IBM Watson IoT Guide

- 1) Register an account on IBM
 - A. Go to https://www.ibm.com/internet-of-things/spotlight/watson-iot-platform/trial
 - B. Click on 'Try Watson IoT Platform' button
 - C. Enter username and password
 - D. Wait for validation account email
- 2) Login to Bluemix (http://www.bluemix.net/)
- 3) Go to catalog using this link <u>https://console.ng.bluemix.net/catalog/</u>
- 4) From left menu, select 'Internet of Things' and then click on 'Internet of Things Platform'

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- 5) In the page that opens, fill the required fields and the click on
- button

Create

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≡	BM Cloud					Catalog	Docs	Support	Manage	Q
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	Internet o	f Things Platform								
	This service is the h	hub for IBM Watson IoT and lets you communicate	Service name:							
	with and consume of the built-in web con-	data from connected devices and gateways. Use								
	analyze it in real tim	e. Then, enhance and customize your IBM Watson	Channe a marke flagghlan to dealers in	Characterization in the		0				
	IoT Platform experi using messaging ar	ence by building and connecting your own apps by nd REST APIs.	United Visedam	Choose an organizatio	yu:	Choose a space:				
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	AUTHOR	IBM	Connect		Information Management					
	PUBLISHED	12/12/2017	Quickly and securely register and connect your devices and gate	ways. You can find	Control what happens to the data the	at is received from your connect	ed devices.	. Manage		
	LOCATION	Service Germany, United Kingdom, US South	gateways in our recipes site.	, and takes as failed	and device platforms.	mator abions, and megrate m				
			Analyze in real time		Risk and Security management					
			Monitor your real-time device data through rules, analytics, and rules to monitor conditions and trigger automatic actions that ino IFTTT, Node-RED flows, and external services to react quickly to	dashboards. Define Iude alerts, email, o critical changes.	Our secure-by-design control capab secure connectivity and access con security with threat intelligence for lo responses with policy-driven mitigat	ilities protect the integrity of you rol for users and applications. E T to visualize critical risks and a on actions.	r IoT soluti xtend the b utomate op	on through base berational		
			Images							
			Click an image to enlarge and view screen captures, slides, or video	s. Screen caps show the u	user interface for the service after it has b	een provisioned.				
	Need Help? Contact IBM Cloue	Estimate Monthly Cost						Create		

6) At the end of creation process, the following page opens

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Manage	c	Internet of Things /											
Plan		 TrialSiel 	coSistemi										:
Connect	tions	Location: United Kir	ngdom Org: sielcoloT S	Space: SSIoT									
					C								
					Let's get sta	rted wit	h Watson Ic	oT Plat	tform				
					Securely connect, contro	l, and manage dev data from th Launch	ices. Quickly build IoT ap e physical world. Docs	oplications tha	it analyze				
					Learn about Watson IoT Platform Juderstand the architecture, concepts of the Watson IoT Platform service and the extended IBM Cloud universe ar of infrastructure.	, and features d see how it fits id your own	Expand using step-b Browse a multitude of your devices to Watsc basic service, and cor in your applications.	by-step recipe of custom recip on IoT Platforr onsume the de	es 7 pes to connect m, expand on the avice IoT data flow				
	<												
		Launch											
Clic	k on 📃	а	nd you will k	be red	irected to the	e page	shown l	belov	N				
IBM W	latson IoT Platfo	orm										-	•
۵	Your boards	Public boards										+ Create N	ew Board
٠	Your bo	oards									Sort By	Recent	y changed 🛛 👻
ŝ													
Å	RISK AN OVERVI	ID SECURITY (i) EW	RULE-CENTRIC ANALYTIC	s (i)	DEVICE-CENTRIC (ANALYTICS	USA	GE OVERVIEW	(i)					
~~	4 Ca	ards	6 Cards		5 Cards	3 (Cards						
	Owned b	iy you 📋 🗢 🏟	Owned by you	♡ ‡	Owned by you	¢ Own	ed by you	♥ ♥					
_ ຄ													
ŵ	Boards	s shared with you											
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*													

7) Click on 'Device-centric analytics'

IBM V	Vatson IoT Platform OUICKSTART SERVICE STATUS DOCUMENTATION	BLOG	
Q	Your boards Public boards		+ Create New Board
۰	Your boards	Sort By	Recently changed *
≌º A	RISK AND SECURITY O RULE-CENTRIC ANALYTICS DEVICE-CENTRIC USAGE OVERVIEW O ANALYTICS		
*	4 Cards 6 Cards 5 Cards 3 Cards Owned by you		
8	Boards shared with you		
8 19			
6 ∙			

and the following page is shown

IBM Wa	son IoT Platform	QUICKSTART SERVICE STATUS DOCUMENTATION BLOG
<u>م</u>	Usage overview	+ Add New Card Paste Card
₽ <u>2</u> 2		
Å	🛆 Device types 🚥	C Data transferred ····
~	No device have been added.	0.0 MB
	Add device	Data transferred today 0.0 MB
8		This month 0.0 MB
ŵ		Previous month
*	C Data transferred	1
	0.0 MB Data transferred today	

8) Now, we can create the 'Device Type'

A. Click on 'Add device' button inside 'Device types' tab

IBM Wa	tson IoT Platform	QUICKSTART SERVICE STATUS DOCUMENTATION BLOG
Q	Usage overview	Add New Card Paste Card Settings
#		
≗≗ A	O Device types ····	C Data transferred ····
	No device have been added.	0.0 MB Data transferred today
	Add device	0.0 MB This month
0		0.0 MB Previous month
\$ \$	△ Data transferred	
0-0	0.0 MB	
	<u><u><u></u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>	

B. Click on 'Create device type' button

ance will be changing soon. Want to	Add Device	\otimes
Choose Device Type Ment	Choose Device Type	
Security	Or Create device type	a button at the bottom of the page, or by using our APL
		Next

C. Click on 'Create gateway type'

ance will be changing soon. Want to	Create Device Type	\otimes
General Information	Create Type	Refrest
Define Template Submit Information Included shows a summary of all deal Metadata	Create device type Create gateway type	at the bottom of the page, or by using our APL
		Next

D. Fill the requested field 'Name' and 'Description'. Then click on 'Next'.

erience	will be changing soon. Went to r	Create Gate	way Type	\otimes	BLOG Refrest
$\mathbf{Y}_{\mathbf{r}}$	Create Type	General Information	0		
	General Information				
	Define Template	Name	SS10680		
	Submit Information able shows a summary of all dea Metadata	The device type name is used for API use.	to identify the device type uniquely, using a restricted set of characters to make it suitable	n at the bottom of the page, or by using our	
		Description	Gateway SS10680 - Guanzate		
		The device type description c	an be used for a more descriptive way of identifying the device type.		
				Back	Next

E. Now, we have to defined the device model. These attributes are optional. You can modify them whenever you want. For this example, select 'Manufacturer', 'Firmware Version', 'Hardware Version' and then click on 'Next'

prience	will be changing soon. Want to /	Creat	e Gateway	Туре					: STAT	8	BLOG
Creat Creat	Create Type General Information Define Template Submit Information	Use the optic template for r on devices th	plate ns below to select attributes new devices that are assigned at are assigned this device t	for the device d this device ype.	ce type. All of type. Attribu	these autes you	ttributes are optional. They wil do not define may still be edite	be used as a ad individually	in at the		
:	Metadata		Serial Number	000			Description				
			Manufacturer			Ø	Firmware Version				
			Model	000			Hardware Version				
			Class				Descriptive Location				
										Back	Next

F. Fill the requested fields and then click on 'Next'

will be changing soon. Want to	Create Gateway	/ Туре	\otimes	
Create Type General Information Define Template Submit Information	Submit Information You must now set values for the attribut as a template for new devices that are a devices.	tes you have selected for this device type. The values of these attributes will act assigned this device type. You can override these values when adding individual		
ible shows a summary of all dec Metadata	Manufacturer Firmware Version	Sielco Sistemi	n at the bottom	
	Hardware Version	rev-1		
			Back	Next

G. In the following page, we can not define metadata, so we can go on with 'Device type' creation by clicking on 'Create'

erience will be changing soon. Want to	Create Gateway Type	STA	\otimes	BLOG
Create Type General Information Define Template	Metadata (optional) Metadata must be added as JSON; plain text cannot be used.	0		Refres
Submit Information The table shows a commerviol of the Metachta		n at th		AR
			Back	Create

H. At the end of the 'Device type' creation process, you will be redirected at the initial page 'Add device' where you can see the new 'Device type' just add. Select it, and then click on 'Next'

	Add Device	\otimes
Choose Device Type	Choose Device Type	11:26:38 AM 🕱
Device Info	U U	
Metadata	SS10680 Y	
nce will be changing soon. Want to s Security	Or	
Summary Types Mana	Create device type	
Davice Type 🕧		
shows a summary of all added dev		ce button at the bottom of the page, or by using our API.
		Next

I. Enter 'Device ID' field and click on 'Next'

rience	will be changing soon. Want to	Add Device			\otimes	
>	Choose Device Type Martin Device Info Device: Type 1 Metadata	Device Info Device ID is the only required informati selected device type. These values car	on, however other fields are populated according to the attributes set in the n be overridden, and attributes not set in the device type can be added.	-		
ple sho	Security we a summary of all added day. Summary	Device ID	gateway	ce butt		
		Manufacturer	Sielco Sistemi			
		Firmware Version	10.0			
		Hardware Version	rev-1			
		+ Additional fields				
					Back	Next

J. Skip data entry for 'Metadata' field and click on 'Next'

rience		Add Device	\otimes
 	Choose Device Type Mana Device Info Device Type	Metadata (optional)	Refres
	Metadata Security sven a summery of all added day Summary	Metadata must be added as JSON; plain text cannot be used.	e button at the bottom of the page, or by using our API
			Back Next

K. Now, you must select the type of the authentication token that you want to use.
 You can choose to use an auto-generated authentication token or a self-provided authentication token. In both cases, you have to make a note of the authentication token because it is not recoverable.

For this example, we use an auto-generated authentication token, so just click on 'Next' to proceed.

rience		Add Device	8))	
~		Security			
* *	Device Info Device Type Metadata	You have two options:			
1	Security	Auto-generated authentication token			
ole sho		Allow the service to generate an authentication token for you. The token will be 18 characters long and will contain a mix of alphanumeric characters and symbols. The token will be returned to you at the end of the registration process.	ce button i		
		Self-provided authentication token			
		Provide your own authentication token for this device. The token must be between 8 and 36 characters long, and should contain a mix of lower and upper case letters, numbers, and symbols (hyphen, underscore, exclamation-point, ampersand, at eign, question mark, period, right and left parentheces are permitted). The token should be free of repetition, dictionary words, user names, and other predefined sequences.			
		Provide a token (optional) Enter authentication token here			
		Authentication tokens are encrypted before we store them. We are not able to recover lost authentication tokens. Ensure you make a note of the authentication token after clicking Add.			
				Back	Next

L. In the 'Summary' page, you can control all the device information, and then click on 'Add' to add the device

entences will be champing score. West in	Add Device		8
Choose Device Type	immary		
Device Info Device Type			
V Metadata Ple	ease check that all submitted	information for this device is correct before adding this device.	
Security able shows a summary of all added de	Device Type	SS10680	ice button at the bottom of the page, or by using our AF
Summary	Device ID	gateway	
	Serial Number	-	
	Manufacturer	Siełco Sistemi	
	Model	-	
	Class	-	
	Description	-	
	Firmware Version	10.0	
	Hardware Version	rev-1	
	Descriptive Location	-	
	Authentication Token	To be generated	
	Metadata		
			Back Add

M. At the end of the device adding process, a summary page is shown to you. In this page you can find the authentication token for the device, that you have to take note.

Now,	click	on	\otimes	•
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Gateway	gateway
vice Credentials	Refresh
tion Information evice T Your Device Creder	ntials
ents You have registered you device. Once you've a section on this page.	our device to the organization. To get it connected, you need to add these credentials to your dded these, you should see the messages sent from your device in the 'Sensor Information'
ormation	
Organization ID Device Type Device ID Authentication Me	SS10680 gateway token
Authentication Tok	ic. <u>akbl.yg</u> YOl
Authentication tokens a	re non-recoverable. If you misplace this token, you will need to re-register the device to generate a new
Logs authentication token.	
es authentication token.	nese credentials to your device 7
n Log	ation
Logs authentication token. Find out how to add th Log Connection Information Devices ID Device Type Date Added	ation gateway SS10680

- 9) From left menu, enter in 'Security' page
 - A. For 'Security Level' field, select 'TLS Optional'
 - B. Click on 'Refresh compliance'
 - C. Save

IBM Wat	son loT Platform			QUICKSTART	SERVICE STATUS	DOCUMENTATION	BLOG T
Ø	← Back						Cancel Save
							C
್ಲಿ	Connection Secu	rity					1 Device in organization
Å	Use the Connection Security policy to set the default rule and custom rules are defined, you	default security level that is applied to all devices. You can the u can view the compliance levels for your organization.	n add custom rules for specific devices. When the				C Refresh compliance
~/~							
	Default Rule						
0	Define the default connection security level to affected and then predicted level of compliant	o use for all device types that do not have custom rules defined ice.	I. You can view the number of devices that are				
ŵ	Note: The device number and predicted com	pliance values are estimates based on a report that runs at var	rying intervals.				
~~	Scope	Security Level	Predicted Compliance	٢	#	of Devices	
2	Default	TLS Optional		nce	1	device	
	Custom Rules						
	You can define custom connection rules for sp compliance value is updated to reflect the def	pecific device types. Custom rules overwrite the default rule for fault settings and the custom settings.	r the specified device types. The predicted				
	Add Custom Rule						

Now, from left menu, enter in 'Devices' page and control if the device is connected.

IBM W	/atsor	n IoT Plat	form							·
Q		Browse	Diagnose Action Device Types Mana	ge Schemas					+ Add Devic	e
٥		-								
ŝ	Browse Devices Tris table shows a summary of all devices that have been added, it can be filtered, organized, and searched on using different criteria. To get started, you can									
Å	add devices by using the Add Device button, or by using API.									
*			Device ID 🗘	Device Type	Class ID 🗘	Date Added	Descriptive Location		1 1 1	ш
	·		gateway	SS10680	Gateway	Dec 21, 2017 11:51 AM				
0										
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son IoT Platform			QUICKSTART	SERVICE STATUS D	DCUMENTATION BLOG	·····································
Apps APIKeys Roles Bluemix Apps						+ Generate API Key
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	API Keys Roles Bluemix Apps	son IoT Platform APJ Keys Roles Bluemix Apps Roles : Roles :	son LoT Platform API Keys Roles Bluemix Apps Key : Roles : Last Edited By :	Apps APKeys Roles : Last Edited By : Expiry Date :	centor Platform QUICKSTANT Destination SERVICE STATUS Destination Apps APIKeys Roles Buemix Apps Comment : Comment :	Apps AFKey: Roles: Buerreix Apps Comment : Comment : Comment :

- 11) In the tab that opens:
 - A. Take note of 'APi Key' and 'Authentication Token'
 - B. Select 'Standard application' for 'Select API role'
 - C. Click on 'Generate' button

IBM V	Vatson IoT Platform	
@ #	Apps Api Keys Roles Bluemix Apps	Generate API Key API Key API Key
<u>°°</u>	Key Roles	Authentication Token gi3PGleBRDuJSHADE A Authentication tokens are non-recoverable: if you mispiace this token, you will need to re-register the API key to openerate are authentication token
A A		Select API Role(s) B
		Standard Application What are they? Add another role
ŵ ŵ		Comment Enter a comment Set API key synler
%		
		Cancel

At this point, Watson IoT Platform configuration is finished.

Now, we recommend to start the configuration of gateway SS10680.