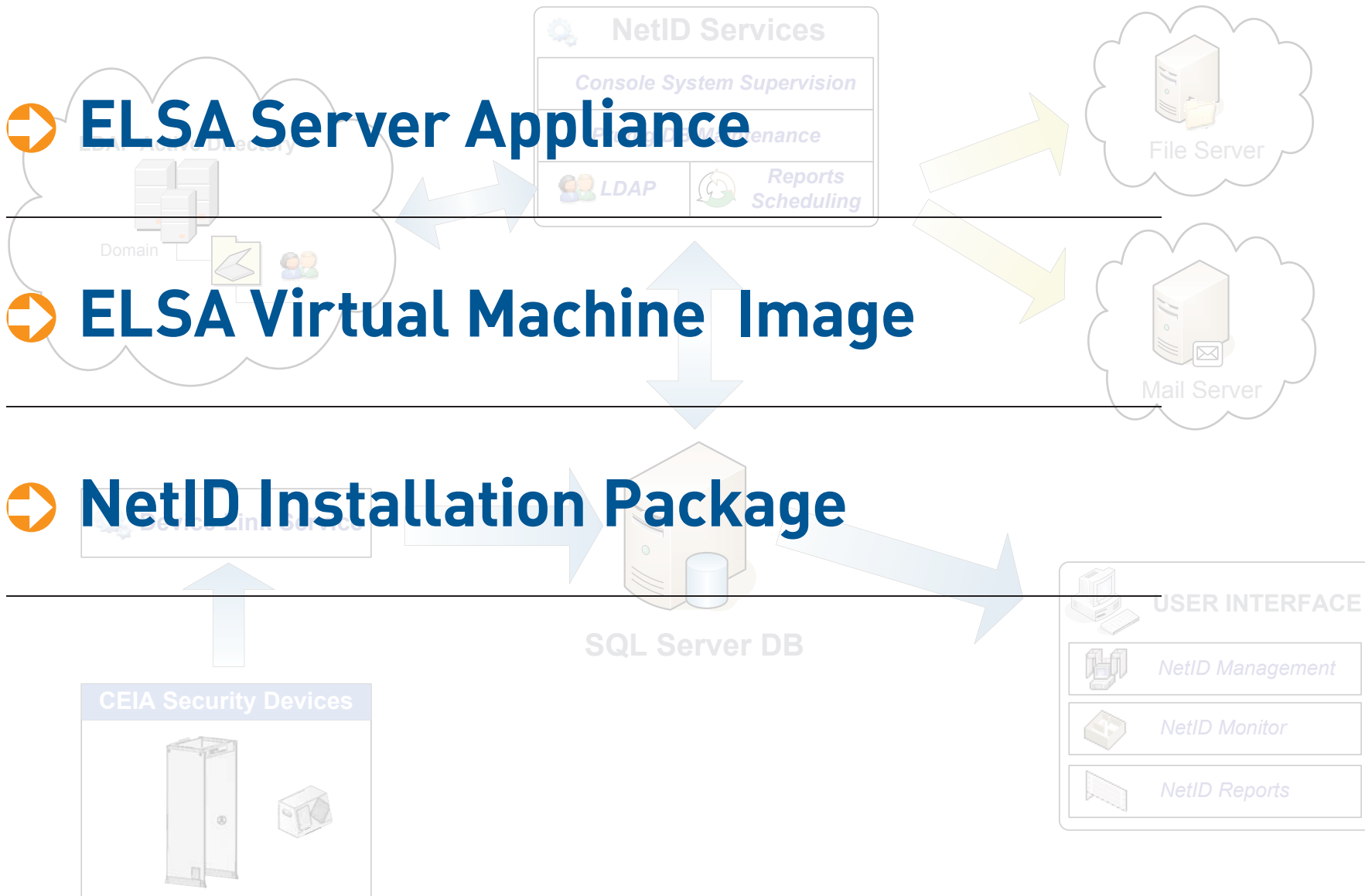
# *System Architecture*

[www.ceia.net](http://www.ceia.net)

# Layout the System



# NetID Deployment Options



# NetID ELSA Server



(1-2)

- ➔ The NetID ELSA Server has been especially designed to facilitate setting up a NetID control system:
  - Pre-installed System including:  
SQL Server, Windows Server, Active Directory, Terminal Server and Domain Policies
  - RAID storage system: comprising 450Gbyte internal storage disks



# **NetID ELSA Server**



(2-2)

- Redundant Power Supply
- Backup system: duplicate copies on internal and external disks
- Licensed for up to 5 concurrent users and 100 Security Devices





# *System Services*

[www.ceia.net](http://www.ceia.net)

# System Services



## NetID



### NetID Device Link

The Data Logging service acquires the transit data and at the same time monitors all the metal detector parameters

### NetID Console

The service contains all the system checking and signalling tools, regarding both the metal detector's operational status and the performance of the server

### NetID Reports Scheduling

The service produces and sends the reports scheduled by the operator via e-mail or using a network folder. NetID Report Scheduling can also publish scheduled reports to a web server



# NetID Device Link



EMDs Data

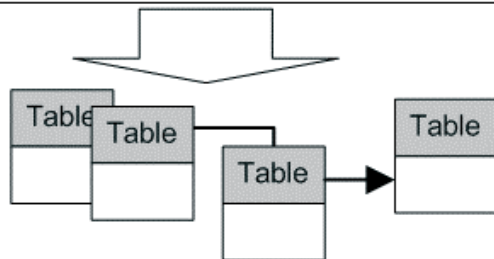


Data Link Layer: TCP/IP error detection and correction and retransmission.

Session Layer: NetID Encryption Layer Encapsulation

Application Layer: NetID Application Data Integrity Check

SQL Relational Database Recording



Recorded Data



APSiM3Plus

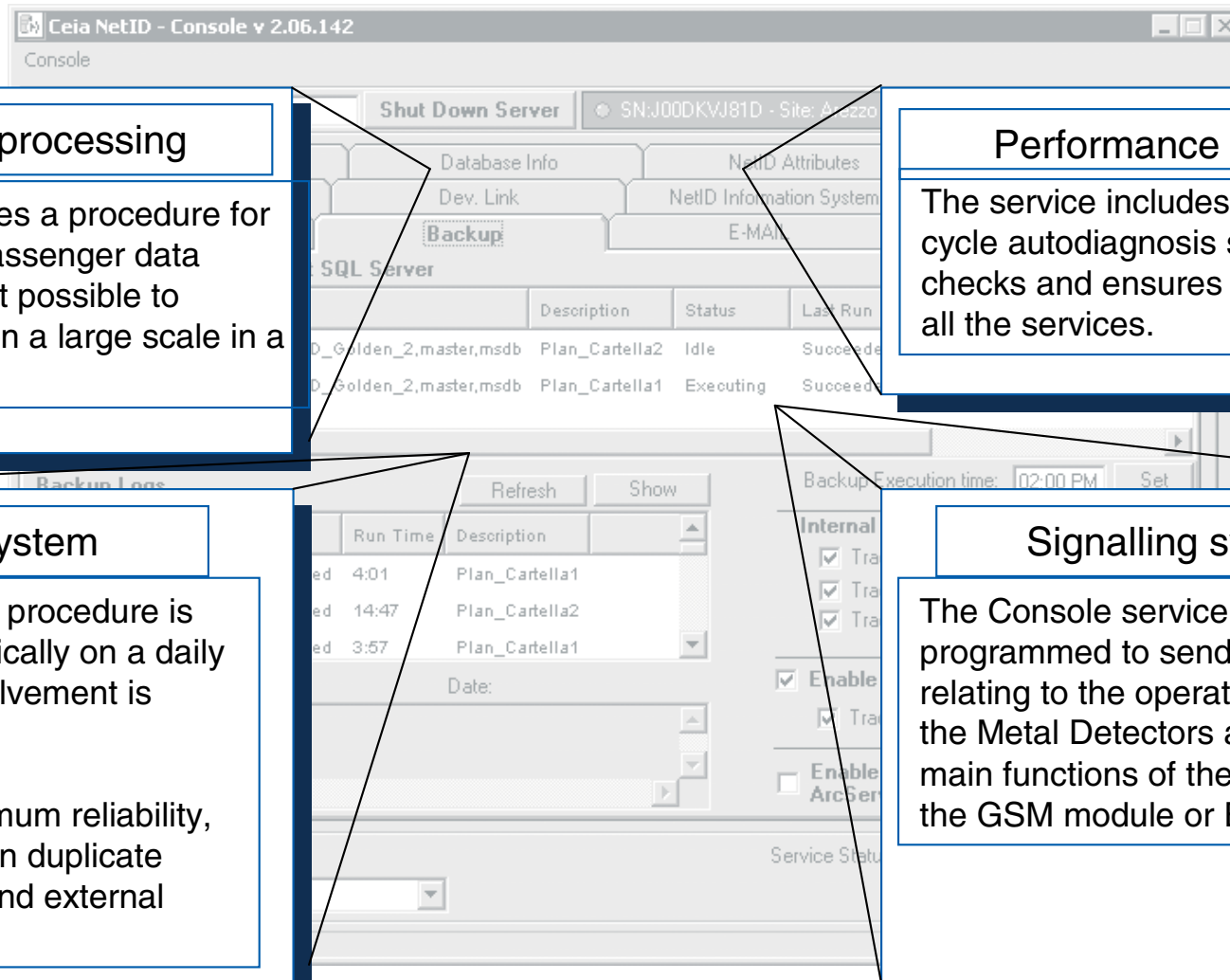


➔ Communication between the Device Link service and the Metal Detectors via the *APSiM3Plus* devices undergoes a multi-layer encryption and data integrity verification process to guarantee data security and consistency.

➔ All system configuration data and acquired information are recorded in a relational database.

# CEIA NetID: System Services

## NetID Console



### Statistics processing

The service includes a procedure for synthesis of the passenger data acquired to make it possible to provide statistics on a large scale in a short time.

### Performance monitoring

The service includes a continuous-cycle autodiagnosis system which checks and ensures the availability of all the services.

### Backup system

The system backup procedure is carried out automatically on a daily basis; operator involvement is never required.

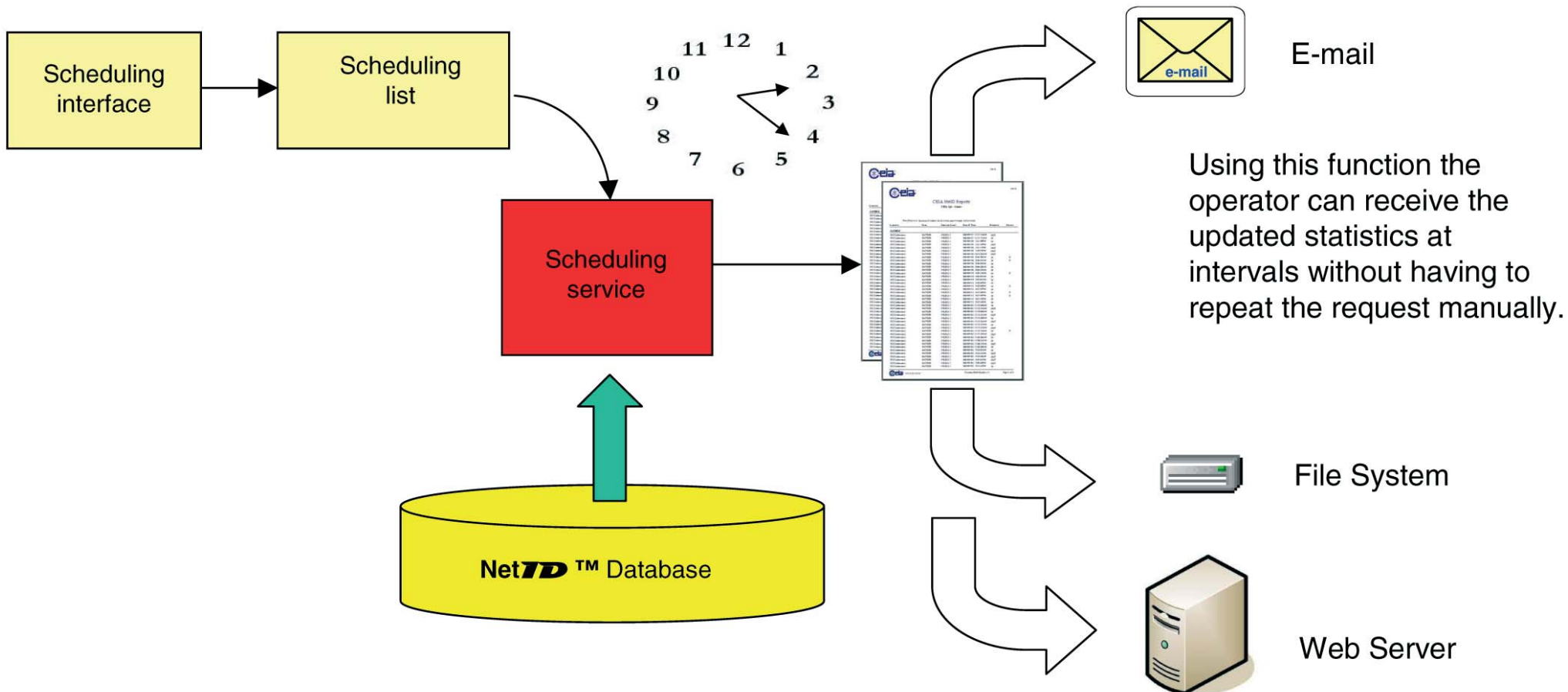
To guarantee maximum reliability, backups are made in duplicate copies on internal and external disks.

### Signalling system

The Console service can be programmed to send signals relating to the operational status of the Metal Detectors and to the main functions of the system via the GSM module or E-mail.

# NetID Reports Scheduling

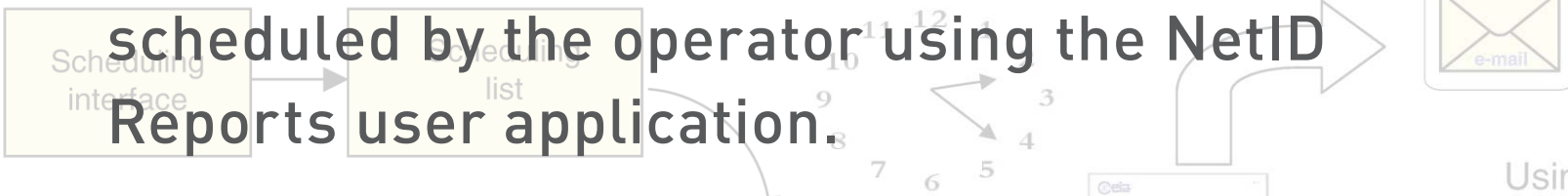
(1-3)



# NetID Reports Scheduling

(2-3)

- ➔ The service produces and exports the reports scheduled by the operator using the NetID Reports user application.



E-mail

- ➔ For each report the export format (e.g. html text, Excel, pdf), data selection criteria and frequency can be specified.

Using this function the operator can receive the updated statistics at intervals without having to repeat the request manually.

- ➔ The service automatically recovers missing schedules.



File System

Web Server

# NetID Reports Scheduling

(3-3)



The program allows specification of:

- The scheduling starting date
- The period to be covered by the statistics, which can be fixed or vary automatically in relation to the scheduling

**Report's schedule**

Add Delete Save Cancel Export... Import... Close

Name	Enabled	Last Run	Last Result	Duration	Next Execution	Operator	changed	Type
✓ Passengers Flow and Alarms by Location (Graph) - Sch.1	YES	Not available	Not available		17/04/2012 15:43	ADMINISTRATOR		

Recurrency: Once; Format: Acrobat Format (PDF); Export by E-mail.

Description Parameters list Recurring Exporting File Format Delivery Options

**Schedule enabled**

**Report Name:** Passengers Flow and Alarms by Location (Graph)  Insert execution date as prefix

Schedule: Passengers Flow and Alarms by Location (Graph) - Sch.1

Start Date: 17-Apr-12 End Date: 18-Apr-2012  No end date

Execution Time: 15:44 Next Execution: 17/04/2012 15:43

File name preview: 2012-04-17 15h44m\_Passengers Flow and Alarms by Location (Graph) - Sch.1.pdf

*Thank you for your attention*



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[www.ceia.net](http://www.ceia.net)

[infosecurity@ceia-spa.com](mailto:infosecurity@ceia-spa.com)

+39 0575 4181

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