00:00:07 so now it is started is my screen visible okay great let's continue with our uh definition of cloud Computing uh if you uh recall we we spend enough time on discussing various uh phrases in this definition what do we mean by shared pool of configurable resources on demand network access rapidly provisioning with minimal effort and then we move to this five essential characteristics and three service models and for deployment model model and in the first five essential characteristics we discuss about the on

00:01:40 demand Sal Service as well that your uh client should be or your service consumer should be able to get On Demand Self Service uh the service provider should not be interfering between each and every request until unless it's uh exceptional request second is Broad network access uh there was a someone asked question if a cloud service provider doesn't have a broad network access then we'll call it cloud computing or not we'll not call it a cloud computing platform so um Road network access has to be there so that all the cloud

00:02:30 resources should be available remotely accessible then resource pooling the key idea behind cloud computing is resource pooling so we pull multiple resources and it can be shared among U various clients so it's a shared pool of resources uh if the resource pool is not shared it dedicated to one client and another resource dedicated to another client you may call it some kind of service but not cloud computing platform so there's a there are some services like you uh if you go for secure online uh web servers kind of services

00:03:25 they may provide you de they may promise you providing you know dedicated uh Computing resources which are isolated and not accessible to others but then it's not pool of resources it's dedicated resources for dedicated clients so that will not be full Computing task then we have rapid elasticity and Rapid elasticity it's uh it's referring to the rapid provisioning of resources or release of resources so there are different types of elasticity horizontal vertical but if we go by the word itself it says you can

00:04:17 reconfigure your compute resource specification on the go that is the elasticity uh for example like our la top they are not elastically Expendable if you want to increase the Ram or maybe hard disk it's not dtic of course you can if your um motherboard have additional slots available slots but it's a like your system has to be switched off and then it will get additional resources so increasing resources or decreasing resources our laptop is not that elastic but virtual machine can be made elastic by facilitating on demand

00:05:18 addition of resources uh at the run time uh when we'll discuss more about virtualization will come again to this issue but uh still the real time elasticity is not possible it takes in fact uh couple it takes uh some couple of seconds to add more resources uh to your uh to your running VM and sometimes even it is also not possible adding more resources to a VM um like you cannot add uh number of cores in a virtual machine while it is running so although we strive to have rapid elasticity but that maybe uh may

00:06:18 come with some terms conditions then we have measure service so measor service means what whatever service consumer we should be able to measure it because uh to generate invoice to generate bills you need to measure the uses of particular service and that's where the advantage of cloud computing is also there that you only pay for the resources which you have used it if you have used it for 2 hours in a day you will be charged for 2 hours but if you have if you have used it for more hours you will be charged for more hours

00:07:17 now now from service provider point of view measuring Services consumed by each and every client or consumer when they are the shared pool of resources really becomes a difficult task it's not that easy to measure the cloud services how much you are using so uh that's where it's a separate characteristics mentioned that it has to be a measured service yes DEA uh you have any question no sir sorry it got raised by mistake okay sure so uh major service means you you should be able to measure the service consumed by each and every

00:08:13 consumer despite they might be hosted on a single physical server if you translate into your single laptop example if your laptop or desktop have multiple users login in that case uh you want to measure how much each user is using your compute resources if no one is using it will be zero now in compute resources as we know there are mainly four resources we are interested in measuring uh one is this uh compute power the processing processor contion then r M then secondary storage and then Network so we want to measure all these

00:09:07 four conception how much RAM is used by a particular client or how much uh M storage or network band with or how many number of cores for how much time is used by a particular client so all those things we need to measure okay then we have uh okay any question in these five essential characteristics so we'll move to three different types of service models so uh mainly these are the three service models infrasture as a service platform as a service and software as a service the three service models now uh it spend some time on

00:10:16 understanding the difference and consequences of uh these three different types of service models so in infracture as a service it is mainly the hardware infrasture which we want to provide as a remote access in platform as a service we wish to provide the developers platform so on on top of that developers or programers can develop their own application that is platform as a service then third is software as a service where the readily available software is provided as a service now although I mentioned that in

00:11:04 infrasture as a service we wish to provide only the hardware part but a hardware cannot be remotely accessed without basic um TCP IP stack with basic device drivers so to facilitate this infracture as a service we assume that operating system is part of infrastucture as a service not platform as a service the basic operating system there are uh different types of operating system that we will explore later uh when we'll again discuss about virtualization technology but for time being you can safely assume that in infu as a service

00:11:56 operating system is also installed on on the VM or at least on the physical Hardware uh if you corate with the popular cloud services like AWS or gcp when you uh create a virtual machine you specify what kind of operating system you wish to have in your uh virtual machine you have flexibility to choose your own operating system but once your VM is created it comes as part of the package of infracture as a service whatever operating system you have chosen that will be inside your virtual machine so in some sense changing

00:12:46 operating system might not be an option for you available as a service consumer and through basic operating system layer and this networking layer we are able to provide remote access of Computer Resources or Ram or secondary storage or network resources right now when we create a VMV specify uh certain specifications say two codes 2 GB Ram or 1 GB PS Network link or um 128 GB hard disk or Mount storage so all these specifications will be uh will become part of your virtualized machine and that virtualized machine you

00:13:49 will get as a remote access now as you buy your laptop which comes with operating system your virtualized machine also works in the same way uh it comes with operating system and now on top of that you have to do everything so you need to set up your development environment or uh uh your development environment then uh you need to write your own code start your services and manage it so ultimately if you are opting for for infr service the bottom three layers which includes facility hardware and virtualized infrastucture they are

00:14:40 managed by service provider but the application and the platform architecture is managed by consumer service consumer uh here is my uh first question for this lecture what do you understand by facility and how it is different from Hardware anyone would like to attempt answering this one so facility and hardware and virtualized infrastucture they are part of pro service providers and we understand what is virtualized infrastucture it's part of virtual machine so you can create your own specification and corresponding to

00:15:30 that you will get a VM Hardware I'm sure all of us understand what is there so what is facility here I have mentioned about facility not explicitly calling it facility in my earlier lecture uh could it be a data center where the servers are placed uh you yes so not only data center but power or cooling management at data center what is a data center it's a combination of compute resources and then additional resources which allows you to run those compute resources so like in power management so power and cooling is not a

00:16:24 part of a hardware it's part of facility okay why it is different from Hardware because Hardware you can virtualize in our compute definition and Facilities what you uh see uh if it's electricity connection you will be leing maybe multiple lines of electricity connection so if one goes out other electricity connections is still up and running so it still keep powering your um your data center part okay uh similarly the cooling is also not a hardware infrastructure although it's Hardware in physical world

00:17:15 but that is not what we are renting in Cloud we do not rent okay give me 2 kilowatt cooling we never ask for that Cooling and we never get additionally paid for cooling that cost is already included as part of your server specific virtual machine specification so cooling is not on demand scalable thing cooling is what a service provider manages pooling is not remotely accessible it is what service provider manages as part of our Cloud definition pooling and power does not fit there as a service

00:18:05 okay similarly the internet connection which is coming to Data Center is also part of facility it is also not uh Hardware as such but the network bandwidth which is pro allocated to your virtual machine is the hardware so your data center uh may have say 10 gbps connection so it can simultaneously holds the clients which can handle which can scale up to 10 gbps so uh that is the facility you can assume that for which uh you cannot explicit explicitly rent as a consumer from a cloud service and facility is

00:19:02 also something for which Pro service provider actually might be also paying some bills to someone else and that those facil facilities are essential to run the hardware in that data center and these facilities and Hardware combinely enables you to create a virtual virtualized manfacture what she has mentioned yes the entire physical setup but not the compute one compute one we are keeping it as part of Hardware in this as part of this diagram okay there's a question when OS is part of I what will be addon

00:19:50 resources in pass uh that that will be my question to you so uh what is what is the other platform which a programmer requires other than operating system I'm sure the developers who set up their own development environment they clearly understand this question and can also answer it so what do you understand by platforms like dbms Services yes so uh you require mongodb uh as part of your application development so there are two choices now in cloud service models either you have infact as a service so you get one VM

00:20:41 raw VM and you install your own mongodb servers uh mongod uh database server or you can opt for a service from a cloud service provider which comes with pre-installed m mongodb so you don't need to install mongodb now middle application servers dbms's so all those are part of your platform service so uh you might have heard about different types of service like dbms as a service data as a service so is asking is Google cab as a example of pass you tell me yes or no by now you should be able to answer

00:21:38 it what do you think with our current discussion vul says no so in Google collab do you need to install your own um libraries and all or it comes pre-installed okay let's not say yes or no also mention in our justification simply saying yes or no we don't know what's what's going in your mind so explain why you are saying no or explain why you are saying yes okay you can also unmute and uh share your opinion some pre-install some we need to install Library okay so uh when it comes with something

00:22:31 pre-installed it's a platform as a service and when you need to install some libraries uh I think with this Google collab it's not uh always the installation but sometimes they are enabling the access of those addition libraries for you for which they may also charge so uh like Anushka mentioned that we generally import the libraries instead of installing them or downloading them on collab platform so it's a developers platform so it's a platform as a service which allow you to develop your own code we

00:23:19 you want to share something uh sir it's a software service because uh it's a Jupiter application which Google modified for itself no so if you talk see uh Jupiter is software as a service I I'm agree uh means I agree with that statement but since collab offers much more than Jupiter right collab and Jupiter are two different things yes I know AB you want to say something okay so uh what happens in Jupiter you also enable some python libraries I agree but it's limited again but cab offers many more things it offers also GPU

00:24:20 attachment and RAM attachment all those things sh says it is a pass no need of requirement of a different to is to build on the required libraries uh not fully sure uh whether this argument fits well uh pratic says this can be S because applications we get are fixed okay you don't get these applications but you get the developers environment where you can write your own application so cab Jupiter let us write the code not the oh they also provide some application hosting support as well yes prino uh sir it also provides uh

00:25:15 computational resources so it should come as a pass okay uh uh you have given good argument which allows me to go back to our diagram if you're offering platform as a service you're also offering virtualized Hardware you're also offering Hardware you're also offering facility so when you have as a service provider when you wish to provide this platform definitely you have to also provide these underlying layers without that it you cannot provide pass so when you say it also allows you to create Computing Resources with your own

00:26:03 specification yes but in addition to that they also comes with pre-installed libraries or platforms on which you can write your own code or software or application uh PR Prashant says on Google collab a service provider manages the hardware and software resources needed for application development yes users write the code and manage the apps and data well set so if we dissect our stack in that case Google colab fits in the platform um service platform as a service balakrishna says even SAS also

00:26:52 enables us to increase or decrease the hardware resources yes because if you provide s we also providing platform we are also providing virtualized infracture and underlying layers so I hope uh many of you are now more clear how to evaluate when a service comes to you when you call it as an infrastucture as a service when you call it as platform as a service and when you call it as software as a service okay any other question or doubt regarding these three service models if you don't ask question then I

00:27:41 will ask questions so in as we will not write code what is as I think analytics is a service talking about okay okay so what analytics let me start writing all these Jun jarg so s s like uh AWS transcoding service can be categorized s which which service transporting service where we transport the and what what it does it uh convert your MP4 or any other format into the hls OR Dash format uh okay videos said anything as a service is as sorry I meant application as a service um actually what I wanted to say

00:28:47 is software as a service no no right application no let's not write software as a service application as a service analytical as a service transporting as a service data as a service database as a service any other kind of service you have heard about there are many so you can infrastructure as a service authentication as a service authentication backup okay messaging as a service yes uh desktop as a service messaging Secrets as a service security as a service he yes I don't know what do you mean by Secrets as a

00:29:54 service security as a service is also one kind of a s yes security is there function is there sir will blockchain as a service work as a cloud let's write and discuss them hosting sir which hosting like website hosting web application hosting uh web hosting as a service [Music] okay container as a service okay Disaster Recovery as a service I stopped at disaster and thought disaster is a service it's Disaster Recovery uh I'll write Dr remind me what Dr stands for later on okay any other thing domain as a

00:31:04 service ml as a service a as a service teaching as a service right identity as a service network as a service load balancers Lo balancing as a service I write L be somewhere okay AWS and go Manpower as a service that is a amaz Mechanical Turk EMT Manpower as a service media live also right can media live as a service what is media live Services media live video service right correct communication as a service like Zoom so yeah support as a service okay yes uh okay my uh screen is failed so I will not write any more but let's

00:32:16 discuss some of them so we will as a class we'll have better understanding what do we mean by this uh different Services let's start from Top database and data as a service first of all let's think what is the difference between database as a service and data as a service so what do you think data is actual data and database to store the data different Services any example if you're aware about database as a service or data as a service uh database we can take it as the AWS red ship and data is like when

00:32:58 we we Implement any SDK or jdk in our apps or anything from the AWS that collects data user data that can be ciz as data as service that should be data collection as a service right like nson sells data it is it can be like data as a service which one nson uh as a company they sell data to many other uh consumers many other companies so that can be named as data as a service so like weather data stock market data this kind of data yes so there are many service providers who manages data and On Demand

00:33:45 lets you access the data for particular time duration in your required format which you can directly consume for your analytical purpose or your data processing purpose first so there's a data as a service then there's a database as a service which provides facility to store your own data and to store your own data you need to write your own program but for database for data as a service you need to write your program you'll get an you will get apis which allow you to retrieve the data in the required format and you need to write

00:34:27 your own own program to process it or analyze it and even if you don't want to process it or analyze it you want to use analytics as a service that is also available like Google analytics for your ads or YouTube videos gives analytics as a service t t uh is not a service uh I'm not sure whether they have come up with some service models a table cloud is there okay tblo cloud is so now they are providing their tool as a service so you can use table tool functionality as a service you don't need to install your own table

00:35:19 application on your desktop right yes that is very much desktop we need to uh install but the you can develop the dashboard on the directly on the you only stall the client agend nothing else but keyu uh resources are consumed at their T Cloud only yes that fits like balakrishna mentioned it fits in the SAS category okay now uh we were at Data San chakrawarti mentions that data is like collecting in processing uh databas is like sharing storage server uh data collection is a separate kind of service I will put it as a

00:36:09 separate category data processing is another service just providing row data through apis is another type of service like uh one of your colleague just mentioned in this class itself and there's a company I think n Nelson or something which sells data so they keep collecting data but they don't collect on your demand they collect by forcing that this data might be required by someone so they put effort they collect data and then they start selling it that's what nson might be doing it right I think that's correct sir nson has the

00:36:56 largest data available for CP and Retail so similarly for uh other domain data you will find there are many open source data repositories which work as a data as a service so uh sir we also used uh data feed for our live streaming so in our product we stream the uh Sports uh like cricket matches and all that and some of the providers give us the data feed that data feed has the metadata about those events or that particular video streaming we combine that also so that is a kind of data only we are receiving

00:37:35 from them no so see uh it's not uh see data feed uh is there application feature it might not be service so it might not be scalable or uh if you fit into the cloud computing definition H it's it's application feature yes yes yes right it's not the cloud service of data feed data feed is the application feature but data can be provided as a you know cloud service scalable it it may allow you to download only 1 GB data or sample data or the entire one terabyte of data if you uh aware about that famous

00:38:28 NASA uh uh NASA experiment of analyzing large Universal images captured from hble telescope and all so they had this uh in City uh at home or satellite at home kind of services where people are asked to download the images and label whether it's a star or Galaxy what do you see various features so image was of one image goes into few uh might be terabyte the one single large image and then we Outsource the this image analytics processing on a small systems by dividing the image multiple parts so uh data as a service

00:39:18 is providing raw data processing the data and providing analytics on top of data as a Services Analytics as a service now whenever we provide something as a service versus application feature there's a basic difference that in as a service model consumer or has some say that what kind of service they want what is the extent of service they want how long they want this particular service and elasticity has to be also there so like the five Cal characteristics which we discussed that must be there theice should be

00:40:06 measurable but functionality as a service it doesn't matter whether any client is asking any consumer consumer is asking for that feature or not as a service provider we will be providing that features uh 24 cross 7 whether there's some taker or not for those features it doesn't matter for us yes prince prince s yeah you want to ask something uh okay so uh things are clear data as a service versus uh analy as a service now tell me uh data as a service and analytics as a service and database as a service in

00:41:12 which category they may lie either ask pass or SAS so datab s as software as service which one um that analytics as a service is one kind of a software as a service that and as a [Music] service data as a service is only the collection of a data I think on and storages and all ready datab yeah data service is what uh is a collection of data and storage and in which category data is a service will be pass or S okay data as a service is a pass can say not s database as a service is pass analytics as a service is s s

00:42:24 and what about data as a service balakrishna says it's pass any other opinion what is database a platform so it's a pass database is a platform dat agree that is an analytics is a service that also we all agree what about data data is find one so that should be s data is ready to consume so so you are uh okay let's uh data is asked information okay information is not written here uh there's a debate like uh there's a relation between data and information once you analyze a data it becomes information row data is row data

00:43:26 you need to dig out your information data can be structural or un understand yes data can be structured and a structure so it's a raw data yeah it's a raw data and uh if raw data should be stored and or something like that it is one kind of I think it's also an information also no that is being processed and that is being provided as a rest API there is some server those are sing those to provide the converting into information yes so that's where that's the reason it's s h okay so let's let's see what

00:44:12 is so balakrishna says data as a service also enables you to develop applications which can consume data and process it so it should be passed as per balak krishna's argument right so uh you can look from any point of view but let's understand what is data as a service so in case of data as a service assume you are the service provider you are providing data access now there can be two possibilities in one possibility you just let user download the data and consume it as at their own location uh they can write SQL queries

00:45:08 to access that data or any other type of queries to access that data and process it analyze it right in second case you can provide a platform where you say that you write your own code here or application or program which can consume data hosted on our servers so in one case data in the first case data is leaving the premises of service provider in another case data is residing itself in the data center but your program is running there and able to access the data those people who are working or or who are using hard they

00:46:05 will understand that whenever we create a job that job goes to the data node on which the relevant data is stored and that job is in parall being run on different data notes so in case one when your when the service providers is only responsible for allowing you to access the data Maybe encrypted or formatted or with some uh license agreement or with some timeline that after that data will get self destroyed in all those cases data is working as a direct as a consumer service so it goes into software as a

00:46:55 service in case two when your data becomes part of the platform and lets developers write their program where you can directly Mount some files or storage blocks and consume the data in that case data becomes feature of your platform that your platform also provides some kind of data for developing some kind of application on top of that let's understand with one concrete example say you are uh training one machine learning algorithm to uh train uh to identify whether the IM whether there's a cat or

00:47:49 dog in an an image now maybe I am as a data service provider I have 10,000s of different images of cats and 10,000s different images of dogs you can buy data from me I'll provide that data to you as a data service provider I will not only have very small data but I will offer variety of data to you now whatever machine learning algorithm you want to train you can buy that type of data with those many images with from me I'll provide you saying that okay for a month you have access to that data now your program can access that

00:48:43 data train its model and you get train model at the end at your end in the second case data if becomes platform as a service I let you write your own code on my platform only and let you also select which type of data you would like wish to train your algorithms your model and run it on my system and give you the train model in both the cases at the end you have train model with you but in one case uh data uh management processing analytics is your responsibility uh data analytics or data processing is your responsibility in

00:49:37 case one in case two data processing is also my responsibility as a service so it depends on where you use this data feature your uh categorization with pass and S may vary balakrishna says hard spark providers like Cloud era datab or platform as a service CS so they let you use Hardo setup uh to write your own har program or spark programs right any doubt any question so far now comes this application as a service so application as a service goes into which category as pass or SAS so SAS it should be s Service H

00:50:52 right now uh I think we did discuss in first two classes the difference between application and software I'll not spend again much time but anyone uh who can quickly uh share what we discuss regarding application and software the difference for our new badge uh pgd badge people someone can share okay so application is a special may I yes yes please go ahead application is created to create uh to perform a uh perform one specific task A specialized one where as software can perform different uh uh multiple

00:51:49 tasks okay so application is very specific it has focused functionalities highly correlated software can be a bit generic so application is part of software as a service can you give me example of any application as a service which we are using on in day-to-day life Gil Microsoft Excel Gmail Microsoft Excel Google Sheets Google Docs same now we using Google meet Google dogs yes Google meet Google [Music] Maps Office 365 balakrishna is uh CRM uh CRM we are not using daytoday life not everyone of

00:52:41 us but it's the correct example anyway so uh Chad gbt is also good application which everyone is using so is too honest to accept that Chad we are using in day-to-day life yes so uh there's no h in using chat jpt if you use it correct way so uh yes chgb is also kind of example of application as a service so now we know from all these examples we don't need to install any setup or anything or install this appli yes we might need to install some agents through which we can access these applications like mobile apps are client

00:53:37 agents but all the computations mostly goes on cloud yes so uh chgb is new Google search with you know terms conditions applied yes and sap cloud is also uh sap Cloud uh I'll say it's a cloud service software as a service for IT company but the end client it's not a SAS it's a pass the platform they wish to use okay then authentication identity as a service so what kind of they are Services transcoding as a service SAS or pass oras transcoding authentication and identity domain messaging what kind of services these

00:54:56 are in which category you will put them so I guess platform a service as coding if you need to write something yes authentication I think it's ready to use service identity is also ready to use service so those should go into SAS as per my understanding so wherever you put as pass in messaging also you use apis to use them in your uh see uh okay uh I think there's some confusion coming up here in pass and SAS see if SAS is provided API and using those API you can also develop a new application that is

00:56:11 possible but if you look at say database example database you cannot re you cannot create apis for database you need to run your own you need to write you know design a schema and write your own queries to retrieve the data or restore the data or update the data or delete the data so in case of database as a service you are responsible for designing your own schema and writing these queries but in case of apis you don't have flexibility to write your own apis you use their fixed apis and they provide the output only as per the API

00:57:02 format nothing else yes K uh sir so when connecting with uh some uh some of the online sources like with python or something so like for SQL if we query so that query goes through an API it uh hits the database and return back the response right so that is also an apepi so how can no no see uh that API is transferring your query running in database and then bringing back the result yep the API which I was refering the type of API which I was refering to they will not allow this kind of customization for your client for your

00:57:47 consumer they are fixed type of apis for example for weather data there's a API to which you can access either weekly or daily data or hourly data or something like that you can only configure the that parameter but you to infinitely write your own Ty on your on your query or design your own database schema kind of thing so those API the parameterized API with some configuration is one category of apis the other apis takes your query and then pass it to your dat server so those API are just only

00:58:38 providing you the communication pipeline nothing else okay uh I'll take a pause here uh I think AI executive people might have uh other uh course starting at 3 p.m. other so you are free to but we'll continue our discussion uh on this and I will uh walk through the slid of quiz which we did it in our first class for pgd program so PG diploma people you stay here others can leave don't discuss anything new technical part but we will about cloud computing so if you also wish to be part of discussion you can stay

00:59:37 back okay so I'll continue our discussion from this slide itself let me take a screen of this one then these keywords are uh okay okay okay so yes we can continue with question answering or if there's no question answer at this moment we'll go back uh we'll discuss about our quiz and all with e diploma yes GES uh sir this is again a humble reminder for that mail set that I have written sir okay uh I yet to respond to those queries I'll I'll do that thank you sir thank you so much yes Vijay basar so if you use an API to um get

01:00:46 something done and the apis are defined by that service itself then it's a SAS is is it no see API will defitely do something for you yeah but are they uh are the those configurations are bound by consumer or Bound by service provider okay if service provider gives you five options that you have these five parameters you can vary and use this API then it says Service software as a service but if those apis are just connecting you to another end point or another compute node and you have full flexibility for connecting to that end

01:01:33 node and doing anything as you like based on your application and your code anything then it becomes platform as a Serv hugging face what is hugging face gorov you can literate me a bit I heard about this but I have never used this hugging face it's the platform for the all elment Transformer models available in the market open source okay so uh does hugging phase allows you to develop your own platform no they just you can just download the thing and sometime they just know you can uh try the sample application on top of that

01:02:31 just to verify the accuracy and outcome that's so it gives you Transformer models pre-trained Transformer models by someone else it's kind of a marketplace right yes it's a Marketplace it's and that Marketplace is allowing you to upload your own model or it can be Marketplace that's all and there are many types of marketplace like mobile application uh stores like Google Play store or apple uh application I store they are also Marketplace uh okay it lets business users work with Transformers data sets and open source

01:03:19 libraries in a privately hosted environment if that is the case then it uh it's going as a platform as a service if it allows you to customize your own code then it's a platform as a service and now you see with our discussion you cannot label directly as pass as or us depends on the features the kind of features they are offering so go back to those five essential characteristics so if they're offering those five Char essential characteristics of cloud computing then they may fall into one of these

01:03:59 category if they are not like the marketplace definition does not fit well into cloud computing definition it's just a uh Ser Marketplace uh where you can upload or download and pay something that kind of so Google Play Store is not a cloud service as such but if if Google Play Store allows you to create your own customized Play Store and that you can provide as a service as part of your uh mobile company offering then Google Play Store will become cloud service model but as of now they are just a

01:04:54 marketplace right any other doubt or question okay so what we will do now uh as we all aware that there will be quizzes as part of this class course so for PG diploma people we will see how our quizzes will be conducted so today I'm going to have it tmy uh uh quiz for you which will not be graded and all so let's uh let's move to that part I will reshare my screen swaging phase and all ml as a service it can be SAS or pass like is a difference SAS allows you to only the use the train pre-train model but pass allows you to C

01:06:13 customize those model as well just a minute okay yes so uh so we'll uh we started with this cloud computing course with this uh meme uh it was prepared by one of the older batch uh so it there are so many topics which we are going to learn and cover as part of this course timings are clear course content uh is also clear which we discussed uh evaluation policy also for diploma candidates we discussed okay uh uh so uh you need to join this slo.com platform uh you can uh either use Lio app or you can go to Simply a browser go

01:08:12 to slido.com and enter this number 33597 A5 you have to do it right now and once you join you will get this uh option of yes us as you want to say something no sir okay okay fine so uh once you join this slider.com you will get this question Paul are you familiar with virtualization in cloud computing so you can say yes or no it doesn't matter which uh but be honest so that I will get some rough idea about the class audience background so you can see the on the screen the number of wordss uh people

01:09:10 opted for yes or no the 117 people already opted in my first class for this course all of you are doing it now so there are 136 people including me 135 so I'm hoping that this number should go about 200 plus the active poll the number of people who are participating in the poll so so far 161 vs are here 117 were already there here 134 comes so it should be 250 I'm spending some time here because it might be first time for many of you yes sir it is f it is a f sorry voice I my conent whether no or by scanning the yes you

01:10:49 can say yes or no anything okay I'll wait once this number crosses 200 then we'll move to next question so we will be using slido platform for uh for our quizzes in this course okay three more wordss then I will move to next question or shall I move if it's not increasing uh sir I'm already given my concern we are waiting for everyone because it might be first time for many of you yeah it's is 200 but in actual case we will not wait for this much time we'll have that demo also just wait for one more question so

01:12:51 another Poll for all of you rate yourself on the scale of 10 how much familiar you are with Cloud related Technologies 10 for very much familiar and one4 not familiar at all so average score was 3.9 before you people started voting it's changing it is only Cloud related Technologies only any anything that can be right yes it doesn't matter it's just uh uh we are practicing how to use slido we are getting familiar with slido platform that's the objective of this this exercise I'll again wait uh uh for people to reach to 200

01:14:02 discount so five more left uh sir hello yes sir actually I am already familiar with the slide quiz it is mandatory to join the quiz no not mandatory but I will be running one or two quiz questions it will take another five minute or so okay you can stay back you are familiar with timed quizzes as well yes sir okay but I will be asking questions only related to cloud or virtualization but that question might help you not the slid exercise okay so it's 199 let's move to next one yeah 200 we can leave this question or you

01:15:02 want to exerise this question as well quickly you can mention I will just wait I will wait for less than a minute you can answer nice so we'll move to the next question for people are still typing quickly type and uh let's move to next one okay we have reached 200 okay sure so we have good combination all over India and some people are also from outside India okay move to next question it's a quiz on your slido platform wherever you have open it you're also getting one option so you need to mention your role number there

01:16:27 here you might have mentioned your name you can go into profile and edit your name make sure you mention your role number okay so once 200 people join this quiz we will conduct the quiz so there is no option of editing uh this some three lines might be coming there you going to profile or you can also refresh and join again and it's also fine keep s for the interruption going on any exam going to be conducted here yeah we are conducting it dummy Quiz and using the same process we will conduct quizzes in our courses so this

01:17:33 is kind of getting familiar with the quiz process okay it is a it will be timed Real Time quiz during the class hours only you need to attend and you can answer imediately right then pleas and will not be available later on is toing to cond so that must be that news must be uh I'm not I'm not getting your voice whenever the quiz exam will be conducted that must be shared by us the information should be passed prior to the exam that is uh have you attended the first lecture yes sir I attended I mentioned

01:18:44 that the quiz dates will be announced in advance okay sir all quizzes will happen on Saturday slot only not on Tuesday slot okay than anything additional you want to have no no sir okay great only instruction here I want to share is next time when you join the quiz you join with your role number right not with name name can be common but role number is unique but today it's fine if you have joined with name it's okay so here is first question for all of you on your screen and you have only 30 seconds to

01:19:30 answer which one is not a virtualization platform KVM Kimo Virtual Lab or virtual box virtual box you are not supposed to answer here you have to use slide platform to answer so within that 30 seconds only very few of you could answer and the correct answer is virtual lip this is the way we are going to conduct quizzes in this course for a question depending on the complexity of question you may get 30 seconds or 35 seconds or 40 seconds or 45 not more than 45 seconds and be careful don't type your

01:20:39 answer don't unmute yourself and share your answer with everyone uh keep this answer with you only on your slido platform uh SI share the concern that he was facing issue in joining slider so if you uh if you have attended my first lecture with your first lecture there I mentioned that I will be considering 80% of the total quiz questions so there are four quizzes each quiz may carry 25 questions suppose so total questions are 100 out of 100 the maximum marks will be 80 So 20% is relaxed to entertain your technical

01:21:39 issues your real time internet connectivity issues or your wrong answers as well so if you have a scored 85 out of 100 your score will become 80 out of 80 and if you have scor 75 out of 100 your score will become 75 out of 80 clear everyone yes sir yes sir so if you are facing more issues than 20% technical issues or Internet issues then there won't be any makeup quiz or anything else and if you are say scoring 100% in first three quizzes so the score will become like 75 you can choose not to attempt for

01:22:35 fourth quiz you may miss one of them because of some work or so your score will still be 75 out of 80 so many of the flexibilities considered while we are giving you 20% relaxation in this Real Time quiz right but no exceptional exceptional request will be entertain regarding quiz no makeup quiz will be there every quiz will be well announced and will happen on Saturday slot right during the class itself no additional time hours okay let's move to next question now I request all of you to adhere with

01:23:25 all the guidelines don't share your answer on Google meet via chat or via audio and try to mark your answer within that 30 seconds window and if your question has checkboxes then there are multiple correct answers in this question it was radio button so only one option you can choose if there are check boxes is there are multiple correct answers and if you choose all the correct answers then only you will get plus one marks otherwise zero and there won't be any negative marking for this quizzes

01:24:10 right I'm again repeating if there are multi-choice questions you have to SCT all the correct answers then only you will get plus one otherwise you will get zero so there's no partial marking it's either zero or one there's no negative marking it's either zero or one right so let's move to next question I hope all of you are uh ready so here is next question on your screen again 30 seconds so Watson and G Hub are uh not a cloud platform but also they are wants to become service model so they also

01:25:34 provide some Services through apis but not as such Cloud okay great and that's how you will be getting your uh leader uh scores at the end these are top five people who marked correct answer and took less time but time doesn't matter for your final quizzes only matter is your marks right so that's how we will be conducting Time quizzes in our course so any question yes abishek so Watson how is Waton not for cloud application actually provides some abled cloud services which I have heard so that's why I also mentioned at the end

01:26:30 of the question that now GitHub and whatson also started becoming Cloud they also started providing services but this only dummy questions it was not actual quiz okay okay but sir I know this a d question but Watson is not the correct answer Watson providing the cloud services [Music] provides cloud services if you go by the original old Watson service it was only API based service earlier now and GitHub was also purely code repository yes G repository only now noways G is uh you know also providing functionality of uh Microsoft

01:27:23 uh co-pilot so that's the integation yeah you can say that that's additional application will be added to the GitHub the for Watson also those the new service models as an invention it is only a c trained model okay okay okay of you are easily saying that it's integrated services also it's the same case okay okay sir understood but in quizzes you will get the questions from our classroom discussions not outside that okay sir so it's at 3:30 uh you can leave the classroom and if you have any question you can stay back and ask your

01:28:25 doubts I'll stop the recordings okay and this is another important one yes I forgot to mention after lecting the correct answer you need to sub click on the submit don't forget to click on the submit button in your quizzes otherwise your answer will not be considered uh see disabling send button may create further issues if people by mistake have selected some and they want to change time or at the last few seconds they by mistakely select another answer and then go back to the old answer so disabling sub button may

01:29:21 also impact negatively in some cases so we'll go with submit button uh in our this course quizes okay cartic okay great any other doubt or question I'll stop the recording and if you wish to ask anything you can

Summary

The lecture explores cloud computing definitions, characteristics, service models, and deployment models, emphasizing on-demand services and resource pooling.

Highlights

📊 Cloud Computing Definition: Discusses shared resources, on-demand access, and rapid provisioning.

🌐 Five Essential Characteristics: Focuses on on-demand self-service, broad network access, resource pooling, rapid elasticity, and measured service.

🖥️ Service Models: Explains Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS).

🔄 Resource Pooling: Highlights the importance of a shared resource pool for cloud computing functionality.

⚙️ Rapid Elasticity: Describes the ability to quickly provision or release resources as needed.

📏 Measured Service: Emphasizes the necessity of measuring cloud service usage for billing and resource management.

🔍 Real-Time Quizzes: Introduces interactive quizzes to engage students and assess understanding of cloud concepts.

Key Insights

💻 On-Demand Self-Service: Service consumers can provision resources without provider intervention, ensuring efficiency and responsiveness to needs.

🌍 Broad Network Access: Essential for cloud services to be accessible from diverse devices, reinforcing the value of remote capabilities in modern computing.

🏗️ Resource Pooling: Resource sharing among multiple clients prevents waste and enhances cost-effectiveness, differentiating cloud services from traditional models.

🔄 Elasticity in Cloud Services: The flexibility to scale resources up or down in real-time supports businesses in managing fluctuating workloads efficiently.

📊 Importance of Measured Service: Accurate measurement of resource usage is vital for billing and operational transparency, ensuring consumers only pay for what they use.

🛠️ Understanding Service Models: Distinguishing between IaaS, PaaS, and SaaS is crucial for businesses to choose the right cloud solutions for their needs.

📚 Interactive Learning: Utilizing quizzes and interactive elements in learning processes enhances engagement and knowledge retention among students.