

# SIEMENS

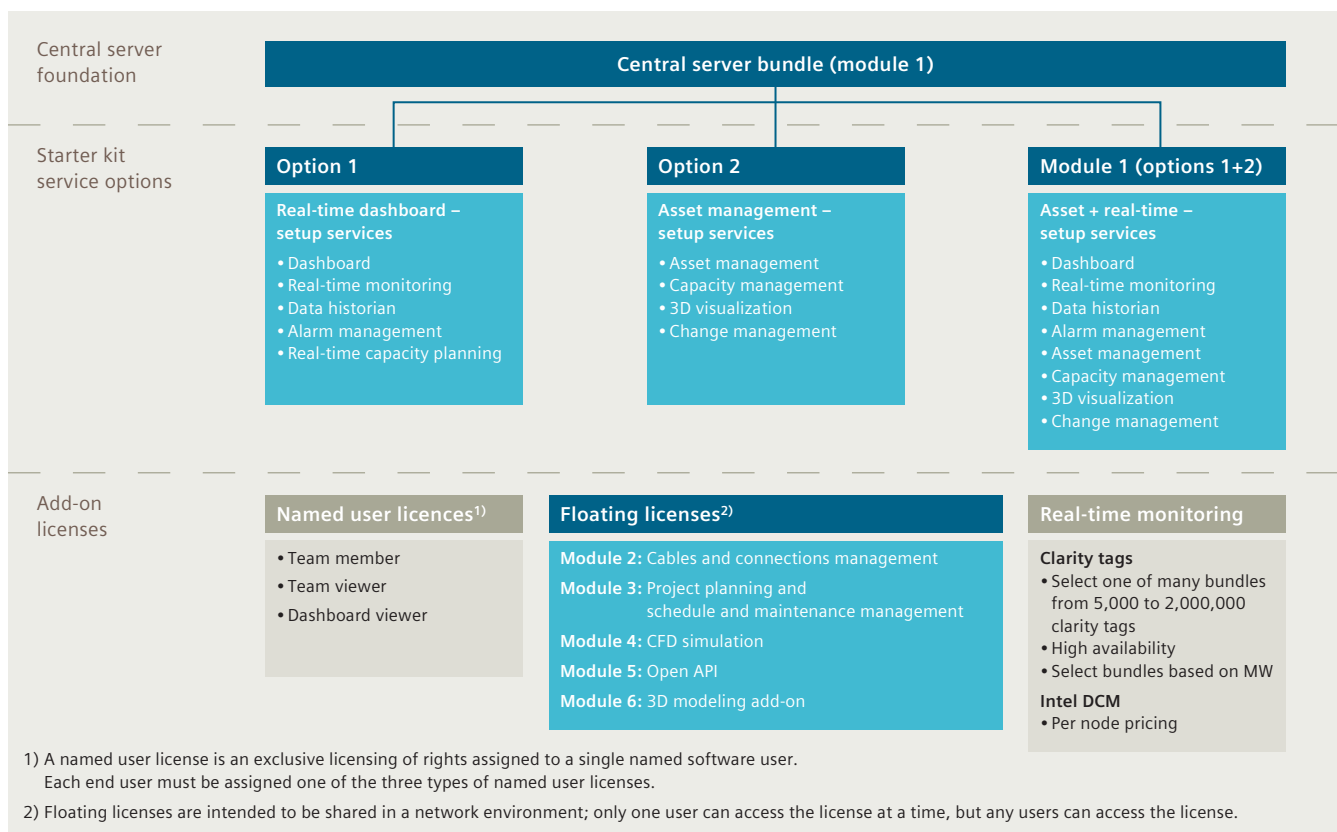
Ingenuity for life

## Datacenter Clarity LC – license description

Solutions for data centers

The return on investment and value behind an IT-driven information strategy is at the core of our pricing model. All data center infrastructure lifecycle management strategies supported by the acquisition of a DCIM (data center infrastructure management) solution such as Datacenter Clarity LC™\* are directly linked to the real-time information tracked by the system as well as the people using that information to operate the data center more efficiently. This means that licensing model and ultimately the cost of our DCIM solution is directly proportional to the value data center operators will get from our system. In a nutshell, the pricing model is linked to the number of real-time monitoring points collected by the system and the number

of named users operating our DCIM solution. A number of concurrent functionality modules are also added to make the solution scalable from a functionality standpoint. The professional DCIM services offered with the solution provide the client with the option to start with just the real-time dashboard and grow later with the asset management capabilities; or the reverse, begin with the asset management capabilities and later add real-time historian and alarm capabilities; or use both. The license model is completely flexible and can easily be delivered in varying price models based on customer needs and per individual elements – including licensing cost, rack, MW, m<sup>2</sup>, site, container, and IT node.



\* Datacenter Clarity LC™ is a trademark owned and licensed by Maya Heat Transfer Technologies Ltd.

# 1. Module description

The Datacenter Clarity LC solution is composed of six functional modules in total (modules 1–6)

## Module 1 (central server bundle)

### Central server bundle includes: – 2,000 Clarity tag bundle

Central server bundle is the starter kit foundation package for all Datacenter Clarity LC central server installations. It provides up to 1,000 real-time monitoring Clarity tags as a starter kit and a named user license for the Datacenter Clarity LC system automated operations. This bundle is dedicated to your data center infrastructure management and operations teams. It includes capabilities for creating data related to asset management and asset classification, 3D asset capabilities for building data center asset configurations, the ability to add visual information on top of a 3D model (real-time data, business data, and customer data), and tools for users to create aesthetically appealing data center models. It also provides users with enhanced visualization with both dynamic and photo-realistic rendering tools. The 3D modeling environment allows the import of third-party geometry like AutoCAD drawings, STEP files, VRML, and IGES files.

This bundle provides the foundation package for Datacenter Clarity LC central server installation.

This is redundant of the first sentence above, delete (?)

## Module 2 (floating license)

### Connections management

The connections management module dedicated to your data center infrastructure management team includes capabilities for routing electrical and network wiring in a data center configuration. The software imports a list of wiring descriptions for connections between electrical or network devices. The connection list may be created from 2D logical design applications external to Datacenter Clarity LC. Power lines from the building's main power panel all the way to the IT equipment can be easily mapped out. If power data is monitored in real time, the real-time device-level dashboards, 2D electrical diagram, and 3D data center model will provide an easy display of the minimum, maximum, and average amount of power used (over a user-defined period), as well as the latest value monitored. This can be of tremendous help when running what-if analyses or troubleshooting an electrical problem that's affecting IT operations.

- Network and power cable management
- Network and power connection and routing management
- Fault impact analysis
- What-if analysis
- Up/downstream impact

## Module 3 (floating license)

### Schedule and maintenance management

Schedule and maintenance management is a module dedicated to your data center infrastructure management and operations teams and includes all capabilities for team leaders to create project plans with a work breakdown structure (schedule task) hierarchy from best-practice schedule templates. Team members can be assigned to schedule tasks, and **by using workflow**, the team members can receive their work packages, including deliverables, in their Datacenter Clarity LC inbox. Team members can update their schedule task assignments and team leaders can track the progress of the schedule and re-plan it as required.

### Features include the ability to:

- Create schedules ad hoc or from templates
- Assign disciplines or users to scheduled tasks
- Assign deliverables to scheduled tasks
- Automate scheduled tasks via workflows
- Perform critical path analysis, finish date scheduling and other core project management activities

Hier ist der Satz vermutlich nicht vollständig, es fehlt etwas:  
'...by using workflow' ist so nicht verständlich.  
Eventuell:  
'...by using the workflow provided'?

## Module 4 (floating license)

### CFD simulation

This module is dedicated to data center infrastructure management and operations teams and includes capabilities for editing data related to asset management and asset classification. It provides access to capacity management, real-time monitoring and alarm management (with a starter kit of up to 1,000 points included with the central server bundle; additional points can be added and are priced as add-on capabilities), dashboards, KPI management, and trending and reporting. Provided that a floating license for the 3D modeling environment is available, the CFD expert user can then create, edit, and access all 3D asset capabilities for building data center asset configurations and adding visual information on top of 3D models (real-time data, business data). The 3D modeling enables the user to create aesthetically appealing data center models and provides users with enhanced visualization using both dynamic and photo-realistic rendering tools. The module includes active creation and participation rights within workflows and process management within the rich client.

#### Includes standard lightweight visualization capabilities:

- 3D markup tools that can include URLs
- 3D geometric dimensioning (distance between 3D assets, floor measurements, and more)
- Exploring in navigation mode (as if walking along a predefined path in the data center)
- Ability to take snapshots and capture images

#### Includes additional advanced lightweight visualization capabilities:

- Visual comparison of two data center 3D configurations to evaluate what was added/moved/removed between configurations
- Dynamic 3D cross-sectioning
- CFD results viewing (need CFD simulation for CFD modeling and simulation)
- Ability to annotate 3D model with important information
- Appearance editor to change color scheme or asset surface appearance
- Fly navigation mode – visually fly around the data center

People using the CFD simulation floating module must be CFD expert named users. This module is for data center personnel who need to access the available functionalities within the system, including entering data, searching data, modifying data, and manipulating data in Datacenter Clarity LC on a regular basis.

## Module 5 (floating license)

### Open API

Open API is a module dedicated to data center infrastructure management and operations teams. It includes a RESTful Web-based API for accessing common functions through a RESTful interface. It also includes the libraries, documentation, and utility tools required to create custom applications within the 3D modeling environment using Open C++, Open for .NET, or Open for Java Application Programming Interface (API) for all Datacenter Clarity LC 3D rich client interface access functions and customization. Custom applications built from any Open API do not require runtime licenses to execute. To use Open for .NET API, Microsoft .NET Framework must be installed on the Windows operating system (Microsoft prerequisites are not included in this bundle). Microsoft Visual Studio .NET integrated development environment is recommended (Microsoft prerequisites are not included in this bundle) for creating and running NX Open .NET executables and dlls. To use Open for Java API, Java 2 Platform, Standard Edition (J2SE) must be installed (Java prerequisites are not included in this bundle). The Java runtime environment distributed and installed with the 3D modeling environment does not include the software development kit (SDK) tools for compiling and debugging Open Java programs (Java prerequisites are not included in this bundle). The Datacenter Clarity LC Asset Management Open (SDK) consists of a collection of open tools to extend the Datacenter Clarity LC application and is included in this bundle. It allows for customization of all asset data and related lifecycle management functions. These tools include published APIs and libraries for adding custom extensions to the asset management applications and data extraction programs that can be used to copy information for passing on to third-party applications. One license is required for each of the asset management servers on which the customer develops extensions. **Run time** usage of developed extensions does not require this license.

Used by the person in charge of the customization of the Datacenter Clarity LC solution.

## Module 6 (floating license)

### 3D modeling add-on

The 3D modeling add-on provides an additional 3D modeling environment floating/concurrent license that allows any named users to access any of the 3D functionalities offered by Datacenter Clarity LC: for example, 3D asset capabilities for building data center asset configurations, adding visual information on top of a 3D model (real-time data, business data, customer data), tools for creating aesthetically appealing data center models, and enhanced visualization with both dynamic and photo-realistic rendering.

This license provides an additional floating 3D modeling environment required to create/modify/remove assets in the 3D configuration context of the data center. Any named user registered in the Datacenter Clarity LC system, excepting dashboard viewer named users, can access the additional floating license functionality. CFD experts and team members can leverage the entire 3D modeling environment capability. Team viewers may only access it in read-only mode.

## Clarity tags add-on bundle

The real-time Clarity tags add-on bundle includes the selected number of real-time tags bundle (see list of available bundles) along with communications interfaces required for acquiring data from IT assets, racks, facility assets, ancillary systems, sensors, BMS/EPMS systems, SCADA systems, operating systems and hosted applications, and any other device needed. It includes unlimited use of communications interfaces for a given real-time server site. High availability (fully redundant system) is available as an option.

### The following interfaces are available (\*) to use with the bundle:

- Standard IT monitoring interfaces: Performance Monitor, SNMP, Ping and TCP response
- Advanced IT monitoring interfaces: SNMP Trap, Windows EventLog, Syslog
- Building/energy monitoring interfaces: OPC (OLE for process control), Modbus, BACnet, DNP3
- Convenience interfaces: RDBMS (relational database management system), HTML, UFL (universal file loader), and server to server
- Any other commercially-available IT/facility-monitoring interfaces at the time of system purchase (over 800 with current release)

(\*) The list of required communications interfaces (and number of instances of each) need to be specified at the time of system purchase. There is no cost associated with them but they need to be specified at the time of purchase for commissioning purposes.

## Provisioned critical load (PCL) MW

Provisioned critical load or PCL means the total amount of designed, commissioned, and energized maximum IT load capacity monitored by the customer via a single central server bundle. PCL is measured in megawatts (MW).

The minimum purchase is two MW critical IT load up to 100 MW. Each MW bundle includes unlimited dashboard viewers, high availability (redundant system), and a large number of Clarity tags.

## Additional licenses for real-time monitoring

### PI Vision (\*)

PI Vision is a Web client tool for creating custom dashboards.

#### Description

PI Vision is an intuitive, Web-client tool that helps users quickly and easily analyze data enterprise-wide. Includes support for mobile browsers and customized views for small-screen devices to allow access to important data and information.

### PI DataLink (\*)

PI DataLink is a Microsoft Excel add-on that enables information retrieval from the PI system directly onto a spreadsheet.

#### Description

PI DataLink provides a graphical interface that brings PI server data directly into a Microsoft Excel spreadsheet, where you can create reports and perform detailed calculations using both standard Microsoft Excel calculations and native PI DataLink calculations.

### PI Processbook (\*)

PI Processbook is an easy-to-use display interface to the OSIsoft PI system.

#### Description

PI Processbook allows users to create 2D-based one-line diagrams with real-time information overlaid **on top of within** the diagram widgets.

**“on top of within” macht keinen Sinn. Ist eventuell “on top of or within” gemeint?**

### PI Interfaces (\*)

PI Interfaces collect data from external data sources, providing real-time, fault-tolerant data to the PI system.

### High Availability (HA) add-on (\*)

High Availability is an end-to-end solution for creating collectives to provide redundancy and ensure continuous data collection, storage, and availability of PI system data during system upgrades, hardware or network failures, and in the event of local disasters. High Availability uses standard, non-fault-tolerant hardware.

## Additional Intel licenses

### Intel DCM – monitoring only (\*)

Provides real-time monitoring of power and thermal consumption data from various data center assets.

### Intel DCM – monitoring and power management (\*)

Provides real-time monitoring of power and thermal consumption data from various data center assets and also manages and optimizes power by providing control over the power envelope of individual assets or groups of assets.

### Intel Virtual Gateway (KVM) (\*)

A cross-platform keyboard-video-mouse (KVM) software development kit designed to offer solution providers enhanced capabilities for diagnosing and troubleshooting data center hardware.

#### Description

Intel Virtual Gateway (KVM) is a universal remote that eliminates the need for costly KVM infrastructure and works across platforms and OEMs. It provides a central at-a-glance remote access for subsystem monitoring, automated health alerts, and remote on/off control. View single or multiple units and subsystems on the same pane of glass, in real time, from anywhere, and remotely.

\* For complete and up-to-date description of Intel modules, please refer to the Website: [www.intel.com](http://www.intel.com)

## 2. User description

Datacenter Clarity LC is based on named user licensing. We offer three different levels of user licenses

### Team member

**Team member includes one named user license with complete operation and standard 3D visualization.**

This license provides the same capabilities as the CFD expert with the exception of the lightweight visualization capabilities within the rich client, which only includes the standard lightweight visualization capabilities. This license is dedicated to data center infrastructure management and operations teams and includes capabilities for editing data related to asset management and asset classification. It provides access to capacity management, real-time monitoring and alarm management (with a starter kit of up to 1,000 points included with the central server bundle; additional points can be added and are priced as add-on capabilities), dashboards, KPI management, and trending and reporting. Provided that a floating license of the 3D modeling environment is available, the team member user can then create, edit, and access all 3D asset capabilities for building data center asset configurations and adding visual information on top of 3D models (real-time data, business data). The 3D modeling enables users to create aesthetically appealing data center models and provides them with enhanced visualization using both dynamic and photo-realistic rendering tools. The module includes active creation and participation rights within workflows and process management within the rich client.

**Includes standard lightweight visualization capabilities:**

- 3D markup tools that can include URLs
- 3D geometric dimensioning (distance between 3D assets, floor measurements, and more)
- Exploring in navigation mode (as if walking along a predefined path in the data center)
- Ability to take snapshots and capture images

This is the typical model selected for cable data entry users, regular operators, network team members, form-based data entry resources, and facility managers. In cases where multiple work shifts are in place (for example, three eight-hour shifts for 24/7 data center operations), extra users can be added using the team member module.

### Team viewer

**Named user license with read-only access and basic 3D visualization**

This license is dedicated to data center infrastructure management and operations teams. It includes capabilities to search and view data related to asset management and asset classification in read-only mode. It provides access in read-only mode to capacity management, real-time monitoring and alarm management (with a starter kit of up to 1,000 points included with the central server bundle; additional points can be added and are priced as add-on capabilities), dashboards, KPI management, and trending and reporting. This module includes participation rights only within workflows and process management to review, approve, and recommend actions within the rich client.

**Includes basic lightweight visualization capabilities:**

- Pan, zoom, and rotate the 3D model that represents the asset or data center room's current configuration

A team viewer's primary interaction with Datacenter Clarity LC is to search the environment to locate asset data that have been authored and published by other users. Team viewer users typically require permission to review, approve, and recommend changes to information contained in the environment. These users traditionally don't require full understanding of the environment's functionality. Instead, they use a subset of the environment's capabilities to perform tasks assigned to them. Managers, CxOs, directors, purchasing agents, marketing managers, and client support managers are good candidates for this module.

## Dashboard viewer

Named user license with read-only access to only real-time monitoring device-level dashboards and real-time information within the top-level dashboard (summary access, not asset-specific data).

This license is dedicated to data center infrastructure management and operations teams and includes access to the device-level dashboard to access the real-time monitoring information only (with a starter kit of up to 1,000 points included with the central server bundle; additional points can be added and are priced as add-on capabilities).

A dashboard viewer's primary interaction with Datacenter Clarity LC is to monitor specific device performance that is created and published by other users. These dashboard viewers traditionally don't require full understanding of the environment's functionality. No 3D asset visualization is provided to these users. Mechanical technicians, maintenance service technicians, suppliers, and client support managers are good candidates for this module.

	Asset management	Capacity planning	Workflow management	Asset modeling	Alarm management	Real-time device dashboards	4D reporting	Scheduled reporting
Team member	x	x	x	x	x	x	x	x
Team viewer	x	x	x	x	x	x	x	x
Dashboard viewer						x		

Article no. BT\_0137\_EN  
(Status 09/2017)

Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.