

## Infor CloudSuite™ Facilities Management Solution Overview

Release 11.4.1

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## About this guide

This document provides a high-level explanation of Infor CloudSuite™ Facilities Management and a summary of the products that are included in this CloudSuite. It also includes information about configuration, personalization, and integration options.

### Related documents

To access the documentation for this release, go to <u>docs.infor.com</u> and select the link for your CloudSuite.

## **Contacting Infor**

If you have questions about Infor products, go to the Infor Xtreme Support portal.

If we update this document after the product release, we will post the new version on docs.infor.com. We recommend that you check this website periodically for updated documentation.

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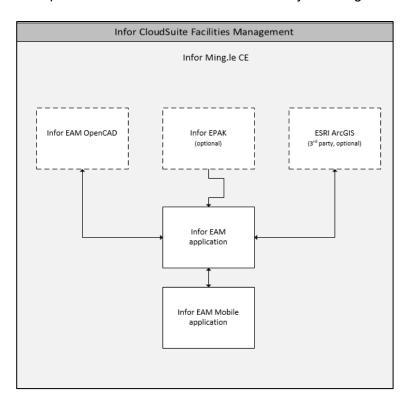
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## Chapter 1 CloudSuite overview

Infor CloudSuite™ Facilities Management is a solution that contains multiple products, including a base product and high-value applications designed to improve facility management processes and reduce costs. All of these applications are delivered in the cloud. This cloud-deployed suite addresses the unique business requirements in the facilities management industry.

This CloudSuite is a multi-tenant solution, which as available through a subscription-based (SaaS) delivery model from Amazon Web Services (AWS).

This diagram shows the products in this CloudSuite and how they are integrated:



For more information about the specific versions of the products in this CloudSuite, see the release notes for this CloudSuite.

The base solution includes products that are used by most companies in the facilities management industry and is offered by Infor as an integrated solution.

This CloudSuite includes these base products for the Professional User:

- Infor EAM
- Infor EAM Requestor
- Infor EAM Customer Service Request
- Infor EAM Mobile
- Infor EAM Barcoding
- Infor Reporting
- Infor EAM Alert Management
- Infor Ming.le
- Infor ION
- Infor Databridge
- Infor EAM OpenCAD
- Infor EAM Web Services Connector
- Infor EAM Web Services Toolkit

This CloudSuite includes these base products for the Casual User:

- Infor EAM Requestor
- Infor EAM Customer Service Request
- Infor EAM Web Services Connector
- Infor EAM Web Services Toolkit

## **Business applications**

### Infor EAM

Infor EAM is a configurable asset management solution. For the facility management industry, Infor EAM is configured with fourteen roles for the major job functions in facility management along with configurable work flow for each role. Additionally, EAM has been configured with ASRAE standards for asset nomenclature as well as standard structures for campus, building, floor, room and property. The configuration is further enhanced with standard system structures for electrical, structural, architectural, plumbing, and mechanical.

EAM enables you to improve capital asset management in ways that increase reliability, enhance predictive maintenance, ensure regulatory compliance, reduce energy usage, and support sustainability initiatives.

EAM provides you with flexibility to focus on the specialized industry requirements that can turn your company's asset management into a competitive advantage.

You can use EAM to perform these tasks:

Maintenance

Receive work requests, assign work to technicians, schedule preventive maintenance, and assign resources.

Uptime

Determine where and why your capital assets might fail, and plan alternatives.

Reliability and risk management

Predict equipment reliability problems to prevent them from happening.

Inventory and warranty

Reduce inventory and purchasing costs, and collect on warranty-related claims.

Strategic planning

Manage your assets to meet corporate performance goals.

### Infor EAM Requestor

Makes it possible to manage all service requests through a single call center. Users can enter, update, and retrieve work orders through a familiar web interface.

### Infor EAM Customer Service Requestor

With Infor EAM's call center functionality, users can centralize incoming maintenance requests from a broad and diverse customer base, and empower operators and customer service representatives by putting all the information needed to handle maintenance, service, and asset management requests.

#### Infor EAM Mobile

Infor EAM Mobile extends the functionality of Infor EAM to handheld devices, laptop computers, and tablets by providing remote access to the Infor EAM database. Infor EAM Mobile is available for handhelds operating on one-quarter VGA display systems. Infor EAM Mobile Full VGA is available for laptops and tablets.

Using a mobile device, such as a smartphone or a tablet, you can view, add, update, and delete information and update the Infor EAM database. Infor EAM Mobile enables your maintenance personnel to remain in the field or on the floor while maintaining their access to the information and Infor EAM functionality that they need to do their jobs. This technology provides them greater mobility and allows them to spend more time maintaining equipment, looking for problems, and verifying performance rather than entering information at a workstation.

Infor EAM Mobile uses Web Services as the integration platform by which data can be transferred between a handheld device and the Infor EAM database. Infor EAM Mobile runs on Android, iOS and Windows devices. Infor EAM Mobile the ability to view attachments such as CAD drawings, MSDS safety sheets, and maps.

### Infor EAM Barcoding

With Infor EAM Barcoding, users can design and print asset labels to streamline processes for asset tracking and relocating, warranty activation and updating, and work registration.

### Infor Advanced Reporting

With Infor Advanced Reporting, users can create fully customized reports and modify existing reports to match your specific needs. Users can query the transactional data to detect trends and perform quantitative analysis of maintenance operation.

### Infor EAM Alert Management

Alert Management provides early warning about existing asset condition trends occurring outside optimum operating data parameters. Users can ensure that the right maintenance person receives

an alert at the right time to analyze asset data and determine whether the asset needs repair or replacement.

## Technology

### Infor Operating Service

Infor Operating Service (OS) is a technology platform that supports fully integrated, industry-specific solution suites with mobile-first design, a consumer-inspired user experience, and science-driven analytics. It leverages the convergence of information, analytics, cloud computing, mobility, and social business.

This platform includes these products:

- Infor Ming.le
- Infor ION
- Infor Document Manager
- Infor BI

### Infor Ming.le

Infor Ming.le is a web-based application framework that provides a common user interface for Infor applications, third-party applications, and in-house developed applications integrated through Infor ION. It is a centralized platform for social collaboration, business process improvement, and contextual analytics.

Infor Ming.le provides drill-back capability so that users can navigate across the applications to track transactions, the transfer of data, and report updates. Additionally, Infor Ming.le provides an infrastructure for sharing content with context applications.

Infor Ming.le uses Homepages, configurable by users to organize information and activities at a high level to focus on critical areas of concern.

Within Infor Ming.le, you can use ION API, a managed API layer across all applicable Infor and non-Infor APIs, allowing existing APIs to be presented in a standardized, managed, and controllable way.

Infor Ming.le uses Infor Federation Services (IFS) for centralized authentication.

Infor Ming.le is available as a mobile app, supported by iOS, Android™, and Windows Mobile operating systems.

### Infor ION

Infor ION is a business process management platform that integrates applications, people, and business processes. The Infor ION platform converts data into the common language of standardized XML to enable disparate business systems such as Infor products, third-party applications, and in-house developed applications to share information.

Infor ION simplifies the connectivity and data sharing across the connected applications. It enables users to configure a routed infrastructure, set up workflows, design and activate business event monitors, and manage tasks and alerts.

### Infor Document Management

Infor Document Management is an integrated platform that enables you to take advantage of document solutions already in use within your organization.

Document Management is used to integrate your documents with your business processes and to provide a central repository for them. Soft links are used, based on document metadata, to provide integration between your documents and your Infor EAM solution. You can view a document from within the context of your application, or click a document link to retrieve the document from the central repository.

Document Management supports the entire lifecycle of your business documents, from input through storage, retrieval, and sharing.

### Infor BI

Infor Business Intelligence (BI) supports all typical internal and external business intelligence requirements.

Infor BI is the technical platform for these purposes:

- Standard reporting
- Flexible ad-hoc-analysis
- Dashboard
- Strategic planning, budgeting and forecasting
- Scenario-analysis and predictive analysis
- Statutory and management consolidation

The BI solution suite is predominantly used where highly specific business needs must be fulfilled. Usually, the solution is based on a multidimensional OLAP approach.

## Infor EAM OpenCAD

Infor EAM OpenCAD helps organizations boost asset and work visibility in a CAD format, without the need to run two or more separate systems to achieve this combined functionality within the EAM application. Infor EAM OpenCAD supports both DWG and DGN drawing formats so graphics can be accessed immediately using the software's auto-discovery capabilities.

### Infor EAM Web Services Connector

Connector exposes Infor EAM business components as web services so it can use simple object access protocol (SOAP) messages to communicate with these components. This makes web services more flexible and easier to use.

### Infor EAM Web Services Toolkit

Infor uses a web services platform that integrates all of its applications, both Infor and non-Infor software apps, so they can be accessed quickly. Users can access the functionality of any Infor or non-Infor web service on this platform.

To extend your CloudSuite solution with more advanced capabilities, you can add these optional products:

- Infor EPAK
- ESRI ArcGIS Connector

### Infor EPAK

Infor Enterprise Performance Accelerator Kit (EPAK) provides the tools, processes, and training required for employees to learn and comply with new business processes. EPAK's core components are end-user training and application simulations, which can be used in every phase of an implementation or upgrade application cycle.

EPAK is used during these phases:

Pre-implementation

To evaluate functionality, conduct user acceptance testing, perform business process reviews, and submit approvals in a consistent format.

Implementation

To provide tools for instructor-led and web-based training, and for usage tracking and user acceptance training.

Post-implementation

To deliver job aids, product assistance, simulations, application coaching, and usage tracking.

The EPAK solution provides a single platform for all process and software evaluation documents, and tools to increase employee productivity. It contributes to a successful deployment of an implementation or upgrade, and decreases the time to achieve return on investment.

## **ESRI ArcGIS Connector**

Integrate ESRI's Geographic Information Systems (GIS) to create a web-based solution that can pinpoint assets, generate work orders from the GIS display, streamline workflow between departments, and form sequential routes to complete work orders.

Administrators can extend your CloudSuite solution by using extensibility options. You use these options to add or modify base application functionality. Without direct access to the application database, source code, underlying system objects, or servers hosting the application, you can use extensibility options to change user interfaces, data models, business logic, reports, analytics, and integration points. These extensibility options use a shared set of computing resources and provide full upgradability, manageability, and isolation throughout the application lifecycle.

This table shows the types of extensibility options that are available for this CloudSuite:

Туре	Description	Examples
Personalize	Modify the look, feel, and flow of an application.	Themes, labels, titles, navigation, accessibility, help, and branding
Tailor	Modify elements in an application.	New fields on existing user interfaces (UI), layouts, objects, functions, properties, default values
Extend	Add new application functionality, including new logic, screens, or data.	New UI elements and new non-UI elements, including tables and business objects

## Extensibility tool overview

You use Infor EAM to configure and personalize this CloudSuite. This table provides an overview of the ways in which this CloudSuite can be extended:

Feature	Audience
Personalize standard EAM screens using EAM tools, which creates rules and filters stored in the tenant instance.	End user
Customers can add company specific information and modify stylesheets.	End user

Feature	Audience
Add new business functionality including the ability to add new logic using Java Script interruptions, FlexSQL Statements to support Business Files, Alert Management automation actions based on anomalous data finding, or extensions using the Infor EAM Web Services tier.	End user
Modify standard EAM reports using Infor EAM Advanced Reporting tools.	End user
Integrate with third party products using ION web services for synchronous integrations or event-based messaging via BODs.	End user

## Personalizing

These options are used to modify the look, feel, and flow of an application. Users must be granted permissions to access these features.

Personalization options are changes that users can make to screens, including column sequencing and visibility.

The administrator can personalize the Start Center by setting up inbox entries, KPIs, and chart controls. The administrator can also modify the page layout of record view, detail view, and list-detail view pages.

These personalization options are available:

Description
Color grid rows or individual fields based on user-defined conditions
Move fields to another location within screen tab
Hide or unhide fields
Force mandatory input of data value in specific field
Edit field label description to a more meaningful value
Save data filters. Ability to set filter as default filter
Save dialog values. Successive use of dialog will use saved values

### **Functional roles**

These roles participate in facility management:

#### Facility executive

Manages facilities goals and budgets, directs the division of work and projects, monitors expenditures, develops policies and procedures, and oversees space management.

#### • Service request caller

Works in the facility and reports issues or items in need of repair through the self-service portal or by calling the service request call center.

#### Call center operator

Answers telephone calls in a call center and creating service requests in the CloudSuite Facilities. Operators also monitor and address the self-service requests queue.

These pre-configured features are included:

- Service delivery matrix that will assign a contractor based on geography and service problem code
- A "thank you" email delivered on service request creation
- Email delivery of satisfaction survey to calls when the service request is completed
- A Start Center for call center operators

#### • Call center manager

Manages the call center operators. This role includes a pre-configured Start Center for call center managers and a pre-configured analytical report with the following KPIs:

- Open Service Requests
- Total Service Requests
- Service Requests by Status
- Service Requests by Type
- Service Request Status Summary by Type
- Service Requests by Service Category
- Service Requests by Department
- Service Request by Service Code

#### Engineer/architect

Manages construction projects, equipment alarms, hazardous waste management plans, major systems engineering, security and life-safety management, and code compliance management.

#### Facility manager

Manages energy control, equipment asset registry, fixed asset registry, parts usage history analysis, preventative maintenance plan definition, vehicle maintenance, and work scheduling.

#### External contractor

Manages breakdown maintenance execution, custodial maintenance, disaster recovery activities, maintenance projects, and preventative maintenance execution.

#### • In-house technician

Similar to external contractor but also manages booked hours against work orders.

#### MRO procurement

Manages contractor invoices, insurance underwriting records, parts purchasing, parts requisitions, and supplier/contractor information.

#### Storeroom

Manages barcoding, MRO inventory validation, parts issue, parts warranty management, and store room physical inventory.

#### Facility inspector

Manages building condition assessment (FCI) and work completed inspection.

#### Space planner

Manages space allocation, space inventory, and workspace planning.

#### General services administrator

Manages conference room scheduling, food services, vehicle pool management, and other asset pool management.

#### Utility specialist

Manages recording utility bills and fuel data for all facilities.

The utility specialist role is pre-configured to perform these functions:

- enter facility monthly utility costs from WAGES (water, air, gas, electricity, and steam)
- receive, store, and consume fuels (hot water, chilled water, #2 Oil, #4 Oil, #6 Oil, and propane)
- conform with the ASHRAE 105 standard that provides a standard method to determine Facility Energy performance and Facilities Greenhouse Gas Emissions
- include eGrid Greenhouse emission factors
- evaluate normalized performance using values per gross floor area heated/cooled and heating/cooling degree days per region

### Pre-configured business workflow processes

Infor CloudSuite Facilities Management is pre-configured with these business workflow processes:

- Equipment setup and warranty
- Service request, criticality and escalation
- Preventive maintenance setup
- Pooled assets
- Utilities management
- Contract work orders and invoicing
- Stock parts
- Purchase card procurement
- Stock purchase requisitions
- Physical Inventory
- Stock receipts and supplier returns
- Internally fulfilled work orders

## **Tailoring**

Tailoring options are used to add or modify elements in an application, for example, making changes to screen layouts, objects, functions, properties, and default values.

These tailoring options are available:

Tailoring option	Description
Menu modification	Show or hide application menu items.
Screen Clone and Creation	Clone and repurpose existing screens or create new ones (without coding requirement).
Quick flow	Suppress dialogs based on saved defaults.
Export to Excel	Export selection of fields to Excel spreadsheet. Presets supported.
Custom .jsp	Insert and call upon external content using public or private pages.
Field Interruption	Interrupt a transaction prior to database update.
Business rule automation	Support post insert and or field update business rules.
Alert & Automation	Support alerts for anomalous information and automation of data content flows.

### Equipment screen configurations

The following equipment screens have been configured for the CloudSuite Facility. All of these are clones based on the standard equipment screens.

- Campuses
  - Use the Campus screen to define a campus that represents a group of related buildings.
- Buildings
  - Within a Campus you can define buildings. When you define the building, ensure that you also identify the parent Campus on the Structure tab.
- Floors
  - Within a building define the floors.
- Rooms
  - Within a floor define the rooms.
- Boilers
- Chillers
- Cooling Towers
- Pumps
- Air Handling Equipment
- Packaged Units
- **Exterior Lighting**

- Computers
- Vehicles
- Fire extinguishers

The standard Assets, Positions, and Systems screens filter out all equipment for which specific screen configurations have been created. For example, boilers will not appear on these screens but only on the Boilers screen.

#### Facility coding structure:

Organization: USGSPCampus: USGSP-C01Building: USGSP-C01-B01

Floor: USGSP-C01-B01-F01

Room: USGSP-C01-B01-F01-R101

Coding structure for fixed equipment will follow the same pattern as that used for Buildings, Floors, and Rooms. For example:

Chiller: USGSP-C01-B01-F01-CHILLER01
Boiler: USGSP-C01-B01-F01-B0ILER01

Coding structure for fixed assets should not follow this pattern. Coding structure for these assets should be unique across organizations. These assets should also be created in the Organization.

### Non-equipment screen configurations

These additional screens have been configured for the Cloud Suite Facility.

#### Asset Inspection Checklist

Create an inspection and record the inspection results.

#### Review Asset Checklist

Review an asset that requires a review.

#### Utilities

Define utilities and track utility bill.

#### Utility Bill

Specify the utility bill.

#### Asset Repair Work Request

Specify a work request for an equipment. This could be a request for a breakdown repair, modification, or improvement.

#### • Self Service Asset Request

Create reservation requests for an asset. For example, request a vehicle for a road trip for one week in the next month, or request a projector for a presentation next week.

#### Approve Asset Reservation Request

Approve or reject reservation requests for an asset.

#### Asset Reservation

Handle the issue and return transactions for reserved assets. Ad-hoc issues are also supported in case of an emergency where the reservation process (request and request approval) was not followed.

#### Work Orders

Create and manage work orders.

#### Call Center

This screen is used to collect service requests coming from the Customer Service Request portal. Helpdesk personnel can also directly enter requests on this screen based on a customer interaction on the phone or via email.

**Note:** The call center is setup to use the Service Delivery Matrix. That means a Service Problem Code and Provider can only be entered after an equipment is specified. The equipment must have a Service Delivery Matrix attached directly to itself or indirectly via a parent/child relationship. Without a Service Delivery Matrix, the lookups remain blank.

### Security configurations

For the responsibilities in a facility management environment, menus are pre-configured to give access to Infor EAM screens. These responsibilities (user groups in Infor EAM) are pre-configured:

- Asset Reservation Manager (ARMG)
- Call Center Manager (CMGR)
- Call Center Personnel (CPER)
- Contractor (CNTR)
- Facility Executive (FEXC)
- Facility Inspector (FINP)
- Facility Manager (FMGR)
- MRO Buyer (MBUY)
- Space Planner (SPLN)
- Store Room Personnel (SROM)
- Technician (TECH)
- Utility Specialist (USPL)

### Extending

These options are used to create new functionality, including screens, logic, and data. Customer administrators can make changes that affect the way CloudSuite products function. Infor EAM can support the ability to add new business functionality through Java Script interruptions, FlexSQL Statements to support Business Rules, Alert Management automation actions based on anomalous data finding, or extensions through the Infor EAM Web Services tier.

Several flexible business rules are provided to support workflow processes. If changes must be made to a business rule because configuration data was altered or because the workflow does not fit, do so carefully.

These flexible business rules are provided:

Flexible business rule	Description
When a new user is created copy inbox, KPI and chart data to the user's Start Center based on the selected User Group of that user.	Table R5USERS Insert trigger Sequence 10
Keep Provider and Supplier in sync.	The provider is updated automatically when the supplier is updated.  Table R5COMPANIES  Update trigger  Sequence 10
Copy Contact Information to Callers.	The Customer Service Request portal (caller login) requires that the Contact Information be synchronized so that the contact can login to the Customer Service Request portal. To keep these entities synchronized in the future, a custom field value on the Contact Information will be and the reference to the Caller will be stored. Callers are associated to the same pre-configured customer (CC001).
	Table R5CONTACTINFO
	Insert trigger Sequence 10
Keep Caller and Contact Information in sync with each other.	This will automatically update the caller if a contact is updated.  Table R5CONTACTINFO  Update trigger  Sequence 10
Create Service Code when a Service Problem Code is created.	A service code is required since we are using the Customer Service Request portal. For the required fields on the service codes screen, Property is populated with CMP001 and System with SC001.  Table R5SERVICEPROBLEMCODES Insert trigger Sequence 10

Flexible business rule	Description
Keep Service Code and Service Problem Code in sync with each other.	This will automatically update the service code if a service problem code is updated.
	Table R5SERVICEPROBLEMCODES
	Update trigger
	Sequence 10
Create Call Center record when service	Table R5SERVICEREQUESTS
request is created from the Customer	Insert trigger
Service Request portal.	Sequence 10
Call Center record with an estimated cost over 3000 will require the Equipment to be	Table R5CONTACTRECORDS
	Insert and Update trigger
entered.	Sequence 10
Copy Auto Create WO and Estimated Costs from the selected Service Code to the Call Center record.	If the Auto Create WO flag is selected it will automatically trigger the work order. This trigger will only work during insert.
Create capital planning request if Estimated	Table R5CONTACTRECORDS
Costs on the Call Center record >= 3000.	Insert and Update trigger
	Sequence 20
Close or cancel the originating service	Table R5CONTACTRECORDS
request when the call center record is	Update trigger
closed or cancelled.	Sequence 40
·	

## Reporting

Administrators can define parameters for existing reports and create new reports. Author users can create new reports by passing Infor EAM parameters to external report applications. Only system administrators or designated authors should create new reports because the process involves modifying critical Infor EAM features. Standard Infor EAM reports can be modified using the Infor EAM Advanced Reporting tools.

See the *Infor EAM System Administrator Guide* for information about configuring reports in Infor EAM.

See the *Infor EAM User Guide* for information about generating reports and saving report parameters.

## Chapter 5 Integrations

This CloudSuite supports these types of integrations

- Standard integration
- Integrations with external applications

## Standard integration

This table shows the base and optional products that are integrated upon installation:

Product	Integration method
Infor EAM	Base
Infor Requestor	Web Services
Infor Custom Service Requestor	Web Services
Infor EAM Mobile	Web Services
Infor EAM Barcoding	Integrated into Infor EAM Mobile
Infor Advanced Reporting	Directly integrated
Infor OpenCAD	Directly integrated
ESRI ArcGIS Connector	Web Services
Infor EPAK	Directly integrated
Infor BI	ION

## Integrations of external applications

External applications are applications that are not pre-integrated as part of the CloudSuite deployment. These applications include other Infor applications, third-party applications, or applications that you have developed.

This CloudSuite provides options for external applications to access data, update data, and execute logic in CloudSuite applications. Examples of executing logic are changing a status or inserting an order. Additional configuration is required to integrate external applications by using one of these options:

- ION
- Infor Ming.le
- Web Services