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GosP (Group of Service Providers) Model-Future of Cloud Computing

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Abstract

Today, we are living in the world of Information Technologies where almost everything is on our finger tips. Every organization is working hard to provide rich and easy to use applications and options to their end users but, how they are managing all those applications and infrastructures at the backend. Most of the organizations are still running their IT operations in traditional on premise model where they have ownership of everything and running everything on their own premise. Traditional on premise model cost a lot in terms of CA-PEX (Capital Expenditures) as well as OP-EX (Operational Expenditures). Cloud is an alternate option for on premise model to save you cost with few more tangible and intangible benefits, but still it's not widely accepted specially by finance, government and insurance sectors due to some hidden threats and drawbacks, specially related with security and governance. In this paper I am proposing a future model called GosP (Group of Service Providers), where any sector or any organization can accept it without any fear or concerns with respect to adoption (as exist in on premise and cloud models) and can take existing, as well as many more tangible and intangible benefits.

Keywords: Cloud Migration, Cloud Delivery Models, Cloud Service Providers

1. Introduction

On Premise is the traditional infrastructure model where you have your own infrastructure premise and where you are running your complete IT operations on your own cost, means you have to hire IT professionals, you have to purchase servers and machines, you have to buy software and licenses, you have to allocate a space for infrastructure and to setup your complete IT infrastructure there like networking, security, cooling, electricity, firefighting equipment's, security, data backup, day to day Operations and maintenance which include upgrades, fixes, outages etc. [3]. Cloud computing is an extension to on premise model where you can outsource your complete IT operations to a public or private cloud service provider and just pay as per your usages of the resources. Certain challenges are there where you can't host some of your critical applications or data over public cloud so you have to choose either a private cloud vendor or go for a hybrid model where you can outsource or distribute some of your operations over public & private cloud and some you have to kept inside your organization with same traditional on premise model. It's make it very complex to adopt and implement such hybrid kind of cloud model. If you conclude a cloud model in terms of adoption then, it's still a big challenge for different sectors and organization to decide if they can move to cloud or not [3, 4].

2. Traditional Cloud Model

GosP is a model which in comparison with on premise and cloud computing models, any sector and any Organization can adopt without any fear to take lots of tangible and intangible benefits without any fear or concerns with respect to adoption. No need to worry about cost, data, security, governance and policies, operational and maintenance, HR process, hiring etc. Isn't it amazing! Now read below to understand complete concept.

Today, every organization of every sector is running their IT operation on any one or on mix kind of existing infrastructure models, either on premise or public cloud or private cloud or hybrid (mix). If it comes to governance and regulations then, every sector is following some common predefined set of rules defined by government or any related body, and top of that

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they have their own internal policies with respect to legal, working culture, operations etc. and many more. Further, to continue with IT operations, they have related hardware's, software's, technology engineers & management, infrastructure, networking, security etc. etc. Now think about any one of the sector, let's take Insurance sector [4, 5]. We have uncountable number of insurance companies are there in market as of now. Now specific to India, for creation, approval & common rules & regulations of Insurance

Industry, there is a national regulatory body created by Government of India called IRDA (Insurance Regulatory & Development Authority). Every organization has to follow the protocols defined and revised by the IRDA. Further, every insurance organization has own internal rules, regulations and complete IT infrastructure setup from where they are running their IT operations. Look at the picture below.

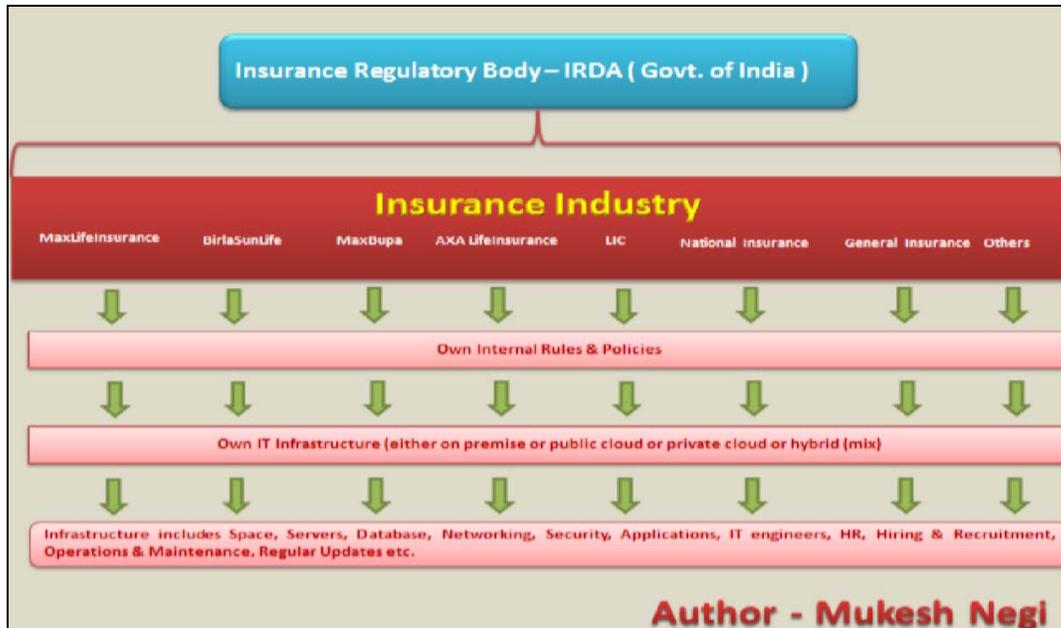


Fig 1: Traditional Architecture

If you closely Analyze above picture then you will see that every insurance sector organizations following the common rules & regulation of forming government body called IRDA but, below that they have their own internal rules and policies, subsequently each and every organization has its own IT infrastructure & applications where they are spending thousand & lakhs of dollars for day to day operations and maintenance. Most important point is every organization has its own IT infrastructure setup means, every organization spending money on same day to day operations separately.

Some of the examples are, all of the organizations using –

- Servers and paying licensing cost as well as maintenance cost separately
- Non IT related infrastructure and paying cost separately
- Database and paying licensing cost as well as maintenance cost separately
- Applications and paying licensing cost as well as maintenance cost separately
- Networking & security components and paying licensing cost as well as maintenance cost separately
- IT engineers & IT Management staff for maintenance and paying cost separately
- HR employees & Operations and paying cost separately
- Hiring & Background verification process and paying cost separately

And this is not only with insurance industry, You can think of ant below mentioned or other sectors or industry then you will realize that everyone is following the above model,

where they have some common regulatory body and then their internal rules, policies and independent infrastructure setup & operations.

- Medical (Health)
- Retail
- Manufacturing
- Defense
- Wholesale
- Banks
- Telecom
- Oil & Gas
- Transportation
- others
- GOsP (Group of Service Providers) Model

Now the question is why? Why all the organizations of a specific sector are using all resources separately and wasting time & money both. Can't we go with an approach where all specific sector organizations come together, form a common IT pool of all resources and operate all together? This the root of my research & concept where we can make a common pool of IT resources with respect to each sector and then operations of all organizations can handled from there. No need to pay separately for anything. Form a group of common IT Management & Team, No purchase of any IT resources separately, setup a central operations center and run all operations from there. There is a huge savings in terms of tangible & intangible costs.

Now the high level model would be as below –

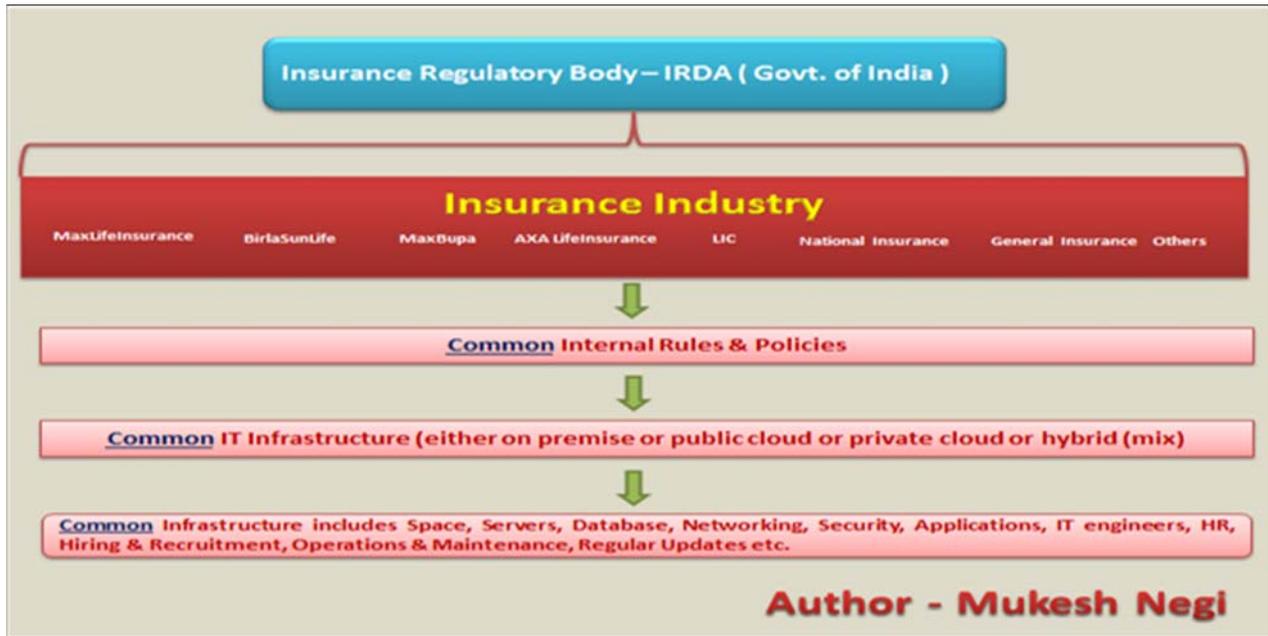


Fig 2: High Level GosP Model

Few of the benefits can summarize as below–

- No separate servers and maintenance cost.
- No separate Non IT related infrastructure cost.
- No separate Database and licensing cost.
- No separate Applications and licensing cost.
- No separate Networking & security components and licensing cost.
- No separate IT engineers & IT Management

staff cost.

- No separate HR employees & Operations cost.
- No separate Hiring & Background verification process and cost
- No security & other threads like exist in cloud computing models
- Adoption without hesitations

Please refer below picture for more clarity.

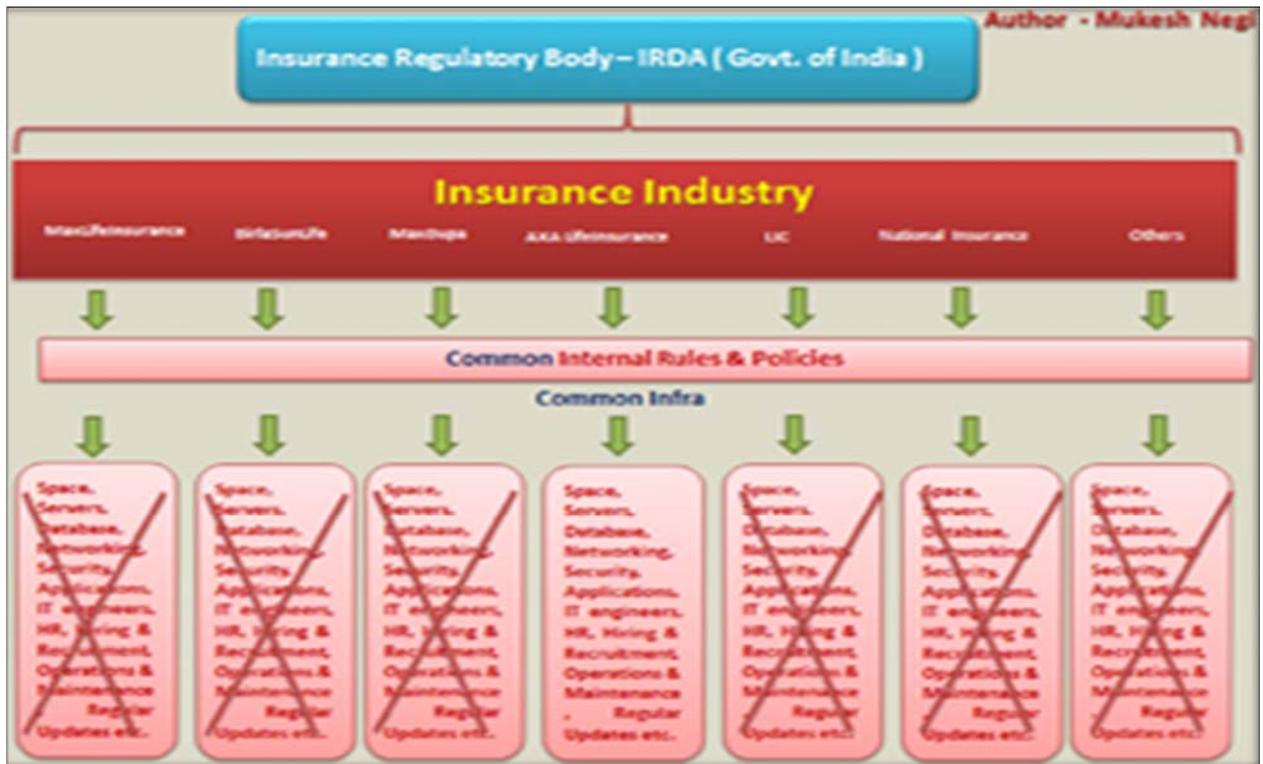


Fig 3: Basic Architecture of GosP Model

Basic architecture of GosP Model would be as per the architecture picture shown above. There will be no separate individual setups; all organizations from same sector will be having a common shared IT infrastructure for all of their IT business applications. In this way they can save the cost as well as simplified the management by defining the proper shared hierarchy of management. All organization will contact GosP for all of their IT requirements and GosP management will contact and work further with other OEM's (Original Equipment Manufacturer) and vendors to fulfill the requirement as per defined common policies and protocols.

3. Management & Operations Structure

To control the common management & operations, I have proposed below model which can be altered to make it more efficient. There would be a common CTO (Chief Technical Officer) for GosP which will interact with CTO or any senior management officer of each organization. Under GosP CTO, there would be different Program Managers, Project Managers, Team Leads & Team members based on different technology and work. It can be a generic common hierarchy model of management which each and every organization is following separately on their IT operations [6,7].



Fig 4: Management & Operations Structure

There would be a common centralized desk for all of the cloud consumers as below



Fig 5: Common Help Desk Architecture

Please refer below to understand high level difference and benefits between all three models.

Cloud Model	On Premise Model	GosP Model
• Security Challenges	• Less Security Challenges	• No Security Challenges
• Low or No backend system visibility	• Good hold on backend system visibilities	• Good hold on backend system visibilities
• Adoption still challenge	• Adoption challenge based on different factors	• No adoption challenges
• Not fit for all applications	• Fit for all applications	• Fit for all applications
• No clarity on Governance, Risks & Compliance	• Individual control on Governance, Risks & Compliance	• Shared & Good control on Governance, Risks & Compliance
• Lack of trust	• No lack of trust	• No lack of trust
• Cost is very high and to pay by each individual company separately	• Cost is very high and to pay by each individual company separately	• Cost is very less and to pay by all individual company on shared basis

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Fig 6: Comparison between cloud, on premises and GosP model

4. Conclusion

Proposed GosP Model is an enhance future model of cloud computing & on premise delivery model, which any organization can adopt without any fear or hesitation and in parallel can save cost and run their business more efficiently with great concentration & control. Today mostly large business groups are moving towards e-model by adopting cloud delivery models, but medium & small groups are still struggling because of high infrastructure and operational cost with respect to cloud or any other existing model of e-business. Proposed GosP cloud Model is a door for them as well where they can make a consortium or group and easily adopt a cloud e-model by sharing costs and all related formalities which they can't even imagine to implement individually. It's a future cloud delivery model for all large, medium and small business organizations.

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