

SPECIFICATIONS KEROS WEB SERVICES

	Written by	Approved by	Validated by
Nam	Christophe Ronco	Sylvain FAVE	Thibault JAMARD
е			
Entit	KLK/KIS/DRD/Gatew	KLK/KIS/DRD/Core	KLK/KIS/DRD/Validation
У	ays	Network	
Date	2019/04/19	2019/04/19	2019/04/23

HISTORY

Date	Modification	Author	Versio
			n
2017/03/	- Initial release	Mickaël	0.1
23	- Replace all web services /application/keros with	Garin	
	/application/administration		
	- Rename DTO : LANDto → LANConfigurationDto,		
	WLANDto → WLANConfigurationDto		
2017/04/	- Update upgrade web service (renamed to	Mickaël	0.2
27	update)	Garin	
	- Add restore web service		
2017/04/	Update update web service	Mickaël	0.3
27		Garin	
2017/05/	Add getVersion web service	Mickaël	0.4
02		Garin	
2017/05/	Fix login, getVersion and getWLANConfiguration	Mickaël	0.5
04	web service display	Garin	
2017/05/	Change HTTP request type for update (PUSH →	Valentin	0.6
16	POST)	Cupif	
2017/06/	Remove useless parameter "fw_name" in update	Mickaël	0.7
80	web service	Garin	
2017/06/	Add getGSMConfiguration and	Mickaël	0.8
80	setGSMConfiguration web services	Garin	
2017/06/	Update GSMConfigurationDto	Mickaël	0.9
28		Garin	
2017/06/	- Update LANConfigurationDto and	Mickaël	0.10



KerOS web services

Version: 8.0

30	WLANConfigurationDto: add "off" choice in ipv4 field	Garin	
	- Add "enable" field in GSMConfigurationDto		
	- Add field "hardware_serial_number" in		
	VersionDto		
2017/07/	Update ErrorDto	Mickaël	0.11
03		Garin	
2017/08/	- Move getNetworkConfiguration,	Mickaël	0.12
21	setNetworkConfiguration, getTimeZones,	Garin	
	getTimeConfiguration, setTimeConfiguration,		
	NetworkDto, TimeZonesDto and TimeDto from		
	iFemtoCell/SPN web services specifications to		
	this document		
	- Remove source from TimeDto		
	- Remove bearer from NetworkDto		
	- Add following web services:- uploadOpenVpnConfiguration		
	- dploadOperryphConfiguration - getLog		
	- gettog - downloadLog		
	- downloadConfiguration		
	- uploadConfiguration		
	- Update NetworkDto		
2017/08/	Fix getLog and downloadLog errors	Mickaël	0.13
25		Garin	
2017/11/	Document approved	Mickaël	0.14
09		Garin	
2017/11/	Document validated	Mickaël	1.0
10		Garin	
2017/10/	Add downloadOpenVpnConfiguration web	Mickaël	1.1
02	service	Garin	
2017/10/	Add resetConfiguration and halt web services	Mickaël	1.2
12		Garin	1.0
2018/01/	- Update ErrorDto	Mickaël	1.3
04	- Update setTimeConfiguration web service	Garin	
	description Add field date time to undate TimeDto		
2018/01/	- Add field date_time to update TimeDto Document approved	Mickaël	1.4
16		Garin	1.4
2018/01/	- Update NetworkDTO to OpenVPNDTO	Valentin	1.5
18	- Update GetOpenVpnConfiguration	Cupif	1.5
	- Update SetOpenVpnConfiguration	Capii	
	- Update downloadOpenVpnConfiguration		
	- Update uploadOpenVpnConfiguration		
	- Add uploadOpenVpnCertificate		
	- Add uploadOpenVpnCertificate		

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink	
Internal Use	Kerlink reserved rights	
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 2 / 37
Confidential	THORIGNÉ-FOUILLARD	Page 2 / 37



KerOS web services

Version: 8.0

· · ·		
		1.6
•	Garin	
1		
		1.7
•	Cupit	
·		
	NA: 1 "1	1.0
		1.8
	Garin	
· · · · · · · · · · · · · · · · · · ·		
	Mickaäl	1.0
Document approved		1.9
Desument validated		2.0
Document validated		2.0
Add and modify Wi Fi relative web services and		3.1
		3.1
	Gariii	
·		
, , ,		
ı		
1 9 1		
· · · ·		
· · · · · · · · · · · · · · · · · · ·		
1		
1		
·		
- Remove following DTO:		
	- Add downloadOpenVpnCertificate - Add uploadOpenVpnCertificatesArchive - Update PaginatedDto and JWTDto (remove camel case fields) - Remove openvpn object in OpenVPNDto and remove camel case fields - Split OpenVPNDto into OpenVPNDto and OpenVPNFileListDto - Add OpenVPNDto - Add getOpenVPNWorkingFileList - Update OpenVPNFileListDto (remove "s") - Rename uploadOpenVPNCertificatesArchive to uploadOpenVPNCertificatesArchive and update web service (remove "s") - Add a note in web services setLANConfiguration, setWLANConfiguration and setGSMConfiguration Document approved Document validated - Add and modify Wi-Fi relative web services and DTO: - Add connect web service - Add remove web service - Add WLANConfigurationDto - Add WLANServiceDto - Add WLANServiceDto - Add GetStatus web service and StatusDto - Remove following web services: - getOpenVPNConfiguration - setOpenVPNConfiguration - getOpenVPNConfiguration - getOpenVPNConfiguration - uploadOpenVPNConfiguration - downloadOpenVPNCertificate - uploadOpenVPNCertificate - uploadOpenVPNCertificate - uploadOpenVPNCertificate - uploadOpenVPNCertificate - uploadOpenVPNCertificate - uploadOpenVPNCertificate - uploadConfiguration - getLog - downloadConfiguration - uploadConfiguration - uploadConfiguration - uploadConfiguration - uploadConfiguration - resetConfiguration	- Add uploadOpenVpnČertificatesArchive - Update PaginatedDto and JWTDto (remove camel case fields) - Remove openvpn object in OpenVPNDto and remove camel case fields - Split OpenVPNDto into OpenVPNDto and OpenVPNFileListDto - Add OpenVPNDto - Add OpenVPNDto into OpenVPNDto and OpenVPNFileListDto (remove "s") - Rename uploadOpenVPNCertificatesArchive to uploadOpenVPNCertificateArchive and update web service (remove "s") - Add a note in web services setLANConfiguration, setWLANConfiguration and setGSMConfiguration Document approved - Add and modify Wi-Fi relative web services and DTO: - Add connect web service - Add remove web service - Update WLANConfigurationDto - Add WLANServiceDto - Add WLANServiceDto - Add GetStatus web service and StatusDto - Remove following web services: - getOpenVPNConfiguration - setOpenVPNConfiguration - getOpenVPNConfiguration - uploadOpenVPNCertificate - uploadConfiguration - resetConfiguration

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink	
Internal Use	Kerlink reserved rights	
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 3 / 37
Confidential	THORIGNÉ-FOUILLARD	Page 3 / 31



KerOS web services

Version: 8.0

	On an VDND+a		
	- OpenVPNDto		
	- OpenVPNFileListDto		
2010/02/	- Remove ntp.polling field from TimeDto	NA: -1 "1	2.2
2018/03/	Update setPassword web service and add	Mickaël	3.2
15	PasswordDto	Garin	
2018/03/	Document approved	Mickaël	3.3
16		Garin	
2018/03/	Document validated	Mickaël	4.0
21		Garin	
2018/04/	- Add following web services:	Mickaël	4.1
20	- addGSMOperator	Garin	
	- deleteGSMOperator		
	 updateGSMOperator 		
	- Add following DTO:		
	- GSMOperatorDto		
	- Update following DTO:		
	- GSMConfigurationDto		
	- TimeDto		
	- LANConfigurationDto		
2018/04/	- Update following DTO:	Mickaël	4.2
27	- StatusDTO	Garin	
2018/05/	- Update following DTO:	Mickaël	4.3
28	- LANConfigurationDto (add ipv4 dns field)	Garin	
	- WLANServiceDto (add error field)		
	 StatusDto (update systems fields) 		
2018/05/	Move pin code field from GSMOperatorDto to	Mickaël	4.4
29	GSMConfigurationDto .	Garin	
2018/05/	- Remove network.gsm.broadcast from	Mickaël	4.5
31	StatusDTO	Garin	
	- Add id field in GSMOperatorDto		
2018/07/	- Update VersionDto (Add platform type field)	Arnaud	4.6
18	- Set document as generic for iBTS and	Lebert	
	iFemtoCell and define WLAN function as specific		
	to iFemtoCell		
	- Update StatusDto (Remove Keros disk field)		
2018/07/	- Update TimeDto (add direction),	Arnaud	4.7
18	- Update VersionDto (add possible values of	Lebert	
	platform type) - Remove PaginatedDto.	_0.00.0	
2018/07/	Document validated	Arnaud	5.0
19	200aone vandaced	Lebert	
2018/07/	- Update LANConfigurationDto (update ipv4_dns	Arnaud	5.1
24	field)	Lebert	5.1
2018/07/	Document validated	Arnaud	6.0
2018/07/	Document vanuated	Lebert	0.0
		reneir	

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink	
Internal Use	Kerlink reserved rights	
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 4 / 27
Confidential	THORIGNÉ-FOUILLARD	Page 4 / 37



KerOS web services

Version: 8.0

2019/03/	- Apply new Kerlink template	Mickaël	6.1
			0.1
07	- Replace all iFemtocell occurrences with Keros	Garin	
2019/03/	Document approved and validated	Mickaël	7.0
18		Garin	
2019/04/	- Update GetVersion (VersionDto modified,	Christophe	7.1
19	added CapabilitiesDto and	Ronco	
	NetworkCapabilitiesDto)		
	- Update WLANServiceDTO		
	- Modify method connect		
	- Delete method remove		
	- Add method disconnect		
	- Add method configureWLANService and		
	removeWLANService (and corresponding DTO)		
2019/05/	Document approved and validated	Christophe	8.0
24		Ronco	



KerOS web services

Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

TABLE OF CONTENT

Specifications keros web services	I
History	1
Table of content	6
Reference	
Glossary	8
Introduction	9
1.KerOS REST API	9
1.1GetVersion	
1.2Login	9
1.3Configuration and administration	11
1.3.1Get Ethernet (LAN) configuration	11
1.3.2Set Ethernet (LAN) configuration	
1.3.3Get Wi-Fi (WLAN) configuration	13
1.3.4Set Wi-Fi (WLAN) configuration	
1.3.5Configure Wi-Fi (WLAN) services	15
1.3.6Remove Wi-Fi (WLAN) service configuration	15
1.3.7Connect Wi-Fi (WLAN)	
1.3.8Disconnect Wi-Fi (WLAN) service	
1.3.9Get GSM configuration	
1.3.10Set GSM configuration	19
1.3.11Add GSM operator	20
1.3.12Delete GSM operator	
1.3.13Update GSM operator	
1.3.14Get time zones	23
1.3.15Get time configuration	24
1.3.16Set time configuration	
1.3.17Update	
1.3.18Restore	27
1.3.19Reboot	28
1.3.20Halt	
1.3.21Set password	30

Classification This document is the strict property of Kerlink and shall not be either copied not sent without express written authorization of Kerlink		
Internal Use	Kerlink reserved rights	
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 6 / 37
Confidential	THORIGNÉ-FOUILLARD	Page 0 / 31



KerOS web services

Version: 8.0

1.3.22Get status	31
2.Data Transfer Object	32
2.1UserDto	32
2.2JWTDto	32
2.3LANConfigurationDto	32
2.4WLANConfigurationDto	32
2.5WLANServiceDto	33
2.6WLANServiceConfigurationDto	33
2.7WLANConnectDto	33
2.8GSMConfigurationDto	33
2.9GSMOperatorDto	34
2.10TimeZonesDto	34
2.11TimeDto	34
2.12PasswordDto	35
2.13VersionDto	35
2.14CapabilitiesDto	35
2.15NetworkCapabilitiesDto	35
2.16StatusDto	35
2.17ErrorDto	36
End of document	37

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink			
Internal Use	Kerlink reserved rights			
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235			
Confidential	THORIGNÉ-FOUILLARD	Page 7 / 37		



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

REFERENCE

Reference	Document / link	Description

GLOSSARY

Abbrevia tion	Description
API	Application Programming Interface
DHCP	Dynamic Configuration Host Protocol
DTO	Data Transfer Object
IoT	Internet of Things
IP	Internet Protocol
JSON	JavaScript Object Notation
LAN	Local Area Network
REST	REpresentational State Transfer
URI	Uniform Resource Identifier
Wi-Fi	Wireless-Fidelity
WLAN	Wireless LAN

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink			
Internal Use	Kerlink reserved rights			
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235			
Confidential	THORIGNÉ-FOUILLARD	Page 6 / 37		



KerOS web services Version: 8.0

Author: Mickaël Garin

Date: 2019/05/24

Introduction

This document describes web services provided by KerOS firmware.

1. KerOS REST API

1.1 GetVersion

The GetVersion web service is the only service accessible before login.

Request						
Signatur	Method	getVersion				
е	URI	GET /application/administration/version				
Paramet ers	Name	Туре	Mandato ry	Description		
CIS						
	Name	Value				
Header	Content- Type	application	on/vnd.kerlir	nk.iot-v1+json		
Body						
Response						
	Name	Value				
Header	Content- Type	application	on/vnd.kerlir	nk.iot-v1+json		
	Location					
Paramet	Name	Туре	Description			
ers						
	Status	Value				
Body	200	VersionD	to			
	4xx, 5xx	ErrorDto				

1.2 Login

The login web service allows a user to authenticate to the middleware by providing its login and password fields, and in case of success getting a token that he will use for the next requests.

Note: the token has an expiration date that can be defined in the properties file.

Classification Internal Use	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink Kerlink reserved rights				
Strict confidential	Kerlink - 1 rue lacqueline Auriol - 35235				
Confidential	THORIGNÉ-FOUILLARD	Page 9 / 37			



KerOS web services Version: 8.0

Request						
Signatur	Method	login				
е	URI	POST /ap	plication/ad	ministration/login		
Paramet	Name	Туре	Mandato ry	Description		
ers						
	Name	Value				
Header	Content- Type	application	application/vnd.kerlink.iot-v1+json			
Body	userDto	UserDto	(login and pa	assword)		
Response						
	Name	Value				
Header	Content- Type	application	on/vnd.kerlir	nk.iot-v1+json		
	Location					
Paramet	Name	Туре	Description			
ers						
	Status	Value				
Body	201	JWTDto				
	4xx, 5xx	ErrorDto	,			

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink			
Internal Use	Kerlink reserved rights			
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235			
Confidential	THORIGNÉ-FOUILLARD	Page 10 / 37		



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3 Configuration and administration

1.3.1 Get Ethernet (LAN) configuration

Request						
Signatur	Method		onfiguration			
e	URI	GET /application/administration/lan				
Paramet ers	Name	Туре	Mandato ry	Description		
2.5						
	Name	Value				
Header	Content- Type	application	on/vnd.kerlir	nk.iot-v1+json		
	Authorizati on					
Body						
Response						
	Name	Value				
Header	Content- Type	application	on/vnd.kerlir	nk.iot-v1+json		
	Location					
Paramet	Name	Туре	Description			
ers						
	Status	Value				
Body	200	LANConfi	gurationDto			
	4xx, 5xx	ErrorDto				

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink				
Internal Use	Kerlink reserved rights				
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235				
Confidential	THORIGNÉ-FOUILLARD	Page II / 37			



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3.2 Set Ethernet (LAN) configuration

Request						
Signatur	Method	setLANConfiguration				
e	URI	PUT /app	olication/adr	ninistration/lan		
Paramet ers	Name	Туре	Mandato ry	Description		
CIS						
	Name	Value				
Header	Content-Type	applicati	on/vnd.kerl	ink.iot-v1+json		
	Authorization	Bearer <	Bearer <token></token>			
Body	LANConfiguratio	LANConfigurationDto				
•	nDto					
Response						
	Name	Value				
Header	Content-Type	application/vnd.kerlink.iot-v1+json				
	Location					
Paramet	Name	Type Description				
ers						
	Status	Value				
Body	204	No Conte	ent			
	4xx, 5xx	ErrorDto				

Note: the call of this web service may not lead to a response if called from LAN interface and if web service requests a LAN disconnection.

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink					
Internal Use	Kerlink reserved rights					
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235					
Confidential	THORIGNÉ-FOUILLARD	age 12 / 3/				



KerOS web services

Version: 8.0 Author: Mickaël Garin

Date: 2019/05/24

1.3.3 Get Wi-Fi (WLAN) configuration

Return WLAN availability and a list of services present and/or configured.

Request				s present ana/or configured.			
Signatur	Method	getWLANConfiguration					
e	URI	GET /application/administration/wlan					
Paramet	Name	Туре	Mandato ry	Description			
ers							
	Name	Value					
Header	Content- Type	applicati	application/vnd.kerlink.iot-v1+json				
	Authorizati on	Bearer <token></token>					
Body							
Response							
	Name	Value					
Header	Content- Type	application/vnd.kerlink.iot-v1+json					
	Location						
Paramet	Name	Туре	Description				
ers							
	Status	Value					
Body	200	WLANCo	nfigurationD	to			
	4xx, 5xx	ErrorDto	<u> </u>				

Classification This document is the strict property of Kerlink and shall not be either copi sent without express written authorization of Kerlink						
Internal Use	Kerlink reserved rights					
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235					
Confidential	THORIGNÉ-FOUILLARD	Page 13 / 37				



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3.4 Set Wi-Fi (WLAN) configuration

Allow to enable/disable WLAN.

7 mow to chabite also we we.						
Request						
Signatur	Method	setWLANConfiguration				
e	URI	PUT /application/administration/wlan				
Paramet ers	Name	Туре	Mandato ry	Description		
CIS						
	Name	Value				
Header	Content-Type	application/vnd.kerlink.iot-v1+json				
	Authorization	Bearer <token></token>				
Body	LANConfiguratio nDto	WLANConfigurationDto				
Response						
	Name	Value				
Header	Content-Type	application/vnd.kerlink.iot-v1+json				
	Location					
Paramet	Name	Type Description				
ers						
	Status	Value				
Body	204	No Cont	ent			
	4xx, 5xx	ErrorDto				

Note: the call of this web service may not lead to a response if called from WLAN interface and if web service requests a WLAN disconnection.

Classification This document is the strict property of Kerlink and shall not be either copied sent without express written authorization of Kerlink				
Internal Use	Kerlink reserved rights			
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 14 / 37		
Confidential	THORIGNÉ-FOUILLARD	Page 14 / 3/		



KerOS web services

Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3.5 Configure Wi-Fi (WLAN) services

Configure service whether it is scanned or not.

Request							
Signatur	Method	configure	configureWLANService				
_	URI	POST					
е		/applicat	/application/administration/wlan/service				
Paramet	Name	Туре	Mandato	Description			
			ry				
ers							
	Name	Value					
Header	Content-Type	application/vnd.kerlink.iot-v1+json					
	Authorization	Bearer <token></token>					
Pody	WLANServiceCon	WLANServiceConfigurationDto					
Body	figurationDto	_					
Response							
	Name	Value					
Header	Content-Type	application/vnd.kerlink.iot-v1+json					
	Location						
Paramet	Name	Туре	Description				
ers							
	Status	Value					
Body	204	No Conte	ent				
	4xx, 5xx	ErrorDto					

1.3.6 Remove Wi-Fi (WLAN) service configuration

Remove service configuration. If service is connected, it will be disconnected first.

Request						
	Method	removeW	LANService	e		
Signatur	URI	DELETE				
е		/application/administration/wlan/service/ {service_id}				
Paramet	Name	Туре	Mandato	Description		
			ry			
ers	service_id	string	YES	Service identifier		
	Name	Value				
Header	Content-Type	application/vnd.kerlink.iot-v1+json				
	Authorization	Bearer <token></token>				
Body						
Response						

Classification	either copied nor ink		
Internal Use	Kerlink reserved rights		
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 15 / 37	
Confidential	THORIGNÉ-FOUILLARD	Page 15 / 37	



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

	Name	Value			
Header	Content-Type	application/vnd.kerlink.iot-v1+json			
	Location				
Paramet	Name	Type Description			
ers					
	Status	Value			
Body	204	No Content			
	4xx, 5xx	ErrorDt	0		

1.3.7 Connect Wi-Fi (WLAN)

Connect to an access point in states "idle" or "failure".

Connect to an access point in states lide of failure.							
Request							
Signatur	Method	connect					
e	URI	POST /application/administration/wlan/connect/					
		{service_id}					
Paramet	Name	Туре	Mandato	Description			
ers			ry				
C13	service_id	string	YES	Service identifier			
	Name	Value					
Header	Content-Type	application/vnd.kerlink.iot-v1+json					
	Authorization	Bearer <token></token>					
	WLANConnect	WLANConnectDto. Leave field passphrase					
Body	Dto	blanked to connect to an already configured					
		access point					
Response							
	Name	Value					
Header	Content-Type	applicat	ion/vnd.kerlir	application/vnd.kerlink.iot-v1+json			
	Location			,			
Paramet	Name	Туре	Description	,			
Paramet ers		Туре	Description	,			
		Type Value	Description				
	Name						
ers	Name Status	Value	ent				

Note: the call of this web service may not lead to a response if called from WLAN interface.

Classification This document is the strict property of Kerlink and shall not be either copied sent without express written authorization of Kerlink				
Internal Use	Kerlink reserved rights			
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	ge 16 / 37		
Confidential	THORIGNÉ-FOUILLARD	ge 10/3/		



KerOS web services Version: 8.0

Author: Mickaël Garin

Date: 2019/05/24

1.3.8 Disconnect Wi-Fi (WLAN) service

Disconnect a connected (state ready or online) WLAN service (does not remove configuration).

Request	Request					
	Method	disconnec	t			
Signatur	URI	POST				
е		/applicatio	/application/administration/wlan/disconnect/			
		{service_id}				
Paramet	Name	Туре	Mandato	Description		
ers			ry			
CIS	service_id	string	YES	Service identifier		
	Name	Value				
	Content-	applicatio	ገ/vnd.kerlir	nk.iot-v1+json		
Header	Туре					
	Authorizati	Bearer <token></token>				
	on					
Body						
Response						
	Name	Value				
Header	Content-	application/vnd.kerlink.iot-v1+json				
ricadei	Туре					
	Location					
Paramet	Name	Type D	escription			
ers						
	Status	Value				
Body	204	No Conter	it			
	4xx, 5xx	ErrorDto				

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink				
Internal Use	Kerlink reserved rights				
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235				
Confidential	THORIGNÉ-FOUILLARD	Page 17 / 37			



KerOS web services

Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3.9 Get GSM configuration

Request							
Signatur	Method	getGSMC	getGSMConfiguration				
е	URI	GET /application/administration/gsm					
Paramet ers	Name	Туре	Mandato ry	Description			
CIS							
	Name	Value					
Header	Content- Type	applicatio	application/vnd.kerlink.iot-v1+json				
	Authorizati on	Bearer <token></token>					
Body							
Response	Response						
	Name	Value					
Header	Content-	application/vnd.kerlink.iot-v1+json					
Headel	Туре						
	Location						
Paramet	Name	Type I	Description				
ers							
	Status	Value					
Body	200		gurationDto)			
	4xx, 5xx	ErrorDto					

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink				
Internal Use	Kerlink reserved rights				
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235				
Confidential	THORIGNÉ-FOUILLARD	Page 18 / 37			



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3.10 Set GSM configuration

Request						
Signatur	Method	setGSMConfiguration				
е	URI	PUT /ap	plication/adr	ministration/gsm		
Paramet	Name	Туре	Mandato ry	Description		
ers						
	Name	Value				
Header	Content-Type	application/vnd.kerlink.iot-v1+json				
	Authorization	Bearer <token></token>				
Body	GSMConfiguratio	GSMConfigurationDto				
Бойу	nDto					
Response						
	Name	Value				
Header	Content-Type	application/vnd.kerlink.iot-v1+json				
	Location					
Paramet	Name	Type Description				
ers						
	Status	Value				
Body	204	No Cont	ent			
	4xx, 5xx	ErrorDto				

Note: the call of this web service may not lead to a response if called from GSM interface and if web service requests a GSM disconnection.

Classification This document is the strict property of Kerlink and shall not be either copied sent without express written authorization of Kerlink				
Internal Use Kerlink reserved rights				
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 19 / 37		
Confidential	THORIGNÉ-FOUILLARD	Page 19 / 3/		



KerOS web services Version: 8.0

Author: Mickaël Garin

Date: 2019/05/24

1.3.11 Add GSM operator

Used to declare a new GSM operator.

Request							
Signatur	Method	addGSMOperator					
е	URI	POST /a	POST /application/administration/gsm/operator				
Paramet ers	Name	Туре	Mandato ry	Description			
CIS							
	Name	Value					
Header	Content-Type	applicat	ion/vnd.kerlir	nk.iot-v1+json			
	Authorization						
Body	GSMOperator Dto	GSMOperatorDto					
Response	Response						
	Name	Value					
Header	Content-Type	application/vnd.kerlink.iot-v1+json					
пеацеі	Location	/application/administration/gsm/operator/ {operatorId}					
Paramet	Name	Type Description					
ers	operatorId	String Operator identifier					
	Status	Value					
Body	201	Created	·				
	4xx, 5xx	ErrorDto					

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink				
Internal Use	Kerlink reserved rights				
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235				
Confidential	THORIGNÉ-FOUILLARD	Page 20 / 37			



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3.12 Delete GSM operator

Used to delete a GSM operator.

Request	Request					
	Method	deleteGSN	10perator			
Signatur	URI	DELETE				
е			/application/administration/gsm/operator/			
		{operator				
Paramet ers	Name	Туре	Mandato ry	Description		
CIS	operatorId	String	Yes	Operator identifer		
	Name	Value				
	Content-	applicatio	n/vnd.kerlir	nk.iot-v1+json		
Header	Туре					
	Authorizati	Bearer <token></token>				
	on					
Body						
Response						
	Name	Value				
Header	Content-	application/vnd.kerlink.iot-v1+json				
ricadei	Туре					
	Location					
Paramet	Name	Type D	escription			
ers						
	Status	Value				
Body	204	No Conter	nt			
	4xx, 5xx	ErrorDto				

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink				
Internal Use	Kerlink reserved rights				
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235 Page 21 / 37				
Confidential	THORIGNÉ-FOUILLARD				



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3.13 Update GSM operator

Used to update GSM operator parameters.

Request	Request					
	Method	updateGSMOperator				
Signatur	URI	PUT				
е				ration/gsm/operator/		
		-	{operatorId}			
Paramet	Name	Туре	Mandato	Description		
ers		-	ry			
C13	operatorId	String	Yes	Operator identifier		
	Name	Value				
Header	Content-Type	application/vnd.kerlink.iot-v1+json				
	Authorization	Bearer <token></token>				
Body	GSMOperator Dto	GSMOpe	eratorDto			
Posponso	Dto					
Response	Name	Value				
Header			ion/und karlir	ok int v1 Licon		
пеацеі	Content-Type	application/vnd.kerlink.iot-v1+json				
Dawanash	Location	T	December			
Paramet	Name	Туре	Description			
ers	CL	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				
	Status	Value				
Body	204	No Cont				
	4xx, 5xx	ErrorDto)			

Classification This document is the strict property of Kerlink and shall not be either copied sent without express written authorization of Kerlink				
Internal Use Kerlink reserved rights				
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235			
Confidential	THORIGNÉ-FOUILLARD Faye 22/5			



KerOS web services Version: 8.0

Author: Mickaël Garin

Date: 2019/05/24

1.3.14 Get time zones

Request						
Signatur	Method	getTimeZ	getTimeZones			
е	URI	GET /app	lication/adm	ninistration/timezones		
Paramet ers	Name	Туре	Mandato ry	Description		
ers						
	Name	Value				
Header	Content- Type	application	application/vnd.kerlink.iot-v1+json			
	Authorizati on	Bearer <	Bearer <token></token>			
Body						
Response						
	Name	Value				
Header	Content- Type	application/vnd.kerlink.iot-v1+json				
	Location					
Paramet	Name	Туре	Description			
ers						
	Status	Value				
Body	200	TimeZon	esDto			
	4xx, 5xx	ErrorDto				

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink				
Internal Use	Kerlink reserved rights				
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235				
Confidential	THORIGNÉ-FOUILLARD	Page 23 / 31			



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3.15 Get time configuration

Request						
Signatur	Method	getTimeConfiguration				
e	URI	GET /application/administration/time				
Paramet ers	Name	Туре	Mandato ry	Description		
ers						
	Name	Value				
Header	Content- Type	application	application/vnd.kerlink.iot-v1+json			
	Authorizati on	Bearer <token></token>				
Body						
Response						
	Name	Value				
Header	Content- Type	application/vnd.kerlink.iot-v1+json				
	Location					
Paramet	Name	Туре	Description			
ers						
	Status	Value				
Body	200	TimeDto				
	4xx, 5xx	ErrorDto	ErrorDto			

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink					
Internal Use	Internal Use Kerlink reserved rights					
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 24 / 37				
Confidential	THORIGNÉ-FOUILLARD	Page 24 / 37				



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3.16 Set time configuration

Request						
Signatur	Method	setTime(Configuration	1		
e	URI	PUT /application/administration/time				
Paramet ers	Name	Туре	Mandato ry	Description		
2.3		_				
	Name	Value				
Header	Content- Type	applicati	on/vnd.kerlir	nk.iot-v1+json		
	Authorizati on	Bearer <token></token>				
Body	timeDto	TimeDto. Leave field date_time blanked to not set date/time				
Response						
	Name	Value				
Header	Content- Type	application/vnd.kerlink.iot-v1+json				
	Location					
Paramet	Name	Туре	Description			
ers						
	Status	Value				
Body	204	No Conte	ent			
	4xx, 5xx	ErrorDto	ErrorDto			

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink		
Internal Use	Kerlink reserved rights		
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235		
Confidential	THORIGNÉ-FOUILLARD Page 25 / 5/		



KerOS web services

Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

Update 1.3.17

Request	Request					
Signatur	Method	update				
e	URI	POST /application/administration/update				
Paramet ers	Name	Туре	Mandator y	Description		
	N	\				
	Name	Value				
Header	Content- Type	Content	-lype: mult	ipart/form-data; boundary=		
	Authorizati on	Bearer <	Bearer <token></token>			
Body	firmware	Binary firmware update file with the following properties: Content-Disposition: form-data; name="file"; filename="firmware.ipk" Content-Type: application/octet-stream				
Response						
	Name	Value				
Header	Content- Type	applicat	ion/vnd.kerl	ink.iot-v1+json		
	Location					
Paramet	Name	Туре	Descrip	otion		
ers						
	Status	Value				
Body	204	No Cont	ent			
	4xx, 5xx	ErrorDto	ErrorDto			

Classification	This document is the strict property of Kerlink and shall not be either copied is sent without express written authorization of Kerlink					
Internal Use	Internal Use Kerlink reserved rights					
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 26 / 37				
Confidential	THORIGNÉ-FOUILLARD	Page 20 / 37				



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3.18 *Restore*

Request	Request					
Signatur	Method	restore				
Signatur e	URI	POST /application/administration/restore/				
		{restoreTy				
	Name	Туре	Mandato	Description		
Paramet			ry			
ers	restoreTyp	String	no	"backup" or "stock"		
	е) / I				
	Name	Value				
	Content-	applicatio	n/vnd.kerlir	nk.iot-v1+json		
Header	Туре					
	Authorizati	Bearer <token></token>				
	on					
Body						
Response						
	Name	Value				
Header	Content-	application/vnd.kerlink.iot-v1+json				
ricauci	Туре					
	Location					
Paramet	Name	Type Description				
ers						
	Status	Value				
Body	204	No Conter	nt			
	4xx, 5xx	ErrorDto				



KerOS web services Version: 8.0

Author: Mickaël Garin

Date: 2019/05/24

1.3.19 Reboot

Request						
Signatur	Method	reboot				
е	URI	POST /ap	POST /application/administration/reboot			
Paramet ers	Name	Туре	Mandato ry	Description		
CIS						
	Name	Value				
Header	Content- Type	application	application/vnd.kerlink.iot-v1+json			
	Authorizati on	Bearer <token></token>				
Body						
Response						
	Name	Value				
Header	Content-	application/vnd.kerlink.iot-v1+json				
	Type					
Demonstra	Location	Tue e	Dagawinstian			
Paramet	Name	Туре	Description			
ers	Chabus	\				
	Status	Value				
Body	204	No Conte	nt			
	4xx, 5xx	ErrorDto				

Classification	This document is the strict property of Kerlink and shall not be either copied n sent without express written authorization of Kerlink					
Internal Use	Internal Use Kerlink reserved rights					
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 28 / 37				
Confidential	THORIGNÉ-FOUILLARD	Page 20 / 37				



KerOS web services

Version: 8.0 Author: Mickaël Garin

Date: 2019/05/24

1.3.20 Halt

Request						
Signatur	Method	halt POST /application/administration/halt				
е	URI					
Paramet ers	Name	Туре	Mandato ry	Description		
ers						
	Name	Value				
Header	Content- Type	application	application/vnd.kerlink.iot-v1+json			
	Authorizati on	Bearer <token></token>				
Body						
Response						
	Name	Value				
Header	Content- Type	application/vnd.kerlink.iot-v1+json				
	Location					
Paramet	Name	Type	Description			
ers						
	Status	Value				
Body	204	No Conte	nt			
	4xx, 5xx	ErrorDto	ErrorDto			

Classification This document is the strict property of Kerlink and shall not be either cop sent without express written authorization of Kerlink				
Internal Use	Kerlink reserved rights			
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 29 / 37		
Confidential	THORIGNÉ-FOUILLARD	Page 29 / 37		



KerOS web services

Version: 8.0 Author: Mickaël Garin

Date: 2019/05/24

1.3.21 Set password

Request	Request					
Signatur	Method	setPassw	ord			
e	URI	PUT /application/administration/password				
Paramet ers	Name	Туре	Mandato ry	Description		
CIS						
	Name	Value				
Header	Content- Type	application	on/vnd.kerlir	nk.iot-v1+json		
	Authorizati on	Bearer <token></token>				
Body	passwordD to	PasswordDto				
Response						
	Name	Value				
Header	Content- Type	application/vnd.kerlink.iot-v1+json				
	Location					
Paramet	Name	Type	Description			
ers						
	Status	Value				
Body	204	No Conte	nt			
	4xx, 5xx	ErrorDto				

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink		
Internal Use	Kerlink reserved rights		
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 30 / 37	
Confidential	THORIGNÉ-FOUILLARD	Page 30 / 37	



KerOS web services

Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

1.3.22 Get status

Request					
Signatur	Method	getStatus			
е	URI	GET /application/administration/status			
Paramet	Name	Туре	Mandato ry	Description	
ers					
	Name	Value	Value		
Header	Content- Type	application/vnd.kerlink.iot-v1+json			
	Authorizati on	i Bearer <token></token>			
Body					
Response					
	Name	Value			
Header	Content- Type	application/vnd.kerlink.iot-v1+json			
	Location				
Paramet	Name	Type Description			
ers					
	Status	Value			
Body	200	StatusDto)		
	4xx, 5xx	ErrorDto			

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink			
Internal Use	Kerlink reserved rights			
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 31 / 37		
Confidential	THORIGNÉ-FOUILLARD	Page 31 / 31		



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

2. Data Transfer Object

2.1 UserDto

Field	Туре	Description
login	String	Login
password	String	Password

2.2 JWTDto

Field	Туре	Description
token	String	Token value
token_type	String	Token type {Bearer}
expiration_d	Integer	Expiration date (EPOCH date in sec)
ate		

2.3 LANConfigurationDto

Field	Туре	Directio	Description
		n	
available	Boolea	Get	LAN availability
	n		
enable	Boolea	Get/Set	True: on; False: off
	n		
ipv4	String	Get/Set	IPv4 configuration type {dhcp, static, off}
ipv4_addre	String	Get/Set	IPv4 address
SS			
ipv4 netma	String	Get/Set	IPv4 netmask or prefix length
sk			
ipv4 gatew	String	Get/Set	IPv4 gateway
ay			
ipv4_dns	String	Get/Set	IPv4 DNS list separated with comma

2.4 WLANConfigurationDto

Field	Туре	Directi	Description
		on	
available	String	Get	Wi-Fi availability

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink				
Internal Use	Kerlink reserved rights				
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 32 / 37			
Confidential	THORIGNÉ-FOUILLARD	Page 32 / 37			



KerOS web services

Version: 8.0 Author: Mickaël Garin

Date: 2019/05/24

enable	Boolean	Get/S et	True: on; False: off
services	WLANServiceDt o[]	Get	Wi-Fi service list

2.5 WLANServiceDto

Field	Туре	Description
id	String	Unique identifier
name	String	Wi-Fi service name
state	String	Wi-Fi service state ("unavailable", "idle", "failure", "association", "configuration", "ready", "disconnect" or "online")
error	String	If not empty, indicates an error
strength	Integer	Signal strength
security	String	Security
already_config ured	Boolean	Already configured

State "unavailable" means service has not been detected during WiFi scan (it should be configured). Other state values directly come from Connman.

2.6 WLANServiceConfigurationDto

Field	Туре	Description
name	String	Wi-Fi service name
passphrase	String	Passphrase

2.7 WLANConnectDto

Field	Туре	Description
passphrase	String	Passphrase

2.8 GSMConfigurationDto

Field	Туре	Direction	Description
available	Boolean	Get	True: GSM available;
			False: GSM not
			available (Read only)
enable	Boolean	Get/Set	True: on; False: off
pin_code	String	Get/Set	PIN code

Classification This document is the strict property of Kerlink and shall not be either copied sent without express written authorization of Kerlink			
Internal Use Kerlink reserved rights			
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 33 / 37	
Confidential	THORIGNÉ-FOUILLARD	Page 33 / 37	



KerOS web services

Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

operators	GSMOperatorD	Get	List	of	declared
	to[]		operato	rs	

2.9 GSMOperatorDto

Field	Туре	Description
id	Integer	Unique identifier
mcc	String	Mobile Country Code
mnc	String	Mobile Network Code
apn	String	APN
user	String	User
password	String	Password

2.10TimeZonesDto

Field	Туре	Description
timezones	Object[] of string	Array of time zones

2.11TimeDto

Field	Туре	Direction	Description
mode	String	Get/Set	- "auto": automatic date and time with NTP - "manual": manual configuration
ntp	Object	Get/Set	NTP object
ntp.address _1	String	Get/Set	NTP address 1
ntp.address _2	String	Get/Set	NTP address 2
timezone	String	Get/Set	Timezone
date_time	String	Get/Set	Date/time in YYYYmmddHHMMSS format: - YYYY: year, 0000 to 9999 - mm: month, 01 to 12 - dd: day, 01 to 12 - HH: hour, 00 to 23 - mm: minute, 00 to 59 - ss: second, 00 to 59

Classification This document is the strict property of Kerlink and shall not be either cop sent without express written authorization of Kerlink			
Internal Use Kerlink reserved rights			
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 34 / 37	
Confidential	THORIGNÉ-FOUILLARD	Page 34 / 37	



KerOS web services Version: 8.0

Author: Mickaël Garin

Date: 2019/05/24

2.12 Password Dto

Field	Туре	Description
password	String	Password

2.13 Version Dto

Field	Туре	Description			
firmware_version	String	Firmware version			
hardware_serial_nu String mber		Hardware serial number			
ui_title	String	Device platform name that should be displayed on login page			
capabilities	Capabi litiesDt	Board capabilities			
	0				

2.14CapabilitiesDto

Field	Туре	Description
network	Network Capabili tiesDto	Network hardware capabilities
gps	Boolean	True if GPS is possible on this product

2.15 Network Capabilities Dto

Field	Туре	Description
wifi	Boolean	True if WiFi is possible on this product
gsm	Boolean	True if Gsm is possible on this product
ethernet	Boolean	True if Ethernet is possible on this product

2.16StatusDto

Field	Туре	Description
system	Object	System
system.cpu	Float	CPU usage
system.ram	Float	RAM usage
system.user_volume_usage	Float	User volume usage
system.temperature	Float	Temperature
network	Object	Network

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink		
Internal Use	Kerlink reserved rights		
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 35 / 37	
Confidential	THORIGNÉ-FOUILLARD	Page 35 / 37	



KerOS web services Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

network.lan	Object	LAN
network.lan.status	Boolean	LAN status
network.lan.hardware_addres	String	LAN hardware address
S		
network.lan.address	String	LAN address
network.lan.broadcast	String	LAN broadcast
network.lan.netmask	String	LAN netmask
network.wlan	Object	WLAN (iFemtoCell only)
network.wlan.status	Boolean	WLAN status (iFemtoCell
		only)
network.wlan.hardware_addre	String	WLAN hardware address
SS		(iFemtoCell only)
network.wlan.address	String	WLAN address (iFemtoCell
		only)
network.wlan.broadcast	String	WLAN broadcast (iFemtoCell
		only)
network.wlan.netmask	String	WLAN netmask (iFemtoCell
		only)
network.gsm	Object	GSM
network.gsm.status	Boolean	GSM status
network.gsm.address	String	GSM address
network.gsm.netmask	String	GSM netmask

2.17 Error Dto

Field	Туре	Description
code	String	Message code: { ERROR_BAD_PARAMETER, ERROR_INTERNAL, ERROR_INVALID_JSON, ERROR_LICENSE ERROR_LOGIN, ERROR_NOT_IMPLEMENTED, WARNING_SYSTEM_BUSY, WARNING_INVALID_FIRMWARE }
message	String	Error message
parameters	Object[]	The array objects used to build the message

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink		
Internal Use	Kerlink reserved rights		
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 36 / 37	
Confidential	THORIGNÉ-FOUILLARD	Page 30 / 37	



KerOS web services

Version: 8.0

Author: Mickaël Garin Date: 2019/05/24

END OF DOCUMENT

Classification	This document is the strict property of Kerlink and shall not be either copied nor sent without express written authorization of Kerlink	
Internal Use	Kerlink reserved rights	
Strict confidential	Kerlink - 1 rue Jacqueline Auriol - 35235	Page 37 / 37
Confidential	THORIGNÉ-FOULLIARD	Page 37 / 37