



HP Unified Device Capability Repository

A solution brief from HP

Many ways to communicate...

At work and at play, people count on a growing multitude of digital devices to keep them in touch with colleagues, family and friends. And while this digital lifestyle offers consumers tremendous freedom in terms of where, when and how communication occurs, it also locks operators into an expensive and time-consuming struggle to keep abreast of the capabilities and technical requirements of the expanding pool of popular digital devices. Seamless, cost-effective delivery of rich mobile services requires operators to have a reliable way to identify the correct, device-specific terminal profiles, access protocols and other technical data.

Today, operators are faced with multiple device profile formats, such as CC/PP 1.0/2.0, UAProf 2.0, proprietary XML and database tables for device profiles. These device profiles are populated within disparate

repositories embedded in different solutions which include device management, streaming, content management, rendering, transcoding and digital rights management. Often, device profiles overlap, and they can hold conflicting information about device capabilities. Further, because this information largely comes from a diversity of vendors themselves, update cycles can vary, leading to outdated information populating the Service Delivery Platform (SDP). Costs increase as operators maintain separate device capability support plans for each vendor. Application providers need to support and certify a quickly growing assortment of handsets and other devices before customer satisfaction is threatened by inappropriate provisioning or formatting issues for their specific device. And there is no single "master" version of all device capabilities, so getting to a single, consistent and unified view of device capabilities has been all but unreachable.

One solution for enhancing control...

The extensible HP Unified Device Capability Repository (UDCR) solution offers a cost-effective and easily implemented solution for regaining control over device profiles and other critical technical data. It sits within the service delivery plane, where it creates and maintains an automated centralized repository for such information, and delivers a comprehensive, unified view that helps operators resolve conflicts within terminal profile information for more accurate, reliable provisioning at low cost.

The HP Unified Device Capability Repository can be included as part of the Service Delivery Platform, or can be made available as a component of a Mobile Device Management solution. In the latter case, the solution will be fed by automatic device detection functional block, such as that delivered by the HP OpenCall Automatic Device Detection solution. If desired, the HP UDCR can also be implemented as a standalone module. The solution is based upon open industry standards, so customization for the specific operator environment can be accomplished rapidly and inexpensively.

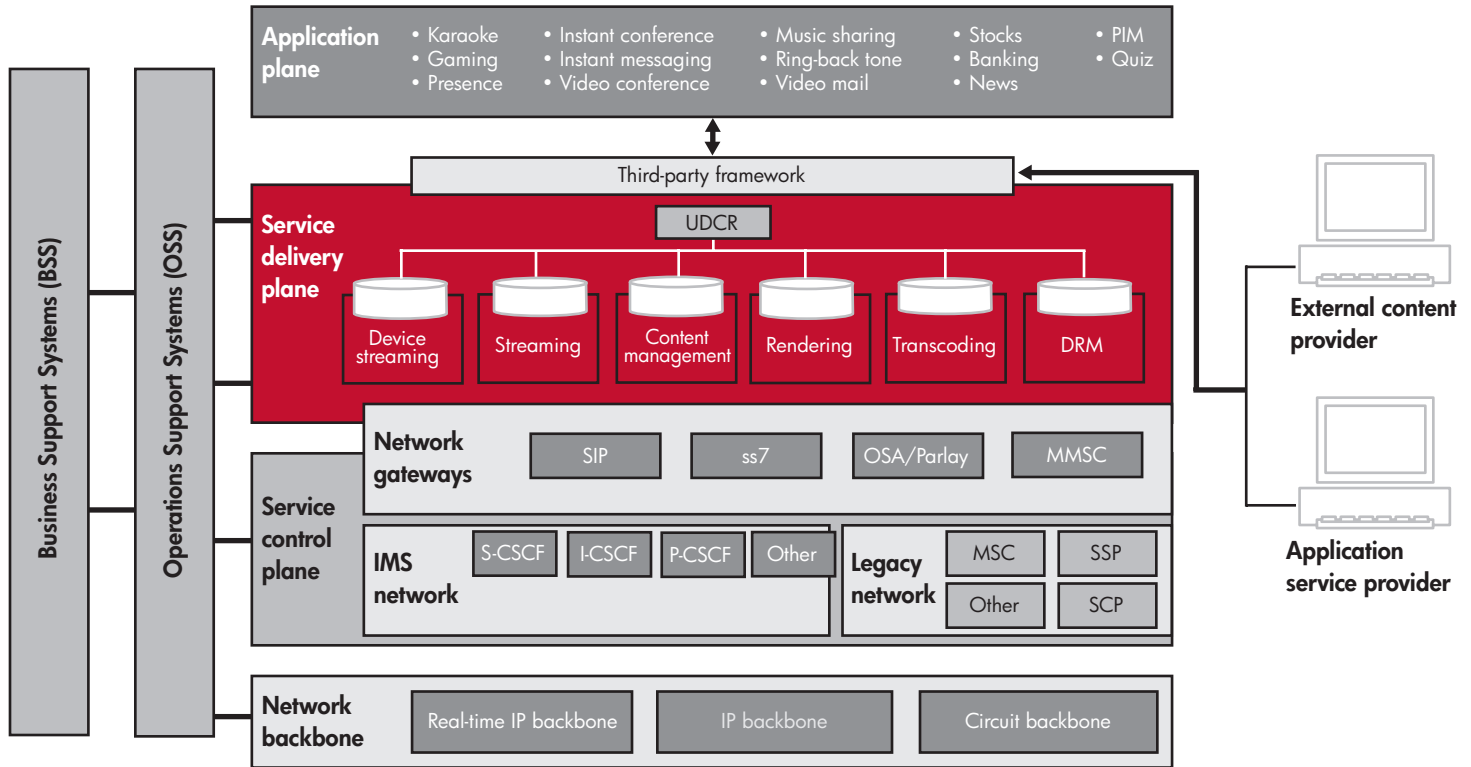
Solution overview

Through its vendor-agnostic interface and brokered architecture, the HP Unified Device Capability Repository (UDCR) provides a unified view of all existing terminal profile information within the operator environment. The HP UDCR becomes the single authoritative source for such device capability information, and allows operators to more quickly resolve conflicts that exist

within various terminal profile repositories. Administrators can search, explore and compare the unified terminal profiles for different devices, and selectively publish the unified terminal profile to the peripheral terminal profile repositories as required. The solution also provides the ability to apply fine-grained access control policy to the device capability information. Unified terminal profiles are cached locally for improved performance, while access to the unified profiles is controlled based on the device attribute access policy control.

By providing access to the Service Delivery Platform applications and components through a uniform vendor-agnostic interface, the HP UDCR insulates the SDP applications and components from any future changes to the device repository ecosystem. The HP solution also offers the ability to register and expose the UDCR device profile service as a service to external content providers and application service providers through solutions like the HP Third Party Framework (3PF).

The UDCR maintains and caches the unified terminal profile in Resource Description Framework/Extensible Markup Language (RDF/XML) format and processes the RDF/XML documents using Jena (Semantic Web Technology tools from HP Labs). The SPARQL Resource Description Framework (RDF) Query Language interface provided by HP UDCR allows an easy and flexible means for both users and applications to query the unified terminal profile maintained in the HP Unified Device Capability Repository.



Solution features

Unified Terminal Profile view

The HP Unified Device Capability Repository solution provides a unified, brokered view of all the various peripheral terminal profile repositories that exist within the operator environment. The solution's three-tiered, layered approach allows administrators to map the device profile information from the underlying terminal repositories directly onto the UDCR unified terminal profile schema.

Conflict management

The solution's Conflict Management functionality gives administrators the ability to schedule and generate conflict reports that identify any conflicts that may exist within the device profile information, even across different terminal profile repositories.

SPARQL Query Interface

SPARQL is a query language for getting information from RDF graphs. Within the solution, a flexible and easy-to-use SPARQL query interface gives administrators a powerful tool for conducting query/search operations throughout the unified device profile information that is maintained in the UDCR cache; the UDCR caches this unified terminal profile in RDF/XML format. UDCR

provides an easy-to-use interface which hides the complexities of SPARQL and automatically generates the query based on the filter expression provided the administrator and presents the list of devices matching the criteria.

Solution benefits

- Provides a centralized system for managing device capability and profile information
- Reduces the confusion and conflicts arising from multiple vendor device profile update services
- Speeds up service delivery platform applications and service development operations
- Insulates SDP applications and services from any changes to the underlying device repositories
- Increases profit margins by reducing the need for many call center contacts
- Provides an extremely consumer-friendly experience while decreasing operator intervention
- Gives operators the ability to record and analyze any changes in devices used by their customers, as well as breakdowns of device attributes and distribution patterns

Technical requirements

- Supported hardware and operating systems
 - HP9000 dual CPU, 16 GB RAM, 72 GB HD HP-UX 11i v2
 - HP ProLiant DL380G5 Server, dual-core CPUs, 2 x 8 GB RAM, 3 x 72 GB SAS HDD, DVD-ROM, Linux OS
 - HP Integrity rx2620 server, dual CPUs, 2 x 8 GB RAM, 3 x 73 GB HDDs (RAID1+HS), DVD-ROM, OS:HP-UX11i v2 DVD Media
- Supported application servers
 - Oracle® 10g Application Server
 - BEA WebLogic Server 8.1 Premium Edition
 - Tomcat Application Server 5.x
- Supported databases
 - Oracle RDBMS 9i Enterprise Edition (v9.2.0.5)
 - MySQL Community Server

The HP advantage

Increasingly complex and rapidly evolving communications solutions force service providers to deliver even more innovative services to the market while keeping customers loyal and insulated from the complexities behind the services. To achieve this, communications and media service providers need strategic partners who can do more. HP offers targeted and seamless solutions, integrated with partners and delivered quickly and efficiently. HP systems and solutions are open and flexible, empowering customers to customize or create value-added services. Our service capabilities provide the expertise to develop, integrate, test, install and support the most complex service launches. This one-stop shopping approach allows providers to focus on customers—not suppliers.

HP focuses more than 30 years of expertise into a powerful integrated team, the Communications, Media & Entertainment (CME) organization, who along with 500 valued solutions partners, assists the world's top service and equipment providers, as well as media, entertainment and cable operators, in meeting their subscriber needs.

HP Services

Every HP solution leverages proven global experience that spans people, processes and technology. HP Services consultants understand the communications, media and entertainment marketplace, and can help companies get the most from their IT investments. HP Services can help in these critical areas:

- **Application Modernization Services**—This HP offering provides a full range of current and future business need assessments, strategic and technological roadmaps for change, infrastructure transition services, and monitoring services for the evolved application environments.
- **Mission Critical Support**—Onsite consulting and technical support is available at whatever level of service the organization desires, including Operational ITSM to help benchmark IT processes against others.
- **Outsourcing Services**—HP offers a comprehensive portfolio of innovative and scalable sourcing options, so company personnel can focus time and resources on their core business.
- **Security Services**—HP has developed a detailed methodology for the evolution of the IT environment. Risk is lessened and both the data and the network are protected.
- **Financial Services**—HP Financial Services offers a range of creative and flexible financing options that can remove the final obstacle to network evolution.

Across the globe, enterprise customers rely on HP Services to design, build, integrate and manage the IT systems that run their businesses. HP Services capabilities cover consulting and integration, outsourcing, support and education services, all delivered by more than 69,000 services professionals in 170 countries. As the marketplace continues to evolve, HP Services will be there to help communications, media and entertainment companies adapt and compete.

For more information: www.hp.com/go/cme

That experience is embodied in the HP Services group, a dedicated team of professionals on the ground in 170 countries worldwide. Building upon a foundation of people, processes and technology, HP Services can manage the complete design, delivery and deployment of critical adaptive infrastructure solutions for today's communications and media services marketplace.

HP delivers solutions, technologies and services arrayed across network infrastructure, network services, operations and business support, mobile and rich media solutions, and end-user access. These innovative capabilities, including the HP OpenCall product suite and HP Software Solutions, have made HP a major player that is leading change in the communications, media and entertainment industries.

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