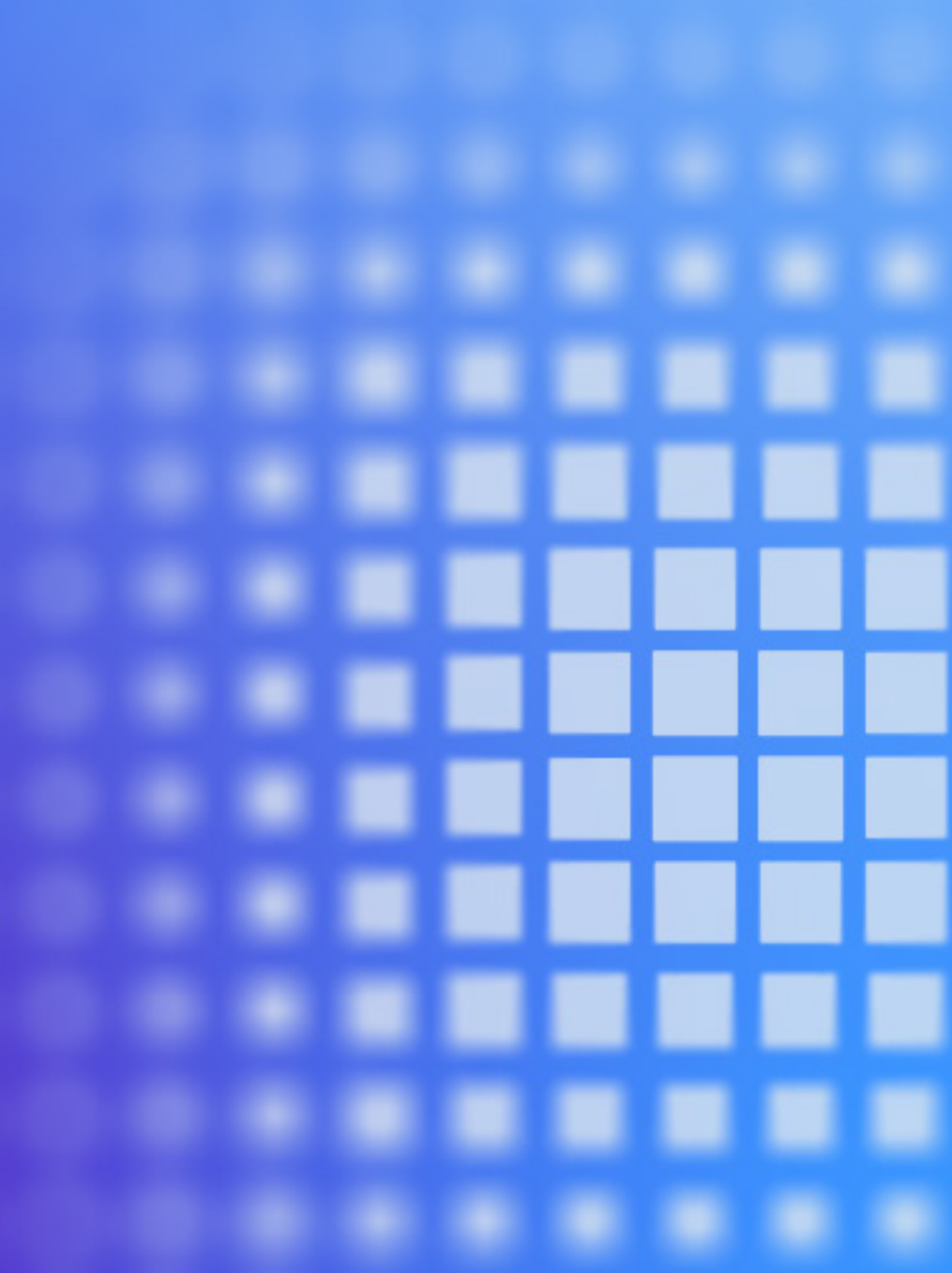# HCLTech | Supercharging Progress™

Network transformation with HCLTech Private 5G

Introduction

As the network connectivity landscape undergoes rapid change, critical factors for successful network adoption include speed, ultra-low latency, security and reliability of data connectivity. These drivers are leading the path for digital transformation across industries and domains globally. Enterprises want more indoor and outdoor coverage, as well as a secure network to ensure that all data trace stays within the enterprise's private network only.
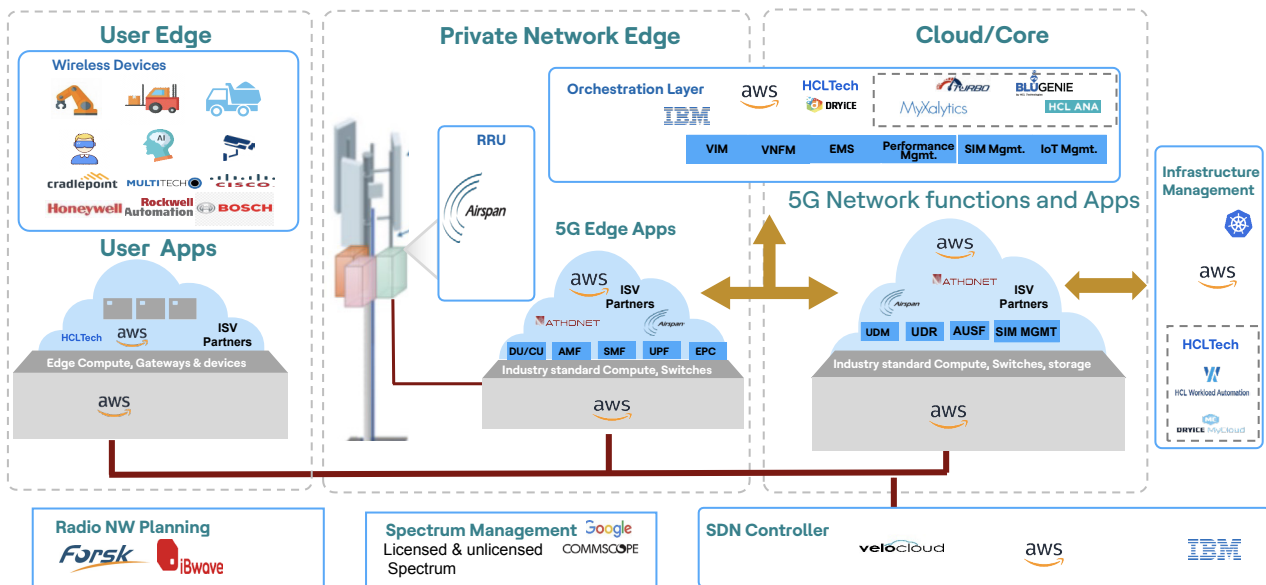
Businesses are undergoing a transformation of considerable magnitude and scale while changing the way they operate. Every aspect of a business is becoming more interconnected – connected operations, connected assets, connected customers and connected colleagues. In such a scenario, Private Networks are the way forward into the future.

HCLTech Private 5G Solution

HCLTech Private Network Solutions addresses the industry 4.0 needs of connecting people, processes and work environment while collecting data for building enterprise use cases that generate business value. Our solutions are built to help organizations unlock the power of the internet through a secure, private network with an as-a-service model for better cost control.

HCLTech partners with AWS to provide a private 5G solution comprising RAN from Airspan, core components from Athonet and underlying hardware from AWS. The solution is integrated and managed through the AWS cloud, which also hosts other applications for managing IoT devices.

HCLTech Private Network Solution Stack

Key Features

- **Cellular 5G Solution**: Follows 3GPP standards and protocols for cellular 5G deployed with low-cost shared spectrum
- **Integrated Enterprise Architecture**: Includes devices, servers, network functions, applications, management and orchestration
- **Fully Integrated Hardware and Software**: Delivers, provisions and maintains all the pre-integrated hardware, 5G Core and RAN software and SIM cards needed to deploy and operate a private 5G
- **Flexible Pricing Options**: Pay-As-You-Go model provides enterprises with a transparent, easy-to-understand pricing model
- **On-Demand Scaling**: Order and provision a private cellular network of any size via self-service and application programming interfaces
- **Built-In-Network Monitoring**: Metrics and dashboards published with tools to monitor and manage the network

Technology Benefits

- Better coverage as compared to Wi-Fi, especially in industrial environments
- Ultra-low latency for automation opens a new door for safe human-robot interaction, e.g., humans and automatic vehicles within a factory
- Availability and reliability offered by 5G network is greater than 99.95%, which is of prime importance for industrial automation and wireless IoT solutions
- With increased security of the 5G technology and private network model, enterprises or the operating entities gain data sovereignty and keep sensitive data localized
- High device density with supporting multi-Gbps peak data rates provides massive connectivity, necessary for performing high speed and high precision machine tasks, non-interrupted seamless multimedia services and efficient collaboration among mobile devices

Additional benefits include

- **Full Enterprise Control** over users, devices and data, enterprise-specific network configuration and security policies
- **Quick Expansion**: Solution is cloud-native and can be expanded for capacity in a few hours for both network functions and device applications
- **Flexible Deployment Options**: Solution can be completely integrated on-premises or partially on-premises and partially on the cloud. The option saves cost and reduces management effort
- **Future Ready Solution**: High-performance edge can host SDWAN, 5G Core and MEC services which boost latency-sensitive use cases along with implementation of mission-critical applications

HCLTech Private 5G Services

Utilizing spectrum frequencies set aside specifically for a customer environment, an enterprise private wireless network is deployed. This spectrum is distinct from the frequencies controlled by commercial mobile network carriers.

Cellular technology is designed with dedicated radio and localized equipment that can support IoT and artificial intelligence in strategic indoor and outdoor operations. These cellular-based networks employ technologies like multi-access edge computing to support low-latency applications and can be deployed in standalone or hybrid models.

Planning & Design	Network Deployment	Integration Support	Performance Mangmnt	Operations Support

Network as-a-Service

- Consulting - Assess and design
- Integrate - Implement, deploy, validate & optimize
- E2E Program Management

Device as-a-Service

- Device & SIM Management
- Sensor Monitoring – Troubleshooting, Monitoring, Inventory Management, etc

MEC apps as-a-Service

- IoT solutions – Manufacturing, Agriculture, Healthcare, etc.
- AR/VR solutions
- Cloud based Management of Apps

Spectrum Management

- Consulting, Planning, Availability Analysis
- Support in Licensing & Registration
- SAS Management, CBSD Registration,
- Interference Management

Day 0&1

Professional Services

Asses, Design, Deploy, Integrate & Certify

- Customer pain points, Feasibility Study, BRD/FRDs
- Site survey, RF/Compute/Storage plan, Facilities survey, capacity assessment/dimensioning, CIQ
- Deploy, program/vendor management, zero-touch, integrate (N/S & E/W), Acceptance sign-off
- Validation/Smoke-tests, Parameter tuning/optimization, customer sign-off

Day 2

Managed Services

Operate (L1-L4), LCM, FCAPs , Support

- Tools integration – Splunk/ELK, Service Now, Network Manager, Billing, etc.
- Visualization dashboards, CI/CD/CT pipeline, FOA/GA/Operationalize
- Service | Incident | Change Management
- SLAs/Governance/Disaster Recovery

Technology Benefits

- **Network as a Service**: Services to consult, design, plan, deploy, integrate and manage the private network solutions
- **Spectrum Management**: Helps clients attain spectrum for 5G implementation along with dimensioning and interference management
- **Device as a Service**: Services to make existing devices compatible with 5G along with SIM management. Also provides services to manage the faults, monitor the devices and do complete life cycle management
- **MEC apps as Service**: HCLTech, with its in-house solutions and partner solutions, provides services to deploy various apps at edge locations itself
- **PoC as a Service**: Services to do PoC at minimal cost in the enterprise or lab environment
- **Lab as a Service**: HCLTech has a strong network of labs around the globe offering services to evaluate and build solutions around 5G

Benefits

- **E2E Services:** HCLTech provides services around 5G, networks, IoT devices and applications, making it a suitable SI to integrate the solution for a specific use case
- **Enterprise Experience:** HCLTech has vast experience in providing solutions to enterprises and hence understands industry requirements. HCLTech works in multiple industry domains viz manufacturing, mining, energy and utility, oil & gas, agriculture, healthcare, retail etc.
- **Large Partner Ecosystem:** HCLTech has a dedicated team which works with technology partners from IoT, 5G, Networks and Application point of view
- **Cost Effective:** HCLTech provides services with optimum cost, which is an Opex-driven engagement model

HCLTech | Supercharging Progress™

hcltech.com

HCLTech is a global technology company, home to 211,000+ people across 52 countries, delivering industry-leading capabilities centered around Digital, Engineering and Cloud powered by a broad portfolio of technology services and software. The company generated consolidated revenues of $11.79 billion over the 12 months ended June 30, 2022. To learn how we can supercharge progress for you, visit hcltech.com.