ISSN2394-3777 (Print)
ISSN2394-3785 (Online)
Available online atwww.ijartet.com
International Journal of Advanced Research Trends in Engineering and Technology
(IJARTET) Vol. 5, Special Issue 14, April 2018

IOT TO MEET BUSINESS CHALLENGES

N LALITHA, Assistant Professor, Bandari Srinivas Institute of Technology, Hyderabad
lalitha.nagaram@gmail.com
PANCHAKSHARI, Assistant Professor, Bandari Srinivas Institute of Technology, Hyderabad,
B LIKITHA, Student, Bandari Srinivas Institute of Technology, Hyderabad
B MANISHA, Bandari Srinivas Institute of Technology, Hyderabad,

ABSTRACT

Internet of Things is an advanced automation system which exploits big data, networking and AI to deliver a perfect product. IOT exploits recent advances in the market like retail market, IT industry, Healthcare and education etc., Many organizations are coming forward to use IOT tools to get more flexibility to their products in the market. But there are many challenges. This survey paper highlights the different IOT tools used to produce more revenue there by lowering overall costs of the organization.
Keywords: Technical complexities, multi site testing, gateways, malicious code, IOT security, device to cloud communication

INTRODUCTION

"TheIoTisnotonething;it'sthe integrationofseveralthings.Hence, IoTrequiresadvancedintegrationskills andend-to-endthinking."
TheIoTcancreateacompetitiveadvantage,delivergainsinbusiness andprocessefficiencyandresponsiveness.TheIoTenablesnewproduct-as-a-serviceportfolios,andhelpsequipment manufacturersincreaserevenuewhilebuildingclosercustomerrelationshipsthrough improvedcustomerengagement.

Fig: IOT business transforms

ModernIoT-drivenbusinessmodelspresentanewsetofchallenges.Oneoftheissues organizationsfaceisthattheyunderestimatethetechnicalcomplexitiesofdeveloping, deploying,andoperatinganefficientIoTsolution.

ToreducethetechnicalcomplexityassociatedwithIoTdeployments,organizationsare nowstartingtolookforPAPIoTsolutionsonlytobedisappointedfromthe lackofoff-the-shelfsolutions.
TheEasy-to-ConnectSolutionmaximizesthebusinesspotentialoftheIoTby deliveringfourkeybenefits:

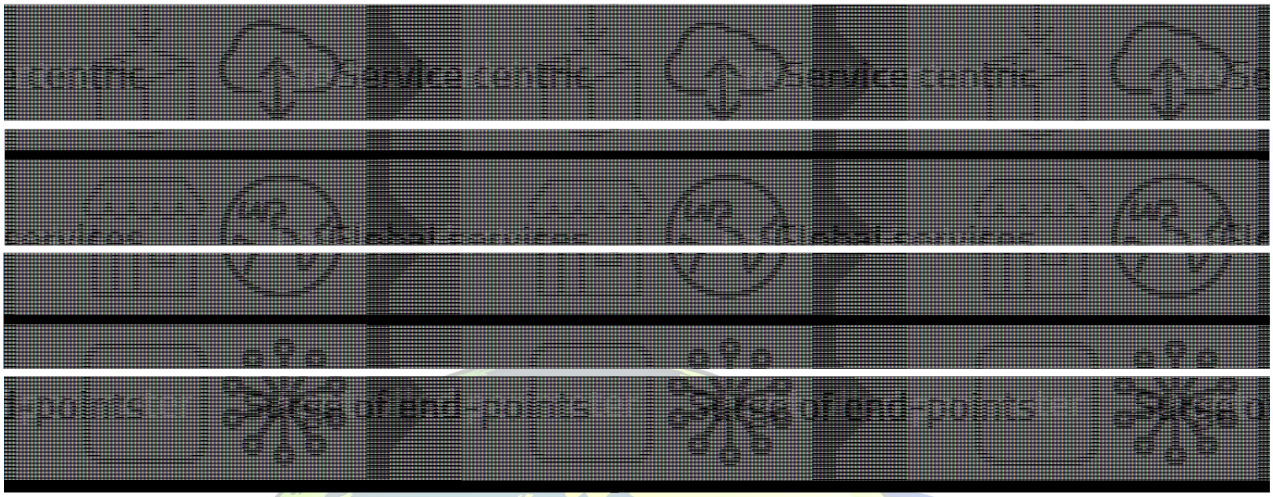
1. Simplifieddevelopment,forfastertime-to-revenue

2. Built-insecurity,formorerobustprotectionfromtheIoTedgetotheIoTplatform

ISSN2394-3777 (Print)
ISSN2394-3785 (Online)
Available online atwww.ijartet.com
International Journal of Advanced Research Trends in Engineering and Technology
(IJARTET) Vol. 5, Special Issue 14, April 2018

3. Streamlinedoperations,forloweroverallcostwhileremainingflexible

4. Flexiblepricing,foroperatingcoststhatmatchthebusinessmodel



Now days,theabilitytoquicklyandefficientlylaunchnewservicesis criticalforcompaniesaimingtobenefitfromemergingopportunities.Ofallthe main steps involvedinatypicalIoTdeployment,thetaskofintegratingallthecomponentsofthe IoTsolutionisoftenthemostcomplexandthemosttime-consuming. DevelopingIoTconnectivitytypicallybeginswithprototyping, movesthroughthemanystepsofintegratingproductsandplatforms,andisthen followedbymulti-sitetestingandglobaldeployment.

Internet of Things-enabledproductsisatargetformalwareandmaliciouscode,andhackershave startedfocusingonIoTdevicesasanentrypointforbroaderattacks.Accordingtothe March2017issueofForbesmagazine,"96%ofsecurityprofessionalsrespondingto anewsurveyexpectanincreaseinIoTbreachesthisyear."SecurityinIoTishighly challenging.Itisamultifacetedandmultidimensionaltaskthatmustbeunderstood andaddressedfromthestart.Securityisalsoneverfinished–itisacontinuous journeytoadaptpolicies,processes,andschemesasthethreatsevolve.

WhatmakesIoTsecurityespeciallychallengingisthatit'saboutmorethanjust securingthedevice,theconnection,thecloud,ortheapplication–it'saboutsecuring allofitholistically.What'smore,thespecificapplicationorusecasedeterminesthe necessarysecurtiylevelsandmechanisms.Asaresult,IoTsecurityneedstobea continuousthreadthatrunsthroughtheentiresolutiondevelopmentandoperation.

Pre-sharedkeysaresecurelyinstalledineachdeviceinthefactoryduring production, andthencorrespondinglyprovisionedinthecloud.Thisensures out-of-the-box,mutuallyauthenticated,mutuallyencryptedcommunication. Tofurtherextendthelifespanofthesecurechannelandmanageany potentialbreach,itispossibletoremotelyrotatesecuritykeys.Foradditional security,SierraWirelessalsosupportsPrivateKeyInfrastructure(PKI) solutions,wherethecustomerbringstheirownCertificateAuthorityto generatedevicecertificatesandestablishachainoftrust.

Thissecuredevice-to-cloudchannelensuresthatnewdeviceconfigurations orlatestfirmwareversionscanreliablybedownloadedandinstalledtoevery device– therebyprotectingagainstnewthreats.Thechannelalsoensures thattheapplicationdatasenttothecloudcanalwaysbetrustedsincethe transportedinformationcannotbeinterceptedoraltered.

Day-to-dayIoToperationcanseenewfunctionsadded,newtechnologiesdeployed,a changeinsuppliers,orashiftinmarketrequirements.Therewillalwaysbesomething newonthehorizon,whetherit'sahardwareformat,aversionofsoftwareorfirmware, anapplication,aconnectivitystandard,orasecurityalgorithm.

ISSN2394-3777 (Print)
ISSN2394-3785 (Online)
Available online atwww.ijartet.com
International Journal of Advanced Research Trends in Engineering and Technology (IJARTET) Vol. 5, Special Issue 14, April 2018

TheIoTsolutionneedstobeflexibleenoughtochangeonaregularbasisandnimble enoughtoevolvequickly.Thisflexibilitycanbehardtomanageifthedeployment operatesinamulti-supplierenvironmentorusesasetupthatinvolvesseveraldifferent sourcingchannels,connectivityproviders,managementplatforms,andsupport contracts.

Duringdesigninganewconnectedproductorservice,it'simportanttounderstand howitwillcreatevaluefortheendcustomerorgenerateefficienciesandsavingsin dailyoperations.Thiswillbethebasisfordefiningthebusinessmodelandcustomer pricingstructure.ButthechoicesanorganizationmakesforIoTconnectivitywillimpact costand,inturn,thepricingstructurethatcanbeproposedtotheircustomers.To avoidcash-flowissuesoncetheIoTsolutionisdeployed,it'sagoodideatoalignthe costmodelforthesolutionwiththedesiredcustomerpricingmodel.Bringingthe idealoperatingmodelandbusinesscostsinlinewiththepricingtargetforinternalor externalcustomershelpsincreaseflexibilityandlimitexposuretofinancialrisk.

Forexample,iftheIoTdeviceswillconnecttothenetworkusingamonthlycellular subscription,thenit'sbesttochargecustomersusingmonthlysubscriptionsaswell. Similarly,ifthedeploymentwilluseapay-per-usemodel,wheredevice-to-cloud serviceisactivatedandinvoicedonlywhenused,thenitmakessensetouseapay- per-usemodelwithcustomers.AligningtheIoTsolutionpricingstructurewithwhat's neededfortheIoTserviceoperationcanbeanimportantchallengeforstartupsand smallcompaniestoovercome,buttheconceptofbalancingpricingwithcashflow appliestoIoTdeploymentsofanysize.

CONCLUSION

This paper had explained in detail about different methods to implement IOT in different business trades. It also explained about the different challenges and how to rectify the problems arises in the market through IOT.

REFERENCES

1. www.itu.int/osg.spu
2. Sierra wireless white paper
3. A text book on Internet of Things