**kapil kumar gupta (VOLTE/IMS/NFVi Expert)**

**Email:-** [**kapilgupta.pt@gmail.com**](mailto:kapilgupta.pt@gmail.com)

**Mob.No. +91-9560102391**

**d.o.b 2nd may 1986**

# A competent professional with 8 **YEARS of** experience in Cloud Platform for (OpenStack and VMware) and Telecom IMS/VoLTE

* Validated the compatibility of ONAP (open network automation platform) Amsterdam release on VMware integrated OpenStack (VIO).
* Worked on Multi-cloud Project of ONAP to setting up OpenStack and VIO labs.
* Design/Architect of VMware Integrated OpenStack live environment.
* Integrate Docker containers and Kubernetes on VIO
* Design, deployment and troubleshooting on OpenStack and VIO.
* VMware integrated OpenStack (VIO) and NSX lab design and deployment.
* IP engineering and Network planning for VMware NFVi and OpenStack lab.
* Experience of Python scripting for OpenStack Automation.
* TOSCA template modification for OpenStack Heat, Cloudify Blueprints.
* Experience on Cloudify NFVO design, deployment, writing blueprint for VNF.
* Experience of writing custom plugin for Cloudify to call quota API of OpenStack
* Proficient on tools like Postman, curl, vROPS, VMware Log-Insight, etc.
* Deployment and Support for telecom IMS/volte & CS core network.
* vIMS VNF deployment and configuration on VMware NFVi(EXSi, vCenter, NSX).
* Handling end to end call related issues for VOLTE, IMS , CS-Core
* Protocol knowledge and troubleshooting on SIP, Diameter, MAP, DNS, ISUP, H.248, BICC, IP.
* Experience of VMware NFVi infrastructure & VNF deployment, VMware 6.0&6.5 administration and support in VNF lab.

**Integration, support and testing of VMware and OpenStack NFVi and VNFs**

* Installation and configuration of ESXi, vCenter, NSX, VIO (VMware integrated OpenStack), vSphere and other VMware components.
* Installation and configuration and troubleshooting of OpenStack component l.e keystone, cinder, nova, neutron etc.
* Monitoring and Performance Troubleshooting using inbuilt performance monitoring tools in VC, esxtop
* Proficient on tools and components like Wireshark, vCenter, vMotion, vROPS, vSAN, VMware Log-Insight

**IMS VNF deployment over NFVi platforms**

* End to end deployment and configuration of IMS VNFs over NFVi infrastructure
* Troubleshooting of IMS VNF deployment / configuration issues along with customers
* End to end test execution and reporting of tests

**Deployment and support of IMS/CS-core**

* IMS/GSM call and platform related issue handling
* Upgrade of various IMS /GSM nodes
* Operation and maintenance of core nodes

**Operations and Maintenance**

* Emergency Handling and troubleshooting of SIP, HSS, CSCf for IMS call and SMS for complex scenario
* Network performance review and KPI improvement like CSR, PSR, and LUSR etc.
* IP Traffic optimization in MSS and MGW’s
* Handover of nodes
* CSR handling for SIP and HSS

**Platform experience:-**

* **VMware** (NSX, VIO, VIO with Kubernets, Vsphere, ESXi) OpenStack, MetaSwitch Clearwater on Perimeta (SBG/P-CSCF), Sprout(S/I-CSCF) and Homestead
* Spirent HSS and UE Simulator
* **Huawei** MSS on Fusion and MGW UMG8900
* MSS/MGW **Ericsson** APZ 2 12 60/R 13.2/R14.1/R6.3.2.0D
* HLR/RHLR **Ericsson** AXE810 Switch APZ 2 12 60/ R 13.2
* STP/NPDB/FNR **Ericsson** AXE810 Switch AZZ 2 12 60/R 13.2
* **Ericsson** HSS, CSCF, SBG, TAS
* **Nokia** MSS on DX200 and ATCA, Nokia HLR on DX200, Nokia MGW on IPA and ATCA

***PROJECT EXPERIENCE***

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| **Project** | Cloudify NFVO Scaling testing for 5G use cases |
| **Company** | HCL Technologies |
| **Role** | Technical Lead |
| **Duration** | MAY 2019 – Present |
| **Technical Environment** | OpenStack, Cloudify, Python |
| **Technologies** | VMware NFVi and OpenStack |
| **Tools** | Postman, Curl |
| **O/S** | Linux |

**Responsibilities:**

* Test and verify the environment (OpenStack and Cloudify )
* Write Cloudify Blueprint to deploy test VM on OpenStack
* Write Python scripts to check multiple project quota for user than deploy vIMS on OpenStack
* Write python scripts for vertical and horizontal scaling of VM.

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| **Project** | ONAP compatibility for VMware integrated OpenStack |
| **Company** | HCL Technologies |
| **Role** | Technical Lead |
| **Duration** | MAY 2017 – April 2018 |
| **Technical Environment** | ONAP, OpenStack, vCenter, NSX , VIO |
| **Technologies** | VMware NFVi and OpenStack |
| **Tools** | Postman, Curl, WireShark |
| **O/S** | Linux |

**Responsibilities:**

* Validated the compatibility of ONAP (open network automation platform) Amsterdam release on VMware integrated OpenStack (VIO).
* Worked on Multi-cloud Project of ONAP to setting up OpenStack and VIO labs
* Lab design and deployment for ONAP on Vanilla OpenStack as well as on VMware integrated OpenStack (VIO).
* Write design and deployment document for ONAP deployment on VMware NFVi.
* Working with ONAP open-source community.
* Fix issue of Dockers download on ONAP VM’s.
* ONPA Heath check and fix issues.
* Understand architecture of ONAP and its VM functionality.
* Lab Integration of VMware ESXI, VCenter and NSX , VIO to deploy ONAP on VMware VIO.

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| **Project** | VMware-VNF-Certification and IMS characterization |
| **Company** | HCL Technologies |
| **Role** | Technical Lead |
| **Duration** | April 2016 – March 2017 |
| **Technical Environment** | Vmware NFVi, MetaSwitch VNF l.e. CSCF(Sprout), SBG(Perimeta), Homestate , Spirent (HSS) |
| **Technologies** | IMS/Volte, EPC, VMware, OPENSTACK |
| **Tools** | Spirent, Wireshark |
| **O/S** | Linux |

**Responsibilities: -**

* Planning for “vCloud NFV Workload Characterization” Goal of this test plan is to deploy Vendor VNF(vIMS) with respect to key Telco control and media parameters and measure various NFVi parameters that are required to support these deployments.
* Lab Integration of VMware ESXI, VCenter and VCloud Director.
* Lab Integration and troubleshooting of VMWARE datacenter (DNS, NTP, vCenter) and Spirent Test server
* Perform and test features like vMotion, HA, DRS, Cloning, snapshot etc on VNF
* Troubleshooting of IMS component of Metaswitch (SBC, I/S-CSCF, N) VNF on VMWARE cloud.
* Troubleshooting of IMS call and Registration.

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| **Project** | Planning and Operation & maintenance |
| **Company** | Huawei |
| **Role** | Deputy Manager |
| **Duration** | OCT 2015 to April 2016 |
| **Technical Environment** | MSS, MGW ,HLR |
| **Technologies** | CS core |
| **O/S** | Linux |

**Responsibilities:**

* Managing APT testing and Tac handover.
* Planning for Nokia network equipment (HLR, STP, MSC, GMSC) migration to Huawei.
* Emergency handling for Nokia, Ericsson and Huawei equipment’s.
* Troubleshooting and configuration for Nokia, Ericsson and Huawei.
* Creation of SIGTRAN, RNC, BSC, MGW’s etc. on DX200 and ATCA, AXE.
* Troubleshooting with clear codes and EOS.

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| **Project** | Emergency handling for Bharti Airtel |
| **Company** | Ericsson Global India ltd |
| **Role** | Customer Support Engineer |
| **Duration** | Sept’14 to OCT’ 2015 |
| **Technical Environment** | HSS, CUDB MSS, MGW ,HLR |
| **Technologies** | IMS/Volte and CS core |
| **O/S** | Linux |

**Responsibilities** as Customer support engineer.

* Handling CSR SIP and APT..
* CSR support for sip implementations.
* Handling CSR for end to end call processing.
* Emergency rota support for call related issue for Bharti Airtel.
* Handling of hot FTS for SIP.

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| **Project** | Operation & maintenance and deployment |
| **Company** | Ericsson Global India ltd |
| **Role** | 2nd LA engineer |
| **Duration** | July’13 to Aug’ 14 |
| **Technical Environment** | IMS(CSCF, SBG, HSS, CUDB), MSS, MGW ,HLR |
| **Technologies** | IMS/Volte and CS core |
| **O/S** | Linux |

**Responsibilities** as 2nd LA engineer for IMS project.

* Upgrades, Implementations, hardware and configurations changes of CSCF, HSS, SBG, MSC, MGW and CUDB as per requirement SBG, HLRFE
* Troubleshooting of call, SMS for complex scenarios, troubleshooting for KPI degrade of Nodes / hardware alarms of Node
* Involve with CSI team to integrate SBG, HSS, CSCF.
* Automation of system backup (Backup archive server) from all IMS core nodes.
* Acceptance testing of all IMS core nodes.
* NTP server implementation in MSS & MGW throughout the network.
* Coordinate with AMDOCs, Orange and Customer on Bridge to troubleshoot the incident.
* User policy implementation on HSS, CSCF, SBG, MSS.
* Analysis of complex scenario like HORLCF, IMS Inter-working, Preferred Roaming, Home routing etc.

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| **Project** | Operation & maintenance for Telecom operator |
| **Company** | Nokia |
| **Role** | NSS Engineer |
| **Duration** | Aug’11 to July’13 |
| **Technical Environment** | MSS, MGW ,HLR, ATCA MSS , ATCA MGW |
| **Technologies** | CS core |
| **O/S** | Linux |

**Responsibilities**

* Migration of MSS from DX200 platform to ATCA MSS, Integration of BSC on pool MSS
* Creation of **SIGTRAN, RNC, BSC, MGW’s** etc. on **DX200 and ATCA**
* Configuration of ODC base MSRN routing as SD provided by Planning.
* Configuration of UPD analysis and creation of VMGW as SD provided by Planning.
* VLR load balancing on pool.
* Trouble shooting for Clear code and critical alarms.
* All creation & deletion activities on MSS and MGW nodes i.e. Circuit creation, CGR creation, VMGW creation, Ater augmentation, Signaling link creation etc.
* Trace analysis and routine health checkups of core Nodes
* User id creation and modifications.
* Complaint management as per priority level.
* Provide support to Customer Technical Support Group to solve all sorts of hotline queries.
* Patch Implementation, PRI, RNC, BSC & POI DB Creation, BICC & H.248, SS7, Sigtran,

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| **Project** | Operation & maintenance for Telecom operator |
| **Role** | Asst. NSS Engineer |
| **Duration** | June’09 to Aug’2011 |
| **Technical Environment** | MSC,MSS, MGW ,HLR, BSC, RNC, BTS |
| **Technologies** | CS core |
| **O/S** | Linux |

**Responsibilities**

* Troubleshooting on APG, CP and RP fault for Rectification.
* Creation of Signaling to the other new nodes coming in the network (MSC, BSC and POIs).
* Analysis of all type of MSC related data like B-Number Analysis Table, Route.
* Processor Load Monitoring of MSCs.
* Configuration of B No. routing plans, charging plans, Short Codes openings, Roaming definitions, GT openings etc.
* Customer Complaint resolution in coordination with TSG.
* Configuration/Coordination for BSNL/OTHER Operator POI AT testing.
* To take CP/APG/RTR backups at specified frequency and maintenance of Backup media.
* BSC Rehoming for load balancing of MSC.
* Site creation to switch & external LAC definition during BSC REHOMING.
* Configuration management as per the requirement from customer (Airtel).
* Parameter changes for better compatibility with Ericsson switches & BSC.
* Announcement loading
* Fault Listing and their rectification of cards in MSC, BSC, Media Gateway and their replacement.
* Familiar with all types of Call Testing Scenarios: Pre-Paid, Post-Paid, VAS.

***TRAININGS Attended***

* VMWARE component deployment and fundamentals training from HCL
* IMS concept training from Ericsson
* IP fundamental training from Ericsson
* Architecture of ATCA h/w, Capacity & Compatibility from Nokia
* BSC on MSS pool from Nokia