## User Management System

Solairis systems have primarily three types of users.

### Root User

* Root user of all Solairis system.
* Only system admin can have access to this credentials and should be used only in extreme conditions. Instead root user will create multiple ‘Internal User’ with admin roles, which would perform all administrative work.

### Internal User

These users are managed by Lumbini and assigned to Lumbini employees and partners that are managing Solairis system. Internal Users are of two types: Admin and Operator.

Admin Internal User

* Only root user can create admin-internal users.
* Admin internal users have almost same privileges as root user, except it cannot create/modify/view another admin users.
* Admin user can be used for all admin operations at Solairis. Root user is used very sparingly.
* Only admin user can create a new customer.
* Root user can activate/deactivate an admin user.

Operator Internal User

* Operator user can be created by admin users.
* These are assigned to Lumbini employees who will perform day to day system operations. Operator user have read-only access and minimal edit permission.
* Admin user can activate/deactivate an operator user.

### External User

External users are usually Solairis customers, site owners and partners. They use the Solairis system and use their services. External users are of three types:

Customer admin

* Customer admin user is automatically created when you create a new customer.
* These user cannot be deleted but can be marked inactive once the customer becomes inactive.
* Customer admin will perform administrative operations for a given customer.

Site admin

* Site admin is created by customer-admin of the respective customer.
* They usually perform administrative operations for one or more sites.
* Customer admin can assign one or more sites to site-admin. A site represents a physical location where solar panels are installed and one site can have at-most one site-admin, but multiple site-engineers.
* They can be activated/de-activated by the customer admin.

Site Engineer

* Site engineer is created by site-admins/customer-admins of the respective customer.
* Site-engineer can perform day-to-day site operations and management.
* Multiple site engineers can be assigned to a single site. Single site-engineer can be assigned to one or more sites.
* They can be activated/de-activated by site-admins.