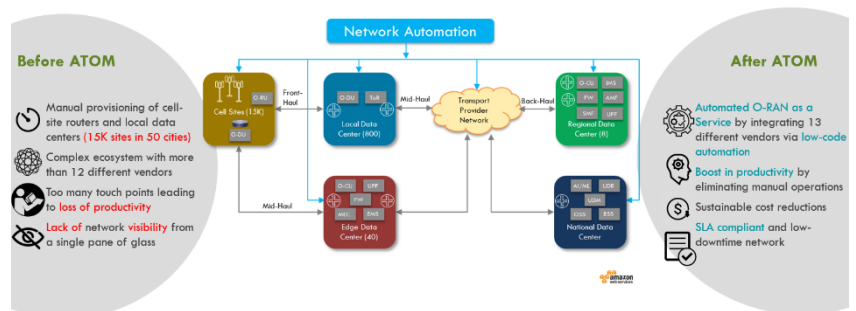**anuta networks**

Desired Architecture

- Multi-vendor server and Network Lifecycle Automation.
- Cloud-native and AWS-ready for increased elasticity and reduced time to market.
- Multi-tenancy for increased security, scale, and control.
- Geo-redundancy and high availability for high uptime.
- Integrated platform for provisioning, monitoring and incident resolution.
- Unified interface for remediation and productivity.
- Massive scale and throughput for optimized performance.

Anuta's Solution

Anuta ATOM provided a cloud-native, scalable, multi-tenant solution for network and server automation, compliance, service provisioning, monitoring, telemetry collection and remediation, all through a single platform.

ATOM supports **45+ vendors and 150+ platforms** while enabling 3rd party integrations and zero-touch provisioning for device onboarding.

Tier-1 Service Provider Accelerates O-RAN as a Service with Low-Code Automation from Anuta Networks ATOM

A Fortune-500 company based in the USA wanted to deploy an Open Radio Access Network (O-RAN) as a service to accelerate its nation-wide 5G roll-out. The scale was expansive covering 50 cities, 50,000 sites and over 200,000 network and server elements. The company was keen to accelerate and streamline its cell-site onboarding and 5G network slice management through a system that could support over a dozen vendors and the complexity tied to heterogeneous hardware, software, and services. With a focus on rapidly deploying a greenfield 5G network to meet increasing demands for high bandwidth and low latency connectivity for IoT, VR and AR applications, the new operator had an urgent need to onboard and orchestrate all physical, virtual, and containerized routers and components.

Massive-Scale O-RAN as Service with Anuta ATOM

Key challenges:

- Deployment and activation of a radio access network of 50,000 cell sites within a year.
- Manual provisioning of cell-site routers and local data centers required 26 hours on average per site, an unacceptable time period.
- A need for scalable lifecycle management for multi-vendor bare metal servers
- Automation of 5G CNFs/VNFs hosted on AWS local zones and regions
- Lack of visibility and dependency on siloed systems
- A highly complex ecosystem with multiple vendors providing different services such as transport configuration and provisioning (Infoblox, Cisco NCS, Juniper ACX), bare metal server provisioning (DELL, Super Micro), workload provisioning (VMware TCA), workload configuration (Mavenir and Altiostar EMSs), ticket generation (JIRA), inventory updating (Ciena Blue Planet), dashboard reporting, notifications, etc.

The Anuta ATOM Advantages – Low-code Automation

- Standards-based workflows
- Out of the box libraries and reusable workflows

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Advanced Analytics & Customizable Reports

1. Reports showing workflows in progress (Time, City)

2. Compliance state and failure breakdown (Device, Vendor, City, Region)

3. Ticket resolution and Performance overview (Throughput, Latency, Packet Loss, Utilization)

"ATOM's cloud-native, AWS-ready network automation solution met all our requirements for next-gen network and server automation. ATOM helped us streamline onboarding operations while integrating systems from 13 vendors. The single-pane of visibility and control delivered by ATOM for thousands of network and server elements across all our sites helps us ensure high uptime and performance for our 5G customers" – EVP of Wireless Ops, Tier-1 SP.

- Intuitive drag and drop interface to build workflows quickly and easily
- Support for custom scripts and Ansible playbooks
- Extensible and customizable reporting
- AI/ML-powered predictive analytics for estimating workflow completion

How ATOM Workflow achieved this automation

1. User fills in the details for the required provisioning
2. Workflow fetches all information along with cell site data from this form and performs checks/reserves IP for BMC and ESXi in infoblox
3. It proceeds to perform the BIOS and Firmware upgrade
4. Update the BIOS settings and install & patch the ESXi
5. Perform NIC version check
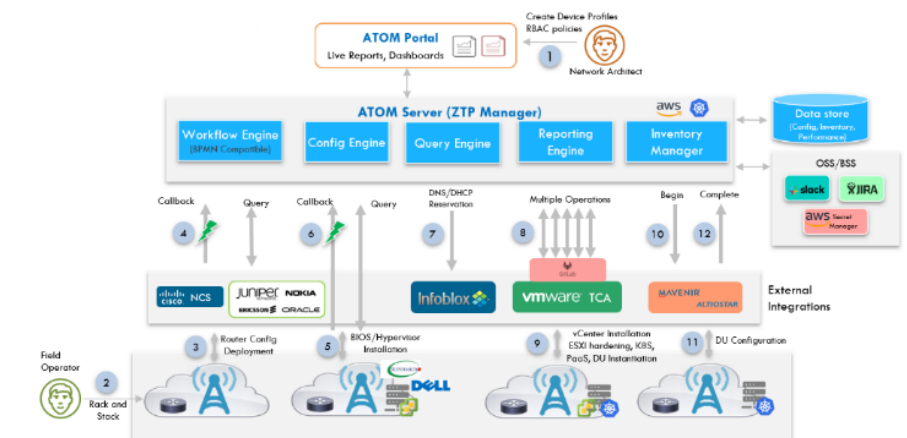6. Finally update the inventory report

All the complex intricacies are handled by the subroutines invoked by individual tasks without any human intervention

Time savings and improved agility result in significant operational cost management

With Anuta ATOM's scalable, automated, modern software stack and rich set of APIs, the customer went from a laborious management process that took 26 hours per device to a mere 2 hours via automation. The onboarding time also decreased from 15 hours per device to approximately 70 minutes per device. Given the existence of over 200,000 managed devices, the cost savings are immense. The team also eliminated configuration and integration touchpoints, combined network & business operations, and developed customizable workflows which helped reduce manual errors and increase productivity.

Anuta ATOM accelerating 5G roll-out