Feature History of ServiceCenter® / Service Manager

Evolution of ServiceCenter Features From Version 5.1 to Service Manager 7.0

HP Software ® IT Service Management

Processes supported by Service Manager

Service Manager supports these business processes and service management needs:

- Inventory and Configuration Management
- Asset Contract Management
- Service Management / (renamed to Service Desk in ServiceCenter version 6.2)
- Incident Management
- Problem Management
- Knowledge Management
- Change Management &Change Calendar
- Release Management
- Request Management
- Service Catalog
- Service Level Management
- Service Lifecycle Management
- Work Management (up to ServiceCenter version 5.*x*)
- Scheduled Maintenance
- Reporting and Business Intelligence
- Service Wisdom
- Get-Services (up to ServiceCenter version 6.1)
- Get-Answers (up to ServiceCenter version 6.1)
- Get-Resources (up to ServiceCenter version 6.2)
- Enterprise Discovery (formerly Network Discovery)
- Desktop Inventory
- Desktop Administration

Read the following sections for more information about each of these processes and their benefits.

Inventory and Configuration Management

Service Manager Configuration Management is the foundation of effective IT service management because it gives you detailed information about assets and their relationships within the infrastructure. This enables you to resolve incidents more quickly, and to effectively control infrastructure changes. Combined with automated discovery tools, Configuration Management promotes better decisions using the most current information about your IT infrastructure.

Asset Contract Management

The Assets Contract Management module enables you to add, edit, and associate assets and contracts. A typical Asset Contract would be a warranty that is associated with a specific piece of hardware. Another example is a maintenance or support contract for an office software product. The software contract type helps you monitor software license compliance.

Service Desk

Service Desk is a starting point for all service desk interactions. It improves the efficiency of the analyst, and increases the quality of service. Service Desk puts the tools and information that analysts need at their fingertips, which empower them to manage, document, and resolve calls quickly. If your

customer requires a service that the Level-One analyst cannot effectively provide, Service Desk guides the analyst through the appropriate escalation procedures. Service Manager Service Desk integrates seamlessly with Incident Management, Change Management, and Request Management to ensure that you can restore your customer's service while adhering to associated service level agreements. In Service Manager you can easily relate records to one another; view, update, or close the related record directly from the ticket you are in or remove the relations.

Introduced with ServiceCenter 6.1, Employee Self Service is a web interface for end-users who use Service Manager occasionally to log requests and tickets, search for information and order from a catalog if the site is licensed for these modules. Self-Service ticketing is part of the service support foundation modules and provides unlimited ticket logging capability.

Incident Management

Service Manager Incident Management automates workflow based on key business rules, ensuring that you notify the right technical experts and stakeholders about critical events, and that service level agreements remain in good standing. Notifications and escalations reduce operational risk, while known error correlation and diagnostic aids enable your organization to restore service to the affected customer community, ensuring customers that down-time is minimized.

Problem Management

Service Manager Problem Management is a proactive problem management solution that includes problem control activities, error control processes, problem/error resolution monitoring, and resolution execution through integrated change management activities. Identifying the underlying root causes of incidents, maintaining known error records, providing trend analysis and investigation frameworks, planning for changes, and defining structural solutions restores infrastructure reliability by preventing incidents before they occur.

Knowledge Management

Knowledge Management supports Knowledge-Centered Support (KCS) standards and guidelines by providing a natural language search engine and rich-text authoring tools that enable users to search, update, and author knowledge articles. Knowledge Management integrates with interactions (formerly known as Service Management Calls), incident, and problem management so that users are able to search for and use knowledge from existing incidents or interactions while attempting to resolve a new incident or problem. Users can also use this integration with interactions, incidents, and problems to create new knowledge. The rich-text editor allows users to include image files and document files of various types as attachments that can be linked to other documents or included as part of an existing document.

Knowledge Management administration provides Knowledge Management Administrators (KM Admin) with the capability to manage document categories, document groups, and user profiles so that users have access to the documents they need to view and maintain while at the same time limiting access to only those documents that are appropriate for particular groups of users and categories of documents. Knowledge Management also provides KM Administrators with document types and document views to manage the amount and type of data displayed in knowledge documents. The out-of-box system provides the standard document types (error/message/cause, external, question/answer, problem/solution, and reference).

Knowledge Management provides a document workflow that controls document creation and approval. It provides document status information and controls changing documents and retiring documents.

Change Management

Service Manager Change Management enables you to minimize operational risk and maximize the benefits of change by following predefined business rules involving appropriate stakeholders. Service Manager Change Management has best-practice process flows that enable your organization to

- Analyze the effect of infrastructure change on the current environment
- Plan and assign multiple tasks to available resources
- Develop a back-out strategy to minimize risk
- Make changes to a group of assets within one change record, and
- Automatically update Service Manager Configuration Management to ensure data integrity and asset tracking accuracy.

ServiceCenter Change Management integrates with Incident Management, Problem Management (known as Root Cause Analysis in versions prior to ServiceCenter version 6), Work Management, and Configuration Management. Change Management gives you all the controls you need to manage infrastructure change activities effectively throughout ServiceCenter.

Release Management

Release Management is a category of Change Management that ensures the Configuration Management Database (CMDB) is kept up to date, changes are appropriately managed and all new software and hardware are stored in the Definitive Software Library (DSL) and Definitive Hardware Store (DHS) respectively. Once one or more changes are developed, tested, and packaged into releases for deployment, Release Management is responsible for introducing these changes and managing their release. Release Management also contributes to the efficient introduction of changes by combining them into one release and deploying them together. The ability back out from and terminate the change have been included with this category for optimum management of release changes.

Change Calendar

The Service Manager Change Calendar is an integrated Web Services application that enables you to schedule changes and tasks with minimal impact to the organization. Changes can be viewed based on filters, and then moved to the date and time with the least change impact. The Change calendar uses a MS Outlook like approach to change views.

Request Management

Request Management is a fulfillment engine with a predefined catalog of goods and services that support effective management of all IT services through a common integrated solution. Managing both product and service requests, Request Management adds to existing Incident Management solutions, enables you to track all IT infrastructure costs from acquisition through the service lifecycle, and increases the overall contribution of the service organization.

Service Catalog

The Service Catalog is a goods and services catalog that supports both individual goods and services along with combined bundles. A Service Catalog contains a comprehensive list of enterprise products and services available to internal and external customers, depending on their business role. Users submit service requests that follow the usual planning and approval workflows. Service Manager fulfills service requests by using an internal interface to route the requested data to the appropriate Service Manager application. The application that delivers the requested product or service opens any required fulfillment tasks.

Service Catalogs integrate seamlessly with Service Level Management to measure and report on service level objectives for service request fulfillments. Service Catalogs set expectations for both customers and service providers about the delivery, quality, and level of services. Any Service Manager Business Service owner can create or maintain a Service Catalog using a simplified Service Manager interface and wizards to guide them in adding or changing service offerings.

Service Level Management

Service Manager Service Level Management is a complete solution that helps you align IT service activities with business objectives, through the development and fulfillment of offered services, and through tracking the costs associated with those services.

Service Level Management has two fundamental Service Level Management domains: Service Level Agreement Management (operational management) and Service Contract Management (financial management). Service Level Objectives add more flexibility to the Service Level Management module and enable administrators to define escalations more clearly.

Service Lifecycle Management

Service Manager 7.00 provides a complete set of integrated lifecycle processes that support business and IT services from inception to retirement. A service is defined as anything provided by IT to satisfy a range of business needs. Services may be delivered to individuals, departments, or an entire enterprise. Sample services may include: enterprise systems such as email, line of business applications such as a billing system, and fulfillment of individual employee requests such as a personal workstation backup service or an office automation bundle.

The lifecycle activities and processes supported include:

- Modeling service instances using Configuration Management.
- Building and visualizing relationships to IT systems and CIs
- The ability to publish service definitions in the Service Catalog
- Defining supported Service Levels for each definition in the Service Catalog
- Self service requesting of services for individuals and departments
- Fulfilling service requests with Change or Request Management
- Tracking the full lifecycle of subscriptions to services, from request, to fulfillment, to cancellation
- Monitoring and supporting the services through Incident, Change, and Problem Management
- Measuring and analyzing service delivery against metrics and goals
- Optimizing service delivery and support

Work Management (available in versions up to ServiceCenter 5.*x*)

ServiceCenter Work Management brings managers and technical staff an enterprise-wide planning solution for efficient and dynamic personnel allocation. Work Management integrates with ServiceCenter Incident Management, Root Cause Analysis, Request Management, and Change Management. You can ensure that assignments are based on both task priority and technician expertise or availability, resulting in superior quality of service at the lowest possible cost.

Scheduled Maintenance

Service Manager Scheduled Maintenance helps you define and schedule recurring maintenance tasks that support your organizational infrastructure. You can reduce unplanned outages and system failures by ensuring the timely review and care of all service assets across the organization.

Scheduled Maintenance makes it easy for Service Manager users to know when to initiate a standard maintenance task. When you use Scheduled Maintenance to define and schedule maintenance tasks, it automatically generates the appropriate incident tickets, change requests, or Request Management quotes. Use Service Manager Scheduled Maintenance proactively to manage infrastructure assets by allowing your users to create preventive maintenance tasks directly from Inventory and Configuration Management records.

Reporting and Business Intelligence

Service Manager ReportCenter, which is based on Crystal Reports® from Business Objects®, Inc., is a desktop reporting solution that IT managers and others use to support their business and infrastructure objectives. The ReportCenter console simplifies the path from raw data to desktop report access, and it includes customization features that you use to optimize reports for unique information requirements.

ReportCenter's offering changed in version 6.2. A template set of Crystal reports for use with Crystal Enterprise XI is provided with Service Manager, including new templates to monitor knowledge and knowledge usage, as well as improve incident management reporting, license tracking and more. Please refer to the ReportCenter online guide to help you choose report templates to use. An ODBC driver is provided for integration and reporting using the ServiceCenter P4 database.

HP ServiceCenter up to version 6.1 integrated with BI Portal, a portal application to Business Objects tools.

With ServiceCenter 6.2, Decision Center became available. HP DecisionCenter is a software system that: 1) lets IT optimize staff resources against service-levels, business impact and cost; and 2) creates a closed-loop environment for improving IT service management and ensuring alignment with business objectives. DecisionCenter is the only IT decision support tool that uses analysis and simulation against historical service data to maximize the business effectiveness of IT staff resources.

Service Wisdom – available through SC 5.1

Service Wisdom is an interactive reference guide that helps organizations to align their organizational resources with industry standards and best practices. Service Wisdom showed you best-practice process flows, explained processes in detail, and recommended resource requirements to help you transform a reactive service organization into a world-class, proactive service provider.

Get-Services – replaced by Employee Self-Service in SC 6.1

Get-Services is a self-service interface where employees can submit an online service request. This solution streamlines the process of reporting a problem, and automatically routes it to the person who can fix it. Technicians can open, close, view, and update tickets using the World Wide Web. Change technician functionality enables change technicians to view, close, and update assigned change tasks and phases through a customizable Web user interface.

Get-Services was made end-of-life with ServiceCenter 6.1 and was replaced by a self-service ticketing functionality (ESS) that is provided with the Service Support Foundation basic modules (Incident, Service, and Configuration). Self-service ticketing allows enterprise, non-Service Manager users to create tickets for response from the helpdesk. Incidents and changes that are opened on the backend by the helpdesk are visible to the end users, surfacing the numbers opened and their status. Self-Service users require an operator ID and contact record that can also be created by self-registration.

Get-Answers – replaced by Knowledge Management in SC 6.2

From the service desk to the end-user, Get-Answers served as a complete knowledge management solution. Get-Answers is an integral part of the consolidated service management strategy that

provides a robust authoring and tailoring environment to create and distribute diagnostics and product information to service desk technicians and end-users.

A new Knowledge Management module is now integrated into Service Manager starting with version 6.2 and is the go-forward Knowledge Management solution. This module is fully integrated with Service Manager. Interactions and Incidents are used to search and apply solutions if they are closed along with a knowledge base documents that were created by Service Manager users.

Get-Answers is no longer supported with Service Manager.

Get-Resources – replaced by Service Catalog in SC 6.2

Get-Resources enables employees to access the assets and services that they need to perform their jobs in a cost-effective manner. The automated workflow streamlines the request and approval processes, which improves service efficiency while adhering to corporate standards. Get-Resources can display the ServiceCenter Request Management catalog, which shows available services and goods to the end user community.

Get-Resources will be replaced going forward with the Service Catalog module that is available in ServiceCenter 6.2. . This module is fully integrated into Service Manager and can interface to request management or change management for fulfillment. The new catalog module employs wizards to be used by business users to create a goods and services catalog for end users to order through self-service.

Get-Resources is no longer supported with Service Manager.

Enterprise Discovery

Enterprise Discovery automatically discovers and inventories software, hardware and networked devices across the enterprise, and presents a dynamically managed visual map of the IT network infrastructure. It populates and updates the configuration management database (CMDB) to maintain a detailed, unified and complete repository of IT assets.

Service Manager Version 7.0

The goal of Service Manager 7 was to combine the best of the Service Manager and ServiceDesk tools as well as align the ITIL processes around the support of business services. Highlights of the changes to Service Manager 7 are:

- Service Life Cycle Management

  Service Lifecycle Management enables IT to support its customers by providing well defined services. Each service is clearly defined and catalogued; giving customers visibility into what IT can provide them. The entire life cycle of a service is supported, including phases for defining, publishing, requesting, fulfilling, maintaining, and supporting each service.
- Usability enhancements

  HP Service Manager has several client and interface enhancements to improve usability and system performance.
- Knowledge Management improvements

  Knowledge Management provides a feature-rich knowledge application that conforms to Knowledge-Centered Support (KCS) methodology and offers natural language searches, rich-text authoring, document change management or workflow, and knowledge management administration.
- Change Management improvements

  Change Management controls the process to request, manage, approve, and control changes that modify your organization infrastructure. This includes assets, such as your network environment,

facilities, telephony, and resources. Change Management automates the approval process and eliminates the need for memos, e-mail, and phone calls.

- Self service improvements

  Self service enables any user to connect with a HP Service Manager application to request a service, provide information, or track previous requests. Self service users can also be granted approval capabilities that enable the user to approve change requests. Typically, this capability is given to high-level managers with a need to approve special requests but who have no need to use HP Service Manager on a regular basis.
- Database administration changes

  The P4 data storage was removed. Service Manager installs out-of-box into any compatible RDBMS.
- Web services changes

  Service Manager supports Web Services Enumeration, Transfer, and Addressing.

Architecture / RTE Changes

Removal of classic mode

With Service Manager 7.0 the so-called classic mode with Service Manager listeners does not exist any more. The only available mode is the servlet mode that enables both horizontal and vertical scaling.

Removal of P4 data storage

Additionally, the P4 data storage layer was completely removed. On install, Service Manager can be loaded into any compatible database, such as Oracle, SQL Server or DB2. This change includes detecting changes you make to existing columns and data types in the back-end RDBMS and then automatically updating the database dictionary to match these changes after a system restart. Additionally the Service Manager server can push changes you make in the database dictionary to the back-end RDBMS, if the proper rights are set for the user on the RDBMS (create table, alter table for example).

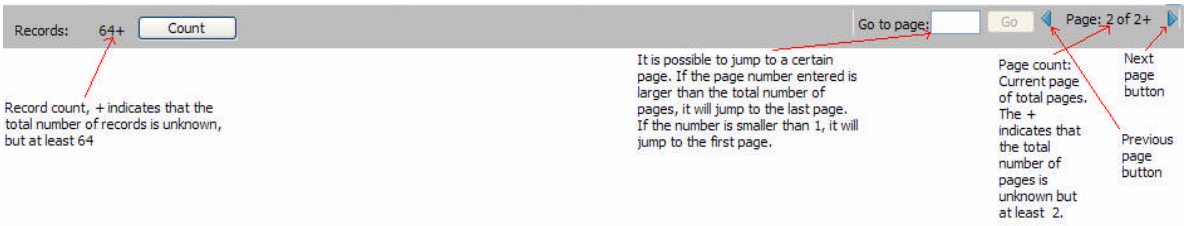
Client Changes

Improved Print

Users can print record lists and detail records from the Web client via the Print Form icon.  or the Windows client via **File > Print**. It is no longer necessary to have a text print form, since the printout is dynamically generated based on the form displayed on screen. The improved print resolves issues of arrays being cut off at the end or the sides as well as adjusting the printout to the size of the medium dynamically. A print preview is available from both clients as well.

Web Client Paging Control

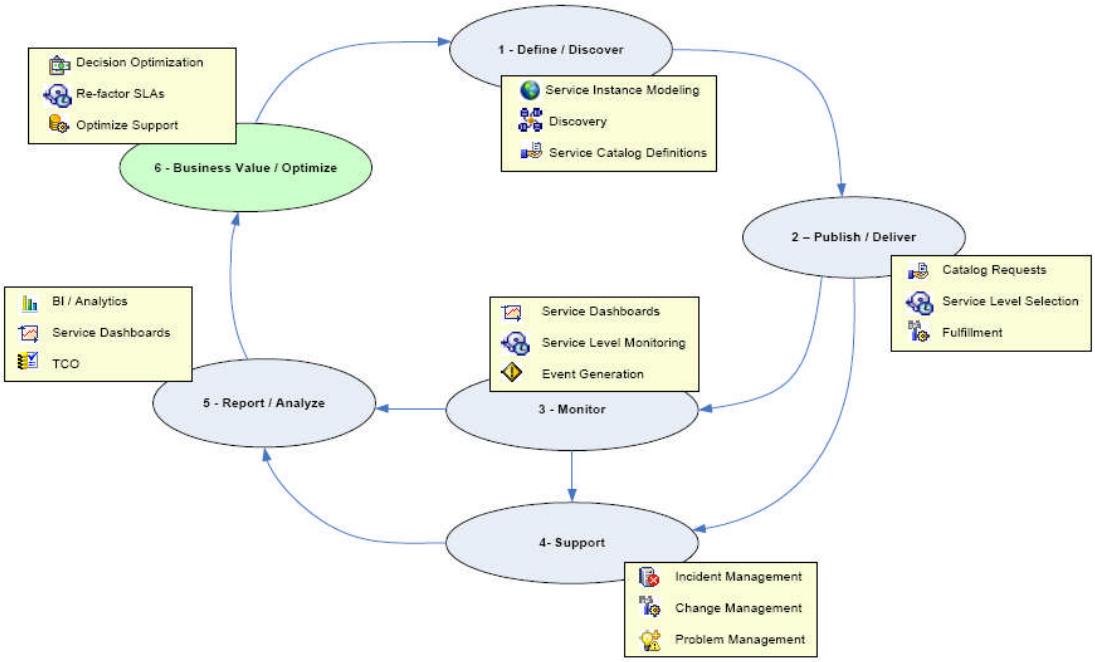
Paging through a QBE list on web clients was inconvenient because the next and previous page buttons were at the very end of the list and had to be scrolled to first, which resulted in a lot of scrolling to get to the end of a multi-page list. In Service Manager, the paging controls are between the detail and the list screens and are frozen in place, so that you do not have to scroll to the bottom of the list before being able to page.



Application Changes

Service Lifecycle Management

The following diagram shows the lifecycle processes and their related activities:



Service Lifecycle Management uses several Service Manager Modules. Customers can subscribe or unsubscribe from their Services using the Service Catalog. The Service subscription goes through the fulfillment engines such as Change Management or Request Management to provide the user with the requested service. When the customer requests support, the helpdesk agent will see the services they are subscribed to, and can narrow down which service is affected. Service Levels are measured and monitored by Service Level Management as defined in the service catalog.

SLcM is based on ITIL v3 best practices

The IT Infrastructure Library (ITIL®) is the world's most widely accepted approach to IT Service Management. ITIL provides a customizable best-practices framework for managing IT services at every phase of their lifecycle.

The evolution of ITIL mirrors the evolution of the corporate IT organization itself. ITIL v1 dealt with stability and control of the infrastructure, minimizing business disruption, and linking IT budgets with external benchmarks. ITIL v2 provided a pathway for moving IT to the next level, concentrating on the quality and efficiency of IT processes.

ITIL v3 reflects another significant step forward in IT's evolution. With IT now playing an important role in driving business results, ITIL v3 focuses for the first time on how IT can best provide value to the business, emphasizing the importance of leveraging technology to enhance that value. ITIL v3 recognizes that managing IT requires more than just a set of processes – it requires the ability to manage the complete service lifecycle. It also requires tighter integration of IT's people, processes and tools with a company's overall strategy and objectives.

ITIL v3 brings service management in line with changing business priorities, advancing technology and new governance models. Its principal objective is to speed and simplify the implementation, adoption and application of service management processes to optimize business outcomes. It states six fundamental strategies for achieving those objectives:

- Evolve from process management to lifecycle management
- Design services based on value
- Use lifecycles as the basis for investment decisions
- Recognize that functionality and manageability are basically the same thing
- Enable services using knowledge
- Treat infrastructure and service as a single entity

ITIL's five service lifecycle stages

ITIL v3 also articulates five principal stages of the service lifecycle:

- **Service strategy stage**: IT determines the unique value it can deliver to help differentiate the business in the marketplace. IT then works with the business to manage demand, determine markets, track finances, resolve resource trade-off issues, and ultimately decide what services to provide.
- **Service design stage:** IT develops a pragmatic service blueprint that balances functionality, performance and cost, while also making key sourcing decisions. Much of the previous service delivery processes from ITIL v2 remain in ITIL v3, including designing for availability, service continuity, continual improvement, and gathering feedback.
- **Service transition stage:** IT tests services and introduces them into the infrastructure in a controlled manner, according to clearly defined processes for change management, asset and configuration management, and knowledge management.
- **Service operation stage:** IT delivers and supports the services it has developed, preserving stability and uptime while maintaining flexibility and responsiveness to variations in the business and IT environments.
- **Continual service improvement stage:** IT monitors service performance and identifies ways to improve quality and reduce costs while staying aligned with changing business requirements.

Change Management

It is now possible to relate a change to a change. This can be used to show relationships between change records, such as when one change prompted another change, or when a project prompts multiple changes. A new history tab was added to the Change Management records. It is using the activity functionality, to record phase changes and monitor the relationships between change records.

Configuration Management

CI Visualization

The CI Visualization application provides customers with a comprehensive visualization solution that enables increased productivity through the ability to easily visualize relationships between Configuration Item (CI) components and the current state of each item in the configuration. An extensive library of graphics displays the relationship in a variety of views. You can customize the views to fit your organization as described in the documentation section *Tailoring – Building a graph diagram*, including using your own graphics for display. You can view, add, or update relationships using the graphical interface of CI Visualization. The addition of CI Visualization meets ITIL® best-practices and enables you to manage resources and outages more effectively.

Knowledge Management

Knowledge Management was improved to allow for adaptive learning and file and web crawling.

Adaptive Learning

Adaptive learning is a feature of Knowledge Management where the system collects words or phrases used in searches that returned useful hits. A useful hit is specified by a document manually marked as useful or documents that were used as solutions for incidents, problems, or interactions. Knowledge Management increases the count each time these search words or phrases resulted in useful hits.

The useful count becomes a weighted value so that when a user performs a search using the same word or phrase, documents with higher counts for the word or phrase are returned higher on the hit list for the search.

KCS II or KCS III users are able to view the adaptive learning list. KM ADMIN users can edit the list by adding, deleting, or modifying words in the list or modifying the count.

Edit in Place

Edit in place is an option that allows users to edit approved documents and then re-approve the document immediately for either internal or external use without sending the document to workflow. This allows users to update documents quickly that for some reason need to be updated and made available immediately.

The edit in place option is available for approved documents only. It does not apply to knowledge candidates such as working copies of a document or draft documents.

In the out-of-box system, the permission for edit in place is set for KCS II, KCS III and KM ADMIN Knowledge Management profiles. A user with a KM ADMIN profile manages assigning the edit in place permission to KM profiles.

File system crawling to create knowledgebases

Using file system crawling, you can index and search external file systems, such as a document repository stored on a local network. The file system needs to be located on the same machine as the Service Manager server or mapped for the user under whom the HP Service Manager 7.00 server service runs.

If you have a large number of documents on a network drive that you need Service Manager users to search on, but you do not want to import them into Service Manager you can make these documents available as a knowledgebase with file crawling. File crawling will index the content of the files into the Search Engine and directly access the files when opened from a hit list.

Web crawling to create knowledgebases

Using the web crawling feature, you can:

- Index and search external Web content, such as online documentation by Oracle etc.
- Index and search Intranet content, such as an internal Sharepoint site.

As with the file crawling capabilities, web crawling enables your Service Manager users to search external knowledge sources without having to import the information into Service Manager.

Changes to Self-Service-Ticketing

As part of the new life cycle management, individual self–service users, or an entire department, can request subscriptions to various services listed in the Service Catalog.

Self-Service users can now be assigned a new menu that includes the ability to work with approvals. Higher level managers can then use the user friendly self-service interface to manage any approvals in their queues.

Administration Changes

Security Folders

Security Folders can be used to set user rights, such as create, update, or close on a record by record basis. Which rights are applied is determined based on the content of the folder field of the specific record. Security Folders combine benefits of Mandanten Security in that a subset of records can be restricted as well as Module Profiles in that the restrictions are to the view / create / update level.

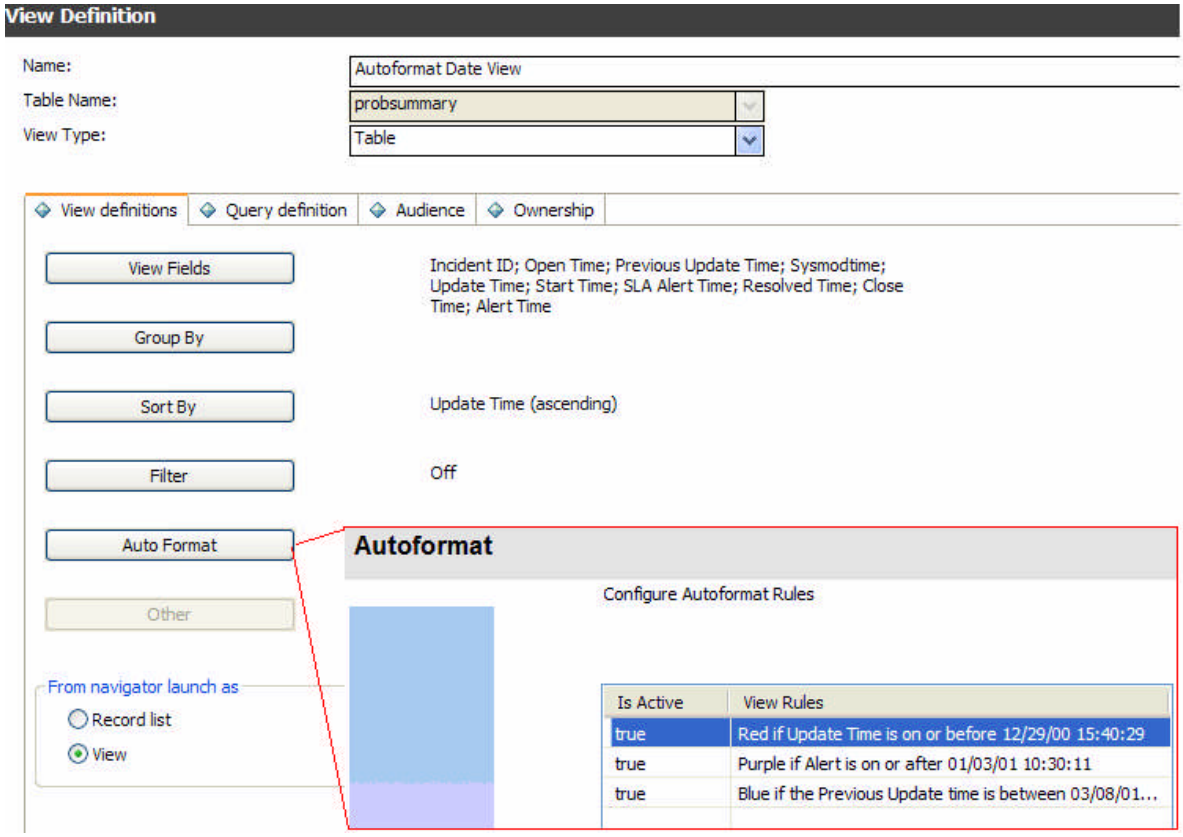
Security Folders are globally enabled or disabled in the System Information Record and implemented on the application level. Available folders are defined in the FolderDef table. Security Folder rights are assigned to the operator via the module profile and are only available where module profiles are available. Each operator may have a default folder assigned in the operator record that is used for filling in the folder value on every ticket this operator creates.

Views

Views and favorites enable you to define and save a query and replace the old inbox functionality. When you display the contents of a view or favorite, the query associated with it automatically runs and produces the list of records that meet the query criteria. Favorites appear in the System Navigator under Favorites and Dashboards. Views appear in most Service Manager queues. Whether you access the record list from Favorites and Dashboards, or a view from a queue, the list of records in each is identical.

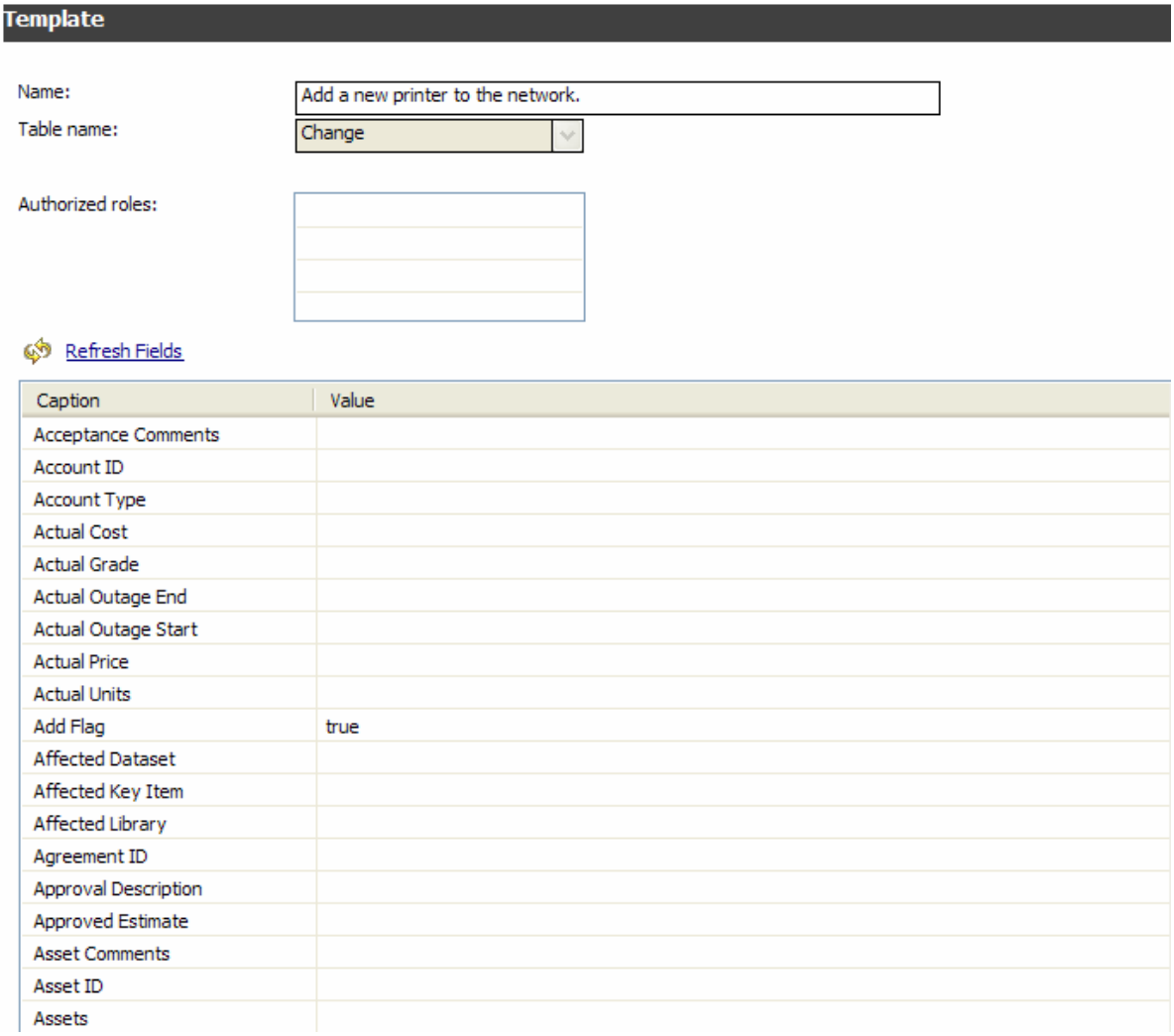
You can create personal views or favorites if you have the user.favorites capability word in your profile. You can create system views or public favorites to share with other users if you have the public.favorites capability word in your profile. Service Manager stores favorites as unique records in the inbox table.

Views define not only the query (=Filter) used to select the list of records, but defines which fields to display in which sort order with which auto formatting rules as well. A sample view definition can be seen below:

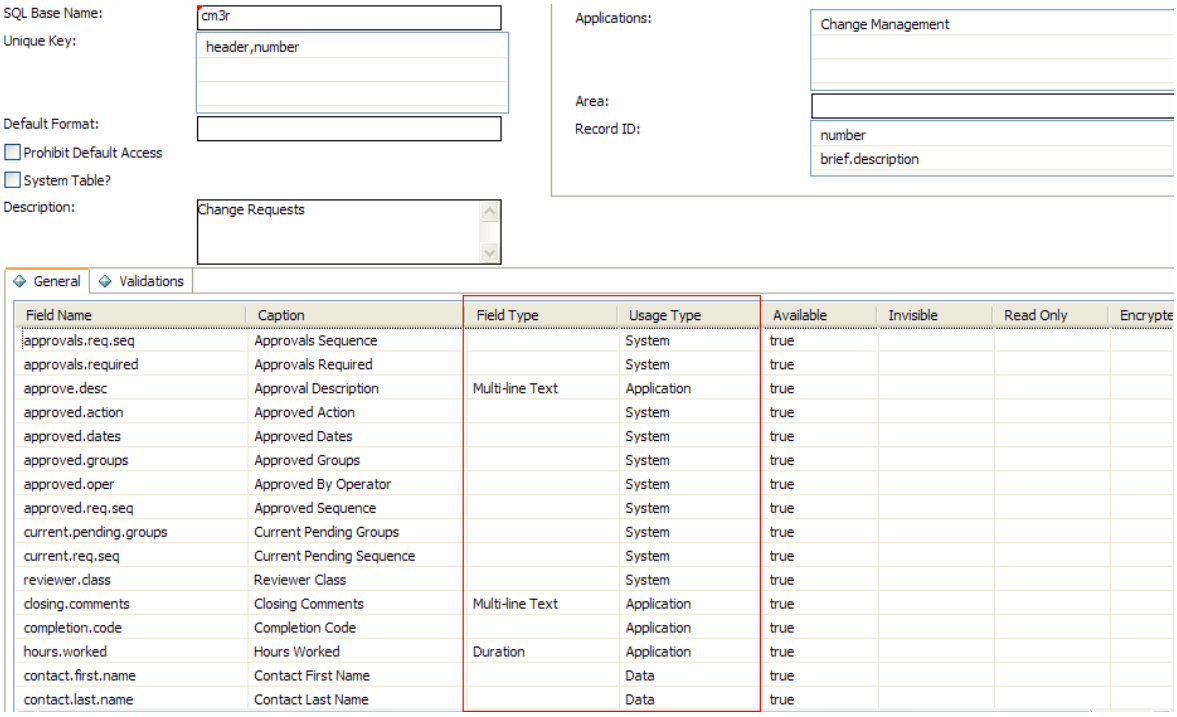


Templates

Templates can be pre-created by a system administrator or created on the fly to enable Service Manager users to quickly open a new record in Change Management, Incident Management or Service Desk interactions. Default templates can be assigned to Change Management categories or via Incident or Service Desk Profiles. When pre-creating a template for one of the supported modules, the user is presented with a list of fields that are non-system fields and can enter information that should then be filled into the record on using the template.



Which fields are non-system fields and which data entering mechanism should be used is defined in the data policy record for this table.



Multi-Item Select and mass add, update, delete

Mass Update enables a user with mass update rights to update one or several fields in a set of records. In the past, mass updates only worked on the complete list of records. Starting with SM7, it is now possible to execute a query to narrow down the result and then fill the checkbox for all the records that need to be updated. When the mass update option in the menu is selected, the new template Mass Update is executed, where a template displays a list of fields that can be updated. The user enters a value for each field to be updated to complete the process on all selected records.

Advanced Find

The advanced find capability can be found in every module search screen. It enables the user to search for any field in the table as well as fields in linked tables. A wizard guides the user through creation of the query statement. The query on fields in linked tables is done via a left outer join. For example, the query to search for all incidents where the assignment group manager contains "MANAGER" will execute the following:

```
SELECT file.alias01,*, file.alias02,wdManagerName AS
probsummary_assignment_assignment_name_assignment_wdManagerName FROM
probsummary alias01 LEFT OUTER JOIN assignment alias02 ON  (
file.alias01,assignment = file.alias02,name )  WHERE ( index("MANAGER",
file.alias02,wdManagerName)>0 )
```

The information on linked files comes from the link record.

Changes to the Object record

On the Object Info tab the assigned to info and workgroup info arrays were added to support the Folder security feature of giving update access only when the ticket is assigned to the operator.

A Search Configuration tab was added to fill the information on the more choices tab in the module search screens. These choices typically include searches such as is assigned to me, is open, is closed, etc. Having the query defined on the search configuration tab of the Object record makes it easier for the end user to find records that are relevant to him.

The Views / Templates tab determines under which circumstances a user can create views. A checkbox turns on template support for this Object and default template location gets defined.

ServiceCenter version 6.*x*

The goal of the ServiceCenter 6.*x* release was to meet the needs of new and existing service management customers. ServiceCenter 6.*x* contains features that assist service desk operators, self-service users, technicians, administrators, and reporting analysts to complete service management tasks. It integrates ITIL support, complies with industry standards and best practices, and supports standard SOAP and XML protocols.

ServiceCenter 6.0 takes advantage of new techniques in system management, enterprise integration, and user interfaces. It uses the latest Web-based technologies such as SOAP, DHTML, XML and HTTP to provide an open and secure platform that can share data with other enterprise systems. Other enhancements help end users, administrators, and application developers to:

- Increase user productivity
- Increase access to information
- Improve service delivery
- Enable you to deploy global systems

ServiceCenter 6.1 enhances the baseline ServiceCenter 6 platform. The goal of this release was to:

- Expand the commitment to industry-standard technology.

- Improve out-of-box application workflows to drive down the total costs of tailoring the system.
- Align Service Management solutions with ITIL recommendations for best practices, including terminology and workflow processes for Service Level Agreements, Problem Management, and Configuration Management.
- Provide an employee self-service feature that enables users to open and track incidents through a streamlined Web interface.
- Enhance time zone support to simplify the way in which managed service providers (MSPs) track schedules.

ServiceCenter 6.2 further enhances the ServiceCenter system with the goals to:

- Improve Security by adding standard encryption
- Improve Scalability by introducing the new servlet mode
- Introduce Release Management in compliance to ITIL recommendations
- Introduce a new Service Catalog to allow for more efficient access to end-user Services
- Introduce incorporated Knowledge Management to increase Help Desk efficiency
- Improve Configuration Management to be more closely aligned to business services

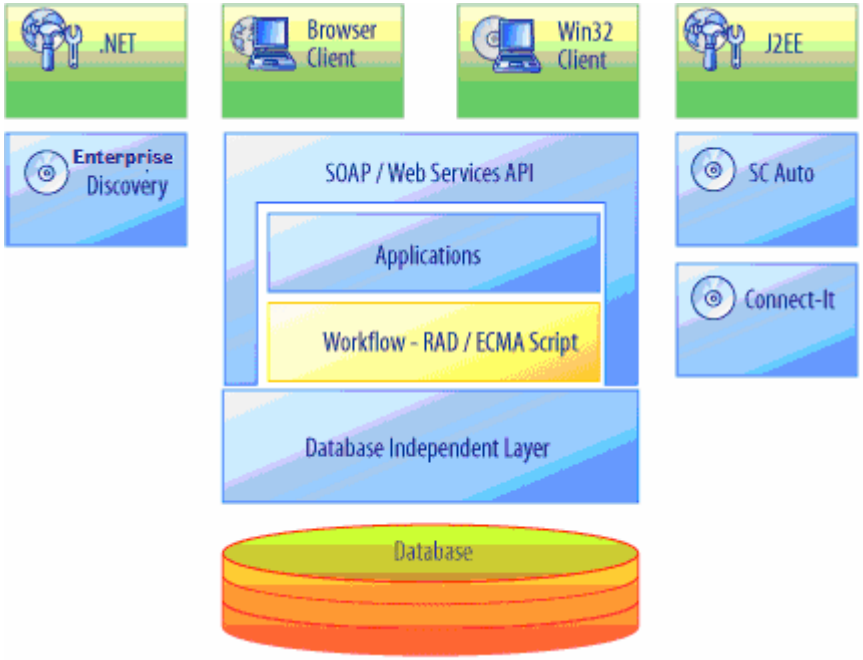
New Architecture and technology

ServiceCenter 6.*0*

Introduced new functionality in an evolutionary manner: It preserves the core functionality of previous versions.

There are key architectural components that are integral to understanding the HP ServiceCenter platform:

- The foundation is a database repository that contains all related files, tables, application code, business rules, and customizations. This database independent layer provides transparent support using either the out-of-box ServiceCenter P4 database or your own RDBMS. This layer connects the repository to the application layer using business rules defined with RAD or JavaScript.



- The Workflow layer is where ServiceCenter executes application logic and any related tailored business rules.
- The application layer consists of out-of-box ServiceCenter applications that can be tailored to meet your specifications. This layer processes data to track configuration items, incidents, and change requests.
- There is no difference in the way other HP Service Management products, such as Network Inventory, Desktop Inventory, SC-Auto, or Connect-It, integrate with ServiceCenter in your environment.
- The SOAP wrapper improves the way the server communicates with clients and other applications. The SOAP API is transparent for internal data exchange. If you want to publish ServiceCenter data to remote applications, SOAP supports the ServiceCenter Web Services publishing feature. SSL encryption helps ensure secure communications beyond your firewall.

ServiceCenter 6.2

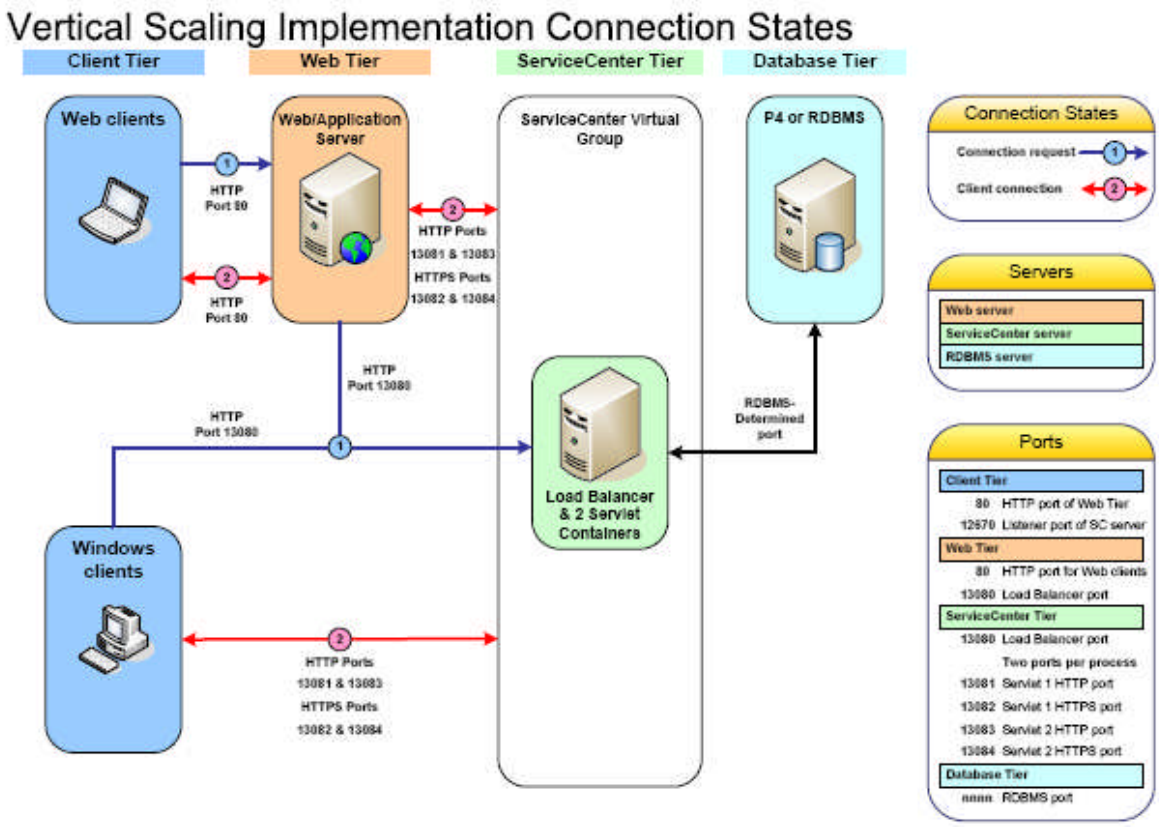
Offers a new server implementation option called a servlet implementation. A servlet implementation manages client connections using a pre-configured Java servlet that is embedded within ServiceCenter and does not require any installation or configuration of Java components, although a JDK has to be installed on the machine. The administration of a servlet implementation uses the traditional ServiceCenter configuration files and management procedures.

A servlet implementation provides the following benefits over a traditional ServiceCenter implementation:

- The ability to specify the exact communications ports client connections use
- Requires fewer communications ports to manage client connections than a compatibility threading implementation
- The ability to specify the maximum number of client connections ServiceCenter will accept
- Improved resilience and scalability options

In a servlet implementation, administrators specify the communications ports the system uses in advance. The total number of communication ports required for a servlet implementation is based on the number of servlet container processes you want the ServiceCenter host to support. Each servlet container process manages a set number of client sessions as determined by the number of threads it contains. The number of communications ports required for a servlet implementation is significantly fewer than earlier 6.x implementations. This is an enhancement from past ServiceCenter versions where network administrators had to allow traffic from a large range of communication ports because each client connections required an operating system-defined “ephemeral port.”

As shown in the picture showing a vertical scaling implementation, each servlet container process supports a set number of client connections over two communications ports, one for HTTP communications and one for HTTPS communications. Administrators set the number of client connections per process using the threading parameters. Now two communications ports are sufficient for up to approximately 50 client connections (as determined by the ServiceCenter host's memory requirements).



A servlet implementation is ideal for administrators who want to do capacity planning and system resource management. The communications port and threading parameters allow administrators to control the resources that client connections consume. By specifying the communication ports and number of threads available for client connections, administrators can set a limit on the total number of client connections any one hardware resource supports. Setting connection limits prevent client connections from consuming more system resources than desired and allows administrators to set a server load threshold in advance. If a client attempts to connect to a ServiceCenter system that has reached its connection limit, the server refuses the connection and displays an error message that the server is unavailable.

Certain servlet implementations benefit from the native resilience and scalability features of grouping Java servlets. In a horizontal scaling implementation, administrators can create virtual groups of multiple servers simply by adding entries to the ServiceCenter configuration file. Each member in the virtual group communicates its connection availability and system resource usage to the other members of the group. Should a group member fail, the other group members are unaffected by the outage and the system can route any new client connection requests to another member in the virtual group. If the client connection routing process fails, the existing client connections are unaffected and an administrator can restart the client connection routing process. This is an enhancement over the Load Manager implementation from previous versions of ServiceCenter where a failure of the Load Manager member could result in a total system outage.

Compliance and use of industry standards

ServiceCenter offers compliance with industry standards and best practices. ServiceCenter compliance ensures that you have a standard methodology for consistently delivering IT services so that you meet your business objectives and the needs of your user community.

ServiceCenter adheres to the accepted standards for these technologies:

- Accessibility standards: 1998 Amendment to Section 508 of the Rehabilitation Act
- Direct Internet Message Encapsulation (DIME): Enables a Web Service that efficiently handles multiple attachments such as encrypted messages, graphics, and Electronic Data Interchange (EDI) documents.
- GNU zip (gzip): A compression utility for SOAP messages that use encoding.
- Hypertext Markup Language (HTML) version 4.01 recommendation by the W3C
- Java 2 Platform, Enterprise Edition (J2EE™)
- JavaScript standards defined by the European Computer Manufacturing Association (ECMA)-262
- Microsoft® Windows Installer (MSI)
- Simple Object Access Protocol (SOAP) version 1.2 recommendation by the W3C
- Unicode™ version 4.0.0 specification defined by the Unicode Consortium

ITIL

The Information Technology Infrastructure Library (ITIL) is a compilation of best practices for managing IT services that was developed by the United Kingdom's Office of Government Commerce (OGC). ITIL defines a framework and a process methodology that have become a global standard. ITIL is the only comprehensive, non-proprietary, and publicly available guide for IT service management (though other organizations provide fee-based professional services, analysis, and other support for implementing a fully compliant IT management system).

Pink Elephant® is a consulting organization with headquarters in Canada. They certify an organization's compliance with and adherence to the best practices described by ITIL. ServiceCenter has been certified as compatible with ITIL objectives and standards.

The Pink Elephant definition of compatibility requires that ServiceCenter comply with 100% of the ITIL mandatory requirements and 80% of the recommended requirements for Incident Management, Problem Management, Change Management, and Configuration Management processes. In addition, ServiceCenter has the additional certification of ITIL Service Support Enhanced because it complies with a more extensive set of criteria.

ServiceCenter 6.1 incorporates application improvements to Problem Management (formerly Root Cause Analysis), Service Level Management, and Configuration Management (formerly Inventory Control Management) to ensure that out-of-box application workflow and terminology are compliant with ITIL best practice recommendations.

JavaScript support

The ServiceCenter platform has traditionally offered a rapid application development (RAD) development environment and expression language for customizing ServiceCenter applications. ServiceCenter now enables those users with system tailoring responsibilities to use JavaScript to customize applications.

JavaScript is a powerful, well known, widely supported, and standardized object-oriented scripting language. Because it is a standardized programming language, many books, tutorials, sample scripts, and other resources are widely available.

Administrators can use JavaScript expressions and routines to define business rule triggers, validations, and other data processing operations. JavaScript support provides ServiceCenter customers with a flexible and powerful development environment that decreases implementation and learning costs.

SOAP

ServiceCenter uses SOAP messaging to publish tables as Web Services, and to transmit application data such as login authentication and record information to SOAP clients. ServiceCenter supports the

W3C SOAP 1.1 and 1.2 recommendations, and formats all SOAP messages as XML documents that adhere to the W3C Web Services standards and conventions. While SOAP supports a variety of communications protocols, ServiceCenter uses Hypertext Transfer Protocol (HTTP) and HTTP Secure (HTTPS) exclusively.

ServiceCenter offers extensibility through a published SOAP API that enables developers to integrate ServiceCenter with other enterprise applications to meet your business needs. The SOAP API is accessible using any language that supports SOAP, including Microsoft .NET and Java.

ServiceCenter offers the following SOAP functionality out-of-box:

- Compatible SOAP clients
  - Web client
  - Windows client

The ServiceCenter Web and Windows clients automatically send and receive all application messages as SOAP messages. However, you can also connect to the ServiceCenter server using a third-party SOAP client.

- SOAP messaging options include:
  - HTTP transmission from a built-in Web server
  - SSL encryption for greater security
  - Gzip compression for efficiency
  - DIME encoding for adding attachments to messages
- Web Services support includes:
  - The ability to send requests to external Web services from ServiceCenter applications using JavaScript
  - The ability to publish ServiceCenter applications or individual tables as Web Services. (Requires a SOAP API license.)

UTF-8 (Unicode™) support

UTF-8 is part of the Unicode standard, which enables you to encode text in practically any script and language. ServiceCenter 6 supports UTF-8 as an encoding method for new and existing data. It can support multiple languages that adhere to the Unicode standard on the same server.

Prior to Unicode, languages were grouped into sets often referred to as Latin 1 (Western European languages such as French and German), Latin 2 (Eastern European languages such as Czech, Polish, and Slovak), Latin 5 (Turkish), and so on. The English language uses characters that are included in all these groups. Earlier versions of ServiceCenter support multiple languages only within a single language group. Therefore, a single server instance could support French and German, English and Turkish, and English and Japanese; but not Turkish and Czech, nor Polish and Japanese. The ability to display data in many different languages from a single server is helpful to any ServiceCenter user who has an international customer base.

Consider the following points to ensure successful Unicode support:

- Carefully read the ServiceCenter documentation regarding UTF-8 support, and follow all the steps that describe the conversion to UTF-8.
- Ensure that any mapped RDBMS is correctly configured for UTF-8 support. For more information, consult with your local database administrator.
- In ServiceCenter 6.0, do not use a pre-ServiceCenter 6 client because it does not support UTF-8 encoding. With ServiceCenter 6.1, client versions previous to ServiceCenter 6 are not able to connect.

With ServiceCenter 6.2 on-demand UTF-8 conversion was implemented to allow large customer implementations to perform their upgrade in a timely manner.

XML

Extensible Markup Language (XML) is a flexible text format that has its origins in the Structured General Markup Language (SGML). Although it was conceived as a way to support large-scale electronic publishing, XML has evolved into a global data interchange language that is highly compatible with the Internet. The World Wide Web Consortium (W3C) has the responsibility to develop and maintain XML specifications and other related specifications. XML is generally accepted as a common data interchange language. For more information about XML, see the W3C Web site at http://www.w3.org/.

ServiceCenter generates and reads well-formed XML documents that can be exchanged with ServiceCenter using the SOAP API.

International language support

Internationalization (I18N) refers to the ability of a software product to support global requirements such as multi-byte data capture and storage, and multiple currencies. You can find details about I18N on various Web sites that discuss I18N compliance.

Localization (L10N) refers to the specific modification of software forms and messages that make it appropriate for use by customers using different languages. You can find details about L10N on various Web sites that discuss L10N compliance.

HP releases localized versions of the ServiceCenter software and documentation in the following languages:

- English
- French
- German
- Italian
- Japanese
- Spanish
- Simplified Chinese (added in version 6.2.1)
- Korean (added in version 6.2.1)

UTF-8 (Unicode) support enables data storage in many languages, including those that use double-byte character sets.

Runtime Environment (RTE) enhancements

ServiceCenter version 6.0 introduced the following enhancements to the runtime environment:

- JavaScript support for application developers, and an active CMDB solution with a public SOAP interface (ServiceCenter 6.1).
- Support for UTF-8 (Unicode), which enables data storage in many languages, including those that use double-byte character sets. In the past, ServiceCenter ran only one code page at a time for a set of related languages. ServiceCenter 6.*x* supports multiple language sets on the same server by using a UTF-8 code page.
- Architecture improvements include increased scalability, accelerated response time, and attachment handling.
- Introduction of the new SOAP interface. You can publish Web Services in ServiceCenter 6.0. In ServiceCenter 6.1 you can publish and consume Web Services.

- Starting with ServiceCenter 6.0, the IR (Information Retrieval) files can be stored in a file within the database. IR Expert is a word search engine that can be integrated with all ServiceCenter modules where users can quickly find related records by entering a few keywords. The internal `scirexpert` file replaces the previously external `ir.<filename>` files, so that they can become part of the normal database backup process.

  To take advantage of this change, all IR files will have to be regenerated after upgrading to ServiceCenter 6.x. ServiceCenter 6.1 includes an optional parameter that allows the administrator to choose between using external or internal IR files.
- Shared libraries on UNIX®: Formerly, UNIX-based systems supported only specialized executables, while Windows systems used shared libraries. Starting with ServiceCenter 6.1 ServiceCenter supports shared libraries for any supported RDBMS that runs on a UNIX operating system.
- Previous ServiceCenter versions used SQL Server® native client libraries. Since ServiceCenter 6.*0* ServiceCenter uses the SQL Server ODBC driver to ensure full Unicode support.
- Previous versions of ServiceCenter used the Sybase® DB-Library interface. Since ServiceCenter 6.*0* we use the CT-Library and DB-Library™ interfaces.

Additional enhancements introduced with ServiceCenter 6.1 contain:

- With ServiceCenter version 6.1 you can enable multithread processing on the ServiceCenter server to support multiple user connections from a single Windows process. The new multithread processing capability supplements the existing multiprocessing capability and can be used in conjunction with it.

  Multithread processing greatly improves the performance and scalability of ServiceCenter on Windows servers. Multithread processing also improves system performance and optimizes memory usage.
- User license tracking allows you to track floating and named licenses on the application level for reporting purposes.
- Secure Sockets Layer (SSL) encryption is available for all ServiceCenter 6.*x* client-to-server communications.
- ServiceCenter 6.1 automatically copies any stack trace produced by a general protection fault (GPF) to the ServiceCenter log file. You can use this information to troubleshoot your server and to pass information to HP Customer Support.
- Starting with the ServiceCenter 6 SOAP API it is now possible to publish data through a Web Service when you create a client application to query that data. Your client application determines how your external user community can access this ServiceCenter data. The functionality for publishing a Web Service is fully integrated into the server software. However, designing and developing the client application to query the Web Service is an independent activity.

  With ServiceCenter 6.1 you can both publish and consume external Web Services. The functionality to publish a Web Service is fully integrated into the server software. You can design and develop client applications to query published ServiceCenter data independently.

ServiceCenter 6.2 introduces these enhancements to the ServiceCenter RTE:

- Servlet Mode – using JGroups provides a more scalable solution compared to classic mode. Servlet containers can be used for horizontal or vertical scaling, the ephemeral port issue is solved and SSL connections now use java keystores.
- On-demand UTF-8 conversion was implemented by adding a new option, thus eliminating system outages during upgrades.

- Encryption of configuration file settings provides more security for password information stored in the sc.ini file (such as for RDBMS connections and LDAP connections). Most sc.ini parameters may be encrypted.
- ServiceCenter Password encryption: The ServiceCenter server now encrypts all operator passwords stored on the database using a SHA512 one-way encryption process that cannot be decrypted. ServiceCenter clients use a two-way encryption process (PBE with MD5 and DES) to secure operator passwords when communicating with the server.
- Multi-threaded processing on Windows OS was introduced in SC 6.1. As of ServiceCenter 6.2, you can now enable multithread processing on servers running compatible Unix operating systems as well.

Client enhancements

Accessibility

When Section 508 became an addendum to the Rehabilitation Act of 1973, it required United States federal agencies to make electronic and information technology usable by anyone with a disability. The ServiceCenter Web client meets this requirement.

The Web client provides support for accessibility. When software contains these accessibility features, assistive technology vendors can customize the look-and-feel of the software to support non-visual presentation with audio or other devices. ServiceCenter users can configure the interface to meet their special needs when they apply third-party assistive technology tools.

ServiceCenter version 6.0 introduced the following enhancements to the ServiceCenter client:

- The Windows and Web clients have new interface components that support new functionality. Both have a new look and feel with enhanced navigation, and both offer access to necessary information through tree view navigation, charts, dashboards, and personalized folders with favorites. The Java client no longer exists.
- The new Web client is scalable, and has the ability to support global users securely. It is a server-based, zero-footprint client that requires only a Web browser on the end-user side. The Web client provides a similar look and feel, and complete access to the same information, as the Windows client. Because the Web client is server-based, users always access the latest updates when they log in. No special formats are required.
- The Windows client has the ability to access client updates from a centralized location upon login without reinstalling the client.
- Charts and dashboards are new in ServiceCenter 6.*x*. Charts are graphic representations of all types of ServiceCenter data, and you use charts to create dashboards.
- The Connections dialog was introduced for the Windows client with ServiceCenter 6. It allows you to define multiple client/server connections using the Connections dialog. On the Web client you still have to create URL links to multiple server connections, and then save them as Web browser favorites or desktop shortcuts.
- Inboxes and Favorites are new in ServiceCenter 6.*x*. Favorites enable quick access to queries, charts, and dashboards. ServiceCenter 6.1 adds inbox functionality to the Favorites feature to make inboxes more accessible. All the inboxes that you can access appear in the Favorites folder. You can save new queries, charts, and dashboards to create additional favorites.
- Perspectives are new in ServiceCenter 6.*x*. A perspective contains one or more views, and perhaps an editor, that provides all of the data and tools you need to complete a ServiceCenter task. ServiceCenter has a default perspective that is standard for accessing ServiceCenter forms and data. You can create custom perspectives to define your own user environment.
- Preferences, like Perspectives, are a new feature in ServiceCenter 6, related to the introduction of the Windows client platform. You can customize the way you view the Windows client by changing settings in Preferences dialog.

- The System Navigator introduced in ServiceCenter 6 provides quick access to ServiceCenter resources, such as applications, folders, files, records, and forms, in addition to the classic menu structure.
- The Views feature introduced in ServiceCenter 6 displays editors, displays system information outside the editor, and provides alternate ways to access forms.
- Windows printing support was introduced with ServiceCenter 6. You click the print icon on the Editor toolbar to use standard Windows printing. A print preview is available as well.
- The spell checker included in the ServiceCenter 6.*x* Windows client uses the Wintertree Software Spelling Checker. You can customize spell checking options and build a custom dictionary. The ServiceCenter Web client uses any spell checker that is embedded in the Web browser.
- The Client Packaging Utility for ServiceCenter clients version 6 and higher allows you to configure and customize a single ServiceCenter Windows client installation, repackage the image into a new installation, and redeploy it to your entire user community.
- The ServiceCenter Help Server is a new feature with ServiceCenter 6.*x*. It enables you to create a single documentation repository that all users can access.
- The new Update Site utility feature in ServiceCenter 6.x creates a central location where you can search for, download, and install new and updated features.
- Debuggers: Starting with ServiceCenter 6 you can use the RAD Debugger for RAD applications, and the Advanced Debugger for JavaScript components.

Enhancements in the ServiceCenter 6.1 client include:

- With ServiceCenter 6.1 administrators have a separate plug-in that consolidates many administrative activities into a single installable component.
- Database navigation improved in ServiceCenter 6.1 by allowing common database tasks and utilities from the System Navigator.
- Exporting a text file from the Web client is a new enhancement in ServiceCenter 6.1
- The System Definition Utility that is included with ServiceCenter 6.1 is a graphic view of existing table elements and properties, and a quick way to define new tables. It enables you to accomplish the tasks traditionally handled by the Dbdict utility.
- The Field Help Editor, new in ServiceCenter 6.1, enables administrators to access, add, and edit field help from the System Definition Utility.
- With ServiceCenter 6.1 you can access trigger records through the System Definition Utility.
- Trusted sign-on is a new feature in ServiceCenter 6.1. You can enable users to log on to ServiceCenter automatically using the same authentication information they use to log on to their operating system or network.

With ServiceCenter 6.2, the following enhancements were introduced:

- It is now possible to import CSV (comma separated value) files
- The Web client can now integrate with Computer Telephony Integration (CTI) applications
- New Forms Designer Objects: Dynamic form, HTML Editor, HTML Viewer, Web preview

Application Enhancements

ServiceCenter version 6.*0* introduced the following enhancements to its core functionality:

- The Service Delivery component of Service Management supports self-service incident reporting and tracking. With this change the functionality of Get-Services was integrated with Service Management directly via the Web employee self-service (ESS) client.
- The new ERD Creation Utility in ServiceCenter 6 allows administrators to generate an entity relationship diagram (ERD) easily. The ERD Creation Utility generates DDL output from any system

that ERwin® can read. It maps relationships that are automatically defined inside ServiceCenter applications, and it can map manually defined relationships.

- Graphic Workflows are new in ServiceCenter 6.*x*. It is a visual representation of defined phases for Change Management and Request Management. In ServiceCenter 6.1 the workflow was added to Problem Management as well.
- In ServiceCenter 6.*x* new capability words were added to support new features, and existing capability words were enhanced to expand required permissions:
  - public.favorites enables users to create, edit, or remove public favorites.
  - user.favorites enables users to create private favorites.
  - chart.breakdown enables users to create charts from record lists.
  - Existing capability words were organized into a logical hierarchy of permissions.
- Scheduled Maintenance exception models were added to ServiceCenter 6.*x*. Exception models support more precise maintenance schedules that include weekends and holidays.
- With the help of the Differential Upgrade Utility you can identify differences between systems after development activities, and then unload the changes and move them to a new system. You can still monitor a limited set of tables using the Development Audit Utility.
- With ServiceCenter 6 you can use JavaScript expressions anywhere that you use a RAD expression. ServiceCenter supplies out-of-box JavaScript examples. You can add new JavaScripts or modify existing JavaScripts.

Additional changes in ServiceCenter 6.1 include:

- End users will see changes to the way in which they use Service Level Management and Problem Management (formerly Root Cause Analysis), including modified forms and a modified work flow. Service Level Management now uses Service Level Objectives to allow more flexibility in the assignment of times for resolution, as well as more flexible alerting. Problem Management now allows tasks and more flexible alignment of Problem Control and Known Errors.
- With ServiceCenter 6.1 you can define a system-wide default time zone and date format in the company record. Individual operator records can contain individual time zone values that override the system-wide default time zone.
- A web-service based Change Calendar was introduced that allows for scheduling of changes and tasks with a user-friendly interface.

ServiceCenter 6.2 introduced:

- The Knowledge Management module replaces Get-Answers. It integrates seamlessly out-of-box with Service Desk, Incident Management and Problem Management. It is using Autonomy's Verity K2 Search Engine , but administration is done from within ServiceCenter.
- Release Management was implemented as a Change Management category. It can be used to ensure that changes to the assets in the CMDB are deployed successfully in the least disruptive manner.
- The Service Catalog is a front-end to use by end-users to order from the catalog of services. An interaction will be opened for each shopping cart containing one or many items. The interaction can then be approved by a ServiceCenter user and fulfillment records (typically change or request management records, service desk interactions or a request to a third party via Web Services) will automatically be created.
- CI visualization (6.2.1)
- Get-Answers migration to Knowledge Management in ServiceCenter 6.2 (6.2.1)
- IR migration to Knowledge Management in ServiceCenter 6.2 (6.2.1)

- Import support for xml documents available in Knowledge Management for ServiceCenter 6.2 (6.2.1)

Documentation Enhancements

ServiceCenter version 6.x introduced the following enhancements to its product documentation:

- With ServiceCenter 6.x. documentation is now available in an embedded online Help system. Starting with ServiceCenter 6.1 role-based ServiceCenter documentation plug-ins simplify tailoring the end-user Help view. You can customize Help topic files to match customized applications. Field-level help describes individual fields on a form.
- All but a few documents are now available online via the ServiceCenter client. The following documents are still available in PDF format:
  - *ServiceCenter 6.x Accessibility Guide*
  - *ServiceCenter 6.x Database Conversion and RDBMS Support Guide*
  - *ServiceCenter 6.x Installation Guide*
  - *ServiceCenter 6.x Rapid Application Development (RAD) Guide*
  - *ServiceCenter 6.x ReportCenter Guide*
  - *ServiceCenter 6.x Report Writer Guide*
  - *ServiceCenter 6.x Upgrade Guide*

Summary of upgrade features

ServiceCenter 6 offers new features and functionality, improved technology, and a new Web client interface.

Upgrading to ServiceCenter 6.0 enables you to:

- Use a zero-footprint Web client interface for remote access. The new Web tier supports the Web client and ensures platform portability.
- Use ServiceCenter Web Service features to publish ServiceCenter applications and data as Web Services. You can add ServiceCenter compliance to your enterprise Service Oriented Architecture strategy.
- Encrypt data exchanged between client and server using industry-standard Secure Sockets Layer (SSL) encryption.
- Use ServiceCenter UTF-8 Unicode support to combine characters from any character set or locale in the same ServiceCenter database.
- Tailor applications with JavaScript.
- Simplify navigation with an improved Windows client interface.
- Improve access using System Navigator tree navigation.
- Access files, fields, keys, and forms quickly in the System Definitions area of the System Navigator.
- Link to frequently-used queries, applications, and forms with favorites.
- Visually organize data with charts and dashboards.
- View a graphical workflow for Change Management and Request Management.
- View field-level Help topics on forms.
- Customize online Help.
- Configure and deploy a customized version of ServiceCenter with the Client Packaging Utility. You can add branding, or design a single configuration for all users.
- Make new and updated features available using an Update Site.
- Access Forms Designer from the System Navigator.
- Use task-specific debuggers: RAD Debugger for RAD panels and Advanced Debugger for JavaScript.

ServiceCenter 6.1 enhances the baseline platform with a focus on usability, feature enhancements, and quality. Upgrading to ServiceCenter 6.1 enables you to:

- Use an enhanced Web Services API for user-designed Web Service applications.
- Consume and publish Web Services.
- Updated trusted sign-on capability.
- Use enhanced JavaScript support to tailor applications.
- Use an enhanced Forms Designer to create and modify ServiceCenter forms.
- Improve performance with enhanced scalability.
- Improve performance by using Multi-threaded mode on Windows clients.
- Troubleshoot problems using the XML editor view to analyze client/server traffic.
- Install the Admin plug-in to consolidate administrative tasks, tools, and views.
- Use the ITIL-compliant Problem Management application with graphical workflow to replace Root Cause Analysis.
- Manage Service Level Agreements (SLAs) using the ITIL-compliant enhancement for Service Level Management.
- Use the SLA support integrated into Change Management (requests and tasks), Incident Management, Problem Management (problems and tasks), and Service Management to gather availability and response metrics.
- Use Configuration Management components with ITIL-compliant names to replace non-ITIL Inventory Management terminology.
- Use the HP Service Center Web Services API, which is a component of the HP ServiceCenter Active CMDB solution.
- Use self-service ticketing (SST) in Service Management to enable external users to request services through the Web client.
- Simplify work scheduling with improved time-zone support.
- Simplify table and form management with the System Definition Utility.
- Use enhanced chart and dashboard functionality to manage business data.
- Use the redesigned capability word permission model to simplify assigning permissions.
- Use the Manage Favorites feature in the Web client to copy, move, or delete favorites.
- Access inboxes and favorites directly from Favorites folder in the System Navigator.
- View enhanced field help for new tables and forms when you access related applications.
- Use shared libraries for any supported RDBMS that runs on a UNIX operating system, which reduces the size of executable files and the amount of memory required.

ServiceCenter 6.2 enhances the ServiceCenter setup and use. Upgrading to version 6.2 enables you to:

- Scale the ServiceCenter implementation to the individual customer's need
- Circumvent the ephemeral port issue using ServiceCenter in servlet mode (number of ports to open through the firewall = (number of servlets * 2) + 1)
- Use standard encryption of operator passwords both on the database backend and over the net
- Have users search knowledge and order from the catalog of services for one-stop-shopping
- Make release changes more efficient with the new Release Management tool

ServiceCenter version 5.1

ServiceCenter 5.1 extended core asset management features to the service desk to help an enterprise run its IT department like a business. Managers are under increasing pressure to do more with fewer resources because of decreased budgets and other constraints. By containing costs, you can drive down the cost of providing services. ServiceCenter 5.1 can help you consolidate and simplify your infrastructure by providing better tools for better business decisions. It enables you to consolidate Service Management and Asset Management disciplines into a single robust infrastructure management tool.

Using ServiceCenter 5.1, you can:

- Use Service Level Agreements and charge-backs to add value.
- Provide a portfolio of services to the business unit at a competitive price.
- Run your IT department like a business.
- Adopt ITIL-recommended best practices to meet the increasing emphasis on ITIL standards that increase efficiency and reduce redundancy.
- Deflect security threats with a coordinated response, defined escalation, and notification process.
- Determine immediately what your assets are, and where they are, as protection against security threats.
- Use change management processes to ensure that you deliver timely repairs and patches.

Whether your concern is software license compliance, maximizing your investments, mitigating risks, improving employee productivity, or adding value to your own customers, ServiceCenter 5.1 can provide increased value to your organization.

Enhancements to ServiceCenter 5.1

ServiceCenter 5.1 extended HP Service Management market leadership by providing an ITIL-compliant service management solution with inventory configuration management capabilities. ServiceCenter 5.1 includes core contract and financial information in the service desk, which helps an enterprise run its IT department like a business.

New management of asset-based contracts including warranties, service contracts, and leases helps you manage assets from a service perspective. This enhancement gives the service delivery organization more effective and streamlined control of the complex and often confusing paper trail associated with an IT infrastructure.

Enhancements to the runtime environment (RTE)

ServiceCenter version 5.*x* introduced the following enhancements to the runtime environment:

- The System Information Record (info.company) has new features:
  - Ability to set Multi-Company mode here instead of using the login.default format control
  - Visibility of integration displayoptions
- Changes to the Joinfile enable you to add, update, and delete.
- Structured array enhancements include searching against fields in structured arrays. Fields in structured arrays can be part of keys, and can be mapped to Attribute tables and Unique Attribute tables.
  - The RTE creates and maintains Attribute tables and Unique Attribute tables automatically.
  - Attribute tables contain the data for the structured arrays in all records in the main table.
  - Unique Attribute tables contain one record for each unique combination of fields defined in the table.

  - The Attribute table contains only those fields that are not part of the Unique Attribute table. For example, the Attribute table contains only a foreign key link.

- The RAD command line now appears in the client and is available in all application windows. The operator record controls access to the command line. Individual viewing options control command-line visibility.

Application enhancements

ServiceCenter 5.1 has new tools such as wizards that simplify common tasks. Wizards are development tools that increase system effectiveness and usability by creating uniformly formatted scripts that guide users through activities. You can create a wizard to automate almost any data entry process in ServiceCenter, such as setting up a contract. Wizards are simpler than ServiceCenter scripts, but very powerful.

The Cascade Update Utility enables you to maintain database consistency and integrity by modifying the data in dependent files to match changes made to data in a source file.

ServiceCenter supports third-party plug-ins that function as low-level extensions of the ServiceCenter platform. They permit tight data and process integration between ServiceCenter and external automation or data sources. For example, you might use a plug-in to authenticate users or populate ServiceCenter records. You can call plug-ins with:

- A trigger
- A format control
- A link record
- A script
- Display options
- The Document Engine

There is also tighter integration between Network Discovery and Desktop Administration in ServiceCenter 5.1.

Inventory Configuration Management

Inventory Configuration Management (ICM) provides better system navigation, using wizards to add or change upstream and downstream devices (configuration items). ICM now reflects out-of-box device categorization. Improvements to ICM include:

- A schema and form redesign
- Integration into the Document Engine
- An update to the Document engine to use Joinfile support, which enables you to search attribute and device files for an asset record.

The Assets Contract Management module enables you to:

- Add or edit assets and contracts.
- Associate assets with contracts.
- View or modify software installation information, including software license compliance.
- View or modify service level agreements, including leases, maintenance, software, support, and warranty contracts.

Service Level Management

Service Level Management (SLM) combines Contract Management and SLA Management to ensure the highest level of support at the lowest possible cost. The Service Level Management (SLM) module

provides a centralized repository of SLM information, and is fully integrated into the ServiceCenter suite of applications.

SLM automatically recalculates Service Level Agreement (SLA) performance. SLM uses availability and response metrics to chart a graphic display.

Scheduled Maintenance

Scheduled Maintenance enables you to track parts, labor, and associated contracts, and provides a detailed estimate of costs associated with preventive maintenance tasks.

Java client enhancements

The ServiceCenter 5.1 Java client introduced Section 508 compliance enhancements, which improves the individual user experience regardless of accessibility requirements. The Java client enables users to set user preferences for keyboard access, font, and color selections, and increases support for third-party accessibility applications that can used with ServiceCenter.

The Java client offers language support for simplified Chinese, traditional Chinese, French, German, Japanese, Korean, Polish, and Turkish.

There were also enhancements to Java client performance in ServiceCenter 5.1.

Documentation enhancements

All documentation for ServiceCenter 5.1 is available on a single CD-ROM that you can launch on any supported platform: Windows, UNIX, or Macintosh®. You can choose either HTML format for viewing with a Web browser, or PDF format where you can perform a comprehensive keyword search of the entire documentation suite.

The documentation CD-ROM also includes the ServiceCenter 5.1 physical data model (PDM) and its supporting entity and attribute information. The PDM is commonly referred to as an *entity relationship diagram*, or ERD. ERD is a data model that enables system administrators to understand the linkages within the out-of-box system.

Appendix A: Product Comparison

The following table is a functional comparison of the features in ServiceCenter versions 5.x, 6.0, 6.1 and 6.2:

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
Application Level	**Application**					
Best Practice and Industry Standards support	**Out-of-box IT Infrastructure Library (ITIL) support**	X	X	X	X	X
	Configuration Management (called Inventory Config Management through ServiceCenter 5)	X	X	X	X	X
	Service Management (Service Desk in 6.2)	X	X	X	X	X
	Incident Management	X	X	X	X	X
	Problem Management (called Root Cause Analysis through ServiceCenter 5)	X	X	X	X	X
	Known Error correlation	X	X	X	X	X
	Change Management	X	X	X	X	X
	Release Management	X	X			
	Service Level Management	X	X	X	X	X
	Service Level Agreement	X	X	X	X	X
	Service Contract Management	X	X	X	X	X
	Availability Management	X	X	X	X	X
	Service Life Cycle Management	X				
Inventory Management	**Inventory Configuration Management**	X	X	X	X	X
	Assets Contract Management	X	X	X	X	X
	Automated Inventory support	X	X	X	X	X

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
	Out-of-box Automated Inventory support	X	X	X	X	X
	Support for Business Services	X	X			
	Support for CI Groups	X	X			
	CI Visualization	X	X			
Call Management	**Service Desk (called Service Management through SC 6.1)**	X	X	X	X	X
	Linkage of Calls to Problems/ Incidents, Request Quotes, Changes, Calls	X	X	X	X	X
	Activity Records	X	X	X		
	Related Records	X	X	X	X	X
	Multi-Level categorization	X	X	X	X	X
	Document Engine support	X	X	X	X	X
	Diagnostic Aid Support	X	X	X	X	X
	Employee Self Service Interface	X	X	X		
	Integrated with Knowledge Management	X	X			
Incident Management	**Incident Management**	X	X	X	X	X
	IR Expert	X	X	X	X	X
	Mass closure of incidents	X	X	X	X	X
	View associated calls within the Incident/Problem record.	X	X	X	X	X
	Close calls upon Incident/Problem closure.	X	X	X	X	X
	Activity Records	X	X	X	X	X
	Related Records	X	X	X	X	X
	Document Engine Support	X	X	X	X	X

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
	Diagnostic Aid Support	X	X	X	X	X
	Integrated with Knowledge Management	X	X			
Knowledge Management	**IR Expert**	X	X	X	X	X
	Shallow search	X	X	X	X	X
	Deep search	X	X	X	X	X
	Complete match	X	X	X	X	X
	Multi-Level Categorization	X	X	X	X	X
	IR Solution retrieval based on categorization combinations.	X	X	X	X	X
	Category	X	X	X	X	X
	Sub-Category	X	X	X	X	X
	Product Type	X	X	X	X	X
	Problem Type	X	X	X	X	X
	Diagnostic Aids	X	X	X	X	X
	Adaptive / IR Learning and Ranking	X	X	X	X	X
	Hot News	X	X	X	X	X
	Common Problems	X	X	X	X	X
	Error Messages	X	X	X	X	X
	IR Queries	X	X	X	X	X
	Get-Answers			X	X	X
	Increased navigation integration with ServiceCenter Diagnostic Aids			X	X	X
	Automated Get-Answers launch with ServiceCenter Login			X	X	X

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
	Knowledge Management module	X	X			
	Seamless integration with SD, IM, PM	X	X			
	Adaptive Learning	X				
	Web and File Crawling	X				
Problem Management	**Problem Management** (called Root Cause Analysis in versions prior to 6.1)	X	X	X	X	X
	Activity Records	X	X	X	X	X
	Related Records	X	X	X	X	X
	Document Engine	X	X	X	X	
	Root Cause Identification	X	X	X	X	X
	Known Error creation	X	X	X	X	X
	Known Error Correlation	X	X	X	X	X
	Root Cause and Known Error Phases	X	X	X		
	Presentation of Known Error workarounds to Service and Incident Management	X	X	X	X	X
	Integration with Knowledge Management	X				
Change Management	**Change Management**	X	X	X	X	X
	Phase closing	X	X	X	X	X
	Prompt for open	X	X	X	X	X
	Prompt for Update	X	X	X	X	X
	Open Phase and Exit	X	X	X	X	X
	Related Records	X	X	X	X	X

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
	Support for Batch Changes	X	X	X	X	X
	Request For Change	X	X	X	X	X
	Request For Change - Advanced	X	X	X	X	X
	Release Management	X	X			
	Document Engine Support	X	X	X	X	X
	Support of Configuration Item Groups	X	X			
	Relate a Change to a Change	X				
	Activity support	X				
Request Management (catalog support)	**Request Management** (back-end catalog fulfillment engine)	X	X	X	X	X
	Request Queue	X	X	X	X	X
	Event Services support	X	X	X	X	X
	Related Records	X	X	X	X	X
	Customizable Catalog	X	X	X	X	X
	Out-of-box catalog choices/scenarios	X	X	X	X	X
	Integration with purchase requests	X	X	X	X	X
	Combination of multiple quotes	X	X	X	X	X
	Re-order level defined by stock room	X	X	X	X	X
	Document Engine Usage	X	X	X	X	X

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
Service Catalog	**Service Catalog** **Self-Service ordering of items and bundles with possible images, adding to a shopping cart that will be fulfilled typically via change or request management**	X	X			
	Catalog of Services available via ESS interface	X	X			
	Integrates with Request Management, Change Management, Web Services, Service Desk	X	X			
	Subscriptions	X				
Service Level Management (SLM)	**Service Level Management**	X	X	X	X	X
	Automatic calculation of SLA performance	X	X	X	X	X
	Graphic display of availability and response metrics	X				X
	Define escalation thresholds	X	X	X	X	X
	Entitlement Checking	X	X	X	X	X
	Service Contract Management	X	X	X	X	X
	Service Level Agreements (SLA) and Contract Management were combined to create Service Level Management.	X	X	X	X	X
	SLA Configuration by Module	X	X	X		
	Flexible calculation of Escalations by using Service Level Objectives	X	X	X		
	Outage spreading for Business Services	X	X			
Technician Scheduling Management	**Work Management**					X
Change Scheduling Management	**Change Calendar** graphical representation of current and forward schedule of changes	X	X	X		

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
Preventive Maintenance	**Scheduled Maintenance**	X	X	X	X	X
	Formalized Maintenance schedules	X	X	X	X	X
	Integration to Service, Incident, Change, Request, Configuration Management	X	X	X	X	X
	Scheduling of inventory based events/tickets	X	X	X	X	X
	Scheduled Maintenance Exception Model	X	X	X	X	
	Track associated contracts, parts, and labor	X	X	X	X	X
	Generate cost estimate of preventative maintenance.	X	X	X	X	X
Reporting & Business Intelligence	**ReportCenter**			X	X	X
	P4 ODBC driver	X	X	X	X	X
	Boolean/Logical parameters	X	X	X	X	X
	Selection of Reports created in Crystal shipped with ServiceCenter instead of Report Center	X	X			
	Decision Center	X	X			
	BI Portal (replaced by Decision Center)			X	X	X
	SC Insight					X
	Dashboard	X	X	X	X	
Best Practice Reference Guide	Service Wisdom					X
	Best Practice offering (released separately)	X				
Employee Self-Service	Self Service Ticketing integrated with Service Management via Web Client	X	X	X		
	Get-Services (replaced by Self-Service Ticketing)			X	X	X

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
	Service Catalog available via ESS web client (replaces Get-Resources)	X	X			
	Get-Resources (Replaced by Service Catalog)		X	X	X	X
	Knowledge Management module for Self-Service KM	X	X			
	Get-Answers (Replaced by Knowledge Management)			X	X	X
Network Management	**Network Discovery**	X	X	X	X	X
Automated Inventory/Discovery	**Network Discovery / Desktop Inventory**	X	X	X	X	X
	Integration with Desktop Administration	X	X	X	X	X
	Desktop Administration	X	X	X	X	X
	Integration with Network Discovery / Desktop Inventory	X	X	X	X	X
Base Utilities	Importing	X	X	X	X	X
	Printing	X	X	X	X	X
	Clocks	X	X	X	X	X
	Macros	X	X	X	X	X
	Views (Inboxes up to ServiceCenter 6.2)	X	X	X	X	X
	License Checking	X	X	X	X	X
	Notification Engine	X	X	X	X	X
	On-call groups	X	X	X	X	X
	Multi-Company Support	X	X	X	X	X
	Central User Administration Utilities		X	X	X	X
	Consolidated Queues and In-boxes	X	X	X	X	X

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
	Settings in System Information Record (info. company)					
	Availability of Integration display options	X	X	X	X	X
	Set multi-company mode	X	X	X	X	X
	Revision Tracking added to Tailoring Utilities	X	X	X	X	X
	Differential Upgrade Utility	X	X	X	X	
	Java Script used for Tailoring	X	X	X	X	
	Consultant In a Box				X	X
	Possibility to set and use time zones on record level	X	X	X		
	Advanced Filter over linked tables with Left Outer Join	X				
	Templates	X				
	Security Folders	X				
	To Do Overview	X				
Common Client Capabilities	Dynamic GUI	X	X	X	X	X
	Display screen and format name	X	X	X	X	X
	Multiple Document Interface (MDI)					X
	Cascade Window support					X
	Form specific tool bars	X	X	X	X	X
	Calendar Widgets	X	X	X	X	
	Record List/Document View	X	X	X	X	X
	On-screen timer object	X	X	X	X	X
	Windows Authentication Support	X	X	X	X	X

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
	Spell Checker	X	X	X	X	X
	Automatic record list in the GUI	X	X	X	X	X
	Search/Find capabilities within GUI fields	X	X	X	X	X
	RAD command line appears in all application windows, depending on operator record setting.	X	X	X	X	
	Tree Navigation	X	X	X	X	
	Automatic Update are possible.		X	X	X	
	Charts and Dashboards	X	X	X	X	
	Printing with Print Preview	X	X	X	X	
Java Client	Dynamic loading of attachments					X
	Browser support of Internet Explorer and Macintosh					X
	ServiceCenter Explore for navigation					X
	"Favorites" for navigation features					X
	Suspend session support					X
	Bookmarks					X
	Support for Windows XP					X
	Support for JDK 1.3 and Java Plug-ins					X
	Support for Netscape 6					X
	Telephony support					X
	Forms Designer					X
	GUI Debugger					X
	Section 508 compliance features					X

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
	Language support for Chinese, French, German, Japanese, Korean, Polish, Thai, and Turkish					X
Web Client	Same look and feel and access as Windows Client	X	X	X	X	
	Zero-footprint client	X	X	X	X	
	Export to Text File	X	X	X		
	Spellchecker on multi-line text fields	X	X			
	Computer Telephony Interface	X	X			
	Import of CSV file	X	X			
	Employee Self Service Interface (ess) available	X	X	X		
	Self – Service Approval access	X				
	Improved paging control	X				
Windows Client		X	X	X	X	X
	Admin Plugin	X	X	X		
	System Definition tool to replace DBDICT Utility		X	X		
	Perspectives, Views, Preferences	X	X	X	X	
	Spellchecker on multi-line text fields	X	X	X		
	Computer Telephony Interface	X	X	X	X	X
	Advanced Debugger to debug both RAD and Java Script	X	X	X	X	
3270 Client						X
Run Time Environment (RTE) Level						

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
	Shared Mandanten	X	X	X	X	X
	FrameRestore to DDE Advise	X	X	X	X	X
	Secure Password support	X	X	X	X	X
	Network Encryption	X	X	X	X	X
	Tracing of Triggers	X	X	X	X	X
	Quiesce	X	X	X	X	X
	Database Monitor Parameters	X	X	X	X	X
	Monitoring of File Locks	X	X	X	X	X
	Monitoring of File Updates	X	X	X	X	X
	QBE List: sort, add, delete on the fly	X	X	X	X	X
	Dynamic SQL Mapping	X	X	X	X	X
	Multi-lingual Client/Server Deployment	X	X	X	X	X
	File Attachments	X	X	X	X	X
	OLE Container					X
	Support for Microsoft Clusters	X	X	X	X	X
	Global Locking in SC Distributed Network		X	X	X	X
	Increased Pool Size: Up to 35 ServiceCenter Database files with 2 GB each		X	X	X	X
	Removal of 32K limit for P4 database record		X	X	X	X
	Event Services processing of inbound attachments	X	X	X	X	X
	Version Dependency eased – Client/Server separated		X	X	X	X
	Server control of client parameters	X	X	X	X	X

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
	Option for case insensitivity of the P4 database		X	X	X	X
	ODBC Level 2 query compatibility	X	X	X	X	X
	Extended functionality in ServiceCenter DBUTIL		X	X	X	X
	Alert Log for monitoring ServiceCenter performance	X	X	X	X	X
	Single Sign-on (interfacing with SiteMinder®, TAM, and other third-party applications.)	X	X	X		
	Trusted Sign-on	X	X	X	X	X
	IR Learning	X	X	X	X	X
	Field Level Encryption	X	X	X	X	X
	Load Manager		X	X	X	X
	Structured Arrays	X	X	X	X	X
	Search against fields	X	X	X	X	X
	Fields can be part of keys.	X	X	X	X	X
	Fields can map to Attribute tables and Unique Attribute tables.	X	X	X	X	X
	Joinfile changes: add, update, delete	X	X	X	X	X
	UTF-8 support	X	X	X	X	
	On-demand UTF-8 conversion	X	X			
	SOAP API / Web Services Interface	X	X	X	X	
	IR files may be stored internally or externally.		X	X	X	
	ServiceCenter dependency on P4 database files removed.	X	X	X	X	
	P4 data storage layer removed	X				
	Multithreading support on Windows	X	X	X		

Process ↓	ServiceCenter Version →	7.0	6.2	6.1	6.0	5.x
	Stack trace generation to the Log file upon GPF	X	X	X		
	Multithreading support on Unix	X	X			
	Servlet Mode implementation	X	X			
	Elimination of the ephemeral port issue	X	X			
	Better scalability and performance	X	X			
	Encryption of configuration file (sm.ini) parameters	X	X			
	One-way encryption of operator password in database	X	X			
	Two-way encryption of password fields from client to server	X	X			
Documentation						
	Service Wisdom					X
	Help Desk processes					X
	Change Management Professes					X
	Problem Management Processes					X
	Online and downloadable documentation	X	X	X	X	X
	Adobe Acrobat Reader® global search					X
	Physical Data Model (PDM)					X
	PDF and HTML formats	X	X	X	X	X
	Documentation distributed with Client		X	X	X	
	Centrally stored Documentation on a Help Server	X	X	X	X	

For more information

Please visit the HP support web site at:
http://www.hp.com/managementsoftware/support

This web site provides contact information and details about the products, services, and support that HP offers.

HP online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valuable support customer, you can benefit by being able to:

- Search for knowledge documents of interest
- Submit and track progress on support cases
- Submit enhancement requests online
- Download software patches
- Manage a support contract
- Look up HP support contacts
- Review information about available services
- Enter discussions with other software customers
- Research and register for software training

Note: Most of the support areas require that you register as an HP Passport user and sign in. Many also require an active support contract.

To find more information about support access levels, go to the following URL:

http://www.hp.com/managementsoftware/access_level

To register for an HP Passport ID, go to the following URL:

http://www.managementsoftware.hp.com/passport-registration.html