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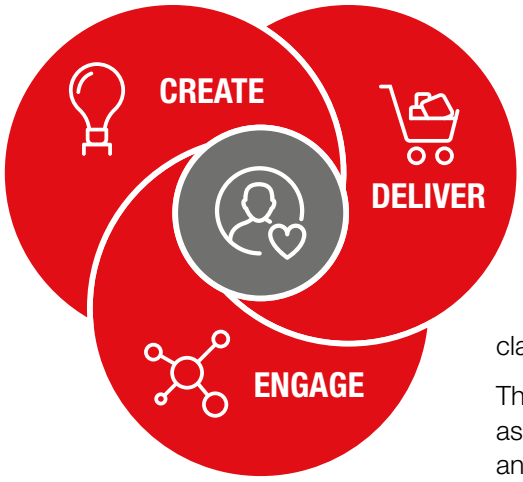
APPLICATION BRIEF

HansenProvision™

DEVICE PROVISIONING APPLICATION



Flexible and dynamic device management for digital service providers.

As communications service providers evolve into next-generation digital service providers, the need to perform end-to-end automated device management of customer premise equipment (CPE) is required.

Service providers need to rapidly provision multiple customer services in a multi-vendor, multi-device type environment, by dynamically assigning different classes of services, per service and per customer.

They also need to remotely upgrade firmware for multiple device vendors as well as perform assurance monitoring of customer devices where they must diagnose and resolve problems related to service access.

Hansen Device Provisioning provides CSPs with a carrier-class, secure, high-performance, scalable platform that provides customer-focused provisioning as well as automated multi-vendor device firmware management and CPE service/device assurance & troubleshooting.

It can manage multiple devices such as modems, MTAs, Set-top boxes, Home gateways, EPONs, ATAs and IP phones while supporting voice, video and data services.

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DEVICE PROVISIONING APPLICATION

Comprehensive Provisioning Support

Multiple role-specific web consoles are provided to streamline customer service, network operations, field technician, and self-service functions. For DHCP related provisioning, Hansen Device Provisioning also supports device-type/class IP address assignment, redirection for captive portal for blocked accounts based on debt management, virus detection, etc. Access to all role-specific consoles is based on SOX compliance operation for secure access and logging functions.

The platform supports distributed operations where configuration & operation can be centrally controlled while providing support for distributed provisioning servers, located closer to the customer premise for optimal performance and latency. The activation server provides CLI- and GUI-based configuration and deployment tools, firmware management functionality, troubleshooting and an API for provisioning, monitoring, querying, etc.
All service topology, subscription and configuration information (including historic IP address allocation) are centrally stored in an external secure database.

Software/Firmware Image Management

The ability to upgrade an individual user's device, in response to a trouble ticket or performing bulk network/regional upgrades for a specific vendor and/or model can be executed. Additionally network-wide upgrades can be segmented and performed based on service, region, model, etc.

IPv4 and IPv6 Address Management

Hansen Device Provisioning supports geographical/network-topology requirements with DHCP IPv4 & IPv6 address management, including the creation of IP address blocks, pools and scopes based on different device types, service-packages, etc.

It supports a number of IPv4 address conservation strategies, such as dual stack-lite for simplified IPv4 encapsulated in an IPv6 packet transport and 6RD (Rapid Deployment) for the streamlined transfer of IPv6 packets over the IPv4 network. And for IPv6 networks, there is support for dual stack for concurrent IPv4 and IPv6 and 6PD (Prefix Delegation).

Assurance Monitoring with Diagnostic/Troubleshooting

Hansen Device Provisioning supports the ability to perform customer-specific device monitoring to identify the quality of service and/or quality of experience for end-users. Using the monitoring analysis provided, support teams can perform specific actions such as reset/reboots, firmware upgrades and device re-provisioning – and more.

Based on the device-specific technology many of these service-related actions can be automated, in response to specific user-defined service thresholds, thereby proactively responding to many network or device conditions before the end-user is impacted.

Deployment Flexibility

Hansen Device Provisioning supports multiple deployment scenarios, to support specific CSP architectures and requirements. This includes:

- Standalone: Integrated servers for smaller subscriber-base installations
- Failsafe: Redundancy mode for automated backup operation
- Distributed: A main activation server with distributed provisioning servers and database server

Dynamic Configuration File Generation

By dynamically creating configuration files, Hansen Provision enables service providers to ensure accurate provisioning based on customer and device profiles.

With the proliferation of different endpoints with different capabilities and the rollout of new digital services, CSPs need the ability to activate the products and services bought by customers seamlessly. Creating, maintaining and storing static configuration files is complicated, costly and inefficient, making dynamic generation a must.

Enabling tiered services and personalised provisioning, Hansen Provision seamlessly identifies devices and the services which need to be activated, providing a high-quality experience for new and existing customers.

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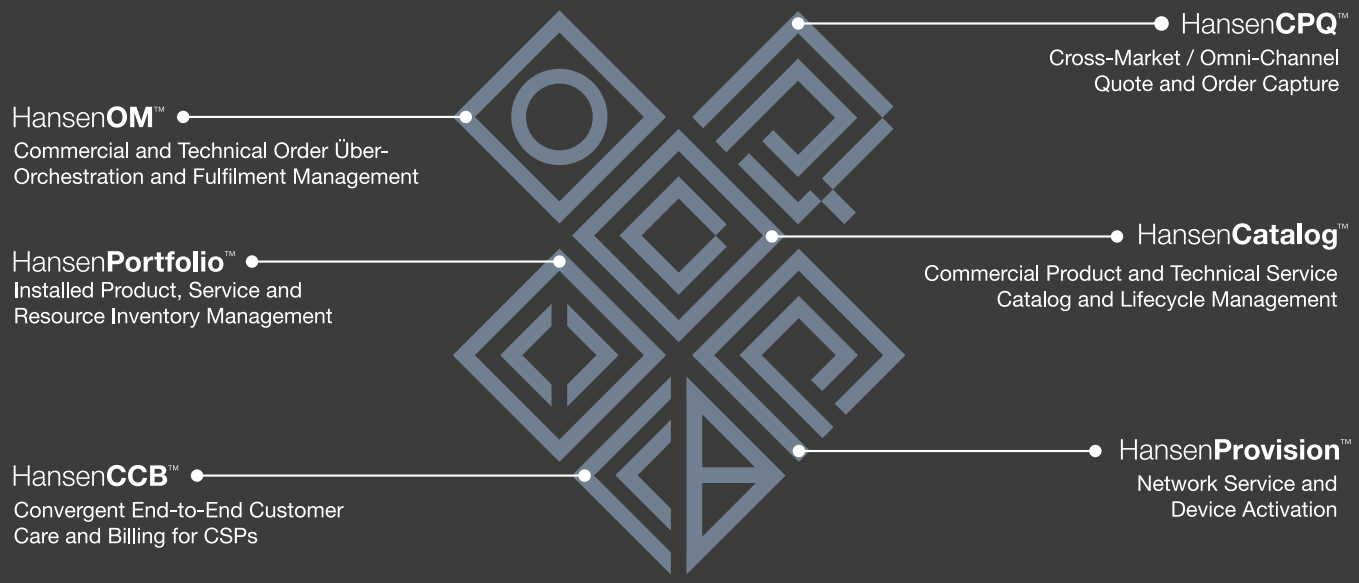
Hansen**Create-Deliver-Engage**™

for Communications Services Providers



KEY FEATURES

- Support for Modems, MTAs, ATAs, STBs, Gateways, Routers, IADs, EPONs, etc.
- Support for DOCSIS 1.0, 1.1, 2.0, 3.0 & 3.1, PacketCable 1.X/2.0, Layer 2 VPN support and DPoE (for EPON management)
- Support for Commercial-focused proprietary SIP provisioning for ATAs, IP Phones, IADs, etc.
- DHCP IPv4 and IPv6 address management
- Additional DHCP features including Dynamic IP filtering, IPv4 & IPv6 DHCP Lease Queries, Dynamic DNS Updates, automatic Denial-Of- Service (DOS) protection, MAC Cloning and more
- Secure platform user-access based on SOX compliance system access operation
- Carrier class scalability and performance with failover/ redundancy protection
- Manual, auto, technician-assisted and self-service provisioning support
- Integrated IP management and reporting, including support for dynamic and static IP addresses with IP allocation history reports
- Device assurance monitoring and management
- XML API for integration into ‘northbound’ applications

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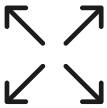
BENEFITS

Improved Customer Satisfaction

Advanced service monitoring, diagnostic and troubleshooting capabilities ensures CSPs can proactively manage customer experience, delivering improved service and support satisfaction.

Scalability and Automation



Hansen Device Provisioning enables CSPs to scale operations in a seamless and automated way, improving service profitability through reduced cost and deployment complexity.

Innovation Agility

The ability to support a diverse CPE portfolio enables CSPs to quickly and efficiently add new products and services to their offers, in order to meet rapidly changing market requirements.

Carrier-class Performance

Hansen has more than two decades of experience serving the provisioning needs of communications service providers worldwide, delivering the reliability and performance needed in the digital world.

Centralised Management

Centralised management of configuration, subscriber and device information enables simplified control and delivers improved operational visibility.

Security Features

Advanced security capabilities, including user access control based on SOX-compliance across operations and tools to protect against theft of service, denial of service attacks, device roaming and cloning.

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