IBM TRIRIGA
Version 10 Release 5

Maintenance and Service Management User Guide

Note
Before using this information and the product it supports, read the information in "Notices" on page 29.

This edition applies to version 10, release 5, modification 0 of IBM TRIRIGA and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. Managing services

Organizations run best when their people can effectively use assets and locations for their designed functions and services. Maintenance and service management enables organizations to maintain or increase the efficiency, reliability, and safety of their assets and locations.

The maintenance and service management process contains the following events:

1. Initiation of the service management process, normally by creating or submitting a request.
2. Creation of the project or task, including the creation of a service plan.
3. Service assignment.
4. Completion of work, such as when a technician responds to a call and fixes a discrepancy.

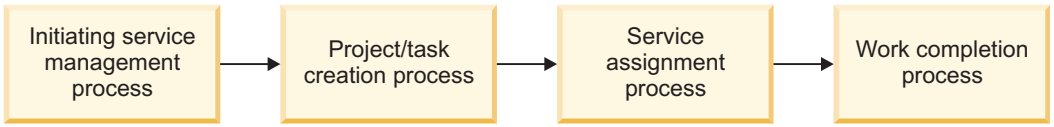

Figure 1. Maintenance and service management process

The first three steps in the maintenance and service process comprise the service management process. The fourth step, work completion, comprises the management of corrective, preventive, and condition-based maintenance.

Chapter 2. Service management process

The creation of work is managed by the service management process. The service management process ties into other TRIRIGA® Application Platform capabilities, including corrective maintenance, preventive maintenance, move management, and facility assessment.

The service management process can be represented by the following process diagram:

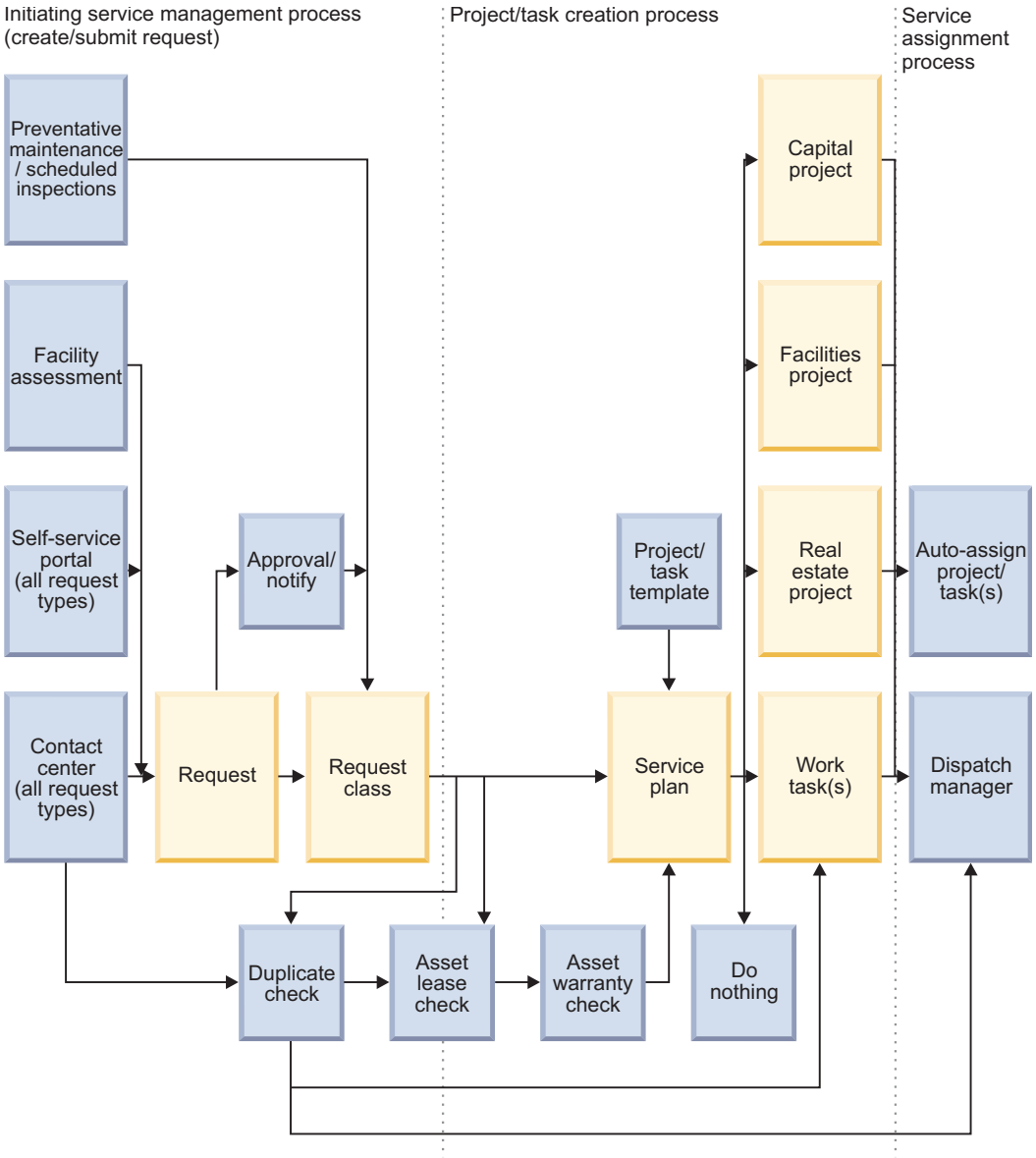

Figure 2. Service management process

The service management process comprises three main steps:

1. Initiating service management process

A request and associated request class are created as part of the facility assessment process, by a self-service user, or by a contact center agent on behalf of a caller. Alternatively, a maintenance supervisor selects the request class during the setup of a preventive maintenance (PM) schedule.

2. Project and task creation process

   The request class and its corresponding service plan contain the settings that determine how the business logic is enforced in the creation of the work. The method by which the service management process is started determines which request class and service plan records are used. The service plan uses templates to create projects and tasks.

3. Service assignment process

   The assignment rules in the service plan determine whether the projects and tasks are auto-assigned or must be assigned by the dispatch manager.

Chapter 3. Setting up service management

The TRIRIGA Application Platform implements the business rules of the organization in accordance with the service management setup. To access the service management setup records, you must sign in as an administrative user, such as Service Manager.

Service management setup overview

The request class and its associated service plan are the key records for running the business logic. Other setup records are necessary only in certain scenarios. For example, if your organization includes multiple groups that supply the same service, you can generate service assignment matrix records to assign the work.

Request class

The request class determines the business rules that are to be applied by the service management process.

The request class can be identified in the following ways:

- A requester logs on and uses Request Central to manually select a request class.
- A contact center agent selects a request class on behalf of a caller.
- A maintenance supervisor selects a request class during the setup of a preventive maintenance (PM) schedule.

A service manager creates and manages the request class records. Although users can select from a list of request classes, security typically restricts the viewing and editing of these records.

The service class is used for categorizing the use of the request class. A solution record from the knowledge base can be made available to the request class.

Service plans

The service plan that is associated with the request class defines how the business processing rules are enforced. Service plans are used to centralize the rules for managing service requests and work tasks.

A request class cannot be associated with more than one service plan. However, it is common for a generic service plan to be associated with more than one request class record. The request engine uses the association between a request class and a service plan to determine how the system reacts when a request is submitted. The project templates and task templates are used to create tasks and projects for the service plan.

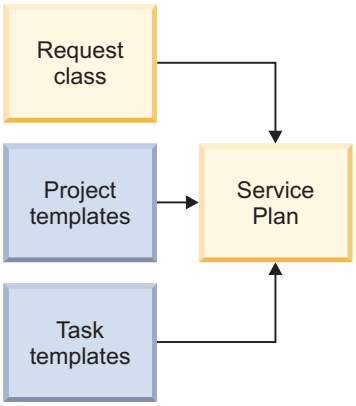

Figure 3. Service plan relationships

The service plan configuration drives the following actions:

- Task creation, which is based on the task template on the service plan.
- Automatic assignment of service providers, for example, responsible organization and person.
- Service level agreement (SLA) details, for example, respond within.

Assignment rules for service plans

The assignment rules section of the service plan defines most of the business logic.

Project and task assignment

When you create a project or task, you must specify the following rules:

Task Assignment Rule
Establishes the method for assigning the service provider, for example, responsible organization and person.

Task Assignment Dates Rule
Establishes the method for assigning the SLA details, for example, respond within, due within and follow up within values.

Task Estimates Rule
Determines how and from where the work time and planned costs for the created tasks originate.

Options for project and task assignment

The following table shows the options available for the **Project Assignment Rule** and **Task Assignment Rule** fields.

Table 1. Options for the project and task assignment rules

Assignment rule	Definition
Auto-Assign to Service Provider	Causes a search for any valid service assignment matrix record to identify the responsible organization. The service assignment matrix record can be from a service agreement, blanket purchase order, real estate lease contract, or warranty.

Table 1. Options for the project and task assignment rules (continued)

Assignment rule	Definition
Do not Assign	Does not assign the project or task to an organization. The project or task must be assigned by other methods, such as the dispatch manager.
Use Assignment from Task Template	Only used by the Task Assignment Rule. Directs the system to pull the appropriate organizations from the task templates that are used to generate the tasks.
Use PM Schedule Organization	Assigns the task by using the job plan organization that is associated with the PM schedule.
Use Service Plan	Assigns the values by using the Service Level Defaults section of the service plan. This option is used primarily when only one provider is handling the related request class of the service plan.

Options for task dates and estimates

The following table shows the options available for the **Task Assignment Dates Rule** and **Task Estimates Rule** fields.

Table 2. Dates/Estimates rules options

Dates/Estimates rule	Description
Use Service Agreement	Use the data on the final service assignment matrix record that was found in the service assignment matrix search process.
Use Service Plan	Use the data on the service plan that is associated with the created tasks.
Use Task Template	Use the data on the task template that is associated with the service plan that is associated with the created tasks.
Use PM Schedule	Use the data on the PM schedule that is associated with the Task.
N/A	The SLA assignment and estimates assignments are ignored.

The options for the task assignment dates rule and task estimates rule are dependent on the option that is selected for the task assignment rule. If you change the task assignment rule, you must select the task assignment dates rule and task estimates rule again.

Location-based filtering

When Request Central users request a service, they select a building where the service is needed. The selected building has an associated list of available service request classes from which the user can select.

By default, all buildings allow all request class types. To restrict the available request class types, you can configure and manage the access to request types by building or by group.

You can add services to buildings by selecting **Requests** > **Set Up** > **Manage Request Services** and using the **Bulk Add** tab. You can similarly remove services from buildings by using the **Bulk Remove** tab.

Procedures

Procedures contain information that is associated with records that explain how certain types of maintenance are accomplished. Procedure records dictate how maintenance technicians accomplish the work and are therefore associated with assets, locations, and PM schedules.

The different procedure types can be used together to describe a complete maintenance process. For example, a Work procedure might require the completion of a Lock-Out/Tag-Out procedure to safely secure the equipment before the work is accomplished.

Reading groups and logs

Reading groups at the asset and location level contain reading logs and are associated with the respective assets and locations. The reading log acts as a storage location for the readings for the asset or location.

Technicians enter the readings on work tasks or directly in the asset record or location record. In some situations, integration with building control software can be configured to update the reading logs directly.

Reading groups can also be established at the specification level. If an asset of that specification type is created after the reading group is established, the asset inherits the reading group of the specification. However, the reading group is not retroactively applied to existing assets of the specification type.

Service assignment matrix records

When more than one group supplies the same service, service assignment matrix records are used to evaluate and assign the work to the appropriate service provider. Each individual service assignment matrix record is based on a configuration of classification, geography, and organization.

In certain situations, you do not need to generate SAM records. For example, if only one group is supplying a service across the organization, you can use only a service plan. A single service plan is often used for small organizations that are centrally located, or for large organizations that centralize aspects of their service. However, when a single service plan is not sufficient, you must generate SAM records.

Various contract types generate and contain SAM records, including but not limited to the following records:

- Blanket purchase orders
- Service agreements
- Real estate lease contracts
- Warranty records

Before you generate service assignment matrix records, you must specify the required criteria: request class, customer organization, request location, and request geography. You can also specify the default values to be used by the service assignment matrix records.

When the lease or agreement is activated, the service assignment matrix records are generated. You can view and edit the generated service assignment matrix records on the **Service Matrix** subtab of the **Terms & Conditions** or **Service Areas** tab. The service assignment matrix records contain the service provider details, including the contract, responsible organization, responsible person, and SLA details.

The service assignment matrix process is illustrated in the following diagram.

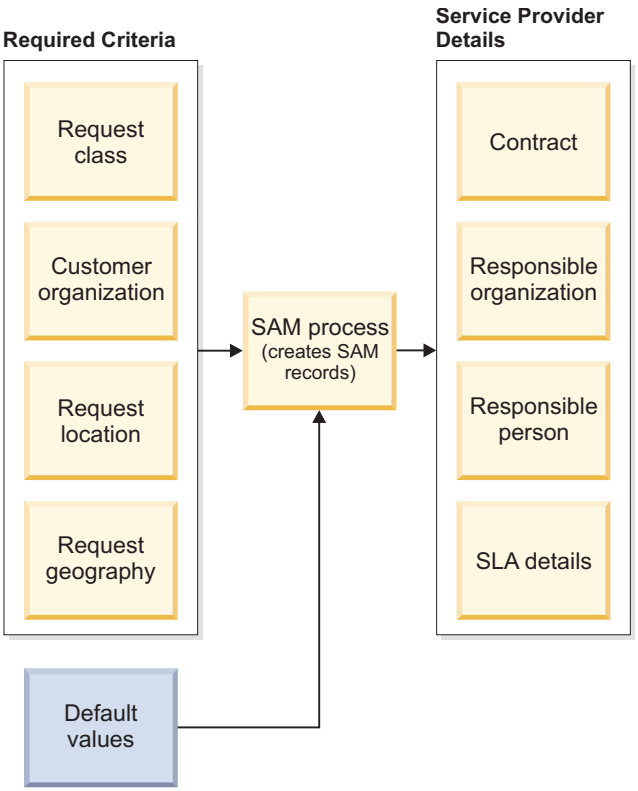

Figure 4. Service assignment matrix process

Default values for service assignment matrix records

In the agreement or contract, you can define the default values that are used by the generated service assignment matrix (SAM) records. You can later modify the SAM records as required.

The default values for SAM records are defined on the **Terms & Conditions** tab of the service agreement, blanket purchase order, and warranty record. On the real estate lease record, the default values for SAM records are defined on the **Service Areas** tab. The relevant sections are Default Matrix SLA Values and Default Service Charge Type.

The default values include time, cost, and priority variables. If your contract is covered by a request class that contains default values, you can use the request class defaults for your SAM records.

The following fields combine to use contact roles to assign the responsible person for the tasks:

- The **Default Assign To Role** field designates the contact role that the system is looking for, for example, Dispatcher.

- The **Role Resolution** field determines whether the contact role is associated with the contract or with the request that is processed through the contract, therefore establishing the linked record. Using role resolution ensures that the record automatically keeps current with changes to the role.
- The **Use Role From** field describes the relationship to the linked record.

If a responsible person is not assigned based on contract roles, then the default assignee is designated as the responsible person for the tasks. The responsible person on a task is the person who tracks the work, not necessarily the individual doing the work. Resources that are associated with the task designate the technician actually completing the work.

The Default Service Charge Type section determines whether all of the service assignment matrix records have Billable or Included as their initial charge type. Included means that the service is covered under the agreement and is paid for as part of the contract terms. Billable means that although the service provider does the work as part of the contract agreement, the work incurs billing on a pay per use basis.

Required criteria for service assignment matrix records

The service assignment matrix (SAM) records include all combinations of request or service class, service geographical areas, service locations, and customer organizations that are specified in the originating contract.

The criteria for SAM records are defined on the **Terms & Conditions** tab of the service agreement, blanket purchase order, and warranty record. On the real estate lease record, the criteria for SAM records are defined on the **Service Areas** tab.

For valid service assignment matrix records to be created, a minimum of three criteria must be supplied in the contract:

- At least one associated request class or service class. The request class is used for the service request process. The service class is used in the procurement process.
- At least one associated location or geography record. The system searches for locations first and then geographies only if a match is not found.
- At least one valid customer organization. The customer organizations, like the other criteria, are pulled from the request when the process searches for a suitable match.

When you create contracts, select the highest level in the hierarchy that accurately describes the work that is covered. For example, if every floor uses the contract, select the building level for locations. Selecting the highest level provides the following advantages:

- Requires the fewest number of SAM records to be generated, speeding up the generation and search processes.
- Supports management through exception. For example, the electrical group covers all electrical calls for a building, except the IT server room that is covered by IT. In this case, two service agreements both technically cover the server room. However, if a call is specifically for the IT server room, the only the SAM record for the IT group is processed.

When the contract is activated, a SAM record is created for each unique combination of criteria. For example, if you specify two request classes, two locations, and two organizations, then eight SAM records are generated.

Auto assignment of service providers

You can configure your system to auto-assign service providers that are based on the service assignment matrix. The auto-assign process searches for any valid service assignment matrix record to identify the responsible organization.

If auto-assignment is activated, the criteria are assessed in the following order:

1. Request class or service class.
2. Customer organization for the request.
3. Location, or geography if a location match is not found.
4. If more than one match still exists, highest provider type.
5. If more than one match still exists, highest provider rating.

Criteria 1-3 all are always used. Criteria 4 and 5 are used only if multiple records meet the 1-3 criteria.

When the auto-assign process begins evaluating locations and geographies, it looks first at the specific location that is identified in the request. If a match for the specified location is not found, the search continues at the next level higher level in the location hierarchy. For example, if no match is found for the space, the search continues at the floor level, and then the building level. If a location match is not found, then the geographies are searched.

The provider type and provider rating are used when multiple matches are found after the other criteria are assessed. For example, at a specific location both the HVAC workgroup and the Electrical workgroup can respond to a temperature request. If both workgroups have contracts that cover this type of request for this location, the provider type is used. The system first looks for a contract with the provider type set to Primary, and then for a contract with the provider type set to Backup. After the provider type is evaluated, if more than one service matrix record still qualifies, then the provider rating serves as a second level of differentiation.

Provider type and provider rating are specified on the **General** tab of the contract. Request class, service class, customer organization, locations, and geographies are specified on the **Terms & Conditions** or **Service Areas** tab.

Knowledge base and solution records

The knowledge base consists of a series of questions, answers, and solutions for a contact center agent to use to resolve a caller's problem.

When a contact center agent receives a phone call, the agent identifies the request class that corresponds with the caller's problem. If a solution record is available for that request class, then a link to the knowledge base is displayed. The contact center agent can use the solution record to solve the problem on the phone. Alternatively, the contact center agent can narrow down the troubleshooting that is required by the responding technician.

The solution instructions serve as the question tree that contact center agents follow when they help a caller with the knowledge base. The solution records act as a historical record of the solution instructions that were used. The solution records capture the questions, answers, and solutions talked through during the call. When you add the solution record, you can attach the top level of the solution instruction tree to the appropriate request class.

Use the same name for the top level of the solution instruction tree and the request class that the solution record supports. For example, if the request class is named 'Room Cold', you can also call the top-level solution record 'Room Cold'. The top-level solution record contains the first question in the question tree. The request class points directly to this top-level record.

Setting up request class records

The TRIRIGA Application Platform includes a collection of pre-configured request class records. You can edit the request class structure in the classification hierarchy.

Before you begin

You must sign in as a Service Manager or Application Administrator.

Procedure

1. In the **Tools** portal, in the Application Administration section, select **Classifications**.
2. In the Hierarchy panel, navigate to the request class records and select the parent of the record that you want to create.
3. In the Hierarchy panel, click **New** and select **Request Class**.
4. On the **General** tab, enter the name and other general information.
5. On the **Details** tab, specify the service class and enter the estimated service cost and time.
6. Optional: Add a solution record to the request class.
   a. On the **Details** tab, select the **Has Solution Record** check box.
   b. On the **Solution Record** tab, specify the record.
7. On the **Service Plan** tab, select the service plan that you want to run the business rules.
8. Click **Create**.

Setting up service plans

You can create a generic service plan, or create a service plan record for every request class.

Before you begin

You must sign in as a Service Manager or Application Administrator.

Procedure

1. Select **Maintenance** > **Set Up** > **Service Plan**.
2. Click the **Add** action.
3. In the Details section, select a request type.
4. In the Assignment Rules section, select a value from the **Create Projects or Tasks** list.
5. Specify the assignment rules. The rules that are available are determined by the request type and whether you chose to create a project or a task.
6. If you chose **Use Service Plan** for at least one of your assignment rules, in the Service Level Defaults section, specify the default values for the generated work.

7. In the Estimates section, specify the initial estimates for calls that use a request class with this associated service plan.
8. Click **Create**.

Setting up procedures

The procedure defines the steps that the technician takes, the cost estimates for each step, and the materials to be used. Procedure steps can be entirely self-contained or can reference external sources, such as equipment service manuals.

Before you begin

You must sign in as an administrative user.

Procedure

1. Select **Maintenance** > **Procedures** > **Work**.
2. Click the **Add** action.
3. On the **Procedure Steps** tab, add steps to the procedure, including cost estimates.
4. On the **Materials** tab, add materials to the procedure.
5. Click **Create Draft**.

Setting up reading groups

By using reading groups, you can keep a record of the readings. The process for setting up a reading group is similar for a specification, asset, or location.

Before you begin

You must sign in as a Service Manager, Service Technician, or Application Administrator.

Procedure

1. From the **Portfolio** menu, select an asset, location, or specification.
   - Select **Assets** and then select the type of asset, for example, Building Equipment.
   - Select **Locations** and then select the type of location, for example, Property.
   - Select **Set Up** > **Specification** and then select the type of specification, for example, Furniture.
2. Click the asset, location, or specification to which you want to add the reading group.
3. If the record is in an **Active** state, click **Revise**.
4. On the **Maintenance** tab, select the **Readings** subtab and click **Add**.
5. Enter the details for the reading and click **Create**.
6. Activate the asset, location, or specification.

Generating service assignment matrix records

You can use various contract types to generate service assignment matrix (SAM) records. The following procedure uses the service agreement.

Before you begin

You must sign in as a Service Manager or Application Administrator.

Procedure

1. Select **Contracts** > **Agreements**.
2. In the Related Links - Contract Agreements section, select **Service Agreement**.
3. Click the **Add** action.
4. On the **General** tab, specify the name and the service provider.
5. If you want to use the provider type and rating in the auto-assign process, specify a provider type and provider rating.
6. Click **Create Draft**.
7. Click the **Terms & Conditions** tab.
8. In the Payment Terms section, specify the discounts that are applied for payment within certain time periods.
9. In the Default Matrix SLA Values and Default Service Charge Type sections, define the default values to be used by the generated service assignment matrix records.
10. On the **Request Class (for Services)** and **Service Class (for Materials)** tabs, add at least one request class or service class.
11. On the **Service Geographies** and **Service Locations** tabs, add at least one geography or location.
12. On the **Customer Organizations** tab, add at least one valid customer organization.
13. Click **Issue**.

Results

The record is saved, set to a read-only state, and routed for any required approvals. When any required approvals are processed, the record is set to an issued state and the service assignment matrix records are generated.

What to do next

View the generated service assignment matrix records on the **Service Matrix** subtab of the **Terms & Conditions** tab.

Adding solution records to the knowledge base

To make the knowledge base a useful resource for your contact center agents, you must add solution records.

Before you begin

You must sign in as a Service Manager or Application Administrator.

Procedure

1. Select **Requests** > **Set Up** > **Knowledge Base**.
2. Click the **Add** action.
3. In the General section, enter the name.
4. In the Details section, specify the request classification, service class, instruction class, and problem type.

5. In the Instruction section, enter the information that is displayed when this solution instruction is accessed.
6. In the Instruction Options section, specify the choices for the next level of the question tree.
7. Specify related topics and related documents.
8. Click **Create**.

What to do next

Attach the top level of the solution instruction tree to the appropriate request class.

Configuring work time and cost estimates

Work time and cost estimates are essential in the planning and setup of your business processes. You can configure estimates by using the Service Management Setup wizard. You can also specify estimates in the service agreement, blanket purchase order, service plan, or PM schedule.

Setting up estimates with the Service Management Setup wizard

You can use the Service Management Setup wizard to populate work time and cost estimates for the request classes and service matrix.

Before you begin

You must sign in as a Service Manager or Application Administrator.

About this task

Existing service assignment matrix records are not updated during the issuing process. Therefore, if any global data is changed on the service agreement, the SAM records must be regenerated.

Procedure

1. Select **Tools** > **System Setup** > **Application Settings**.
2. On the **Service Management Settings** tab, click **Service Management Setup wizard**.
3. On the **Request Class Setup** tab, update the estimated values for the request classes.
   a. Select the **Details** option.
   b. Update the estimated service cost and estimated service time.
   c. Select the request class records to modify.
   d. Click **Apply to Request Class**.
4. On the **Modify Service Matrix** tab, update the estimated values for the service matrices.
   a. Select the **Change SLA Values** check box.
   b. Update the estimated service cost and estimated service time.
   c. Select the service matrix records to modify.
   d. Click **Update Service Matrix Records**.
5. Close the wizard.

Setting up estimates for service agreements

You can use the default values of the request class to populate the estimates on service agreements. The procedure is the same for blanket purchase orders, which are a different form of the same business object.

Before you begin

You must sign in as a Service Manager or Application Administrator.

About this task

Existing service assignment matrix (SAM) records are not updated during the issuing process. Therefore, if any global data is changed on the service agreement, you must regenerate the SAM records.

Procedure

1. Select **Tools** > **Administration** > **Classifications**.
2. In the Hierarchy panel, expand the **Request Class** node and navigate to the type of request class.
3. In the main panel, click the request class that you want to populate with estimates.
4. Review the estimated service cost and estimated service time in the request class.
5. On the main menu, select **Contracts** > **Agreements** > **Classifications**.
6. In the Related Links - Contract Agreements section, select **Service Agreement**.
7. Click a service agreement to open it.
8. On the **Terms & Conditions** tab, scroll to the **Default Matrix SLA Values** section.
9. Ensure that the **Use Request Class Defaults** box is checked.
10. Click **Issue**.
11. After the SAM records are created, review the records on the **Service Matrix** tab.

Chapter 4. Requesting corrective maintenance

Corrective maintenance occurs in response to an identified problem, and is managed through service requests. You request service for activities such as requesting a repair, moving people, suggesting updates to contracts, or placing room reservations.

Service requests

You can initiate requests for the services, assets, locations, or personnel that you need, and manage and track each request. You can create a request as self-service user, or as a contact center agent on behalf of a customer.

Self-service users can enter problems by using the Request Central portal. The options that are available to you in the Request Central portal section are based on your role. The options can include facilities, IT and telephones, spaces, human resources, contracts, stores, products and services, and reservations. For example, you can inquire about more software for a notebook, report an expired light bulb, or request a move.

Contact center agents answer calls and record relevant information on the contact center form. Depending on the request classification, the contact center agent can access solution records from the knowledge base. The contact center agent might be able to resolve the problem during the call without generating a request. However, usually the contact center agent uses the form to generate a service request. The request is processed similarly to a self-service request entered through Request Central.

After you submit a service request, it is routed for approval. When the service request is approved, it is routed to a service provider. The service provider is selected based on the service plan that is defined for the type of request and for your location and organization. After the service provider finishes the task, the service request is closed and you receive a notification and a service survey form.

Before you can create service requests, administrators must set up request class records for the solutions that are provided for the requests.

Submitting self-service requests

You can submit your requests for service from an online form. Your service request is automatically routed for approval and sent to a service provider. After work is complete, you receive notification and a survey form.

Before you begin

You must sign in as a user in a role with a Request Central portal section.

About this task

For detailed information about how to submit self-service requests, see the IBM® TRIRIGA Self-Service videos that are in the Media Library of the IBM TRIRIGA wiki:

IBM TRIRIGA Self-Service Users - Requesting Services
Includes information about how to use Request Central to make online requests for services, repairs, or products and to manage and track each request.

IBM TRIRIGA Self-Service Users - Making Reservations
Includes information about how to use Request Central to reserve resources like meeting rooms, workspaces, food services, vehicles, and equipment.

IBM TRIRIGA Self-Service Users - Making Reservations from Outlook
Includes information about how to use the IBM TRIRIGA reservation add-in for Outlook messaging software to create appointments in Outlook and connect to IBM TRIRIGA to reserve company resources.

Procedure

1. Expand the section for which you are requesting service.

Role	Action
Request Central role	In the Request Central portal section, expand the section for which you are requesting service.
Other roles	Select **Requests** > **My Requests**. In the Request Central portal section, expand the section for which you are requesting service.

2. Select the type of service request.
3. Specify the details for your request.
4. Create a draft and review the form.
5. Submit the request.

Receiving requests in the contact center

You use contact center forms to record relevant information about the calls that you receive, and to generate service requests.

Before you begin

You must sign in as a Contact Center Agent or Contact Center Manager.

Procedure

1. On the **Contact Center Form** tab, select a location-centric or person-centric view.
2. In the General section, enter the relevant details.
3. In the Problem section, specify the request classification and enter a problem description.
4. On the **Solution** tab, search the knowledge base for relevant solution records. The solution records that are available depend on the request classification.
5. Review the remaining information and update if necessary.
6. Depending on how the call is resolved, take one of the following actions:
   - To record that you solved the problem without generating a request, in the General section, select the **Resolved During Call** check box.
   - To generate a default request that is based on the information on the contact center form, on the **Request** tab, click **Quick Add** and submit the request.

- To edit the request before it is generated, on the **Request** tab, click **Move**, **Product**, or **Service**. Specify the details and submit the request.

7. After you complete the call, click **Next Call**.

Chapter 5. Scheduling preventive maintenance

Preventive maintenance (PM) is a proactive approach to maintaining and improving the operating condition of assets, locations, and building systems. Spending resources on preventive maintenance avoids larger and more costly repairs over time.

Preventive maintenance records

Preventive maintenance records include job plans and PM schedules. The job plan identifies the items to be serviced, the responsible organization, and the service organization for the maintenance. The job plan contains the PM schedules, which can be based on schedules or readings.

Schedule-based PM schedules

Schedule-based PM schedules provide a method of scheduling maintenance for building systems, assets, and locations. PM schedules are usually recurring.

When you create a schedule-based PM record, you set the recurrence schedule. You can create a one-time event, or set the event to recur daily, weekly, monthly, or yearly. To create a quarterly event, create a monthly schedule that is set to run every three months. You can also create an ad hoc event, which allows for multiple scheduled occurrences that do not conform to a standard pattern.

Although naming conventions are not mandatory for PM schedules, you can incorporate information into the name. For example, the ‘Q-1 Pump filter replacement’ PM schedule is the first quarterly check on the equipment in the job plan and the maintenance consists of replacing a pump filter.

When you activate a schedule-based PM schedule, the tasks are generated. The generated tasks are associated with the job plan, the schedule, and the appropriate assets and locations.

Shadowing

In the recurrence schedule, you can use shadowing to ensure that higher-level maintenance supersedes lower-level maintenance. If a lower-level maintenance task and higher-level maintenance task both fall within the offset duration, the lower-level task is not scheduled. When you use shadowing, schedule the higher-level maintenance tasks first to ensure that unrequired maintenance tasks are properly skipped.

For example, you create 'A-1 Pump Overhaul', an annual overhaul check. Then, you create ‘Q-1 Pump filter replacement', a quarterly schedule that replaces a filter. The annual schedule includes a replacement of the filter, so you specify that the quarterly schedule is shadowed by the annual schedule, with an offset duration of five days. If Q-1 is scheduled plus or minus five days from any existing A-1 task, then the Q-1 tasks are skipped.

Reading-based PM schedules

Reading-based PM schedules monitor readings that are recorded for assets or locations, and generates a task when specific reading requirements are met.

For example, if the copy count exceeds 5000, a task can be generated to change the copier toner cartridge.

The PM reading log is created in one of the following ways:

- Manually when a task is completed.
- Manually directly for a location or asset.
- Automatically through integration with another system, such as a building control software.

When you activate a reading-based PM schedule, the associated reading groups for the locations and assets are monitored. Any new reading that is posted to the associated reading log is evaluated for the criteria that are defined in the job plan and reading-based PM schedule. If the reading meets the criteria that are established in the PM schedule, then a work task is generated in accordance with the rules established by the service plan. If procedures are associated with the PM schedule, the procedures are associated with the generated tasks.

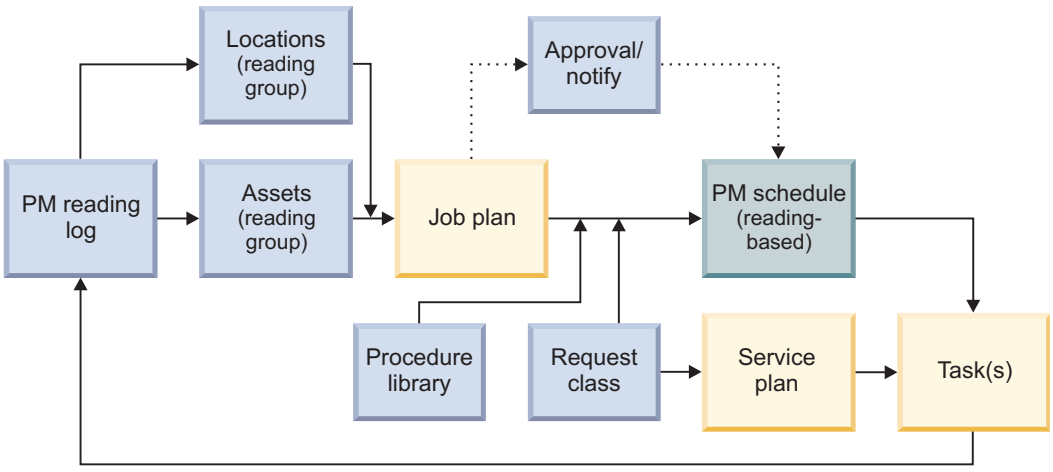

Figure 5. Reading-based PM schedule process

Setting up job plans

A job plan gives you access to all of the maintenance that is associated with assets, locations, or building systems.

Before you begin

You must sign in as a Service Manager or Application Administrator.

Procedure

1. Select the **Maintenance** menu item.
2. In the Related Links - Maintenance section, select **Preventive Maintenance** > **Job Plans**.
3. Click the **Add** action.
4. On the **General** tab, enter the job plan name.
5. In the Detail section, select the resource type.
6. In the Responsible Organization section, click **Find** and select the organization that is responsible for the job plan and the maintenance.

7. In the Service Provider section, click **Find** and select the service provider that performs the work on the job plan.
8. Enter the systems, assets, and locations on which the maintenance is performed.
9. Click **Create Draft**.

What to do next

Create PM schedules.

Setting up PM schedules

A preventive maintenance (PM) schedule is contained within a job plan and is associated with a request classification. The PM schedule takes business rules and information from the job plan, the request classification, and the associated service plan.

Before you begin

You must sign in as a Service Manager or Application Administrator. A job plan must exist to contain the PM schedule.

Procedure

1. Select the **Maintenance** menu item.
2. In the Related Links - Maintenance section, select **Preventive Maintenance** > **Job Plans**.
3. Click the name of the job plan whose assets, locations, or building system require scheduled maintenance.
4. On the **General** tab, select the **PM Schedules** tab.
5. Click the **Add** action.
6. In the Detail section, select a request class.
7. Specify whether your PM type is schedule-based or reading-based, and then take the related actions:
   - If your PM type is schedule-based, click **Create Recurring Pattern** and enter the recurring pattern details.
   - If your PM type is reading-based, specify the reading action rules and the reading occurrence details.
8. In the Service Level Defaults section, define the time within which a response, follow-up, and completion are required.
9. In the Estimates section, specify how the work time and cost estimates are obtained.
10. On the **Procedure** tab, find the procedures to be added to the tasks generated by the schedule.
11. Click **Create Draft**.
12. Click **Activate**.

Chapter 6. Assigning work tasks

As a service manager or application administrator, you are responsible for assigning resources to tasks. Tasks can be automatically assigned to a responsible organization based on service plan settings. You can also manually assign tasks to individuals by using the work plan records.

Work plan records

You can use the work plan record to view the availability for employees at specific times of each work day. You can then assign tasks from the backlog or unassigned current demand.

The work plan record also contains details about the parameters that determine the length of time for the work plan. You can specify the rebuild of the schedule, which determines how often the work plan data is regenerated. By default, rebuilds are scheduled daily.

Creating work plan records

The work plan record improves your ability to allocate resources to tasks. When you create the work plan record, the resources and tasks are added to the planning data, and the records for time periods are added to the supply summary.

Before you begin

You must sign in as a Service Manager or Application Administrator. The tasks must exist and be assigned to your workgroup.

Procedure

1. Select **Tasks** > **Assign Tasks** > **Manage My Work Plans**.
2. Click the **Add** action.
3. Specify the information.
4. Click **Create** to generate the record and start the build process. You are notified when the work plan is ready for use.

Assigning resources to tasks

You can use the work plan to assign and unassign resources to tasks. You are notified about overdue work, unassigned work, and over-allocation of resources.

Before you begin

You must sign in as a Service Manager or Application Administrator. A work plan record must exist. The tasks must exist and be assigned to your workgroup.

Procedure

1. Select **Tasks** > **Assign Tasks**. The default work plan record opens.
2. In the Work Planner section, expand the **Tasks**, **Resources**, and **Weeks** nodes.
3. Select the task that you want to assign a resource to.
4. Right-click the resource and select **Place**.

5. Click **Assign**.
6. To view a summary of the assignment status, click the **Supply/Demand** tab.

Setting up unavailable time

You can use the work plan record to identify time when a resource is unavailable. You can make the time unavailable without changing the resources calendar, which might be shared among multiple resources.

Before you begin

You must sign in as a Service Manager or Application Administrator. A work plan record must exist. The tasks must exist and be assigned to your workgroup.

Procedure

1. Open the work plan record.
2. Click **Create Unavailable Time**.
3. Select the resource and specify the purpose that the resource is not available.
4. Set the start date and time and the end date and time.
5. Click **Continue** to commit the record.

Results

The **Resources** tab lists all resources and unavailable time.

Chapter 7. Sending surveys to evaluate services

Use a general evaluation request to send a survey for evaluating services that were provided to the recipients. After you create the general evaluation template beforehand, specify the request details, select the template, select recipients, and send the survey.

General evaluation surveys

You use a general evaluation survey to gather feedback from people about services.

You can create general evaluation templates that contain different sets of survey questions for different types of services. When you create a general evaluation survey, select the general evaluation template to address the specific service.

You can send the survey to participants to gather their evaluation of provided services. You also can send the survey to random recipients within a location or organization. Random recipients are also selected from child locations or organizations.

After you submit the general evaluation survey request, the request is sent for approval. When the request is approved, the survey is sent to the recipients. When a survey is completed, you can view the responses from the recipients and an overall evaluation of the results on the **Evaluation** tab of the request.

Creating general evaluation survey templates

You can create general evaluation templates that contain different sets of survey questions for different types of services. When you create a general evaluation survey, select the general evaluation template to address the specific service.

Procedure

1. Select **Requests** > **Set Up** > **Survey Templates** > **General Evaluation**.
2. Add a template.
3. Specify the name and type of survey template that you are creating.
4. Add your survey questions.
5. Create the template.

Sending general evaluation surveys

You can send the survey to participants to gather their evaluation of provided services. You also can send the survey to random recipients within a location or organization. Random recipients are also selected from child locations or organizations.

Procedure

1. Select **Requests** > **Manage Requests** > **More**.
2. In the Other section, select **General Evaluation Requests**.
3. Add a request.

4. Specify whether the request is for you or for someone else. If the request is for someone else, enter the contact information for that person.
5. Specify the location, purpose, and scope of the survey that you are creating.
6. Select the survey template that contains your predefined questions.
7. Select the recipients to whom you want to send the survey. You can find and select certain people or have recipients that are randomly selected for you.
   a. If you selected to have random recipients, enter the parameters for the selection of recipients. If the location or organization that you specify has child records, random participants are also selected from those locations or organizations.
   b. Generate the list of recipients, review the list, and click **Continue**.
8. Submit the request. After the request is approved, the survey is sent to the recipients.

What to do next

You can view the results of completed surveys and an overall evaluation on the **Evaluation** tab of the request.

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