Trust your data
HPE Trueview Inventory and Reconciliation solution

Hewlett Packard Enterprise
A true up-to-date view of your network—at all times—is essential to deliver sustained service quality to your customers.

**Get a view**

To face harsh competition from over-the-top (OTT) suppliers and stand apart, communications service providers (CSPs) like you, who are seeking growth, must look into new businesses and explore new markets. You must also continue to enhance your focus on the customer while improving your cost structure. To keep an accurate, up-to-date view of your network—at all times—is a fundamental requirement to correctly operate your network, and avoid delivery of degraded service quality to your customers. This is addressed by one of the key building blocks within your operations support system (OSS): The inventory management system.

The importance of inventory management systems grows every day in the context of continuous network growth, number of devices, variety of applications, and volume of data exchanged. Designed to inventory the network, first-generation systems relied on manual documentation to populate and maintain the network view. Low data quality was an annoyance but could be contained with appropriate business processes. Discovery tools were attached as an afterthought and gave traditional systems some respite.

Not anymore. Networks are growing faster than manual data cleansing can cope with. Bad data creates significant cost and impedes customer experience in many ways. For example, the root cause of a fault is possibly not found; bad data may cause an exception during service provisioning; or worse, customers may be unable to use your services because network planning and traffic engineering operate on inaccurate data, potentially leading to customer churn.

This evolution in the telecom space brings a new set of requirements for an inventory management solution:

- **Gives confidence in accurate data**—The user must have precise data and be notified when data may not be up to date.
- **Provides information to all**—Inventory data used to be the engineer’s realm. Today, customer care, sales, and even customers may benefit from this information. It provides pertinent information regarding outages, can help in planning business future, or lets customers know what they are paying for.
- **Copes with growth and innovation**—Your systems must accommodate growth as your company expands and innovates. The inventory needs to be able to reflect new devices and services quickly and easily.
- **Is fast and manages costs**—You must increasingly streamline and automate these activities, as much as possible, to achieve the necessary reductions in network implementation and service deployment costs. The success of this optimization is dependent on using inventory data that accurately reflects the actual network.
- **Aligns with latest technology**—Traditional inventory management solutions were built with a focus on modeling physical connections between devices and dedicated point-to-point paths across the network. With the evolution in technology, inventory management needs to cover advanced virtual point-to-point and multipoint connectivity and service configurations carried over converged data networks.
Benefit from a complete end-to-end solution

HPE addresses inventory management as a key element of an OSS and business support systems (BSS) solution, taking advantage of our capability to offer true one-stop shopping from a single vendor for a complete, integrated solution. In addition to software, the solution embraces end-to-end business transformation and governance; enhances the business-process model; and designs, deploys, and supports the software solution. These services can be delivered as independent modules or in combination to provide a complete OSS and BSS transformation, if required.

For example, the HPE Communications & Media Solutions (CMS) offering includes services that help you:

- **Achieve your business and operational goals**—IT projects are successful provided they address business, IT, and operational priorities. Unfortunately, CSPs like you may often struggle in building key performance indicator (KPI)-driven business cases that include addressing organizational change and redesigning your business processes to support next-generation inventory management requirements.

HPE Solution Consulting Services can help by addressing inventory management in the context of mapping business objectives to business process models and solutions across all your relevant departments. These services can also include consulting-led engagements from business benchmarking down to resolving complex, technical service issues and providing recommendations.

- **Succeed in solution implementation**—The HPE CMS Services offering includes worldwide implementation services by HPE experienced teams—HPE Solution Implementation Services—to deliver and integrate an inventory management solution on time and on budget while increasing its value as related to OSS or BSS.

Understand the role of the solution

The HPE Trueview Inventory system provides a representation of your network and related services, while also documenting the network infrastructure and capabilities. Additionally, it supports the implementation of customer services and evolution of the network.

It implements an “active inventory” system by considering accurate data can only come from the network element. And it uploads network configuration from the network and reconciles that with the data in inventory to maintain the actual state of the network.

Network configuration is instrumental to accurately represent network services. Based on the actual network element configuration and network topology, HPE Trueview stitches together services that are actually implemented in the network, leveraging static data whenever available.

An intuitive interface enables a wide audience to access the solution. HPE Trueview Inventory and Reconciliation was built with the user in mind. Its web-based thin client offers an intuitive interface where complex concepts translate into simple representations. As a result, nontraditional types of users—customers, customer care representatives, sales, and marketing—can benefit with minimal training.
Review HPE Trueview Inventory details

• **Network resources and service instances are represented efficiently**—HPE Trueview Inventory supports the lifecycle management of network resources and services instances. Leveraging physical and logical information, HPE Trueview Inventory enables the network connectivity model to be built across multiple network technologies including optical, Ethernet, MPLS, and IP. Services are then created using the network resources and providing an end-to-end view of each service.

• **Standards-based implementation**—The solution was designed with special attention paid to the technologies and services to be supported, with built-in implementation of standards such as Metro Ethernet Forum’s (MEF’s) Carrier Ethernet and Tele Management Forum’s (TMF’s) Frameworx Shared Information/Data (SID) model. This approach enables rapid deployment and simplifies product use, as these capabilities are provided readily with no additional modeling required.

• **The solution is easily extendible**—Productized templates and extension modules, available from a constantly growing library, can update HPE Trueview Inventory service model with technology-specific data. Having built-in service models gives a full understanding of how network capacity is being used across services and automatically warns users if capacity is unavailable. A full set of web service APIs is also provided for integration into your environment.

HPE Trueview Inventory offers powerful features such as:

• **Auto-path routing**—HPE Trueview Inventory can automatically find an available path through the network. This greatly speeds up the “design and assign” process to create new services.

• **Capacity management**—The model used understands the dependencies between technology layers in the network, which represents utilization accurately and facilitates efficient delivery of services from you to your customers.
• **Number management**—Unique to HPE Trueview Inventory is the ability to manage numbers associated to logical assignments. During service design it understands how and where different numbering schemes are to be used and enables automated and manual assignment.

• **Reporting**—The Trueview solution has a built-in report generator to address your reporting requirements. Reports may be provided in HTML, PDF, or Microsoft Excel format.

• **Low-cost runtime environment**—HPE Trueview Inventory is certified to run using the Oracle WebLogic and Database and is also certified to run on open-source solutions such as JBoss and PostgreSQL.

### Understand HPE Trueview Inventory and Reconciliation

Discovery and reconciliation systems have traditionally been viewed as the solution to address data accuracy issues. They are based on the idea that systems retrieve configuration data directly from the network elements, compare it to the network information stored in the inventory system, and report the discrepancies for manual correction.

The approach of HPE Trueview Reconciliation solution is fundamentally different. Instead of focusing on generating reports and managing discrepancies, it provides—in an automated way—the visibility of discrepancies and their resolution integrated with the inventory.

HPE Trueview Reconciliation includes a unique capability. Based on the network element configuration and network topology, services can be stitched together. As an example, if the inventory data has no record of a particular service instance that is implemented by a set of cross-connects or a VLAN ID, HPE Trueview Reconciliation can trace (stitch) together a service path and record that as a service instance.

![Figure 2: HPE Trueview reports](image-url)
Once the reconciliation process has been run, there is usually a set of discrepancy scenarios that can be automatically updated. Other scenarios may require investigation and action by a user. HPE Trueview Reconciliation's user interface presents the network data graphically, clearly identifies where the discrepancy exists, and lets the user take appropriate action to correct the discrepancy. User acceptance and trust of an inventory system are solely based on the data's accuracy. HPE Trueview Reconciliation provides accuracy of data and makes it visible to users—data known to be accurate, suspect, or not verified—so they clearly understand and have confidence in the information they are working with.

The reconciliation and inventory capabilities are built into the same product, providing seamless interaction and access to reconciliation results.

The solution can also be configured to operate with existing corporate inventory systems. When used with existing inventory systems, the concepts of indicating data accuracy to the user are provided as fully as possible, giving users confidence in the data they rely on.

**Simplify the experience**

Typical inventory systems are difficult to use from an understanding of concepts, navigation, and the skill level required to use them. HPE Trueview Inventory and Reconciliation was built with the user in mind by translating complex concepts into simple representations. It was also designed to support nontraditional types of users such as the customers, customer care, and sales with minimal training.

The HPE Trueview Inventory and Reconciliation portal simplifies the user experience offering the following features in an intuitive browser-based application:

- **Network visualization**—Users are able to create graphical views of the network, which helps them better understand the connectivity relationships between devices. Views can be organized using many different criteria—geography, technology, function, and more. View definitions can be saved on disk for a given user or shared with all users. Views are automatically generated when opened.
• **Service visualization**—Taking advantage of interactive graphics, key domain knowledge is included in the design and assign process. Less network knowledge prerequisite helps minimize training needs.
• **Customer service visualization**—This unique visualization capability displays an overview of customer service connectivity, showing how customer services connect to customer locations. It enables direct customer access and provides a new way of looking at how a customer uses services.

![Customer service visualization](image1)

**Figure 5:** HPE Trueview customer service visualization

• **Inventory equipment**—The models are based on manufacturer's specifications (Figure 1) and provide accurate inventory modeling to support reconciliation and easy integration of activation and service assurance products.

![Inventory equipment](image2)

**Figure 6:** HPE Trueview service visualization
Review an interaction example
While fault and performance systems provide real-time information in the context of physical and logical configuration, HPE Trueview Inventory models all equipment to match this same context. In this example, HPE UTM facilitates data integrity between HPE Trueview’s representation of the network, and fault and performance management systems. The result is a reliable root-cause determination and service impact analysis.

- **Dynamic object menu**—As objects are opened, they are automatically incorporated into the menu until they are closed. This enables network objects to remain open until the user is finished, enabling easy navigation between entities of interest within HPE Trueview without having to navigate through large tree-type menus.

- **Security model to enable wide utilization**—Specific data and functionality is easily managed to support a wide variety of users accessing the system.

- **Single sign-on**—J2EE container authentication enables integration into enterprise security solutions such as Active Directory, LDAP, or Single Sign-on products. There is a common browser-based client for read and write and read-only users. The client has no plug-ins, which helps eliminate the need to install any software, and is accessible from a large number of platforms.

- **Distributed security control**—User privilege management is distributed to team leads in definable subsets.

**Integrate easily**

HPE Trueview fully integrates with other components in the HPE OSS software portfolio, providing a productized end-to-end fulfillment and assurance stack:

- The HPE OSS Fulfillment portfolio includes HPE Trueview integrations with HPE Service Provisioner and HPE Service Activator.

- HPE Trueview interacts with HPE OSS Assurance components through HPE Unified Topology Manager (HPE UTM). HPE UTM consolidates multiple service and resource inventory data sources and feeds several target management systems to enable OSS data integrity.

- HPE Trueview provides standard web services interfaces for easy integration with external BSS and OSS systems including customer relationship management (CRM), order management, and activation systems.

**Level 1—Subdomains**

![Figure 7: HPE OSS Blueprint](image-url)
Gain these benefits

HPE Trueview Inventory benefits
- Active inventory system automatically documents and updates the network and service configuration resulting in dramatically increased data accuracy and substantial reduction of manual data entry.
- Standards-based model helps eliminate modeling requirements that are typical of inventory implementations. It also reduces mapping of data to support activation and assurance integration.
- Lower total cost of ownership (TCO) significantly with speed of implementation, ease of integration, and simplicity of the user interface, which reduces training and skill requirements.
- Low-cost run-time environment due to certifications—certified to run using Oracle WebLogic and Database and also certified to run on open-source solutions such as JBoss and PostgreSQL.

HPE Trueview Reconciliation benefits
- Off-the-shelf adapters integrate with network elements from most common vendors, and provide technology-specific model and service layers representation. They reduce implementation effort and provide a complete end-to-end reconciliation solution. Through its library mechanism, the list of adapters is regularly increased.
- Inventory update automation reduces overall manual effort and greatly improves data accuracy.
- Inventory data flagged with an identifier can greatly improve user acceptance and enable better decision-making when planning or designing new services.

Understand the differentiators
- **Rapid innovation**—Predefined models, based on market standards, enable introduction of new technologies quicker and more easily.
- **Customized TCO**—Deployment and maintenance costs (preintegration) decrease; comprehensive licensing scheme includes Enterprise License Agreement and pay-as-you-grow.
- **Better customer experience**—Data consistency is achieved through active discovery of services.
- **Ease of use**—Deployment and operation is simplified; enables user-friendly interaction with off-the-shelf assets.
- **Leverage existing investment**—Deploys different HPE Trueview solutions independently through modular solution architecture. It can be deployed while leveraging your existing reconciliation business process, and deployed to improve accuracy of your existing inventory system.
Get the HPE advantage

As the trusted partner for OSS transformation, Hewlett Packard Enterprise has the unique combination of many years of transformation consulting experience gained from small to very large and complex OSS transformation projects worldwide, industry-leading solutions, mature deployment methodologies, and highly experienced delivery teams.

The HPE OSS solution:

- Is built on more than 20 years of deep and broad OSS experience
- Has more than 500 successful customer deployments worldwide
- Is backed by a portfolio of more than 300 field-proven best practices
- Integrates OSS capabilities from HPE and solution partners
- Gives customers access to 10,000 HPE Services personnel in more than 170 countries
- Enables fast deployment with minimal disruption to existing operations, together with HPE global delivery and integration teams, giving you the peace of mind that comes with local experts based near them who speak their language
- Provides a complete capability to manage and operate OSS

HPE also offers a variety of financing and operating approaches for OSS, depending on your individual needs.

Review HPE Services

- **Consulting**—HPE Solution Consulting Services helps define business transformation and translates strategies into actionable solutions.
- **Implementation**—HPE Solution Implementation Services offers a low-risk project lifecycle across design, development, customization, and network and system integration.
- **Management**—HPE Solutions Management Services increases the operational efficiency of your existing solutions, including reactive, proactive, operational, and enhancement management services.
- **Outsourcing**—HPE Services offers a variety of sourcing options—including IT and infrastructure outsourcing, application management, and business process outsourcing—designed to improve business agility while reducing your operational expenses.

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