Start up Guide for SKF Multilog On-line System IMx and SKF @ptitude Analyst

Introduction

This application note contains a brief procedure on how to run SKF @ptitude Analyst with SKF Multilog IMx units. For this procedure, SKF @ptitude 2010 or newer needs to be installed. Please refer to the following application notes for detailed information about points configuration and other useful features:

- CM3158, Add SKF Multilog On-line System IMx Points in SKF @ptitude Analyst
- CM3159, Add SKF Multilog On-line System IMx AC, DC, Logic and Speed Points in SKF @ptitude Analyst
- CM3160, Create SKF Multilog On-line System IMx Orbit and SCL Points in SKF @ptitude Analyst
- CM3161, Create Alarm Groups, Set up Relays and Active Ranges for SKF Multilog On-line System IMx in SKF @ptitude Analyst
- CM3171, Create SKF Multilog On-line System IMx Transient Groups for Run up and Coast down Data Collection in SKF @ptitude Analyst and SKF @ptitude Observer

The procedure in this application note covers:

- SKF Multilog IMx Network
- Online Device Configurator and serial interface
- SKF Multilog IMx Service
- SKF Multilog IMx unit and channels configuration in SKF @ptitude Analyst
- Firmware

Procedure

To run SKF @ptitude Analyst with SKF Multilog IMx units, it is necessary to follow these steps (described in detail below):

- 1 Install SKF @ptitude Analyst and database.
- 2 Create a network for the SKF Multilog IMx.
- 3 Create an IP configuration file for the SKF Multilog IMx.
- 4 Download the IP configuration file to the SKF Multilog IMx.
- 5 Register an SKF Multilog IMx Service in the Analyst Configuration Tool.
- 6 Check that SKF @ptitude IMx and Transaction Server services are running.
- 7 Configure the SKF Multilog IMx in SKF @ptitude Analyst.
- 8 Add the firmware to the database.
- 9 Build channels and set up measurements points.



1. Install SKF @ptitude Analyst and database

For better performance, you need to install SKF @ptitude Analyst 2010 or newer (\rightarrow fig. 1).

2. Create a network for the SKF Multilog IMx

To be able to work with SKF Multilog IMx units, you need to create a network.

- From your PC, go to Control Panel / Network and Internet / Network Connections.
- Right-click on the network that the SKF Multilog IMx units will use and choose Properties (-> fig. 2).
- Highlight "Internet Protocol Version 4" and click **Properties** (→ fig. 3).
- Set the **IP address** of the monitor computer to "10.0.0.1" and **Subnet mask** to "255.255.255.0" and click **OK** (→ fig. 4).
- If this is a specific network for SKF Multilog IMx units only, then a gateway is not needed. A
 gateway is needed if SKF Multilog IMx units should be on the internet.
- Always involve the IT department if a network is going to be set up at a customer site.



Fig. 1. About window showing version of SKF @ptitude Analyst



Fig. 2. Select Properties from the network that the SKF Multilog IMx units will use.



Fig. 3. Click Properties while "Internet Protocol Version 4" is selected.

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ou can get IP settings assigned nis capability. Otherwise, you n or the appropriate IP settings.	automatically eed to ask yo	y if yo ur ne	ur ne twork	two	rk supp ministra	orts
Obtain an IP address autor	natically					
Use the following IP address	is:					
IP address:	10	. 0	. 0	•	1	
Subnet mask:	255	. 255	. 255	5.	2	
Default gateway:				•		
Obtain DNS server address	automatically	1		-		
Use the following DNS server	er addresses:					
Preferred DNS server:				•		
Alternate DNS server:						
_			- î			

Fig. 4. Set the IP address and Subnet mask.

3. Create an IP configuration file for the SKF Multilog IMx

To create an IP configuration file for the SKF Multilog IMx:

- Start Multilog IMx Configurator by going to Start / All Programs / SKF @ptitude Monitoring Suite / Administrative Tools / Multilog IMx Configurator (→ fig. 5).
- Click on Create a Network and ID configuration file for IMx and save to disk (→ fig. 6).
- From the Create IMx Config window, select "IMx" as Device type and Configure by "Software" (→ fig. 7).
- Choose **Device number** "1" for the first unit and set the **IP address** to "10.0.0.101" (if the installation is at a customer site, then the IT department must provide the IP address).
- For the **IMx Service IP**, type in the IP of the computer where the SKF Multilog IMx service is running, then enter which port to use in the **IMx Service Port** field (the default port is 1000).
- Click **Save**, give the file a name and remember where it was saved.



Fig. 5. Select Multilog IMx Configurator.

/ Multilog I	Mx Configurator 2011
Select des	sired action
P	Create a Network and ID configuration file for IMx and save to disk.
1	Start serial interface for IMX
	Start IMx-M protection serial interface.
	<u> </u>

Fig. 6. Create a Network and ID configuration file for IMx and save to disk.

Y Cre	eate IMx Config	×
Dac	1	
Dev	ice type	IMx 💌
Con	figure by	Software
Dev	ice number	1
Net	work options	
	C Obtain an IP ad	dress automatically
	🕞 Use the followin	g IP address
	IP Number	r 10 0 0 101
	Subnet mask Gateway	255 . 255 . 255 . 0
	IMx Service IP IMx Service Por	t 1000
		Ethernet Factory Defaults

Fig. 7. Set the Dad and Network options for the Multilog IMx Configurator.

4. Download the IP configuration file to the SKF Multilog IMx

Use a null modem serial cable (\rightarrow fig. 8) for connecting the SKF Multilog IMx and uploading the IP address. If the computer used does not have a serial port, then use a USB-to-serial converter. For SKF Multilog IMx-M, a direct USB connection can be used (\rightarrow fig. 9). For this USB, drivers shall be installed according to the "SKF Multilog IMx-M USB drivers installation" procedure.

- Start Multilog IMx Configurator by going to Start / All Programs / SKF @ptitude Monitoring Suite / Administrative Tools / Multilog IMx Configurator (→ fig. 5).
- Select Start serial interface for IMx (→ fig. 10).
- Select the COM Port and click Update network config. (→ fig. 11).
- Highlight the configuration file you want to upload to the SKF Multilog IMx and click Open (→ fig. 12).
- The file will now upload to the SKF Multilog IMx.
- After 15 seconds, upload will complete (→ fig. 13).
- From the Download and verification Complete window, click OK.
- After 10 seconds, the device number and IP address of the unit will display in the serial interface (→ fig. 14).



Fig. 10. Start serial interface to IMx.



Fig. 11. Select the COM Port and Update network config.



Fig. 8. Serial cable.



Fig. 9. USB cable.



le Serial interface	×
Select COM Port : 1	
CLEAR LOCK	
*** STARTING DOWNLOAD ***	Data operations
-ENTEDING DOWNLOAD MODE	Remove data
	Update network config.
> RESET	Commands
* SVE Multilog TMy	Syntax Help
	Set debug On/Off
TEST SEQUENCE STARTS	RESET
Multilog IMx Configurator	— X —
Download and verification Complete. Please wait for the unit to flash and Reboot, this can take up minute. When the IP configuration is displayed the unit upda completed.	to one ate is
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Fig. 13. Download and verification completion message.

Serial interface	×
Select COM Port : 1	
CLEAR LOCK Device Identity Number: 3 IP Address : 10.0.0.103 Netmask : 255.255.255.0 Gateway : 0.0.0.0 Server IP Address : 10.0.0.1 Port : 1000	Data operations Remove data Update network config.
++ IPTask startup MasCon 16, using InterNiche Technologies TCP/IP-stack v1.6 Copyright 1997 by InterNiche Technologies. All rights reserved. Ethernet: Entering ether prep	Set debug On/Off RESET Show Config
Ipport: Prepared 1 interface, initializing Ethernet: Init driver Datag: old ackno 12342, scanning for data	Adv. debug modes
Ethernet: Output task started Ethernet: Input task started	Boot code cmd Boot code ex FPGA
Connecting to 10.0.0.1:1000 Measurement configuration invalid or missing!	Test and calibration
Calculate: Started as 12 File: Started	Update firmware
Command	

Fig. 14. Device number and IP address displayed in the serial interface.

5. Register an SKF Multilog IMx service in the SKF @ptitude Analyst Configuration Tool

To register an SKF Multilog IMx service in the SKF @ptitude Analyst Configuration Tool:

- Go to: Start / All programs / SKF @ptitude Monitoring Suite / Admin Tools / SKF @ptitude Analyst Configuration Tool (→ fig. 15).
- From the warning window, click $OK (\rightarrow fig. 16)$.
- Highlight SKF @ptitude IMx Service and click Manage (→ fig. 17).
- Select the database type and name the connection (\rightarrow fig. 18).
- For SQL Server Express edition, the DB connect name field has the format: <computername>\\SQLEXPRESS
 - For SQL full version, use "localhost"
 - For Oracle, use the database name
- Click Save.
- Click Add and name the service (→ fig. 19).
- The default port is "1000"; you can change it if it is already in use.
- The SKF Multilog IMx Hostname is the computer name found in System Properties.
- The **Connection title** is the database connection previously created.
- The Local host IP address is the network that the SKF Multilog IMx is connected to.
- Enable "Send emails when service lost database connection".
- Click Save.
- An SKF @ptitude IMx service should display in the upper right window.



Fig. 15. Open SKF @ptitude Analyst Configuration Tool.

@ptitude /	Analyst
<u>^</u>	WARNING! Changing these settings could lead to the software to malfunction.
	ОК

Fig. 16. Warning window.

base Jatabase Johange Database Johange Database Johange Database Run SQL Script @pttude Analyst Configuration Tool Seneral Configuration SKF @pttude HMI Connection SKF @pttude HMI Connection SKF @pttude Hontor Recovery SKF @pttude Analyst License Key Manager SKF @pttude Home SKF @pttude Home SKF @pttude Home SKF @pttude Home	Name Add Properties	Port	Connection Title	Hostname amove Sync
NT egotitude Microlog Service	Name: Port: Host: Connection title: Send emails when	sql_skf	user database connection Test Sz	Manage Email lit ave Undo
	Localhost IP address:		fe80::ad8d:2c72:35ea:9	9890%16

Fig. 17. Manage the SKF @ptitude IMx Service.

Manage Connections	
This dialog will allow you to ma properly configured and to run	nage your database connections. For a service to be the database connection must be configured.
Connections:	<db connect=""></db>
Connection title:	
sql_user	
DB connect name:	
FREDDYH-PC	
For SQL Server EXPRESS edit <computername>\\SQLEXPRI from the database connection SQL Server Management Stud</computername>	tion, this field has the format: ESS. You can also obtain this information screen when you launch the lio tool.
Oracle Oracle SQL Serv	rer
Save Undo	Remove Close Help

Fig. 18. Manage the database connections.

<u>H</u> elp				
atabase	Name	Port	Connection Title	Hostname
- Database Type - Change Database - User Management - Update Database - Run SQL Script KF @ptitude Analyst Configuration Tool	default	1000	sql_skfuser	FREDDYH-PC
– General Configuration – SKF @ptitude HMI Connection – SKF @ptitude Transaction Service – SKF @ptitude Monitor Recovery – SKF @ptitude Analyst Thin Client Transfer – SKF @ptitude Analyst License Key Manager – SKF @ptitude Home – SKF @ptitude IMx Service	Add Properties Name: Port:	Edit default 1000	Deactivate Re	move Sync
SKF @ptitude Microlog Service	Host:	FREDE)YH-PC	
SMTP Settings	Connection title:	sql_skf	user	Manage
	Send emails wh	en service lost	database connection	Email list
	Start	Stop	Test Sa	ave Undo
	Localhost IP address:		fe80::ad8d:2c72:35ea:9	890%16
				Help

Fig. 19. Configure the SKF @ptitude IMx service.

6. Check that the SKF @ptitude IMx and Transaction Server services are running

Check that both SKF @ptitude IMx service and SKF @ptitude Transaction Server are started by right-clicking on **Computer / Manage /** Services and Applications / Services (→ fig. 20).

E Computer Management	las in pas					
File Action View Help						
🗢 🄿 🙍 🗊 🖬 🙆 😽	2 🗊 🕨 🗉 🕪					
E Computer Management (Local	O. Services					Actions
▲ [™] System Tools						Services 🔺
Or Task Scheduler Or Task Schedu	COM+ System Application	Name	Description	Status	Startup 🔦	More
Event Viewer		🔍 Remote Desktop Configuration	Remote Des		Manual	WOTE
Shared Folders	Start the service	🔍 Remote Desktop Services	Allows user		Manual	COM+ Sys 🔺
Beformance		Remote Desktop Services UserMode Port R	Allows the r		Manual	More 🕨
Device Manager	Description:	🌼 Remote Procedure Call (RPC)	The RPCSS	Started	Automa	
A Gestorage	Manages the configuration and	鵒 Remote Procedure Call (RPC) Locator	In Windows		Manual	
Disk Management	(COM)+-based components If the	🔍 Remote Registry	Enables rem		Manual	
Services and Applications	service is stopped, most COM+-	🥋 Routing and Remote Access	Offers routi		Disable	
Services	based components will not function	🥋 Roxio Hard Drive Watcher 12			Automa	
WMI Control	properly. If this service is disabled,	🔍 RoxMediaDB12OEM	Roxio RoxM		Manual	
By SQL Server Configuratic	it will fail to start.	🔍 RPC Endpoint Mapper	Resolves RP	Started	Automa	
		🔍 Seagate Service	Seagate Ser	Started	Automa	
		🎑 Secondary Logon	Enables star	Started	Manual	
		🎑 Secure Socket Tunneling Protocol Service	Provides su		Manual	
		SecureStorageService	Wave Secur		Manual	
		🤐 Security Accounts Manager	The startup	Started	Autom	
		🔍 Security Center	The WSCSV	Started	Autom:	
		🔍 Server	Supports fil	Started	Automi	
		🔍 Shell Hardware Detection	Provides no	Started	Autom	
		SKF @ptitude HMI Connection	Manages co		Manual	
		鵒 SKF @ptitude IMx-IMxTraining	Enables IMx	Started	Automi	
		SKF @ptitude Transaction Server	Provides ser	Started	Automi	
		🔍 Smart Card	Manages ac	Started	Automa	
		鵒 Smart Card Removal Policy	Allows the s		Manual	
		🔍 SNMP Trap	Receives tra		Manual	
		🔍 Software Protection	Enables the		Automa	
		🔍 Sony Ericsson PCCompanion	Provides su	Started	Manual 🖕	
		· · · · · · · · · · · · · · · · · · ·				
4	Extended Standard					
						,

Fig. 20. SKF @ptitude IMx service and SKF @ptitude Transaction Server are both started.

7. Configure the SKF Multilog IMx in SKF @ptitude Analyst

To configure the SKF Multilog IMx in SKF @ptitude Analyst:

- From SKF @ptitude Analyst, go to **Customize / Online settings** (→ fig. 21).
- Click Add and enter a Device name (→ fig. 22).
- Choose which SKF Multilog IMx to use (S, P, M or T).
- Choose the correct SKF Multilog IMx service.
- Select a device number (DAD #) between 1 and 255. This should be the same as in the configuration file downloaded to the SKF Multilog IMx.
- **Communication timeout** indicates the time that needs to be reached during a disconnection before alarming it as an event and (if configured) sends an email indicating the lost of the connection.
- The SKF Multilog IMx should be "always connected".
- Connection interval is used when the SKF Multilog IMx is not going to be connected 100% of the time to the server.
- For the **Reference time**, enter the time when a spectrum will be stored if spectra are stored every day.
- Select the correct **Time zone** where the SKF Multilog IMx is mounted and then click **Config**.
- Configure the channels to use (\rightarrow fig. 23).
- Enable Check sensor OK status. In SKF @ptitude Analyst, a BOV check is built into each measurement; SKF Multilog IMx will stop measuring on this channel if it goes out of the range.
- ICP is controlled with DIP switches on SKF Multilog IMx-S, –M and –T. SKF Multilog IMx-P does not have DIP switches and needs to be configured by software.
- Click **OK** and close the online settings.

		Online Settings	×
		Devices Sensor Setup Gatir	19 (er
		Available hardware devices:	IMx Training
		Properties	
		Device name:	IMx Training
		DAD type:	IMx-S 🔽 Config
		IMx service:	IMxTraining Hosts
		Settings	
		Communication type:	Ethernet (TCP/IP)
SKE @ntitude Analyst ADMIN History	w (Evenings on 1/1/2012) [Hierarshy]	DAD #:	1
SKP @ptitude Analyst - ADMilli - Hierarch	(Expires on 1/1/2012) - [Hierarchy]	Data collection method:	Live & scheduled
File Edit View Insert Transfer	Customize Tools Window Help	Compression method:	
i 🍡 🏡 🔊 🖉 🊱 🕼 🛈 🐁	Administrator	Communication timeout:	0 Minute (s)
	Scheduler	Always connected	
🔓 My Hierarchies	Configure XML Export	Connection interval:	00:00:00
🖻 🔶 🔙 Hierarchy	Configure XML Import	Reference time:	00:00:00
🗄 🔶 👢 Decision Support		Time zone:	(UTC+01:00) Amsterdam, Berlin, B, ▼
🖻 ··· 🔶 🌉 Products	POINT Attributes		
🕀 🖷 🔶 🛄 Microlog			Save Undo
	Alarm Attributes		
	Online Settings		<u>Close</u> Help
🖽 🖷 🕵 IMx Training			

Fig. 21. From SKF @ptitude Analyst, go to Customize / Online Settings.

Fig. 22. Enter the online settings.

alaiou cilai	nnels:								
Number	Name	Enabl	Sensor type	Zero offset	Sensitivity	OK status	Lower	Upper	Cum
1	Channel 1	Yes	Accelerome	0	100	Enable	8	14	Disa
2	Channel 2	Yes	DC	0	1000	Enable	8	16	Disa
3	Channel 3	Yes	Accelerome	0	100	Enable	8	16	Disa
4	Channel 4	Yes	Accelerome	0	100	Enable	8	16	Disa
5	Channel 5	Yes	Accelerome	0	100	Enable	8	16	Disa
6	Channel 6	Yes	Accelerome	0	100	Enable	8	16	Disa
7	Channel 7	Yes	Accelerome	0	100	Enable	8	16	Disa
8	Channel 8	Yes	Accelerome	0	100	Enable	8	16	Disa
∢			111						•
Properties)								
🔽 Char	nnel <u>e</u> nabled			Chan	nel na <u>m</u> e:	Channel 1			
Sensor to	ype: A	ccelerometer	r	 Sens 	<u>i</u> tivity:	100	mV/g	1	
Current s	shunt: D	isable		▼ <u>Z</u> ero	offset:	0	Volts		
Chec	ck sensor <u>O</u> K	status							
Lower lin	nit: 8		Volte	Unne	r limit:	14	Volte		
Lower III	uit. 0		Volts	Oppe	a 111111.	14	VOILS		

Fig. 23. Configure the channels to use.

8. Add the firmware to the database

To add the firmware to the database:

- From SKF @ptitude Analyst, go to File / Import / Firmware (→ fig. 24) and click Browse (→ fig. 25).
- You will find the firmware on the Analyst CD. From the CD directory (-> fig. 26), highlight the .pkg file and click Open.
- When you see the .pkg file in the window, you can close the window (\rightarrow fig. 27).





Fig. 24. Go to File / Import / Firmware.

Open			×
😋 🔍 🗢 📔 « INST	🕽 🕞 🗢 🚺 « INSTALA 🕨 @PTITUDE SUITE 6.0 🕨 🛛 👻 🍫 Search @PTITUDE SUITE 6.0		JITE 6.0 🔎
Organize 🔻 New	folder	:== 👻	
PERSONAL Pictures SKF CMC LL SKF CMC LL SKF LATINT Videos Computer Computer Computer CD Drive (E: Freddy Herr ARCHIVO: INSTAL4 @DS 3 @OBS	Name AutoPlay AUTORUN DB_INST DecisionSupport Demo Data DMxManager InstallationManuals LabVIEW 8.5.1 NI-VISA Runtime 4.4.1 Prerequisites Suite ThinClient	Date modified 7/15/2011 11:56 AM 2/23/2011 1:45 PM 2/23/2011 1:45 PM 3/9/2011 5:00 PM 2/23/2011 1:46 PM 2/23/2011 1:47 PM 2/23/2011 1:47 PM 2/23/2011 1:47 PM	Type File folder File folder
PTII PTII PTII Autc ↓ F	I oois UserManuals IMx-0.971.pkg IIMx-0.971.pkg IIMx-0.971.pkg	2/23/2011 1:47 PM 2/23/2011 1:47 PM 5/31/2011 2:27 PM IMX Firmware (*.pkg) <u>Open</u>	File folder File folder PKG File Cancel

Fig. 26. Open the .pkg file.

Fig. 25. Click Browse.

Firmware Manager			×
<u>F</u> irmware:			
Device		Version	Published
IMx		0.971	5/31/2011 12:27:
			,
	Browse	<u>D</u> elete C	lose <u>H</u> elp

Fig. 27. When the .pkg file displays in the window, click Close.

9. Build channels and set up measurement points

Now you can add points to the hierarchy (refer to application notes **CM3158**, Add SKF Multilog On-line System IMx Points in SKF @ptitude Analyst, and **CM3159**, Add SKF Multilog On-line System IMx AC, DC, Logic and Speed Points in SKF @ptitude Analyst).

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