

PSS®E Cloud

Product Sheet (Documentation)

PSS®E Cloud X provides transmission planning simulation software over the cloud that enables users with on-demand computation power to accelerate daily tasks and simulate even the most complex scenarios with shorter wait times.

Documentation

General

Value Proposition

Siemens PSS®E Cloud X supports PSS®E users in the following areas:

- **Accelerate Simulations** - Tackle the growing number of simulation requirements without sacrificing accuracy. With PSS®E Cloud X, users can now conveniently access on-demand computation power to accelerate daily tasks and simulate even the most complex scenarios with shorter wait times. The power of the cloud can be accessed directly in software through APIs or online.
- **Secure Collaboration** - With a few clicks, users can efficiently and securely store, share, and synchronize model data. PSS®E Cloud X is secure by design and ensures that major cybersecurity best practices/standards are covered.
- **Flexible Remote Working** - With PSS®E Cloud X, grid planning teams can sustain business continuity despite changing expectations. PSS®E Cloud X can be accessed from anywhere within the Territory – users only need their secure login credentials with multi-factor authentication and a web browser.
- **Optimize Investments** - Avoid high costs associated with implementing and maintaining complex IT infrastructures. With PSS®E Cloud X, users can easily scale based on business needs and get access to the latest software updates without complex approval processes. More precise budget planning can unlock new opportunities for expenditure.

Prerequisites

Operating systems and web browsers for users

PSS®E Cloud X is a Cloud Service with a web-based browser frontend for use on desktop computers or notebooks. PSS®E Cloud X uses the PSS®Cloud backend which requires a recent version of an HTML5 capable Internet Browser, e.g. Google Chrome

Description & functionalities

PSS®E Cloud X AppStream The PSS®E Cloud X Apps Streaming allows users to securely launch cloud-based simulation software via a web browser without requiring any on-premise installation.

Users can use the PSS®E Cloud X App Streaming functionality to perform study analysis, parallel distribution and securely collaborate on studies over the cloud as if the user was using an on-premise simulation software. This can be done with the PSS®E Cloud X and other simulation tools in the future.

PSS®E Cloud X API The PSS®E Cloud X provides Cloud APIs to allow users to use their existing pre-written scripts by working in the desktop application using Cloud APIs to offload the computational work to the cloud. The Client API used for Cloud APIs can be downloaded from the PSS®E Cloud X Web User Interface after signing up to the subscription.

Roles and authentication services

Authentication and Access This application uses the Siemens ID digital identity system for authentication. Therefore, a personal Siemens ID user account needs to be created before the application can be used. Registration on Siemens ID will be performed automatically for PSS® Cloud with email address provided at ordering. Siemens ID accounts itself can be managed via Siemens ID self-service <https://uss.login.siemens.com>. Terms and conditions for Siemens ID are available on <https://id.login.siemens.com>. Customer needs to define a technical admin (provided at ordering – email address needed). This technical admin can manage customer users, i.e. adding users up to the allowed number. Computation hours are reset at 12:00am on the first day of the next month.

Cybersecurity and maintenance

Cybersecurity Siemens' cloud infrastructure is operated under a cybersecurity governance model aligned with ISO 27001 and providers of Siemens' cloud infrastructure are required to (i) implement and maintain a cybersecurity program that complies, inter alia, with ISO 27001 or a successor standard (if any) that is substantially equivalent to ISO 27001 and that is designed to provide at least the same risk management and security controls as evidenced by the certification of the providers under ISO 27001 and (ii) have the adequacy of their cybersecurity measures annually verified by independent auditors. This Section contains Siemens' entire obligation regarding the security of the cloud infrastructure for the Cloud Services.

Certificates Cybersecurity certificates like ISO 27001, as well as other documents like STAR Registry Listings, can be found on Siemens' website (www.siemens.com/system-certificates) or external websites like <https://cloudsecurityalliance.org/star/registry/siemens-ag>. Cybersecurity certificates can also be obtained upon request.

Securities Advisories Siemens investigates reports of security issues and publishes Security Advisories for validated security vulnerabilities that directly involve Siemens products and require applying an update, performing an upgrade, or other customer

action. As part of the ongoing effort to help managing security risks and help keep systems protected, Siemens discloses the required information necessary to assess the impact of a security vulnerability under www.siemens.com/cert.

Entitlement Metrics and Limitations

Entitlement Metrics

The subscriber of PSS®E Cloud X has the following entitlements:

- Subscription Package
- Number of users
- Number of workers
- Computation hours

Subscription Packages

Different Subscription Packages of PSS®E Cloud X are available. The PSS®E modules that can be simulated on PSS®E Cloud X are grouped into Subscription Packages and shown in the table below.

| Subscription Package | Included Modules |
|------------------------|---|
| PSS®E Cloud X Basic | <ul style="list-style-type: none"> • Graphical User Interface and Contour Plotting • Power Flow • Contingency Analysis • Voltage Stability (PV/QV) Analysis • Python and IPLAN Scripting • Transmission Reliability Assessment |
| PSS®E Cloud X Standard | <ul style="list-style-type: none"> • All Modules in the PSS®E Cloud X Basic Package plus: • Line Properties • Dynamic Analysis • Short Circuit Analysis |
| PSS®E Cloud X Advanced | <ul style="list-style-type: none"> • All Modules in the PSS®E Cloud X Standard Package plus: • Advanced Contingency Analysis and RAS • Parallel Dynamics • Optimal Power Flow • Geomagnetically Induced Currents • Advanced Linear Analysis |
| PSS®E Cloud X Expert | <ul style="list-style-type: none"> • All Modules in the PSS®E Cloud X Advanced Package plus: • Harmonics • Time Series Power Flow |

The descriptions of each PSS®E Modules can be found in the Modules section of the PSS®E website: www.siemens.com/pss-e

Users

PSS®E Cloud subscription packages will include a number of named users as part of the Subscription Package.

Workers

All PSS®E Cloud X subscription packages will include a maximum number of workers. The workers allow for parallelization of work on the cloud to provide the computational power to speed up simulations.

Computation Hours

The PSS®E Cloud X subscription packages will include computation hours as part of the subscription. These hours are used to run simulations on the cloud. These are monthly computation hours that are reset on the 1st of each month

and terminate at the end of the subscription term. Computation hours are not carried over.

Other Limitations

You are not permitted to use Siemens PSS®E Cloud X in any way to create a product that provides competing functionality to Siemens PSS®E or use Siemens PSS®E Cloud X for the training of artificial intelligence models.

Subscription Packages & Limits

| Packages | Users | Monthly Computation Hours | Workers/User |
|---------------------------|-------|---------------------------|--------------|
| PSS®E Cloud X Trial | 1 | 100 | 32 |
| PSS®E Cloud X Basic 1 | 1 | 100 | 32 |
| PSS®E Cloud X Basic 3 | 3 | 175 | 32 |
| PSS®E Cloud X Basic 10 | 10 | 325 | 32 |
| PSS®E Cloud X Basic 30 | 30 | 500 | 32 |
| PSS®E Cloud X Standard 1 | 1 | 150 | 32 |
| PSS®E Cloud X Standard 3 | 3 | 250 | 32 |
| PSS®E Cloud X Standard 10 | 10 | 500 | 32 |
| PSS®E Cloud X Standard 30 | 30 | 825 | 32 |
| PSS®E Cloud X Advanced 1 | 1 | 250 | 32 |
| PSS®E Cloud X Advanced 3 | 3 | 375 | 32 |
| PSS®E Cloud X Advanced 10 | 10 | 750 | 32 |
| PSS®E Cloud X Advanced 30 | 30 | 1175 | 32 |
| PSS®E Cloud Expert 1 | 1 | 325 | 32 |
| PSS®E Cloud X Expert 3 | 3 | 500 | 32 |
| PSS®E Cloud X Expert 10 | 10 | 1000 | 32 |
| PSS®E Cloud X Expert 30 | 30 | 1325 | 32 |

Changes between Subscription Packages (Upgrade / Downgrade)

Upon Customer’s request, Siemens may adapt the selected subscription package. Requests to change the subscription package to a higher value subscription package (“Upgrade”) or a lower-value subscription package (“Downgrade”) can only be requested by the Customer prior to renewal of the Subscription Term.

Payment Terms

General

The fee for the ordered Subscription package is invoiced annually in advance. Additional fees for Upgrades will be calculated on a daily basis and are fully invoiced immediately after activation of the Upgrade.

In the case of three-year packages paid upfront, the fee for the booked subscription is invoiced three years in advance or invoiced annually as stated in the Order. If nothing is stated in the Order the fees will be invoiced in advance.

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| No-Charge and Trial Offerings | The Subscription Term for No-Charge and Trial Offerings is limited to 1 (one) month and will automatically terminate after expiry of this one-month period unless a different date is agreed in writing by both parties |
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Support and service levels

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| Agreed Service Level | Commercially reasonable efforts will be used to provide at least 98% Monthly Uptime Percentage. "Monthly Uptime Percentage" means the percentage of the Service being available on average during a calendar month, based on internal availability measurements. Monthly Uptime Percentage excludes downtime resulting directly or indirectly from any SLA Exclusions. The Cloud Services are available to the Customer if its user interface is accessible by login at the exit of the wide area network of the data center used by Siemens to provide the cloud Services. |
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| Service level exclusions ("SLA Exclusions"). | <p>Service level commitments exclude downtime resulting directly or indirectly from any SLA Exclusions. "SLA Exclusions" means unavailability or any other performance issue causing downtime of the Cloud Services as a result of:</p> <ul style="list-style-type: none"> (i) scheduled maintenance; (ii) downtime for which at least 24 hours prior notice is provided to Customer; (iii) factors outside Siemens' reasonable control; (iv) actions or inactions of Customer or any third party; (v) any equipment, software or other technology not provided by Siemens; or (vi) suspension or termination of the Cloud Services in accordance with the Agreement |
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| Remedies for not meeting service level. | Customer must submit to Siemens a support case within 30 days after the end of each relevant Month in which Siemens did not meet the Monthly Availability. Any claims not submitted by Customer within the specified time period may be denied by Siemens, and Siemens will have no further obligation to Customer with respect to such failure to meet the Monthly Availability. If Siemens is unable to meet the Monthly Availability for Cloud Services three or more times in a calendar year, then Customer will have the right to terminate the Order for the non-conforming Cloud Services. In the event of such termination, Siemens will refund any prepaid fees for the terminated Cloud Services on a pro-rata basis for the remainder of the Subscription Term for that Cloud Services. The remedies provided in this section will be Customer's sole and exclusive remedies with respect to availability of the Cloud Services. |
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Support

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| Contact | <p>Customer may contact Siemens' Technical Support organization as primary point of contact for support in relation to the Cloud Services. All Support inquiries must be made through:</p> <ul style="list-style-type: none"> • https://siemens-pss.freshdesk.com (Customer Care Portal) |
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| Scope of Technical Support | Subject to availability Siemens offers Customer support services via a service desk Monday to Friday, 9:00 am to 6:00pm (EST) on Business Days, excluding national and local holidays in USA. |
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Siemens will respond to Customer's support inquiry at Siemens' sole discretion via e-mail, hotline or remotely as described in this clause. Customer must ensure remote access to its local networks for e.g. remote diagnoses, upon request by Siemens. The following types of incidents are excluded from the scope of support for Cloud Services, but Customer may revert such requests to the sales team(s) for resolution:

- incidents regarding a release, version, and/or functionalities of a service developed or configured specifically for Customer (unless otherwise expressly set forth in an Order);
- incidents ascribed to a consulting or training request ("how-to"). These are covered by the online user documentation;
- incidents ascribed to a custom development request.
- Functional enhancements, upgrades, or software licenses to non-PSS@E Cloud products
- Emergency or after-hours works

The Customer Support is available in English.

To receive support services hereunder, Customer shall reasonably cooperate with Siemens' Support to resolve support incidents and shall have adequate technical expertise and knowledge of its Cloud Services configuration to provide relevant information to enable Siemens' Support to reproduce, troubleshoot and resolve the experienced error such as, by way of an example, instance name, username, form name and screenshot. Such support services may require that Siemens gets access to Customer Content in which case, Customer is required to issue temporary Credentials to Siemens to permit that access.

Additionally, Siemens may provide an emergency phone number for major system incidents for customers upon request.

Export control regulations

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| AL | N |
| ECCN | EAR99S |