HCLTech | Red Hat

Connecting diverse environments with Red Hat Service Interconnect

Overview

Modern businesses often face connectivity challenges in navigating diverse technological landscapes across multi-platform environments. Red Hat Service Interconnect addresses these complexities, providing a robust solution for streamlined communication, especially within multicloud and hybrid environments.

Key challenge

In the quest for migrations to a cloud-native architecture for modern applications, organizations must face a slew of technical challenges and complexities in integrating Applications and Services not limited to:

01

Applications portability, security and compliance across on-prem, cloud and hybrid cloud models

02

Integrations of legacy, stateful, complex apps and services across clouds, regions and data centres

03

Integrations of Red Hat OpenShift, RHEL with other open-source Kubernetes platforms

04

Complex and time consuming network infra, VPN and firewall configurations

Solution

Red Hat Service Interconnect emerges as a definitive solution, representing a refined iteration of the Skupper open-source project. Its primary prowess lies in facilitating uninterrupted communication channels between applications and services, seamlessly bridging gaps across diverse technological landscapes—Kubernetes clusters, virtual machines, or bare metal environments

Virtual Application Network (VAN)

The VAN is a Virtualized Application-centric Network layer at its core. This innovative approach decouples the network layer from its underlying infrastructure constraints, thus amplifying both application performance and agility. By dynamically tailoring its configurations to meet specific application requirements, the VAN ensures optimal performance without compromising traditional infrastructure considerations. Red Hat Service Interconnect ingeniously leverages this VAN paradigm atop Kubernetes clusters, virtual machines or bare metal setups, ensuring a streamlined communication framework devoid of node integration challenges

## Elimination of Virtual Private Network (VPN) Dependency

A pivotal advantage lies in sidestepping the traditional reliance on VPNs. By circumventing VPN dependencies, organizations can significantly mitigate latency issues while simplifying connectivity paradigms, channeling efforts and resources exclusively toward enhancing service connectivity efficiency

Benefits

Mitigation of Common Failures

Red Hat Service Interconnect adopts a service-centric approach, minimizing the risk of widespread failures. Emphasizing service-to-service connectivity over cluster-centric models it curtails the likelihood of systemic issues permeating across the infrastructure
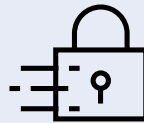
Robust Encryption Standards

Prioritizing security, Red Hat Service Interconnect integrates comprehensive encryption measures as a foundational element. This ensures that all communications, irrespective of their nature, are safeguarded against potential threats, ensuring data integrity and confidentiality

Adaptive Routing Logic

Empowering engineers with enhanced control, Red Hat Service Interconnect incorporates a flexible routing logic. This granularity allows for tailored optimization strategies, be it prioritizing latency reduction, redundancy measures, or other bespoke criteria, thereby ensuring optimal performance
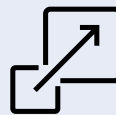
Resilience and Scalability Dynamics

A distinguishing feature lies in its capacity to manage disparate clusters autonomously. Even as individual clusters undergo scaling, updates or modifications, Red Hat Service Interconnect guarantees uninterrupted communication pathways between services, fortifying resilience and scalability attributes

Use cases

Multi cloud scenarios

Red Hat Service Interconnect facilitates seamless communication among services across diverse cloud platforms such as AWS, Google Cloud and Azure. By eliminating the complexities associated with traditional VPN setups, it ensures a unified communication framework that transcends vendor-specific constraints, enabling efficient data exchange and workflow continuity

Data isolation and compliance

Operating across multiple geographic regions brings forth intricate data storage, processing and compliance challenges. Red Hat Service Interconnect addresses this by ensuring efficient communication while strictly adhering to regional data regulations. This ensures that organizations maintain data sovereignty and compliance integrity across diverse locales

Company expansions and mergers

During pivotal business phases such as mergers, acquisitions, or expansions, seamless integration of services and applications becomes paramount. Red Hat Service Interconnect facilitates this transition, allowing organizations to bridge disparate systems without undergoing extensive infrastructure transformations, thereby expediting business consolidation processes

Development and Production Segregation

In the realm of software development lifecycle, Red Hat Service Interconnect stands out by facilitating secure and direct communication channels between distinct environments— development, testing, or production phases. Such seamless integration bolsters continuous integration and delivery pipelines, fostering agility and efficiency

Edge Computing Integration

With the proliferation of edge computing models, the demand for secure and efficient communication between edge devices and central clusters has surged. Red Hat Service Interconnect rises to this challenge, simplifying the communication pathways while ensuring real-time data processing and analysis. This integration paves the way for enhanced operational efficiencies and responsiveness in edge computing ecosystems

Hybrid environments

Red Hat Service Interconnect is a linchpin for organizations navigating the complexities of hybrid infrastructures or those transitioning toward cloud adoption. It adeptly bridges the gap between on-premises setups and cloud workloads, ensuring consistent service-to-service communication and optimal resource utilization

Why HCLTech?

Proven track record in Red Hat Solutions

HCLTech boasts a commendable portfolio of delivering large-scale and intricate Red Hat solutions across diverse global landscapes. Their expertise spans projects of significant magnitude, highlighting their capability to navigate complexities and deliver tangible results

Global advance partnership with Red Hat

HCLTech's strategic alliance as a Global advance partner with Red Hat underscores its deep-rooted collaboration and commitment to leveraging Red Hat's cutting-edge technologies. This partnership status signifies mutual trust, shared objectives and a symbiotic growth trajectory between the two partners

Dedicated Centers of Excellence (CoE) and Cloud Native Lab

A testament to its commitment to innovation and excellence, HCLTech has established specialized Centers of Excellence and a dedicated Cloud Native Lab tailored for Red Hat technologies. These dedicated spaces foster collaboration, research and development, ensuring that HCLTech remains at the forefront of technological advancements in partnership with Red Hat

Proprietary IPs and Acceleration Tools

HCLTech's innovation extends to its proprietary inhouse developed Intellectual Properties (Ips) and tools. These assets are meticulously crafted to expedite application and platform migrations, ensuring efficiency, reliability and seamless transitions for clients

Recognized cloud expertise

As a globally recognized Cloud Certified Service Provider (CCSP) and Managed Services Partner (MSP) for Red Hat, HCLTech's expertise transcends conventional boundaries. This recognition underscores its capabilities in harnessing Red Hat technologies to deliver scalable, resilient and innovative cloud solutions tailored to diverse business needs

Gold Membership with CNCF and Kubernetes Expertise

HCLTech's gold membership status with the Cloud Native Computing Foundation (CNCF) amplifies its commitment to championing cloud-native technologies and best practices. Additionally, as the only Global System Integrator (GSI) designated as a Kubernetes Certified Service Provider (KCSP), HCLTech's expertise in Kubernetes, OpenShift, Ansible and OpenStack is unparalleled
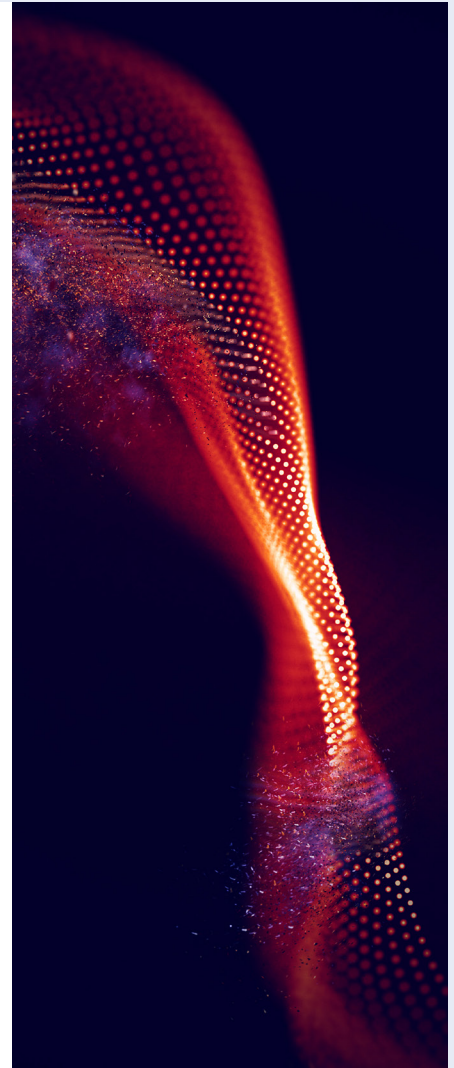
Skilled team of Architects and Engineers

Central to HCLTech's success is its robust talent pool comprising trained, accredited, certified architects and engineers proficient in Red Hat technologies. Their expertise encompasses a spectrum of tools and platforms, ensuring that clients receive solutions tailored to their unique requirements, backed by industry leading expertise and insights

In summary, Red Hat Service Interconnect and HCLTech's expertise provide essential solutions for modern connectivity challenges, ensuring organizations operate with agility, security and efficiency in today's interconnected landscape.

For more information, contact us at Ibmecosystem2@hcl.com

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