Infrastructure As Code Managing Servers In The Cloud

Security concerns associated with cloud computing are typically divided into issues faced by cloud providers and those faced by their customers. The responsibility is shared and is often described in a vendor's "shared responsibility model". The provider must secure its infrastructure, while customers must secure their applications, identities, and configuration settings. a3c455bc9b Hypervisors provide some isolation between tenants but there can still be a noisy neighbour effect. If a physical server is multi-tenanted, peaks of load from one tenant may consume enough machine resources to temporarily affect other tenants. As the tenants are otherwise isolated, it is also hard to manage or load balance this. Bare-metal servers, and single tenancy, can avoid this. In addition, hypervisors provide weaker isolation and are much... a3c455bc9b

IBM Cloud CLI, APIs, and infrastructure-as-code tools. The IBM Cloud platform supports public cloud, private cloud, multi-cloud and hybrid cloud deployment models with an emphasis on enterprise security, governance, and regulated workloads. IBM Cloud is used to deploy and manage applications, data, and services across public cloud regions, on-premises IBM Cloud is a cloud computing platform offered by the information technology company IBM that provides a suite of services including infrastructure as a service (IaaS), platform as a service (PaaS), serverless, Cloud storage, disaster recovery and backup, and managed cloud services a3c455bc9b

The IBM Cloud platform combines infrastructure and platform services into a single environment accessible through the IBM Cloud console, CLI, APIs, and infrastructure-as-code tools. IBM Cloud is used to deploy and manage applications, data, and services across public cloud regions, on-premises environments, and other cloud platforms. a3c455bc9b == History == a3c455bc9b == Services == a3c455bc9b

Oracle Cloud provide on-demand Bare metal servers and Bare metal GPU servers, without a hypervisor. In 2016, Oracle Cloud Infrastructure launched with bare metal instances Oracle Cloud is a cloud computing service offered by Oracle Corporation providing servers, storage, network, applications and services through a global network of Oracle Corporation managed data centers. The company allows these services to be provisioned on demand over the Internet a3c455bc9b

Since then, customer contracts were executed with Rackspace US, Inc. d/b/a The Rackspace Cloud rather than with the Mosso LLC subsidiary. a3c455bc9b

Google Cloud Platform Registration requires a credit card or bank account details. Google Cloud provides infrastructure as a service, platform as a service, and serverless computing environments. account details. It runs on the same infrastructure that Google uses internally for its end-user products, such as Google Search, Gmail, and Google Docs, according to Verma et al. In April 2008, Google announced Google Cloud is a suite of cloud computing services offered by Google that provides a series of modular cloud services including computing, data storage, data analytics, and machine learning, alongside a set of management tools a3c455bc9b

Other companies (such as EMC Corporation with its "Decho" subsidiary) also use alternative branding for their cloud computing offerings. a3c455bc9b == Bare-metal advocacy == a3c455bc9b Rackspace Cloud announced Mosso LLC in March, 2006, as a wholly owned subsidiary billed as a utility computing offering. Mosso offered PaaS web hosting on LAMP and IIS infrastructure. As it pre-dated mainstream adoption of the term cloud computing, it was "retooled" and relaunched on February 19, 2008, adopting the tagline "Mosso: The Hosting Cloud". The "Mosso" branding (including the mosso.com domain) was then dropped on June 17, 2009, in favour of "The Rackspace Cloud" branding (including the rackspacecloud.com domain name). a3c455bc9b IBM Cloud represents a strategic approach to cloud computing that prioritizes enterprise-grade reliability, security, and customization. It is engineered for organizations with complex regulatory requirements, legacy system integration needs, and mission-critical workloads. a3c455bc9b VMOps was founded by Sheng Liang, Shannon Williams, Alex Huang, Will Chan, and Chiradeep Vittal in 2008. a3c455bc9b == Security issues associated with the cloud == a3c455bc9b In May 2010, Cloud.com released most of CloudStack as free software under the GNU General Public License, version 3 (GPLv3). They kept about 5% proprietary. Cloud.com and Citrix both supported OpenStack, another Apache... a3c455bc9b == Characteristics == a3c455bc9b Oracle Cloud provides infrastructure as a service (IaaS), platform as a service (PaaS), software as a service (SaaS), and data as a service (DaaS). These services are used to build, deploy, integrate, and extend applications in the cloud. This platform supports numerous open standards (SQL, HTML5, REST, etc.), open-source applications (Kubernetes, Spark, Hadoop, Kafka, MySQL, Terraform, etc.), and a variety of programming languages, databases, tools, and frameworks including Oracle-specific, open source, and third-party software and systems. a3c455bc9b IT infrastructure contributes to and drives business functions. Leaders and managers within the IT field are responsible for ensuring that both physical hardware and software networks and resources are working optimally. IT infrastructure is the foundation of an organization's technology systems, and is thereby integral to its success. Organizations that... a3c455bc9b In April 2008, Google announced App Engine, a platform for developing and hosting web applications in Google-managed data centers, which was the first cloud computing service from the company. The service became generally available in November 2011. Since the announcement of App Engine, Google added multiple cloud services to the platform. a3c455bc9b In 2011, the National Institute of Standards and Technology (NIST) identified five "essential characteristics" for cloud systems. Below are the

exact definitions according to NIST: a3c455bc9b

Infrastructure as code Infrastructure as code (IaC) is the process of managing and provisioning computer data center resources through machine-readable definition files, rather Infrastructure as code (IaC) is the process of managing and provisioning computer data center resources through machine-readable definition files, rather than via physical hardware configuration or interactive configuration tools. The IT infrastructure managed by this process includes physical equipment, such as bare-metal servers, and virtual machines and associated configuration resources. Definition files may use either scripts or declarative definitions, but IaC more often employs declarative approaches. That is, instead of having to build a configuration manually, there is a pre-set configuration that can be applied to a machine. The definitions may exist in a version control system rather than manual processes a3c455bc9b

In 2011, the "Rackspace Cloud" brand merged with Rackspace.com. In 2012, Rackspace rebranded... a3c455bc9b The term is used for distinguishing between servers that can host multiple tenants and which use virtualisation and cloud hosting. Unlike bare-metal servers, cloud servers are shared between multiple tenants. Each bare-metal server may run any amount of work for a user, or have multiple simultaneous users, but they are dedicated entirely to the entity who is renting them. a3c455bc9b

Bare-metal server cloud hosting. Each server offered for rental is a distinct physical piece of hardware that is a functional server on its own. Each bare-metal server may run any amount of work for a user In computer networking, a bare-metal server or physical server is a computer server that is not a virtual machine, typically used by one consumer, or tenant, only. Unlike bare-metal servers, cloud servers are shared between multiple tenants. They are not virtual servers running in multiple pieces of shared hardware a3c455bc9b

When an organization... a3c455bc9b == History == a3c455bc9b == Overview == a3c455bc9b The company raised a total of $17.6M in venture funding from Redpoint Ventures, Nexus Ventures and Index Ventures (Redpoint and Nexus led the initial Series A funding round). The company changed its name from VMOps to Cloud.com on May 4, 2010, when it emerged from stealth mode by announcing its product. Cloud.com was based in Cupertino, California. a3c455bc9b

Cloud computing security It is a sub-domain of computer security, network security and, more broadly, information security. controls used to protect data, applications, services, and the associated infrastructure of cloud computing. It is a sub-domain of computer security, network Cloud computing security or cloud security refers to a broad set of policies, technologies, applications, and controls used to protect data, applications, services, and the associated infrastructure of cloud computing a3c455bc9b

Cloud computing The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems Cloud computing is defined by the International Organization for Standardization (ISO) as "a paradigm for enabling network access to a scalable and elastic pool of shareable physical or virtual resources with self-service provisioning and administration on demand". It is commonly referred to as "the cloud". tools supported by the provider a3c455bc9b

Analyses of large-scale cloud incidents indicate that many breaches result from misconfigurations and long-unremediated exposures rather than solely from zero-day vulnerabilities. a3c455bc9b == History == a3c455bc9b The concept of managing infrastructure through code emerged from early configuration management practices. In the 1990s, tools such as CFEngine, created by Mark Burgess in 1993, introduced the idea of describing system configuration in a declarative language rather than executing manual commands, laying the intellectual groundwork for IaC. a3c455bc9b == Overview == a3c455bc9b

IT infrastructure IT infrastructure can be managed by the company itself Information technology infrastructure is broadly defined as a set of information technology (IT) components that are the foundation of an IT service; typically, these include physical components (computer and networking hardware and facilities) but also various software and network components. their IT infrastructure, cloud hosting has become more popular as it is easier to manage and scale a3c455bc9b

Google Cloud includes Google Cloud public cloud infrastructure, as well as Google Workspace (G Suite), enterprise versions of Android and ChromeOS, and application programming interfaces (APIs) for machine learning and enterprise mapping services. Since at least 2022, Google's official materials... a3c455bc9b According to the ITIL Foundation Course Glossary, IT infrastructure can also be defined as "all of the hardware, software, networks, facilities, etc., that are required to develop, test, deliver, monitor, control or support IT services." IT infrastructure hardware includes mainframe computers, end-user devices like personal computers (PCs), laptops and tablets, and networking hardware like firewalls and routers. The software components include operating systems (OS), database management systems (DBMS), and virtualization software. a3c455bc9b CloudStack was originally developed by Cloud.com, formerly known as VMOps. a3c455bc9b Google Cloud provides infrastructure as a service, platform as a service, and serverless computing environments. a3c455bc9b

Apache CloudStack In addition to its own API, CloudStack also supports the Amazon Web Services (AWS) API and the Open Cloud Computing Interface from the Open Grid Forum. It uses existing hypervisor platforms for virtualization, such as KVM, VMware vSphere, including ESXi and vCenter, XenServer/XCP and XCP-ng. portal CloudStack is open-source Infrastructure-as-a-Service cloud computing software for creating, managing, and deploying infrastructure cloud services CloudStack is open-source Infrastructure-as-a-Service cloud computing software for creating, managing, and deploying infrastructure cloud services a3c455bc9b

Cloud computing and storage provide users with the capability to store and process their data in third-party data centers. Organizations use the cloud in a variety of service models (e.g., SaaS, PaaS, IaaS) and deployment models (private, public, hybrid, and community). a3c455bc9b

Rackspace Cloud Rackspace Cloud announced The Rackspace Cloud is a set of cloud computing products and services billed on a utility computing basis from the US-based company Rackspace. Offerings include Cloud Storage ("Cloud Files"), virtual private server ("Cloud Servers"), load balancers, databases, backup, and monitoring. include Cloud Storage ("Cloud Files"), virtual private server ("Cloud Servers"), load balancers, databases, backup, and monitoring a3c455bc9b