



SAP Cloud Platform

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About the Tutorial

SAP Cloud Platform is a cloud-based tool to develop and deploy custom applications. This includes full range of service catalog including database, storage and backup of data, reporting service and transaction layer to develop multi-platform software development.

This tutorial gives you a comprehensive coverage of concepts of SAP Cloud and makes you comfortable to use it in your software development projects.

Audience

This tutorial has been prepared for professionals who aspire to learn the fundamentals of Cloud Platform and application development. Consultants and project team members who have already been a part of SAP application development can draw benefits from this tutorial and refresh their knowledge.

Prerequisites

The course is designed for beginners with little or no knowledge of SAP Cloud platform. The reader is expected to have a basic understanding of application development using Java, HTML5 and HANA XS applications.

If you are new to any of these technologies, we would suggest you to refresh your knowledge on these tutorials first, before starting with SAP Cloud Platform.

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1. SAP Cloud Platform – Introduction

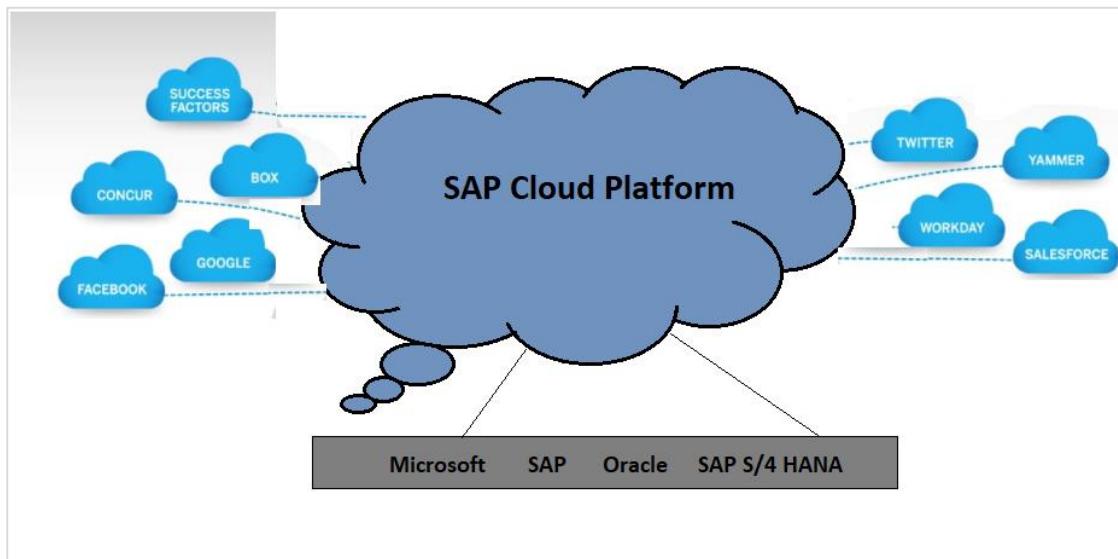
SAP Cloud Platform is a cloud service provided by SAP based on platform as a service (PaaS) to develop and deploy custom web applications. SAP is responsible for managing complete infrastructure of this platform including hardware servers, maintenance cost, component upgrades, and system lifecycle.

SAP Cloud service provides full range of service catalog including database, storage and data backup, reporting service and transaction layer to develop multi-platform software development. SAP Cloud platform customers can utilize this cloud environment for managing software development or can also use a hybrid model based on cloud and on premise environment.

SAP Cloud platform can be integrated with following to get data and development:

- SAP Applications
- 3rd party applications
- Internal solutions

Note that the above mentioned can be on premise or on cloud and can be easily integrated with SAP Cloud platform for application development.



SAP Cloud platform supports business critical solutions for software development and it includes:

- SAP Fieldglass
- SAP Success factors
- SAP Hybris
- SAP Ariba
- BusinessObjects
- SAP ERP Business suite
- Concur

You can migrate apps and extensions seamlessly to SAP Cloud platform including SAP Business suite and SAP S/4 HANA. All the data centers are managed by SAP itself, so you can expect the given key benefits associated with data center management:

- Security
- Compliance
- Availability

Why SAP Cloud Platform is Different?

SAP Cloud platform offers PaaS based in-memory and microservice based mobile enabled cloud applications. SAP Cloud Platform provides you an option to control your choice of clouds, frameworks, and applications.

To know more about SAP Cloud platform and services offered by Cloud service, you can navigate to this link- <https://cloudplatform.sap.com/index.html>

SAP Cloud Platform

Scenarios Capabilities Pricing Getting Started Customers Marketplace More Estimator Free Trial Login →

SAP Cloud Platform

Choose your preferred development technology and start building the cloud application of your dreams.

Start your free trial

Contact Us

What is SAP Cloud Platform?

SAP Cloud Platform is an open platform-as-a-service (PaaS) that delivers in-memory capabilities, core platform services, and unique microservices for building and extending intelligent, mobile-enabled cloud applications. The platform is designed to accelerate digital transformation by helping you quickly, easily, and economically develop the exact application you need – without investing in on-premise infrastructure. Based on open standards, SAP Cloud Platform offers complete flexibility and control over your choice of clouds, frameworks, and applications.

2. SAP Cloud – Free Trial

SAP Cloud platform also provides a free trial. For creating a trial account, you need to click "Start your free trial" button as shown below. You can also chat with SAP experts for any queries.

The screenshot shows the SAP Cloud registration page. On the left, there's a form titled "Tell us about yourself" with fields for E-mail address, First name, Company, Phone number, Create password, and a checkbox for terms and conditions. On the right, there's a "Log On" section with fields for E-Mail, ID, or Login Name and a Log On button. A central modal window titled "Need Help?" displays a portrait of a man and text: "We're here for you. Chat with one of our experts." It has two buttons: "Let's chat" (highlighted in green) and "No, thanks". Below the modal, a link to the Privacy Statement is visible. At the bottom, there's a "Submit" button.

To register for free trail, you need to provide your work email id, and other details. Once you successfully submit all the details, you can use that for logging into the Cloud service.

The screenshot shows the SAP Cloud registration page with filled fields. The "Tell us about yourself" section contains the following data:

- E-mail address: nehag@xyz.com
- First name: [redacted]
- Last name: [redacted]
- Company: [redacted]
- Office location: United States
- Phone: +1 XXX-XXX-XXXX
- Relationship to SAP: [redacted]
- Create password: [redacted]
- Confirm password: [redacted]
- I have read and understood the Terms and Conditions of SAP.com

The "Log On" section is partially visible on the right. A "SAP® ID Service" section is also present at the bottom right. A "Submit" button is located at the bottom left of the main form area.

Once you provide all details and login, you will get a message - "Welcome to your free trial". To start your trial, click the blue icon - "Click here to start your trial". SAP also assigns you a unique User Id for your trial period.

Once you login, it takes you to SAP Cloud platform cockpit.

The screenshot shows the SAP Cloud Platform Cockpit interface. On the left, there's a sidebar with 'Home', 'Regions', and 'Services'. The main area has a banner 'Your SAP Cloud Platform Trial' with two sections: 'Cloud Foundry Trial' (AWS, GCP, or Azure, 90 days limited trial) and 'Neo Trial' (SAP, Unlimited). Below the banner is a large image of a hot air balloon over mountains. The central part of the page has a 'Hello [REDACTED]' message, a 'Get Started' button, and sections for 'Environments' (Cloud Foundry and Neo) and 'Next Steps' (Deploy your first application, Launch SAP Web IDE, Download tools, Go to documentation, Go to developer tutorials). At the bottom left are 'Useful Links' and 'Legal Information'.

SAP Cloud Platform cockpit is the central Web-based user interface for administrators, and you can use this for providing access to various functions for configuring and managing applications using SAP Cloud platform. You can use the cockpit to manage resources, services, security, monitor application metrics, and perform actions on cloud applications.

The email starts with a yellow arrow icon pointing right. The subject line is 'Welcome to your free trial'. The body of the email reads:

Dear [REDACTED],

Thank you for your interest in *SAP Cloud Platform*.

To start your cloud trial, click this [link](#) or the button below.

Your User ID: [REDACTED] 83186

Want to know more? Please visit our [website](#), check out our [developer resources](#) to get started building your first app, or just get in touch.

We hope you enjoy your trial!

The SAP Cloud Platform Team

[Click here to start your trial!](#)

3. SAP Cloud Platform – Service Description

The service level agreement for SAP Cloud service is applicable to Cloud service mentioned in service description guide. You can check detail on Service level agreement using this link- <https://cloudplatform.sap.com/support/service-description.html>

The System Availability SLA for all Cloud Services is 99.9% per month. Any deviations from the 99.9% System Availability SLA or any aspect of the standard Service Level Agreement for SAP Cloud Services are noted in the applicable Cloud Service terms in this Service Description Guide.

You can check the details using this link- https://www.sap.com/about/agreements/cloud-services.html?search=Service%20Level%20Agreement&sort=latest_asc

The screenshot shows a document titled "Service Level Agreement for SAP Cloud Services". The document is bilingual, with sections in English and Russian. It includes a header with download, email, and share icons, and a close button. The English section starts with "SERVICE LEVEL AGREEMENT FOR SAP CLOUD SERVICES" and defines the "Service Level Agreement". The Russian section starts with "СОГЛАШЕНИЕ ОБ УРОВНЕ ОБСЛУЖИВАНИЯ ОБЛАЧНЫХ УСЛУГ SAP" and defines the "Соглашение об уровне обслуживания". Both sections describe the scope of the SLA, mentioning that it applies to the productive version of SAP Cloud Services and excludes certain SAP Cloud Services like SAP HANA Cloud. Definitions of "Downtime" and "Definitions" are also provided.

SERVICE LEVEL AGREEMENT FOR SAP CLOUD SERVICES

1. Service Level Agreement

This Service Level Agreement for SAP Cloud Services sets forth the System Availability Service Level Agreement ("SLA") for the productive version of the applicable SAP Cloud Services to which customer has subscribed ("SAP Cloud Services") in an Order Form with SAP.

This Service Level Agreement for SAP Cloud Services shall not apply to any SAP Cloud Service for which a System Availability SLA is explicitly set forth in the applicable Supplemental Terms and Conditions for such SAP Cloud Service or for which the applicability of the System Availability SLA is explicitly excluded in the Agreement.

2. Definitions

"Downtime" means the Total Minutes in the Month during which the productive version of the applicable SAP Cloud Service is not available, except for Excluded Downtimes.

СОГЛАШЕНИЕ ОБ УРОВНЕ ОБСЛУЖИВАНИЯ ОБЛАЧНЫХ УСЛУГ SAP

1. Соглашение об уровне обслуживания

Настоящее Соглашение об уровне обслуживания Облачных услуг SAP устанавливает Соглашение об уровне обслуживания по Доступности системы («SLA») для продуктивных версий применимых Облачных услуг, на которые подписан заказчик («Облачные услуги SAP») в соответствии с Договором с SAP.

Настоящее Соглашение об уровне обслуживания Облачных услуг SAP не применяется к любым Облачным услугам SAP, для которых явным образом установлен SLA Доступности системы в соответствующих Дополнительных условиях и положениях для таких Облачных услуг SAP, а также для которых применимость SLA Доступности системы в Соглашении явным образом исключена.

2. Определения

«Времяостоя» означает Итоговое количество минут в месяц, которое продуктивная версия соответствующей Облачной услуги SAP оставалась недоступна, кроме

High Availability

As per SAP- High Availability option for HANA and ASE Service in SAP's data centers, SAP shall provide High Availability for SAP Cloud Platform, HANA service or SAP Cloud Platform ASE service with an availability SLA of 99.95% per month if Customer has allocated to High Availability via SAP Cloud Platform provisioning self-service a duplicate of SAP Cloud Platform, HANA service or SAP Cloud Platform ASE service, as applicable. The duplicate SAP Cloud Platform services allocated to High Availability require separate subscriptions (and associated fees). In all other respects, the Service Level Agreement for SAP Cloud Services referenced in the Order Form applies to the applicable SAP Cloud Platform services.

SAP Cloud Platform Java server				
Cloud Service Description	Java server means a virtualized hardware resource used by Java-based Platform Applications.			
Usage Metric	Monthly Flat Fee per Piece			
Explanation of Usage Metric	Flat Fee means fixed monthly subscription fees			
Piece Size	1 Java server = 1 Piece			

Available T-Shirt Sizes:

Size	x-small	small	medium	large
Cores	1	2	4	8
Memory (MB)	2,048	4,096	8,192	16,384

	Precondition to System Availability SLA:
Service Availability "SLA"	<ul style="list-style-type: none"> Java Platform Applications need to run with minimum 2 application processes/nodes Java Platform Applications need to have an availability check configured
Previously referred to as	<p>SAP HANA Cloud Platform, Java server (x-small) = SAP HANA Cloud Platform, compute unit lite</p> <p>SAP HANA Cloud Platform, Java server (small) = SAP HANA Cloud Platform, compute professional</p> <p>SAP HANA Cloud Platform, Java server (medium) = SAP HANA Cloud Platform, compute premium</p> <p>SAP HANA Cloud Platform, Java server (large) = SAP HANA Cloud Platform, compute premium plus</p>

SAP Cloud Platform Virtual Machine	
Cloud Service Description	SAP Cloud Platform Virtual Machine is a virtualized infrastructure-as-a-service hardware resource used to host and run SAP or third-party applications.
Usage Metric	Monthly Flat Fee per Piece

SAP Cloud Platform

Explanation of Usage Metric	Flat Fee means fixed monthly subscription fees per Piece				
Piece Size	1 virtual machine server = 1 Piece				
Available T-Shirt Sizes					
Size	x-small	Small	medium	large	x-large
Cores	1	2	4	8	16
Storage (GB)	20	40	80	160	320
Memory (MB)	2,048	4,096	8,192	16,384	32,768
Additional Terms	<ul style="list-style-type: none"> · Customer may use the Cloud Service to host and run separately licensed SAP or third-party applications. · Customer is solely responsible for the security, maintenance, management and support of the applications installed by Customer on the Cloud Service. · Customer is responsible for back up of Customer Data – no back up services are included in the Cloud Service. · The Cloud Service is provided through a single data center. As such, no redundant data center is included for disaster recovery services. · Customer is solely responsible for managing and updating the OS layer of the Cloud Service, including patching the OS with the most recent security patches made available by the OS vendor. <p>Customer shall fully compensate SAP (without effect of any limitations on liability in the GTCs) for any damages or expenses incurred by SAP as a result of a claim by a third party that any Customer or third-party software or other technology hosted or run on the Customer's Cloud Service virtual machine infringes or otherwise violates the rights of the third party.</p>				

SAP Cloud Platform Portal

Cloud Service Description	SAP Cloud Platform Portal is a flexible environment that allows Customer to create and extend business websites.
Usage Metric	Per User per month
Explanation of Usage Metric	A User is an individual authorized to access Customer's SAP Cloud Platform Portal.
Pre-requisite	At least one (1) SAP Cloud Platform portal administrator
Additional Terms	<ul style="list-style-type: none"> · SAP Cloud Platform Portal is limited to access by individuals within the Customer's organization, including employees and contractors. · Each SAP Cloud Platform Portal subscription also includes: <ul style="list-style-type: none"> - 30 logons of SAP Cloud Platform Identity Authentication per User, per month
Previously referred as	SAP HANA Cloud Platform, portal service SAP HANA Cloud Portal

SAP Cloud Platform SAP HANA server (<size>, BYOL)

Cloud Service Description	Fully provisioned environment for Customer to bring separately purchased SAP HANA license to develop, test and run Platform Applications.
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Usage Metric	Monthly Flat Fee per Piece																																								
Explanation of Usage Metric	Flat fee means fixed monthly subscription fees																																								
Piece Size	1 Piece = 1 instance of a particular T-shirt size																																								
Available T-Shirt Sizes																																									
<table border="1"> <tr> <td>Size</td><td>64 GB</td><td>128 GB</td><td>256 GB</td><td>512 GB</td><td>1 TB</td><td></td></tr> <tr> <td>Cores</td><td>12 Cores</td><td>24 Cores</td><td>32 Cores</td><td>40 Cores</td><td>80 Cores</td><td></td></tr> <tr> <td>HANA Memory</td><td>64 GB</td><td>128 GB</td><td>256 GB</td><td>512 GB</td><td>1 TB</td><td></td></tr> <tr> <td>Disk Space</td><td>640 GB</td><td>1280 GB</td><td>2560 GB</td><td>5120 GB</td><td>10 TB</td><td></td></tr> <tr> <td>bandwidth(out)</td><td colspan="3">512 GB /Month</td><td colspan="3" rowspan="2">1 TB /Month</td></tr> </table>							Size	64 GB	128 GB	256 GB	512 GB	1 TB		Cores	12 Cores	24 Cores	32 Cores	40 Cores	80 Cores		HANA Memory	64 GB	128 GB	256 GB	512 GB	1 TB		Disk Space	640 GB	1280 GB	2560 GB	5120 GB	10 TB		bandwidth(out)	512 GB /Month			1 TB /Month		
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Disk Space	640 GB	1280 GB	2560 GB	5120 GB	10 TB																																				
bandwidth(out)	512 GB /Month			1 TB /Month																																					
Additional Terms & Conditions	<ul style="list-style-type: none"> SAP Cloud Platform SAP HANA Server (BYOL) does not include a license to the SAP HANA database or any other database. Customer must have a valid license agreement for the SAP HANA database in order to subscribe to SAP Cloud Platform SAP HANA Server (BYOL). Customer may not use SAP Cloud Platform SAP HANA Server (BYOL) or copy, access or use the SAP HANA database software accessible through the SAP HANA HANA server (BYOL) without such current license. Any attempt to access the SAP HANA database without such a license is a violation of SAP's intellectual property rights and a breach of this Agreement for which Customer will be liable to SAP. Customer's use of the SAP HANA database is governed by the license agreement under which it is licensed to Customer and support for the SAP HANA database is provided under applicable support agreement, if any. No support for the SAP HANA database accessible through SAP HANA Server (BYOL) is provided under this Agreement. 																																								
Previously referred to as	SAP HANA Cloud Platform, SAP HANA Infrastructure Services		SAP	HANA	se																																				

SAP Cloud Platform SAP HANA service (SAP DC), standard edition						
Cloud Description	SAP Cloud Platform SAP HANA service (SAP DC), standard edition allows Customer to develop, test and run Platform Applications— with a fully provisioned HANA environment including subscription-based SAP HANA database standard edition instance.					
Usage Metric	Monthly Flat Fee per Piece					
Explanation of Usage Metric	Flat fee means fixed monthly subscription fees					
Piece Size	1 Piece = 1 instance of a particular T-Shirt size					
Available T-Shirt sizes in Neo environment:						
Size	32 GB	64 GB	128 GB	256 GB	512 GB	1 TB
Cores	8 Cores	12 Cores	24 Cores	32 Cores	40 Cores	80 Cores
HANA Memory	32 GB	64 GB	128 GB	256 GB	512 GB	1 TB
Disk Space	320 GB	640 GB	1280 GB	2560 GB	5120 GB	10 TB
Bandwidth	512 GB/Month			1 TB/Month		

Available T-Shirts in Microsoft Azure environment:

Size	256 GB	512 GB	1 TB	2 TB
Cores	32	64	64	128
HANA Memory	256 GB	512 GB	1 TB	2 TB

SAP Cloud Platform

Disk Space	2.05 TB	2.56 TB	4.5 TB	8 TB
Bandwidth	512GB /Month	1TB /Month		

SAP Cloud Platform SAP HANA service (SAP DC), enterprise edition

Cloud Service Description	SAP Cloud Platform SAP HANA service (SAP DC), enterprise edition allows Customer to develop, test and run Platform Applications—with a fully provisioned HANA environment including subscription-based SAP HANA database enterprise edition instance.
Usage Metric	Monthly Flat Fee per Piece
Explanation of Usage Metric	Flat fee means fixed monthly subscription fees
Piece Size	1 Piece = 1 instance of a particular T-Shirt size

Available T-Shirt sizes in Neo environment:

Size	32 GB	64 GB	128 GB	256 GB	512 GB	1 TB
Cores	8 Cores	12 Cores	24 Cores	32 Cores	40 Cores	80 Cores
HANA Memory	32 GB	64 GB	128 GB	256 GB	512 GB	1 TB
Disk Space	320 GB	640 GB	1280 GB	2560 GB	5120 GB	10 TB
Bandwidth	512 GB/Month			1 TB/Month		

Available T-Shirts in Microsoft Azure environment:

Size	256 GB	512 GB	1 TB	2 TB
Cores	32	64	64	128
HANA Memory	256 GB	512 GB	1 TB	2 TB
Disk Space	2.05 TB	2.56 TB	4.5 TB	8 TB
Bandwidth	512GB /Month	1TB /Month		

SAP HANA spatial service

SAP HANA spatial services support business processes which require spatial data processing and analysis from multiple sources, such as Earth observation images, weather information, and business data.

Monthly Flat Fee per Piece

Flat Fee means fixed monthly subscription fees per Piece

1 Piece = 1 block of Starter Package or 1 block of Professional Package

Starter Package block includes 8,500 Transactions and 25GB of disk space storage

Professional Package block includes 67,000 Transactions and 150GB of disk space storage

1 Transaction = 100 Basic API calls or 1 Advanced API call

Basic and Advanced API calls are specified in the Documentation.

- The Cloud Service should not be used to process or store personal data.

- Publicly available geo reference data accessible through the Cloud Service may only be used in the context of the Cloud Service, and Customer is responsible for ensuring the accuracy and completeness of such data. SAP is not responsible for any harm caused by such data.

- The EU Access option is not available for the Cloud Service.

4. SAP Cloud Platform – Checklist for Site Planning

Before you start creating your site in Cloud platform, you should have clear idea about site goals, content of the site, site navigation and site evolution. This chapter explains these aspects in detail.

The key points to be considered for site planning are as follows:

- Site Goals
- Site Navigation
- Site Content
- Site Evolution

You will have to use the following checklist for this purpose:

- Purpose of site creation
- Target audience
- Business goals
- End user goals

The target audience for a site can include the following:

- Employees
- Suppliers
- Existing customers
- New customers

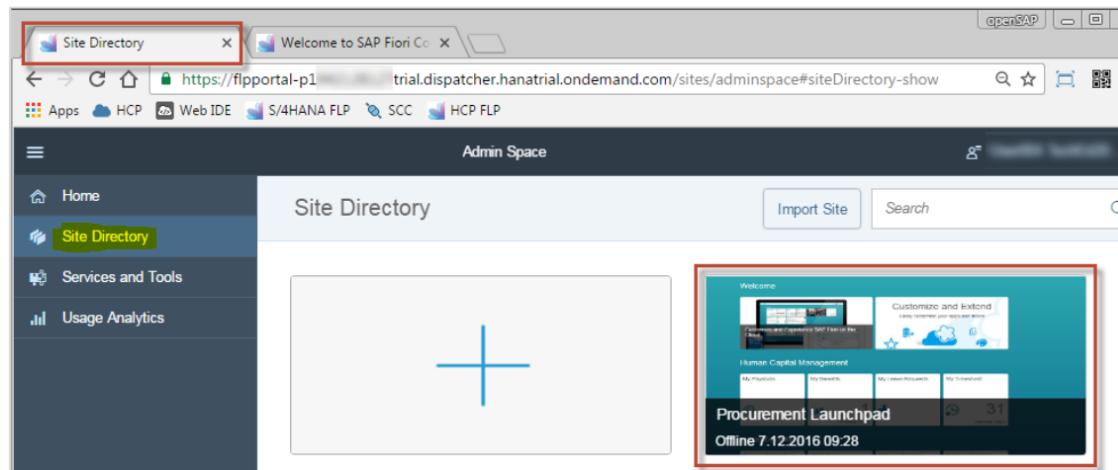
Once your goals are identified, define the navigation for your site. This includes how user will navigate between site pages. Note that the site menu can be managed for all pages or only for few pages.

Site content must be defined which includes text, videos, graphics and images. SAP Cloud portal allows you to add custom widgets, video, URL's and you can also create your own widgets.

You can define type of themes you want to use for your web site- you can use default theme or customized theme to meet your desired site design. Content of site includes-

- Content Type
- Branding
- Theme
- Links to be used
- Feedback from site user

To create a new site, Site directory is your starting point. Site directory takes each site as card, contains site details and other relevant information about site creation.



5. SAP Cloud Platform – New Site Creation

In SAP Cloud platform, you use Site Directory to create new site and to manage access to sites which you have permissions. Site Directory is first point for creating new sites. It is also possible to sort the cards in the Site Directory using the filter list (Sort-by) at the top, and you can search for specific sites using the Search field at the top right.

Using Site Directory, you can also view sites from additional sources, as follows:

Transferred Sites

Sites that were previously exported as ZIP files from other accounts or landscapes, and then imported to the Site Directory.

Transported Sites

Sites originated from a different account and deployed automatically to this account through SAP Cloud Platform.

To navigate to Site Directory, go to Services -> Portal.

The screenshot shows the SAP Cloud Platform Cockpit interface. On the left, there is a sidebar with the following menu items:

- Overview
- Applications
- Services** (highlighted in green)
- Solutions
- SAP HANA / SAP ASE
- Connectivity
- Destinations
- Cloud Connectors
- Security
- Repositories

The main content area has the following details:

- Header: Home [Europe (Rot) - Trial] / Europe (Rot) - Trial / p19
- Title: Subaccount: p1942583186trial - Services
- Subtitle: Filtered: 1 of 40
- Section: User Experience
- Card: **Portal** (highlighted in yellow)
 - Status: Not enabled
 - Description: Create role based, multi-channel sites to access business apps and content.

In the Overview tab of the Portal Section, you can see a short description of the service and a set of actions that can be performed. To access the launchpad(s) and the customization tool, navigate to go to Services

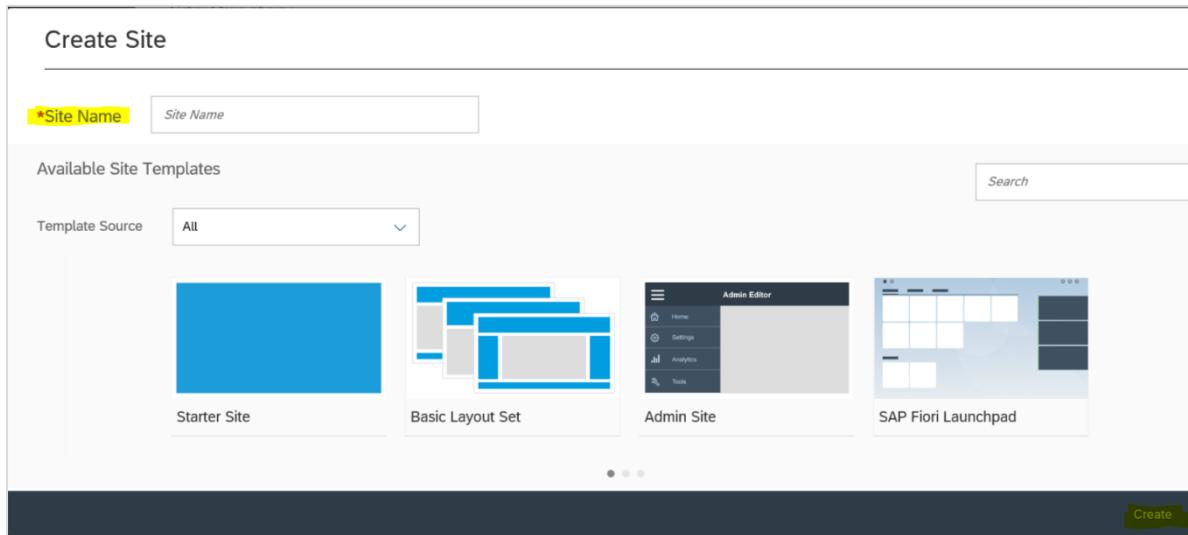
SAP Cloud Platform Portal lets you build digital experience portals for employees, customers, and partners. You can streamline access to business data so that your employees can execute their daily business tasks securely, from any device.

The screenshot shows the SAP Cloud Platform Cockpit interface. The top navigation bar includes links for Home [Europe (Rot) - Trial], Europe (Rot) - Trial, p1942583186trial, and Portal. The main title is "Service: Portal - Overview". A status indicator shows "Not enabled" with a "Enable" button below it. The "Service Description" section contains a brief overview of the service. The "Availability" section shows Cloud Foundry and NEO status. The "Take Action" section includes links for Configure Portal, Go to Service (which is highlighted with a yellow box), and Register for Portal notifications. The "Additional Resources" section links to Documentation and Troubleshooting Guide.

If you have already site defined, you can see list of all sites under Site directory page. To create a new site, click on card with cross button (+).

The screenshot shows the SAP Cloud Platform Cockpit interface. The top navigation bar includes links for Home, Site Directory (which is highlighted with a green box), Services and Tools, and Usage Analytics. The main content area is titled "Site Directory" and displays a large empty box with a central crosshair, indicating no sites are currently listed.

Next step is to enter a name and description for the site and click Create and Open. This will add site to Site Directory.



Using Site Directory, you can perform different tasks related to site management-import/export a site, publish a site, delete a site, etc. Following table lists different task you can perform using Site Directory -> Site Actions

Create a new site	Click +Add Site or click the blank card with the cross on it.	In the Create Site dialog box, enter the Site Name and Description . Then click either Create and Open , or Save .
Import an existing site	Click +Add Site > Import Site .	In the Import Site dialog box, browse to the location of the site ZIP file, and click Import .
Change the name and description of a site	Hover over the card, click the text at the top, and enter your changes.	The text is saved automatically.
Open a site for editing	Hover over the site card and click Edit .	The Authoring Space opens.
Publish a site	In the (Site actions) menu, click Publish .	This action makes the site available on the Web, for viewing by end users.
Take a site offline	In the (Site actions) menu, click Take Offline .	This action does not delete the site, but rather blocks end user access to it until you publish the site again.
Export a site	In the (Site actions) menu, click Export .	This action creates a ZIP file of your site structure, contents, and optionally, a list of your site guests.
Select a default site for the domain	In the (Site actions) menu, click Set as Default .	A default site is indicated by a star in the top-right corner of the card:
Make an identical copy of a site and its contents	In the (Site actions) menu, click Duplicate .	In the Duplicate Site dialog box, enter a Name and optional Description for the site copy, and select whether to include the existing list of site guests.
Delete a site	In the (Site actions) menu, click Delete .	This action completely deletes the site and its contents. You can delete an unpublished site or a site that has been taken offline. (You cannot delete a published site.)

Using Authoring space of SAP Cloud Platform, sites can be build, design and published. Authoring tools are used to make changes to site design, and changes are immediately implemented without need of saving work. You have following authoring tools from side panel to make changes to your site:

Set your site-level settings such as: site URL, tracking code, and redirect settings for downtime or mobile access.		Site Settings
View all content that is available for use in your sites, and add it to site pages.		Content Catalog
Set the design settings for your site, such as: site layout, site theme, and page template.		Design Settings
Add pages to your site and define specific settings for each page, such as: page alias, access level, and visibility.		Page Management
Add authors and invite site guests to view your site.		User Management
Preview your site on different devices.		Site Preview
Publish your site to make it available online, or take the site offline.		Publishing Options
Access the SAP Cloud Platform Portal documentation.		Help
Go back to the Site Directory.		Site Directory
Log off from the SAP Cloud Platform Portal environment.		Log Off

Note:

For site creation, you should have TENANT_ADMIN role (Administrator) in the SAP Cloud Platform Portal cockpit.

6. SAP Cloud Platform – Site Design

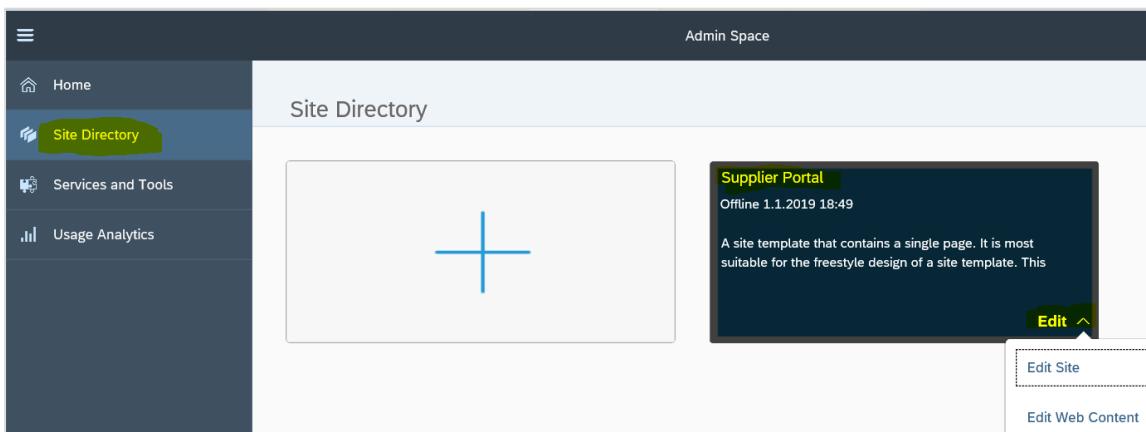
After creating a new site, you need to design your site properly. When a site is created, it has only one page and you need to add sub-pages and define their hierarchy. You can also define different access levels for the site.

To define site structure, click Page Management in side panel -> Page Management. This will open Page Management menu. You can also use Add Page button to add a page to your site.

To add an empty placeholder to the site menu (whose subpages are displayed upon hover), select Add Title from the dropdown menu and this will add a new page entry. You can also add a link to an internal or external page or site using "AddLink" from the dropdown menu.

You can also create a new page using content from another site page -> Click "Import Page" from the dropdown menu. You need to select the site and the page you want to import -> click Import. This will add a new page entry and shows the name of the source page.

You can also use Edit option at the bottom right or select the browser tab in Site Directory.



On the left side, you can access various tools, editors, and services provided by the configuration cockpit. To configure the Launchpad catalog open menu item, go to Content Management -> Catalogs or click the Catalogs tile.

You can also navigate to Properties tab to edit name and description of application.

The screenshot shows the Fiori Configuration Cockpit dashboard. On the left, a sidebar menu includes Home, Settings, Content Management, Services and Tools, App Resources, and Usage Analytics. The main area displays a green box with '0 Apps' and a blue box with '1 Catalogs'. Below the catalog box, a red arrow points to the 'Catalogs' text. To the right of the catalog box, there are four statistics: 0 SAPUI5 Fiori Apps, 0 SAP GUI and WDA apps, 0 Apps without a tile (launcher), and 0 Apps unassigned to catalogs.

The screenshot shows a 'Sample Catalog' interface. It features three circular icons: 'Properties' (highlighted with a yellow box and a red arrow), 'Apps', and 'Roles'. The 'Properties' icon is currently selected.

Using Roles tab, you can assign Roles tab and assign role to everyone.

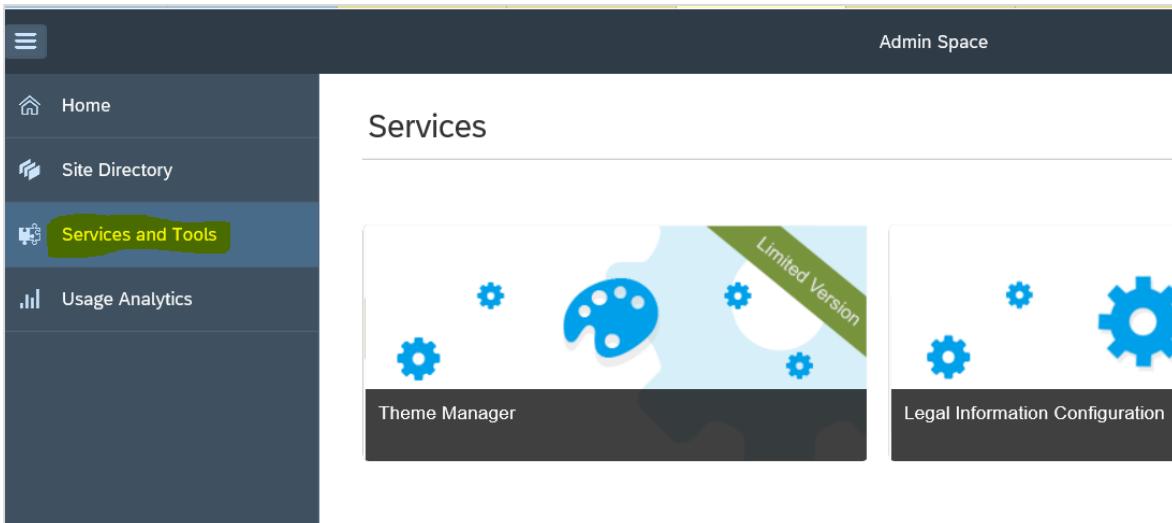
The screenshot shows the 'Fiori Configuration Cockpit' catalog management screen. The sidebar has 'Catalogs' selected. The main area shows 'Catalogs (1)' and a list item 'Procurement Applications'. On the right, the 'Edit Catalog' panel is open for 'Procurement Applications'. It shows a 'Procurement Applications' section with three tabs: 'Properties' (highlighted with a yellow box and a red arrow), 'Apps', and 'Roles' (highlighted with a yellow box). Below this, the 'Assigned Roles (1)' section shows a table with one row: 'Everyone' (highlighted with a yellow box and a red arrow). There are '+' and '-' buttons to manage assigned roles.

7. SAP Cloud Platform – Site Themes

Using site themes, you can define overall appearance of your site. SAP Cloud platform offers predefined site themes and an administrator can add more themes to theme repository. In this chapter, let us see in detail the overall concepts involved in the site themes.

Themes used in site are defined in LESS stylesheet file- it is used to control UI part of site like font, color, etc.

To apply a theme, navigate to Design Settings -> Services and Tools.



To assign custom theme to your site, navigate to Theme Manager. All the themes that you created are available under Theme manager. When you select a theme, you can check the following details under manage themes:

- Title
- ID
- Updated By
- Updated On
- Theme Upgrade

The screenshot shows the SAP Cloud Platform Admin Space interface. On the left, there's a sidebar with links like Home, Site Directory, Services and Tools (which is highlighted), and Usage Analytics. Below the sidebar is a bottom toolbar with icons for Useful Tools, Search, and a navigation arrow.

The main content area is titled "Themes (4)". It contains a search bar and a list of four themes:

- SAP Belize
- SAP Belize Plus
- SAP Blue Crystal
- SAP High Contrast Black

Each theme entry has a small circular icon next to it. To the right of the list, the "SAP Belize" theme is selected, showing its details:

- Title: SAP Belize
- ID: sap_belize
- Updated by: SAP
- Updated on: [date]
- Theme Upgrade: Yes

Bottom toolbar provides you following options to manage the theme. Click "Assign to Site" option to assign a theme to your site.

- Enable User selection
- Assign to Site
- Export
- Edit
- Delete

This screenshot shows the "Themes (4)" list and the details for the "SAP High Contrast Black" theme. The "SAP High Contrast Black" theme is highlighted in the list.

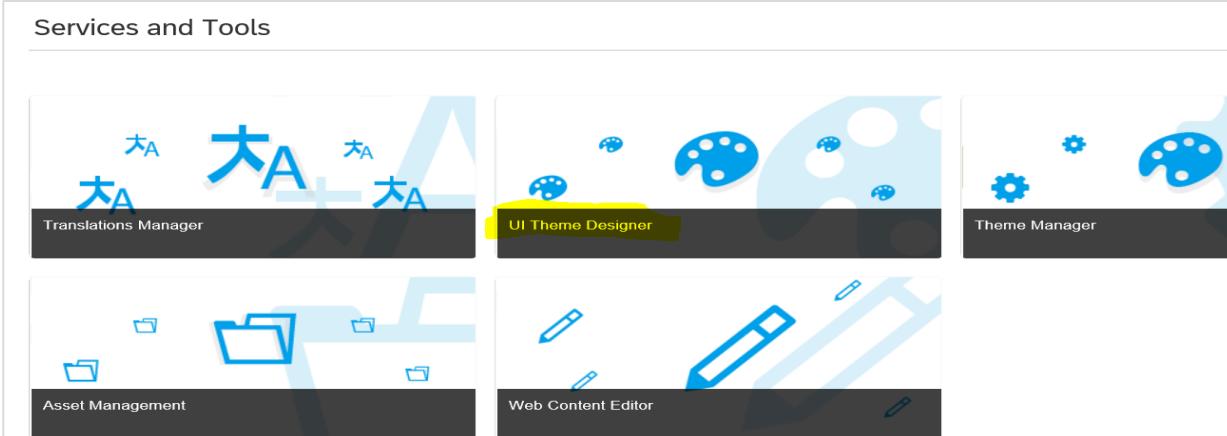
The "Manage Themes" section on the right displays the following details for the selected theme:

- Title: SAP High Contrast Black
- ID: sap_hcb
- Updated by: SAP
- Updated on: [date]
- Theme Upgrade: Yes

Once you apply all the changes, click Publish button to publish to your site.

Creating and Publishing Theme

To create a new theme, navigate to UI Theme Designer -> “Create a New Theme” and select your base theme. You can select any of base theme from list of available themes.



The screenshot shows the SAP Cloud Platform Services and Tools interface. At the top, there's a header bar with "Services and Tools". Below it, five service cards are displayed in a grid:

- Translations Manager**: Represented by four large blue 'A' icons.
- UI Theme Designer**: Represented by a palette and paintbrush icon.
- Theme Manager**: Represented by a gear icon.
- Asset Management**: Represented by folder icons.
- Web Content Editor**: Represented by a pencil icon.

Below this grid is the main application window for the **UI Theme Designer**. The title bar has tabs for "Theme" (which is selected) and "Help". The main area contains the following elements:

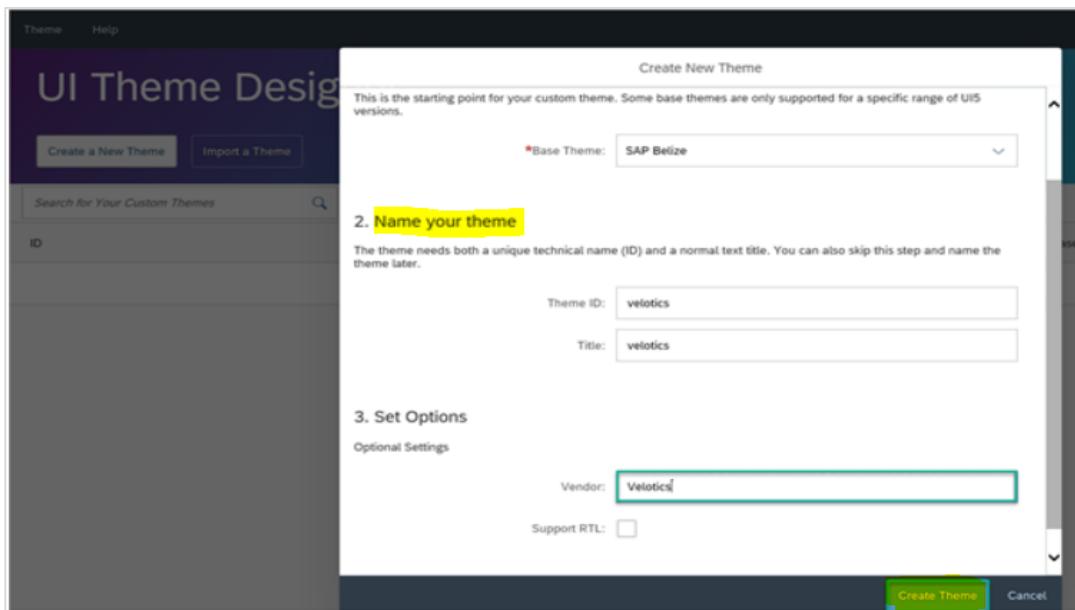
- A yellow-highlighted button labeled **Create a New Theme**.
- A button labeled **Import a Theme**.
- A search bar with the placeholder text **Search for Your Custom Themes** and a magnifying glass icon.
- A table with columns for **ID**, **Title**, and **Vendor**.

The following steps are involved while creating a customized theme:

- Choose Base Theme
- Name your Theme
- Set Options

In the next window, you must enter details under “Name your theme”- Theme ID and Title. You also have an option to define optional settings like Vendor, support, under Set Options.

To proceed with theme creation, click Create Theme.



To customize a theme, first define a Target Page that will act as a canvas to perform changes. Use Quick Theming mode change color, image background, etc. and click Add button to add the target pages.

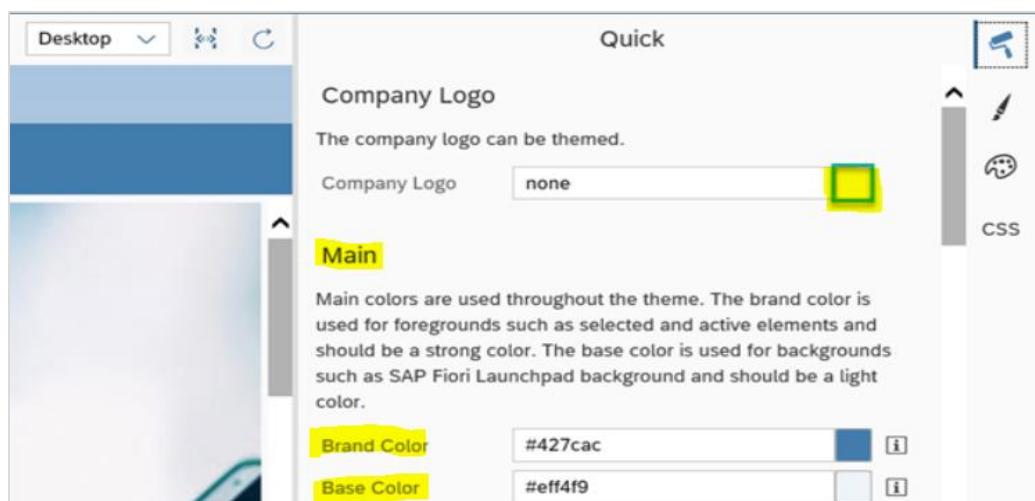
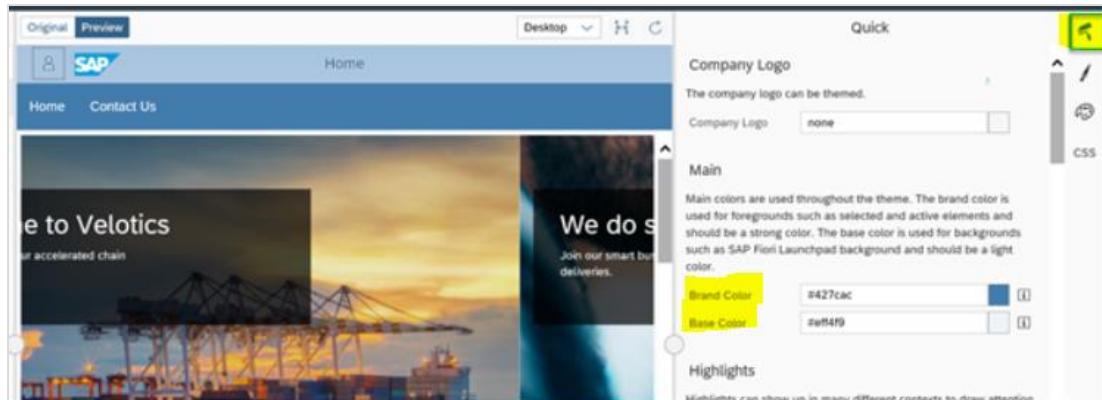
You can select from the following options on the right side:

- Quick theming
- Expert Theming
- Defining Organization color
- Add LESS or CSS to your theme

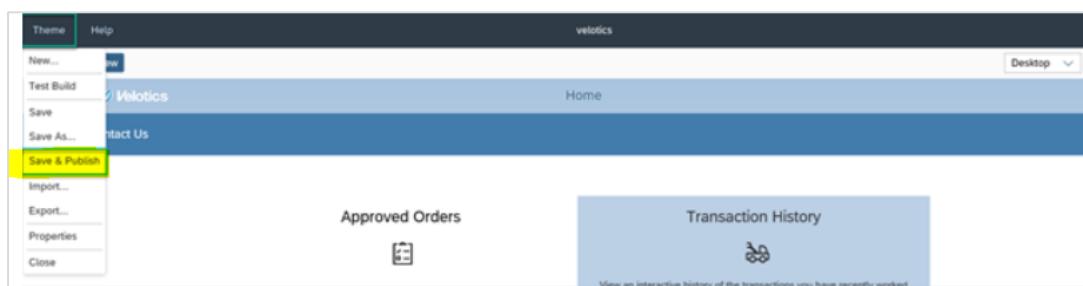
On right side panel, you can select Quick Theming option by clicking the paint brush icon. You can change logo, add brand and base color for foreground and background.



You can see below options under Quick theming. Select image you want to use for Company Logo -> click OK to apply changes

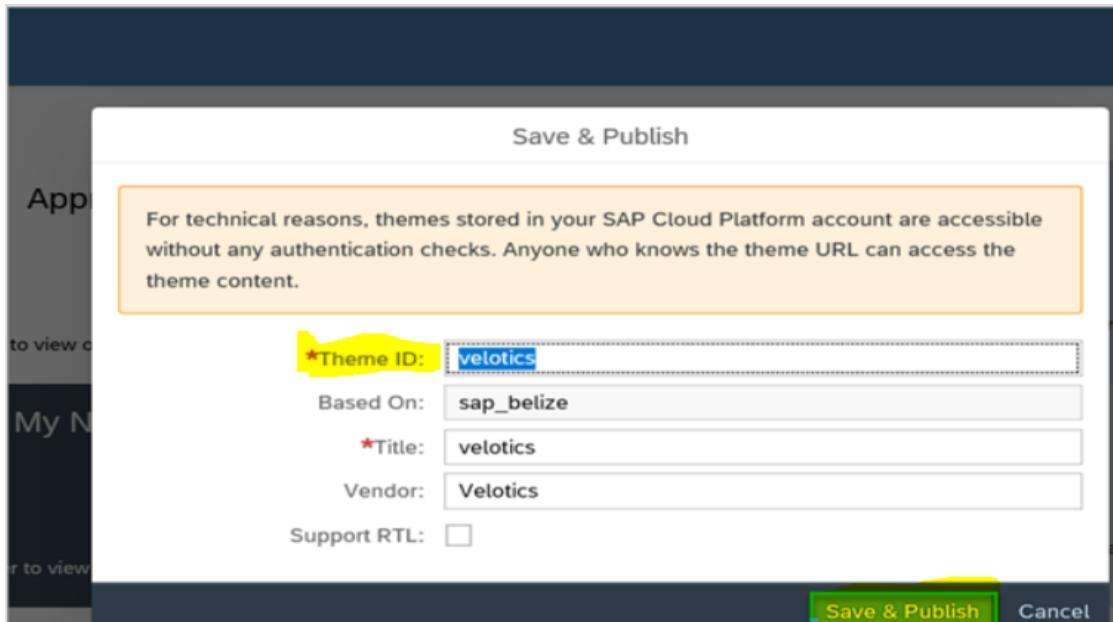


Note that if you want to apply new theme to portal site, first step is to publish the theme using UI Theme Designer and apply the theme from Portal Theme Manager.



To Publish a theme, in UI Theme Designer top level menu -> select Theme and then Save & Publish.

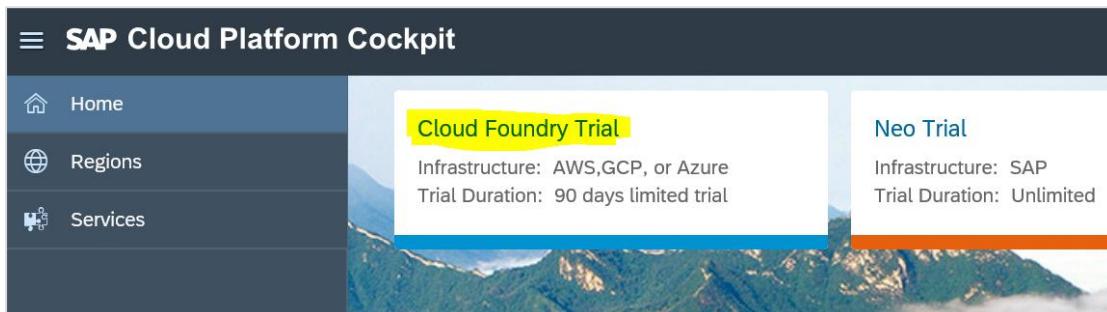
You can also validate the theme parameters that you defined while creating new theme-name, description, vendor, etc. Click on Save and Publish button as shown below to publish the theme.



8. SAP Cloud Platform – Cloud Foundry Environment

While using Cloud Foundry environment, services are enabled by creating a service instance and bind the instance to application. You can create a Service instances based on specific service plan defined as configuration variant of a service.

To integrate any service or service instance with application, you need to pass service credentials to application. Achieving this, you can bind the service instances with application to automatically deliver these credentials to your application or other way is by using service keys to generate credentials to communicate directly with a service instance.



9. SAP Cloud Platform – Creating New Instance

You can create an instance using cockpit or command line cloud foundry interface. The first step for this is to navigate to space where you want to create a service instance. Navigate to Services -> Service Marketplace

The screenshot shows the SAP Cloud Platform Cockpit interface. In the top navigation bar, the path is Home [Europe (Rot) - Trial] / Europe (Frankfurt) / P1942583186trial / trial / dev. The left sidebar has a 'Services' section with 'Service Marketplace' selected. The main content area is titled 'Space: dev - Service Marketplace' and shows a grid of service tiles. A message at the top says 'Only 20 of 28 tiles are shown. Please refine your search if the tiles you are looking for are missing.' The tiles include: 'API Management' (api-management), 'Application Autoscaler' (autoscaler), 'Application Logging' (application-logs), 'auditlog-api' (auditlog-api), 'auditlog-management' (auditlog-management), and 'Authorization & Trust Managem...' (xsuaa).

Now, select the service for which you want to create an instance -> In the navigation area, choose Instances on left side-> You can see an option to create New Instance.

You can also use search option to search for a service. When you use an enterprise account, you need to add quotas to the services you purchased in your subaccount before they appear in the service marketplace or it will only display services available in trial account.

The screenshot shows the SAP Cloud Platform Cockpit interface. The path in the top navigation bar is Home [Europe (Rot) - Trial] / Europe (Frankfurt) / P1942583186trial / trial / dev. The left sidebar has an 'Instances' section selected. The main content area is titled 'Service: Application Logging - Instances'. It shows a table with one row: 'Name' and 'Plan', with the status 'No instances'. A green button labeled 'New Instance' is visible.

Select the service plan from the dropdown list -> Next

Create Instance	
Choose Service Plan	Choose Service Plan
Specify Parameters (Optional)	Plan: <input type="text" value="lite"/> <input type="button" value="▼"/> Feature: <input type="text" value="lite"/>
Assign Application (Optional)	No data
Confirm	

Next is to specify a JSON file or specify parameters in the JSON format ->Next. This is an optional field to select for instance creation and you can leave it blank and click Next.

Create Instance	
Choose Service Plan	Specify Parameters (Optional)
Specify Parameters (Optional)	Select a JSON file or specify parameters in the JSON format: <input type="text"/> <input type="button" value="Browse..."/>
Assign Application (Optional)	
Confirm	

You can also assign an application that you want to bind to the new service instance, choose it from the list and click Next. This is an optional field to select.

Create Instance	
Choose Service Plan	Assign Application (Optional)
Specify Parameters (Optional)	Choose an application to bind the new service instance.
Assign Application (Optional)	Application: <input type="text" value="(None)"/> <input type="text" value="(None)"/>
Confirm	

Enter the instance name and validate parameters passed during the instance creation. You can edit any of the parameter as required. Click Finish button to complete the instance creation.

To create a service instance using Cloud Foundry Command Line interface, you can run the following command:

```
cf create-service SERVICE PLAN SERVICE_INSTANCE
```

The following parameters should be defined in above command to create a service instance:

- SERVICE: This shows the name of the service in market place to create an instance.
- PLAN: This is the name of the service plan you want to use in instance creation.
- SERVICE_INSTANCE: This is the name of the service instance. Note that you should use- alphanumeric characters, hyphens, and underscores.

Create Instance

Choose Service Plan	Confirm
Specify Parameters (Optional)	
Assign Application (Optional)	Service Plan: lite
Confirm	Instance Parameters: <input type="text" value="60"/>
	Application: (None)
	*Instance Name: <input type="text" value="TEST"/>

Previous **Finish** Cancel

10. SAP Cloud Platform – Binding an Instance to Application

You can bind a service instance to an application using cockpit or command line interface. The binding of an instances to applications can be performed both at the application view or at service-instance view in Cloud cockpit.

To create a binding at service instance view, navigate to Services -> Service Instances

The screenshot shows the SAP Cloud Platform Cockpit interface. The left sidebar has a navigation menu with the following items: Applications, Services (with a dropdown arrow), Service Marketplace, Service Instances (which is highlighted with a yellow box), User-Provided Services, and Portal. The main content area is titled "Space: dev - Applications". It shows a message "All: 0" and a large blue button labeled "Deploy Application". Below this, there is a table with columns: Requested State, Name, and Instance. The table currently has no data.

Select Bind Instance in the Actions column for your service instance as shown below.

The screenshot shows the SAP Cloud Platform Cockpit interface. The left sidebar has a navigation menu with the following items: Applications, Services (with a dropdown arrow), Service Marketplace, Service Instances (which is highlighted with a yellow box), User-Provided Services, Portal, Routes, and Security Groups. The main content area is titled "Space: dev - Service Instances". It shows a message "All: 1". Below this, there is a table with columns: Name, Service, Plan, Referencing Applications, Service Keys, Last Operation, and Actions. One row is visible, showing "TEST" as the Name, "application-logs" as the Service, "lite" as the Plan, "None" as the Referencing Applications, "0" as the Service Keys, and "Created" as the Last Operation. The "Actions" column for this row contains two icons: a magnifying glass and a pencil.

Select your application from drop down and you can also specify parameters in the JSON format or select a JSON file -> Save.

The screenshot shows a modal dialog box titled "Bind Instance". It has a field labeled "*Application:" with a dropdown menu open. Below it is a checkbox labeled "Specify Parameters: ". A note at the bottom says, "If you want to unbind the instance later on, navigate to the Service Bindings screen of the application." At the bottom right of the dialog are "Save" and "Cancel" buttons.

To bind a service instance to an application using Cloud Foundry command line interface, use the following command:

```
cf bind-service APP-NAME SERVICE_INSTANCE {-c PARAMETERS_AS_JSON}
```

In the above command, you have to pass the following parameters:

- APP_NAME: You need to pass the application name.
- SERVICE_INSTANCE: You need to pass the service instance.
- -c: You need to pass service-specific configuration parameters in a valid JSON object (OPTIONAL)

11. SAP Cloud Platform – Creating Service Key

Service keys are used in an application to directly communicate with a service instance. When service keys are configured for service, apps from other space, outside entities can access your service using service keys. Service keys can be created using SAP Cloud cockpit or Cloud Foundry command line interface.

To create service keys using SAP Cloud cockpit, navigate to space where service instance has been created and go to Services -> Service Marketplace

The screenshot shows the SAP Cloud Platform Cockpit interface. On the left, there is a navigation bar with 'Applications' and 'Services' (with a dropdown arrow). Below 'Services', a button labeled 'Service Marketplace' is highlighted with a yellow box. The main content area shows the URL 'Home [Europe (Rot) - Trial] / Europe (Frankfurt)' and the title 'Space: dev - Service Marketplace'. It also displays the count 'All: 28'.

Select the service you want to create a service key -> Select the Instance for which service key has to be created -> Left side navigate to Service Keys tab.

The screenshot shows the SAP Cloud Platform Cockpit interface. On the left, the 'Service Keys' tab is selected and highlighted with a yellow box. The main content area shows the URL 'Home [Europe (Rot) - Trial] / Europe (Frankfurt)' and the title 'Service Instance: TEST - Service Keys'. It displays the count 'All: 0' and a blue button labeled '(+) Create Service Key'.

To create Service key for instance, click on Create Service Key button. Enter a name for the service key -> Optionally enter configuration parameters ->Save



To create a service key using Cloud Foundry command line interface, you need to run the following command:

```
cf create-service-key SERVICE_INSTANCE SERVICE_KEY {-c PARAMETERS_AS_JSON} . .
```

Now, enter the following parameters:

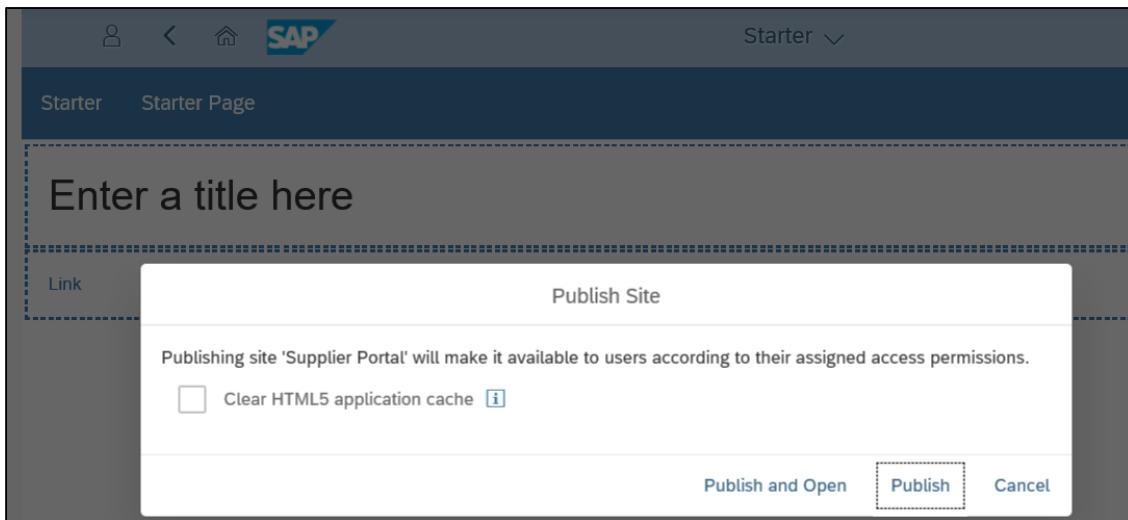
- SERVICE_INSTANCE: This shows name of the service instance.
- SERVICE_KEY: You need to mention the name for the service key.
- -c: (Optional) Here you need to provide service-specific configuration parameters in a valid JSON object

12. SAP Cloud – Publishing Site

When your site is finalized, you can publish it to make it available to others. Before publishing site, you need to ensure site displays as expected. Let us deal with this concept in detail in this chapter.

You will have to check the following points should be checked before publishing a site:

Previewing your site	Before you publish your site, make sure that the site displays as you expect on every device that you need to support. It is much more efficient to resolve any issues before you publish, rather than afterwards, when you would need to take your site offline to make any necessary changes.
Editing the Site URL	Before you publish your site, you can modify the suffix of the site URL to make it meaningful to your planned audience. Choose a text string that includes the organization name, indicates the purpose of the site, and is as short as possible.
Publishing your site	After you have previewed your site and made sure that everything is correct, you can publish the site to make it available online.



Publishing Options

The Publishing Options in the side panel change according to the site status: You have the following site status available:

Publishing Options – Offline

This shows that site has not yet been published or it has been offline after publishing for the maintenance.

Publishing Options – Published

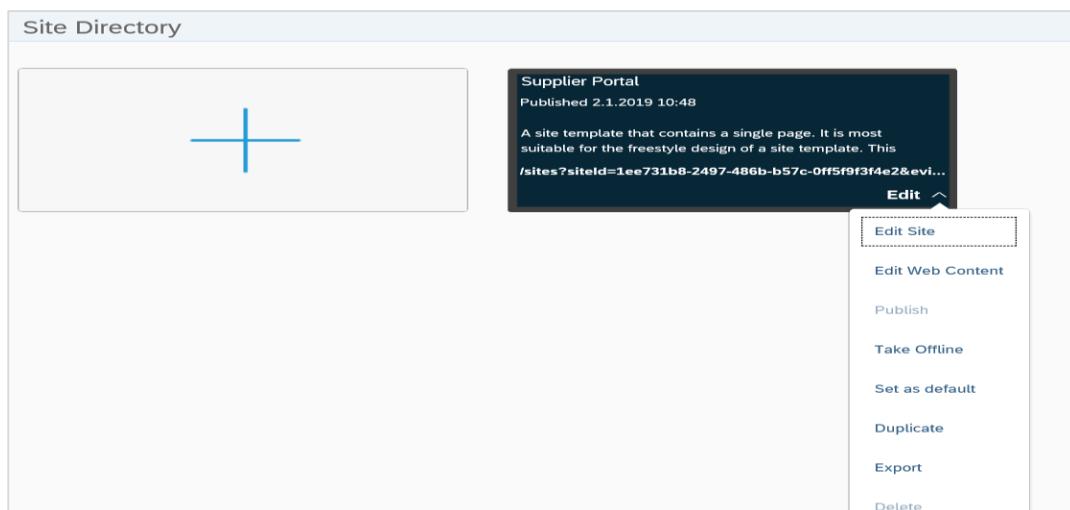
This shows that site has published for other users.

Published Options – Modified

This shows that site has been published however it has been modified after it was published. Once the site has been published, you can invite others to access it by sharing a URL in an email. The public sites can be accessed without restriction; however private sites need invite to users.

In the following table, you can see the steps that need to be performed for publishing and updating a site:

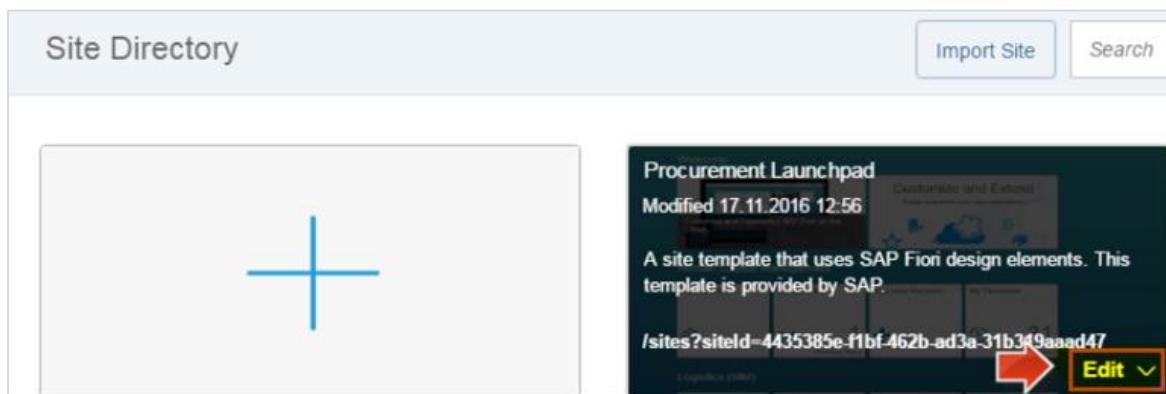
Publish the site	Make the site available on the Web for viewing by end users.	Click Publish .
View published site	View the published site on the desktop or mobile device.	<ul style="list-style-type: none"> Click Published Site to open the site in a new browser window (or tab). Click QR Code and then scan the QR code for viewing the site on a mobile device.
Modify the published site	Add and remove content to and from the site, and to change the design settings. These changes cannot be seen by end users until you publish the site again.	Use the options on the side-panel menu to modify the site.
Take the site offline	Prevent end users from accessing the site. This action does not delete the site, but rather blocks access to it until you publish the site again. Site authors can still access the site.	Click Take Offline .
Cancel changes made to the site	Remove all changes made to the site since it was last published. This option is not available for sites that have never been published.	Click Revert to Last Published Site .



13. SAP Cloud – Other Site Activities

You can define a site as the default site to your account. This helps user to modify a site without taking it offline for maintenance. You can make changes to the site and then make the updated site as default site for your account. In this chapter, let us discuss such other site activities that can be done.

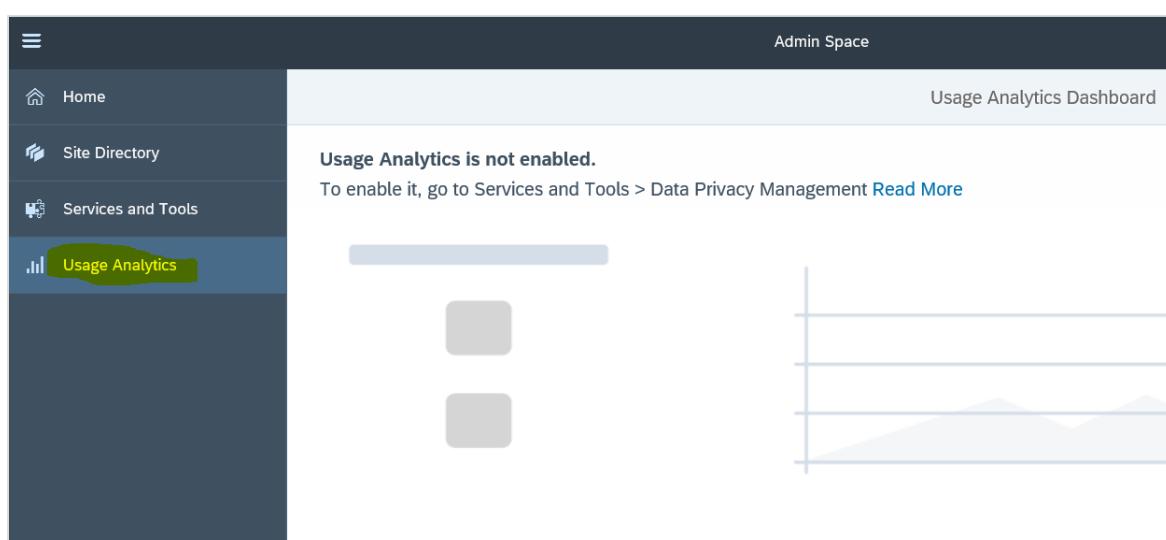
To assign default site to your account, navigate to Site directory and bring the cursor on the site card you want to make as default. From Site Action menu -> click Set as default.



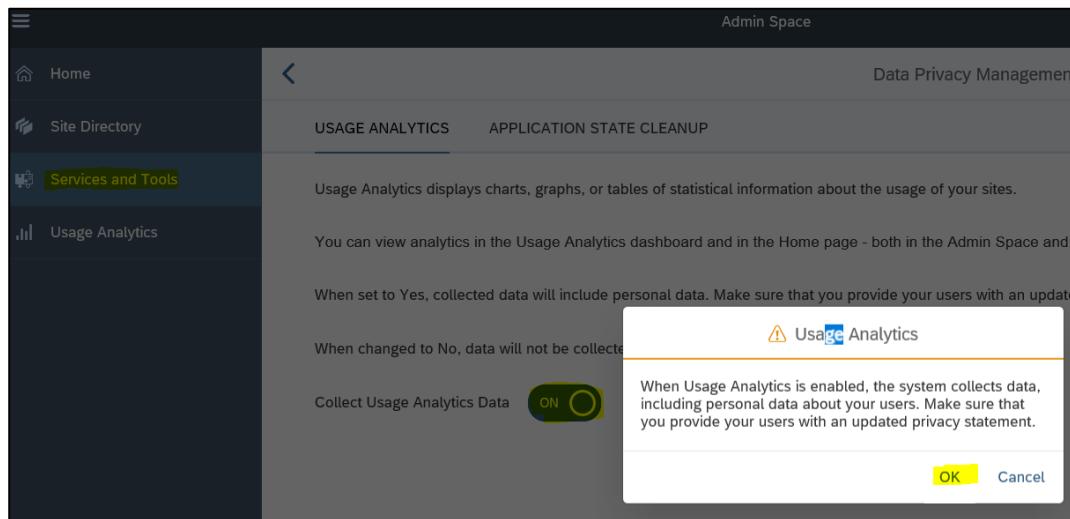
Managing Site Statistics

In SAP Cloud platform, you can also analyze statistics of portal sites which you have access. You can use Analytics dashboard to check statistical information related to Portal sites. Go to Analytics tab in Portal service to view charts or tables of statistical information about the usage of one or more selected sites.

You can use this information to better understand usage trends, and traffic peaks and lows, and thereby improve your sites to yield optimal results.

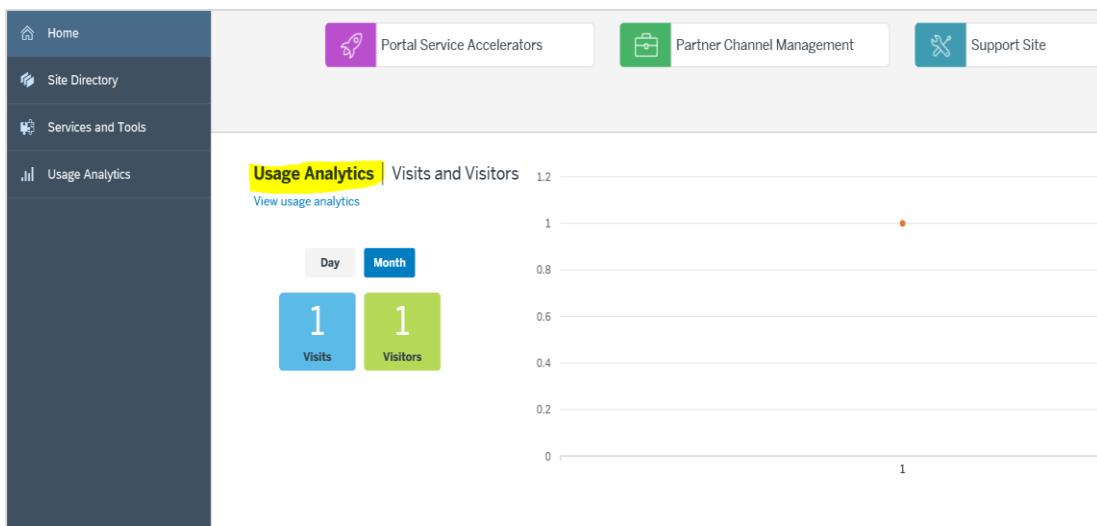


To enable it, navigate to Services and Tools -> Data Privacy Management

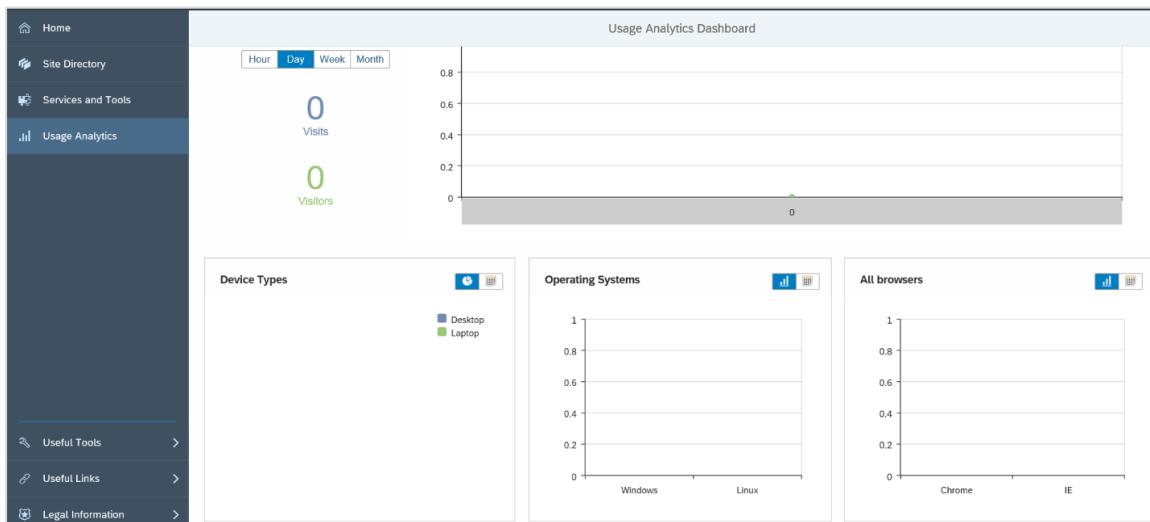


Using Analytics option, you can find the following information:

- You can view a gauge for Visits and Visitors to measure the web traffic during a time period and you can further break the report in day, hours, and mins.
- You can also view the different devices from which the site was accessed- mobile devices, tablets or user PC.
- You can also check the information related to OS type used and browser types to access the site.



When you click View Usage Analytics, you have an option to Visits and Visitors details (Hour, day, week and month), device type, Operating systems and browser details.



14. SAP Cloud – Translating Site

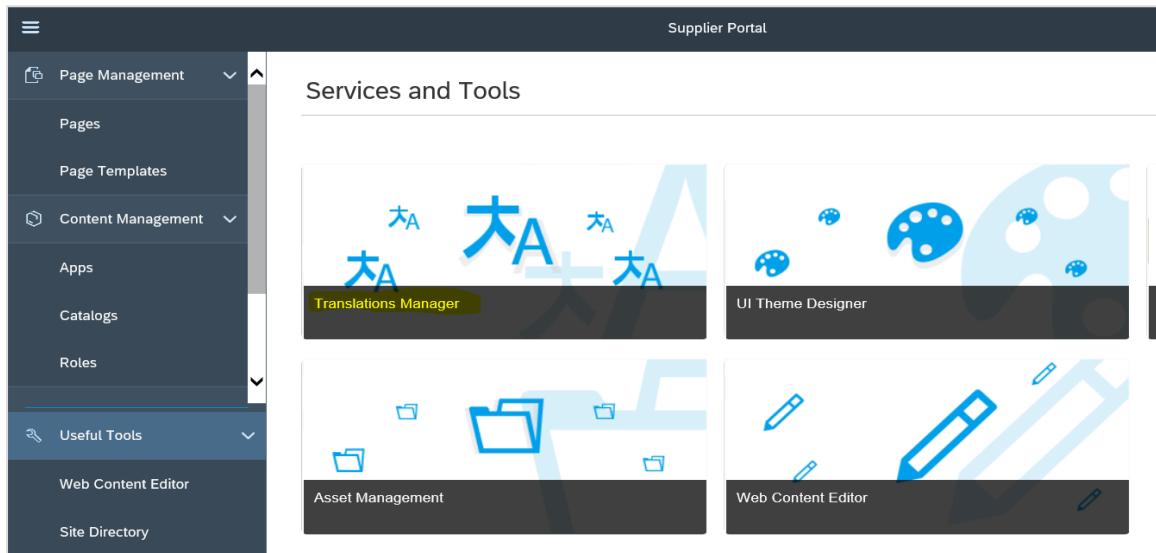
You can also translate the site and download the content in PDF, HTML and other formats. Once the files are translated, you can load them to the site and users can view it in the browser language. However, note that the site is still maintained in master language.

When site is translated to other account, translations are automatically available in site content; however, when you duplicate a site using same account, translations are not available, and you need to export them and import the site to that account.

To define a site master language, you have to navigate to Site Settings menu. The site master language is also a fall back language when the selected language is not supported by browser.

Downloading Site Content

To download site content, navigate to Services and Tools and select Translation tiles in navigation pane -> Configure option.



To download the master language of your portal site, click Download button as shown below. This will download the master language ZIP file onto your system.

The screenshot shows the SAP Cloud Platform Translations Manager interface. At the top right, it says "Translations Manager". Below that, a message says "Use this screen to manage translation of user-facing texts". Under "Translation Files", there is a sub-section titled "Download or upload translation files when the site is not already translated.". It contains two buttons: "Download" (highlighted with a yellow box) and "Upload". Below this, another section is labeled "Available Languages".

To translate this site into multiple languages, you can use SAP Translation hub service and the zip file which you have downloaded.

Name	Date	Tags	Size	Rating	Folder pa
master_Language_2017_08_29	8/29/2017 10:52 PM			★★★★★	C:\Users\%
master Language 2017 08 29.zip	8/29/2017 10:50 PM		2 KB	★★★★★	C:\Users\%

Go to UI for Translation workflow and create properties file for all the languages selected for translation. When translation is done, you can load the files into portal site.

The screenshot shows the SAP Translation Hub - Overview page. At the top left, it says "Service: SAP Translation Hub - Overview" and "Enabled". On the left, there's a "Service Description" section with links to "Documentation", "View APIs", "Videos on YouTube", "SAP Translation Hub on SAP Community", "Register for SAP Translation Hub notifications", "Go to File Upload UI for Company MLTR", and "Go to UI for Company MLTR". On the right, there's an "Availability" section with a "Regions" dropdown set to "Euro".

To upload, go to Translation tile -> Configure -> Upload

The screenshot shows the SAP Cloud Platform Translations Manager. At the top right, it says "Translations Manager". Below that, a message says "Use this screen to manage translation of user-facing texts". Under "Translation Files", there are two sections: "Download master language file to be sent for translation" with a "Download" button, and "Upload translated files" with an "Upload" button. The "Upload" button is highlighted with a yellow box. At the bottom left, there is a section titled "Available Languages".

Now, browse for Zip file and open. This will process the zip files and all languages will be displayed on the screen. Note that all are inactive till you activate them. You can see the status of each language and to activate click "OFF" icon as shown below:

The screenshot shows a table titled "Available Languages". It has columns for "Language", "Enable for Users" (with an "OFF" switch), "Last Uploaded File", and "Delete File". The "Enable for Users" column contains several "OFF" switches, some of which are highlighted with yellow boxes. The "Last Uploaded File" column shows dates like "01.01.2019 18:49". The "Delete File" column contains trash bin icons.

Language	Enable for Users	Last Uploaded File	Delete File
Arabic	<input checked="" type="checkbox"/> OFF	01.01.2019 18:49	
Bulgarian	<input type="checkbox"/> OFF		
Catalan	<input type="checkbox"/> OFF		
Chinese (China)	<input type="checkbox"/> OFF	01.01.2019 18:49	
Chinese trad.	<input type="checkbox"/> OFF		
Croatian	<input type="checkbox"/> OFF		
Czech	<input type="checkbox"/> OFF	01.01.2019 18:49	
Danish	<input type="checkbox"/> OFF	01.01.2019 18:49	

15. SAP Cloud – Transferring Sites

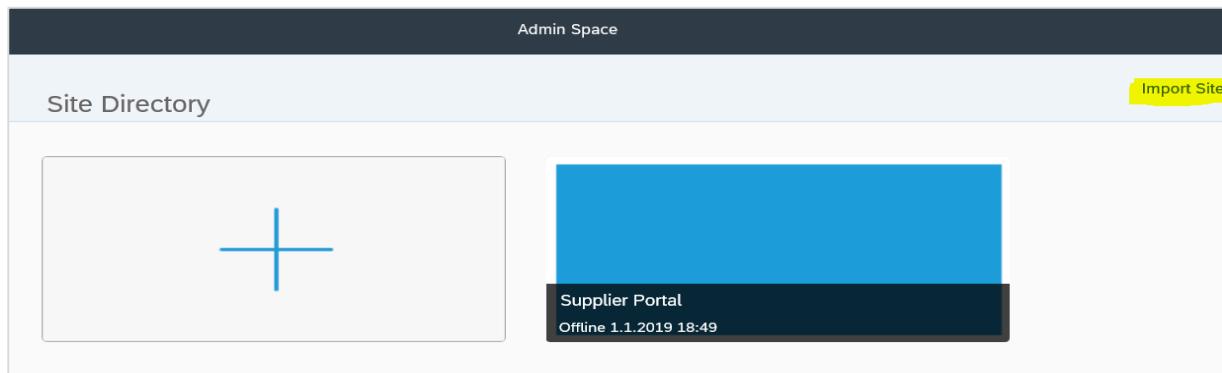
You can also perform site transfer from SAP Cloud platform or to create a prototype or to create site from other accounts. Basic site transfer can be performed using export/import option in Site directory.

To export site as a zip file, it can include:

- Pages
- Content in Open Social widgets
- Theme files
- Translation sites
- Site users' details (Optional field)

To export a site, go to Site Directory -> select the site to export and click on Site Actions -> Export Site and save ZIP file to your system.

To import site, again go to Site Directory -> Add site -> Import Site.

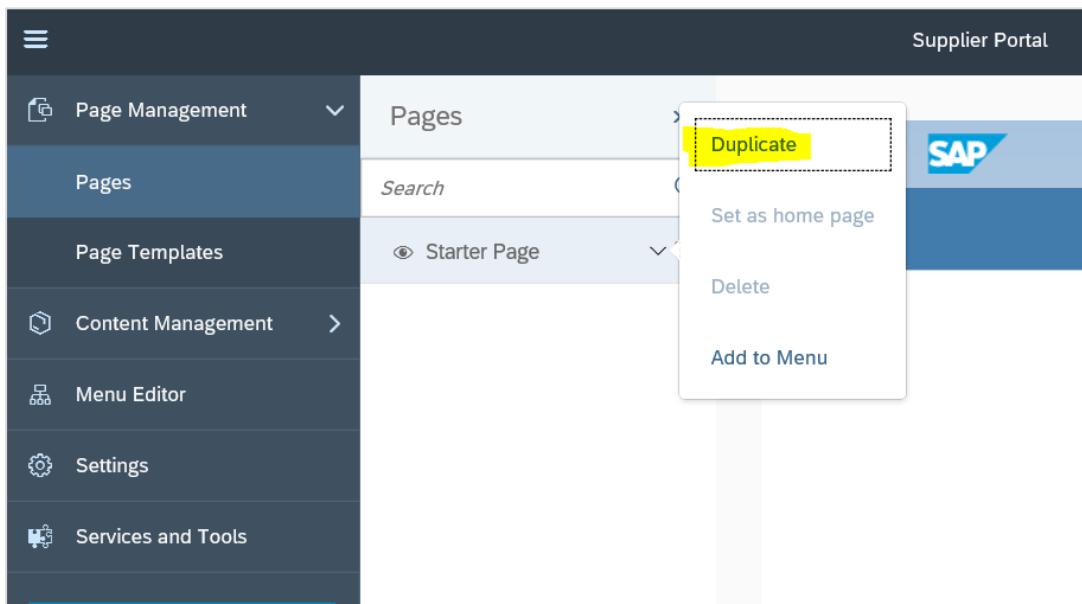


This will create a site in the Site Directory and the transfer date is displayed in the Created field. You can also create a duplicate site, click on Site Actions -> Duplicate Site.

Now enter the following in the name and description details:

- Site name of the new site
- Site Description of the new site

Next, click Duplicate button and this will create a copy of an existing site with name and description provided.



You can select "Include site users" checkbox if you want to include invited end users in the duplicated site.

Note: You should have "TENANT_ADMIN" role (Administrator) in the SAP Cloud Platform cockpit.

Name	Type
TENANT_ADMIN	Predefined

TENANT_ADMIN Predefined: Provisioned by the application

16. SAP Cloud – Cloud Repositories

You can have different cloud repositories for site building maintained by SAP Cloud administrators. These repositories can be edited/modified by users with administrator privileges. The content of the cloud repositories is available in authoring space. In this chapter, let us discuss the available cloud repositories in SAP Cloud.

Types and Usage

The following repositories are available in SAP Cloud:

- Theme Repository: This is available in Theme tab in Portal service
- Document Repository: This is available on Document tab in Portal service
- Widget Repository: This is available in Content tab in Portal service

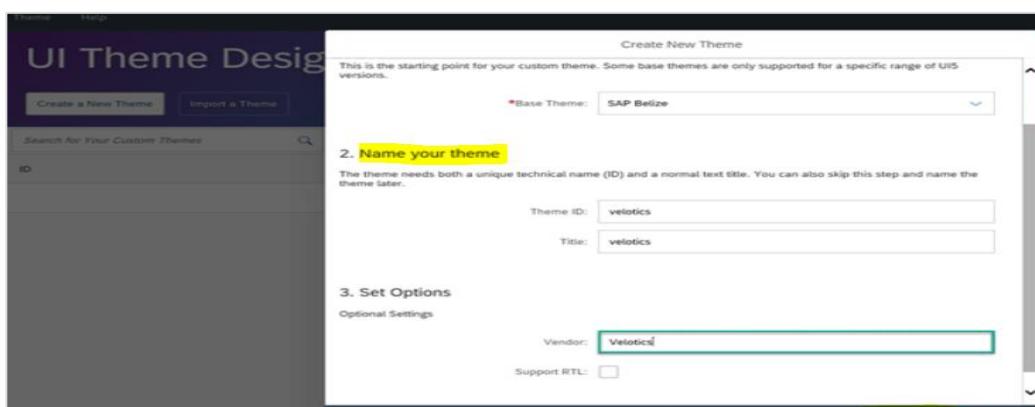
Widgets Available in Content Catalog			
		Name	Description
		Description	Categories
	Rich Text Editor	A widget used to enter and format text in Web pages	Delivered with product
	Group Widget	A widget used to display a number of related widget	Delivered with product

Using Theme Repository

In theme repository, themes are available in table form with details- name of the theme, description and theme creator name. Theme repository can be accessed from Themes tab of Portal service. The default theme for the account is represented using “star” shape symbol.

To create a new theme, navigate to Themes tab in the Portal service tab -> Add Theme at the right corner and this will open “Add Theme” dialog box.

Enter the theme details, such as a name, description, and path to the theme file (LESS)location -> Click Add button. You can also edit or delete an existing theme from repository.



Using Document Repository

Document repository contains all the documents which can be shared, reused in different sites. It contains all the documents for a given account. Document repository can be accessed from Document tab of Portal service in Cloud platform.

Documents can be uploaded and arranged in repository. You can also perform a search or download the documents and can also see site details where documents are used.

To access document repository, navigate to Portal service tab -> SAP Cloud Platform cockpit -> Repositories -> Document Repositories

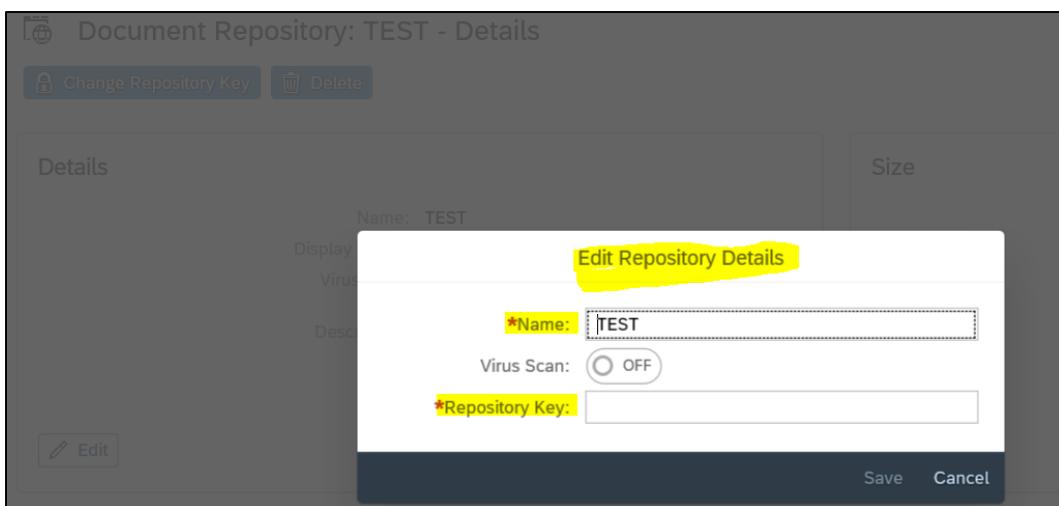
If document repository doesn't exist, you can create a new Repository. Click on New Repository and enter the details:

- Name
- Display Name
- Description
- Virus Scan
- Repository Key

Note: Repository key should be minimum 10 characters.

Also, to maintain the content integrity in repository, you cannot edit documents stored in the repository. Instead, you download a document, edit it, and upload the new, updated document.

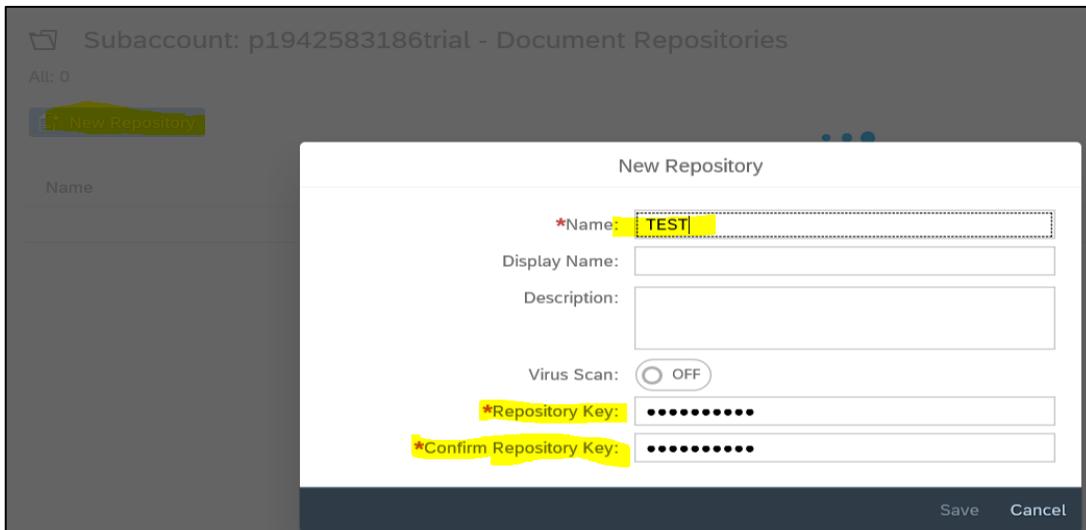
You can also edit repository name, change repository key or delete a document repository using below options:

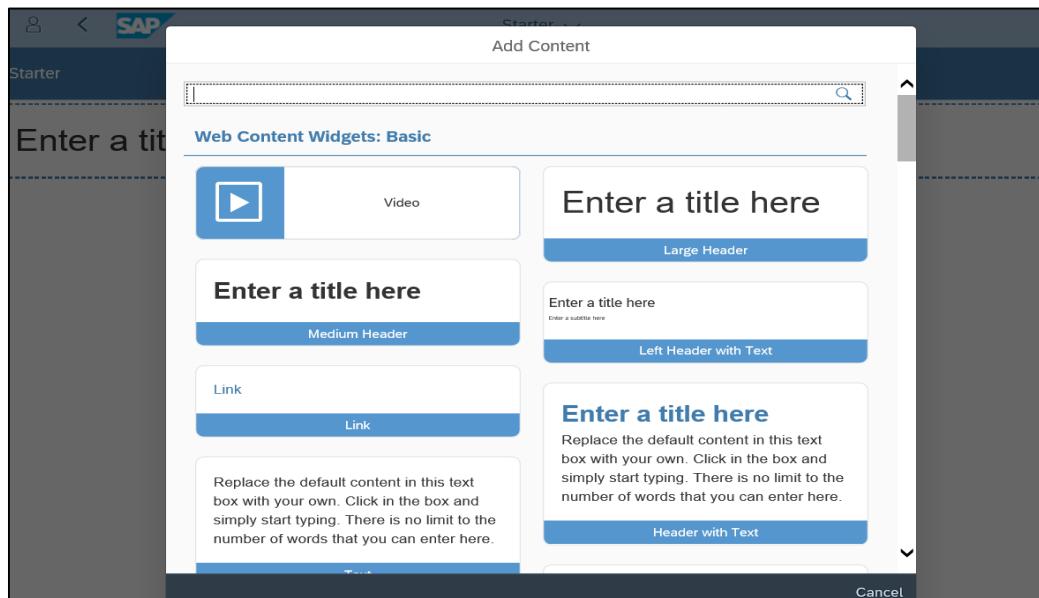


Using Widget Repository

Widget repository contains all the available widgets for a given account. You can access Widget repository from Content tab of Portal service in Cloud platform. The widget in repository are listed in table format and shows the basic information about widgets. Following Widget types can be added to repository:

- Social widget
- URL widget
- SAP Jam Feed widget





17. SAP Cloud – Access Management

To manage and administrate sites, SAP Cloud platform provides different level of access and permissions. Administrators are responsible for managing content and themes of site and user level access is used to manage access related to site and published pages.

Roles

The following roles are commonly used in Cloud platform:

Administrator

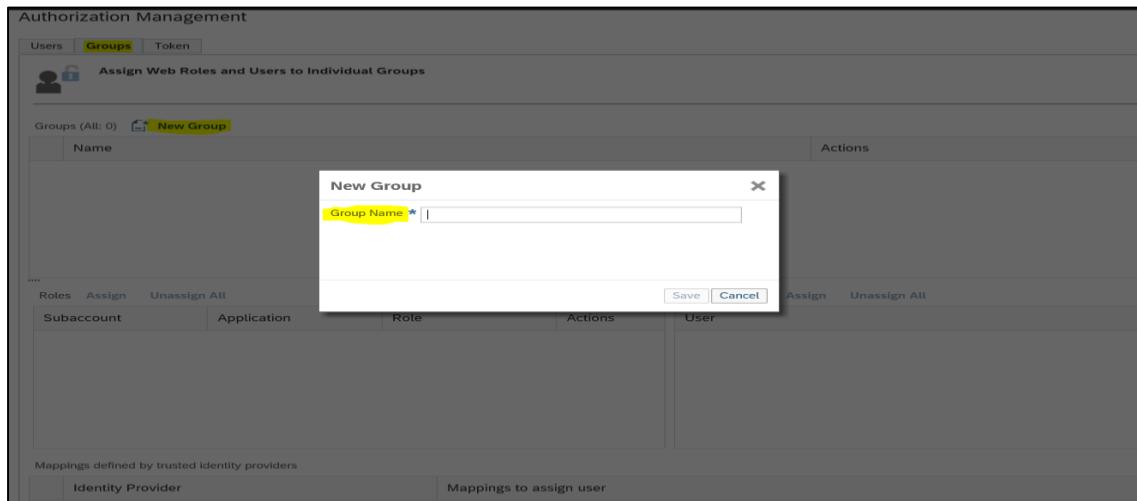
This is predefined as Tenant_Admin in SAP Cloud platform cockpit. The administrator is used for adding and managing content and themes.

User Roles

This is used to manage access to published sites and pages. These are defined in SAP Cloud platform cockpit. Note that Authorization option is used to assign the roles to individual and user groups.

The screenshot shows the SAP Cloud Platform cockpit's Authorization Management interface. The 'Users' tab is active. The main title is 'Authorization Management'. Below it are three tabs: 'Users' (highlighted), 'Groups', and 'Token'. A sub-header reads 'Assign Web Roles and Groups to Individual Users'. There is a 'User:' input field with a required asterisk and a 'Show Assignments' button. Below this are two tables: one for 'Subaccount' and one for 'Group', each with 'Assign' and 'Unassign All' buttons.

In Group tab, you can also create a new group and add users to it. To create a new group, click on New Group button and provide Group name as below:



Guest Role

This role is used to allow access to individuals outside organizations for site access.

Managing Site and Page Access for Users

When you publish a site, you can allow different level of site access to users- public, authenticated or role based.

Public

When you allow public access to site, anyone on the web can access it.

Authenticated

This includes site users who are part of an organization and can access to site using predefined authentication mechanism.

Role Based

This includes only few users assigned with specific role can access the site.

Note: You can also limit page access permissions from Access Management panel on left side to manage access to site pages for one or more groups. Like site access, following access level can be granted for pages:

- Role- Based
- Public
- Guest

Go to Page settings -> Page Authorization and you can see assigned access level to page. To make changes, click on Edit option on bottom right corner.

Pages x

Page Settings

Search 🔍

Starter Page

Navigation

Page Intent

Semantic Object: page1
Action: Display
Page displayed in site menu

Page Authorizations ⓘ

Access Level: **Role-based**
Assigned Catalogs: Everyone

Page Details

Based on 'Starter Page' template

Page Content

Name Type
Large Header A widget that displays a title, header, image, text, buttons and links

Edit

You can make changes to page access level using Access level drop down list from Page Authorizations. To save the changes, click on Save button.

Pages x

Page Settings

Search 🔍

Starter Page

Page Name: Starter Page

Navigation

Page Intent ⓘ

Semantic Object: page1
Action: Display
Page displayed in site menu

Page Authorizations ⓘ

Access Level: **Role-based**
Assigned Catalogs:

- Role-based
- Role-based
- Public
- Guest

Page Details

Based on 'Starter Page'

Page Content

Name
Large Header

To create a new role, navigate to Roles tab under Content Management -> New (+) icon at bottom.

The screenshot shows the SAP Cloud Platform Content Management interface. On the left, there's a sidebar with various navigation options like Page Management, Pages, Page Templates, Content Management (which is expanded), Apps, Catalogs, Roles (selected and highlighted in blue), Menu Editor, Settings, Services and Tools, and Useful Tools/Links/Information. The main area is titled 'Roles (2)' and shows two entries: 'Everyone' and 'Guest'. The 'Guest' entry is selected and expanded, showing its properties: 'Anonymous' and three tabs: 'Properties' (selected), 'Catalogs', and 'Groups'. Below this is a section titled 'Assigned Groups (0)' with a table header for Group Name, Group ID, and Tiles. A note says 'No data'. At the bottom right of the main area is a green 'Save' button.

You have to define new Role properties like- Role Name and Role ID. Under Additional information, you can see Created, Creator and last modified date.

This screenshot shows the 'New Role' creation dialog. The title bar says 'New Role' with a red warning icon. The left sidebar lists existing roles: 'Everyone' (Everyone) and 'Guest' (Anonymous). The main form has a 'General' section with fields for 'Role Name' (containing 'New Role') and 'Role ID' (containing 'New_role'). A red error message box states: '① SAP Cloud Platform account does not contain a role matching the current Role ID'. Below this is an 'Additional Info' section with fields for 'Created', 'Creator', and 'Last Modified'. At the bottom right are 'Save' and 'Cancel' buttons.

You can also assign more Catalogs and Groups to this role. Navigate to relevant tab and click on + sign to add new item. To save the changes, click on Save button.

The screenshot shows the SAP Cloud Platform interface for creating a new role. The left sidebar lists existing roles: 'Everyone' and 'Guest'. The main area is titled 'New Role' with the name 'New_role'. Under 'Properties', the 'Catalogs' tab is selected. In the 'Assigned Catalogs (1)' section, there is one entry: 'Guests' with Catalog ID '_sap_guest_users_catalog'. At the bottom right, there are 'Save' and 'Cancel' buttons, with 'Save' being highlighted.

When you assign this role to any of Page, by default it takes the assigned Catalogs name as per role properties.

The screenshot shows the SAP Cloud Platform interface for configuring a page named 'page1'. The left sidebar shows 'Pages' with 'Starter Page' selected. The main area has sections for 'Navigation', 'Page Intent', 'Page Authorizations', and 'Page Details'. In the 'Page Authorizations' section, the 'Access Level' is set to 'Role-based' and 'Assigned Catalogs' is set to 'Guests'. On the right, there are preview cards for 'Based on 'Starte...' and 'Page Co...'. At the bottom right, there are 'Save' and 'Cancel' buttons, with 'Save' being highlighted.

Managing Site Settings

You can also navigate to site setting options and edit different properties related to site-system, user and custom settings. Navigate to Settings tab on left side and this will open Site Setting menu. To make changes, click on Edit button at bottom right corner:

You can edit following System and User settings:

18. SAP Cloud – Site Authors

Site author access can be provided to edit and maintain existing sites. It can allow users to open and edit all sites to which they have assigned access and this access can also be extended to other users. When an assignment is created for the user, it sends an email to new author with URL that allows that person to access and author new site.

To check Site URL, you can navigate to Site setting tab -> General -> Site URL

The screenshot shows the SAP Site Settings interface. The 'General' tab is selected under the 'Supplier Portal' section. The 'Site URL' field is highlighted with a yellow box and contains the value: <https://fipportal-p1942583186trial.dispatcher.hanatrial.ondemand.com/sites?siteId=1ee731b8-2497-486b-b57c-0ff5f9f3f4e2&evictCache=true>. Other visible settings include Site Description, Site Status (Published), Site Alias (No alias defined), Session Timeout Message (Yes), and SAPUI5 Version (Innovation (1.56)). The right side of the screen shows the 'User Settings' tab, which is currently inactive.

Maintaining Profile for Login

You can also maintain your login profile as per requirement. Click the top right corner drop down -> User information -> Edit

The screenshot shows the SAP Cockpit interface. In the top navigation bar, 'Cockpit' is selected. Below it, the breadcrumb navigation shows 'Home [Europe (Rot) - Trial] / Europe (Rot) - Trial / p1942583186trial'. A subaccount dropdown indicates 'Subaccount: p1942583186trial - Cloud Connectors' with 'Not connected'. A message states 'There is no cloud connector connected to this subaccount.' A modal dialog box titled 'User Information' is displayed, containing the following details:
Name: [REDACTED] (P1942583186)
ID: P1942583186
E-Mail: [REDACTED].com
Buttons at the bottom of the dialog are 'Edit' and 'Close'.

In User profile information, you can maintain the following information:

Contact Preferences

By e-mail * Yes No

By telephone * Yes No

[Cancel](#) [Save](#)

Two-Factor Authentication

To access applications that require two-factor authentication, you need to activate a mobile device to generate passcodes. No devices are currently activated for two-factor authentication.

[Activate](#)

Social Sign-On

19. SAP Cloud – HTML App Development

In SAP Cloud platform, you can develop SAP UI5, HTML5 based applications and open social widgets and consume them using SAP Cloud portal service. Using SAP Cloud platform, you can develop and execute HTML5 applications in cloud platform. It can contain static resources and can be connected to other on-premise or on-demand REST service.

To develop a HTML5 application and consume it in Cloud Portal service, you need to perform the following steps:

- Develop HTML5 application and save it in HANA Cloud
- Next is to convert HTML5 application to an OpenSocial widget
- Add the OpenSocial widget to the Portal service widget repository

Setting Environment

To develop HTML5 applications, you can use the browser-based tool like SAP Web IDE that does not require any additional setup. Let us see how to develop “Hello World Application Using SAP Web IDE”.

Login to SAP Cloud Platform cockpit and click on Applications -> HTML5 Applications. In case you have already created applications using this subaccount, it will show a list of HTML5 applications.

The screenshot shows the SAP Cloud Platform Cockpit interface. On the left, there's a navigation sidebar with various options like Overview, Applications (with Java Applications, HTML5 Applications selected), HANA XS Applications, Subscriptions, Services, Solutions, SAP HANA / SAP ASE, Connectivity, and Security. The main content area is titled "Subaccount: p1942583186trial - Overview". It features a "System Status" section divided into two panels: "JAVA" and "HTML5". Both panels show "Overall Health" and "No applications yet". Below each panel are buttons: "Get started here!", "Create an application", and "Run sample applications" for Java, and "Create Hello World App" and "Create Weather App" for HTML5. At the bottom of the main area, there's a banner that says "ENHANCED DISASTER RECOVERY".

Now to develop a new HTML5 application -> Click on New Application and enter an application name. Note that name of application must contain lower case alphanumeric characters and must not exceed 30 characters and start with a letter.

The screenshot shows the SAP Cloud Platform Cockpit interface. On the left, there is a sidebar with various navigation options: Overview, Applications (selected), Java Applications, HTML5 Applications, HANA XS Applications, Subscriptions, Services, Solutions, SAP HANA / SAP ASE, Connectivity, and Security. The main area is titled "Subaccount: p1942583186trial - HTML5 Applications". It displays a message "No HTML5 applications available." Below this, a modal dialog box is open with the title "New HTML5 Application". Inside the dialog, there is a field labeled "Application Name:" with a yellow border around it. At the bottom right of the dialog are "Save" and "Cancel" buttons.

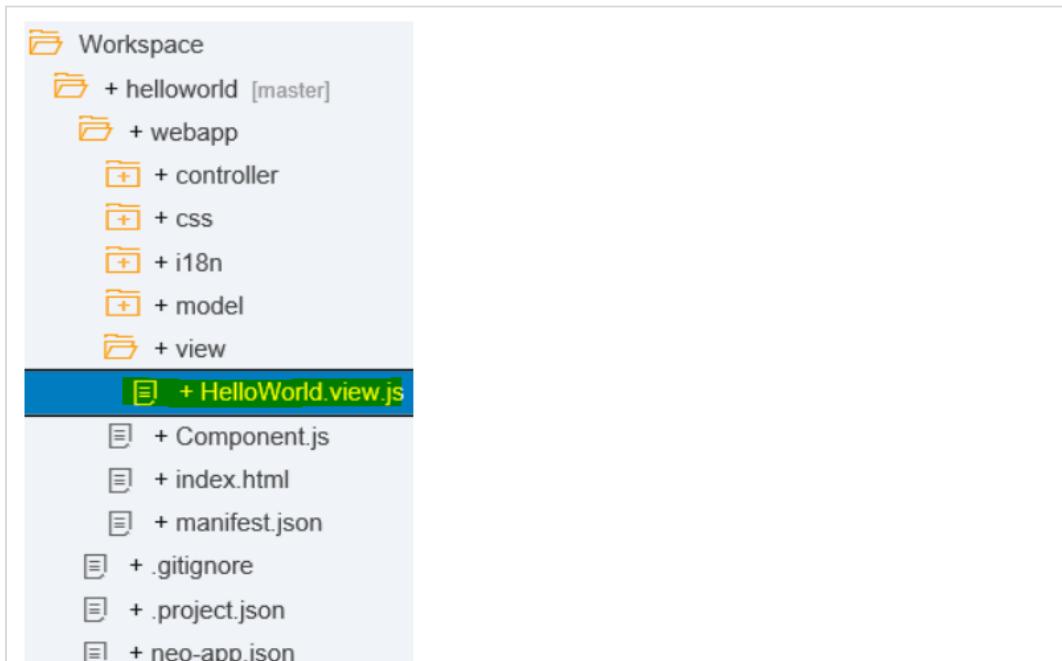
You can navigate to Applications page and click "Create Hello World App" to check the steps included in HTML5 development.

The screenshot shows the SAP Cloud Platform Cockpit interface. The sidebar includes: Overview, Applications (selected), Services, Solutions, SAP HANA / SAP ASE, Connectivity, Security, Trust, Authorizations, OAuth, and Repositories (selected). The main area is titled "Subaccount: p1942583186trial - Overview". It features a "System Status" section with two columns: "JAVA" and "HTML5". The JAVA column has "Overall Health" and "No applications yet" sections with "Get started here!", "or...", "Create an application", and "Run sample applications" links. The HTML5 column has "Overall Health" and "No applications yet" sections with "Get started here!", "or...", "Create Hello World App" (which is highlighted with a yellow box), and "Create Weather App" links. Below this is a "ENHANCED DISASTER RECOVERY" section with "Documentation" and a diamond icon.

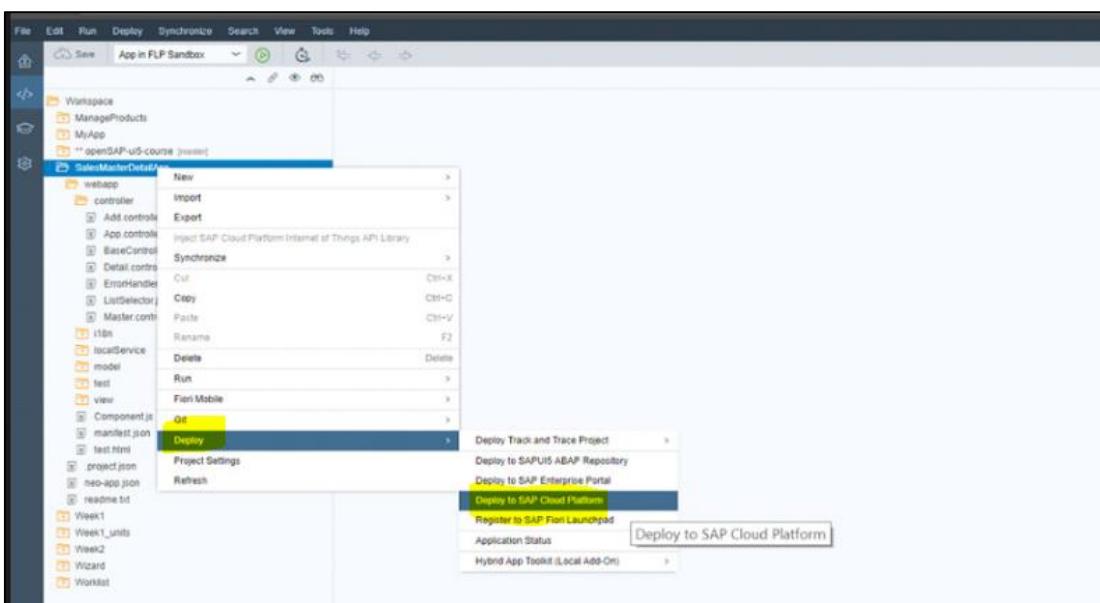
Steps Involved

The following steps are involved for creating a HTML5 application:

- Create a Project
- Edit HTML5 application
- Deploy the application to SAP Cloud platform



To deploy your application to SAP Cloud platform, right on application Deploy -> Deploy to SAP Cloud platform.



Login to SAP Cloud platform and enter user name and password. You can keep "Activate" option checked and this will activate new version directly.

Click OK button for completing deployment process.

A build will be triggered for the project. The build results will be deployed.

Application Details

Deploy a new application Update an existing application

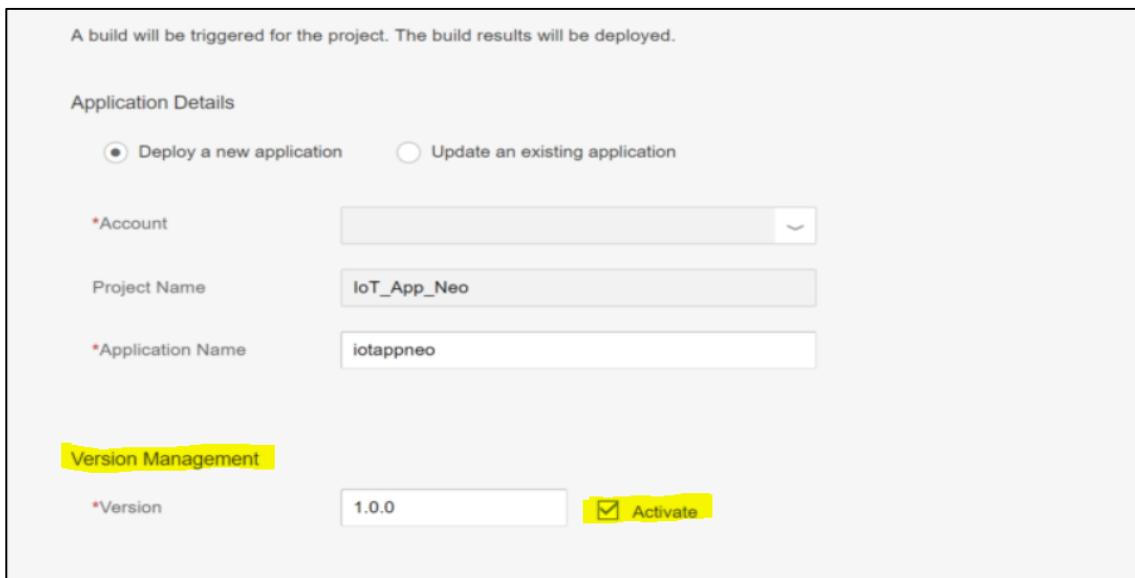
*Account:

Project Name: IoT_App_Neo

*Application Name: iotappneo

Version Management

*Version: 1.0.0 Activate



20. SAP Cloud – Backend System Connection

In SAP Cloud platform, objects in Portal site can be communicated to SAP Backend system. Portal service can be integrated with backend system like CRM, or SAP HR system. In this chapter, let us discuss them in detail.

Prerequisites

To integrate, following perquisites should be met:

- You should have gateway server and service has been installed.
- SAP Cloud connector should be installed, and connection should be defined between Gateway service and portal service.
- You should have destination defined in portal service.

SAP Cloud Platform Connectivity option allows cloud application to connect internet service and on-premise system via Cloud Connector. SAP Cloud Administrator can create destinations so that users can build, test, and deploy applications. You configure the destination for SAP Web IDE to SAP Enterprise Portal in the SAP Cloud Platform cockpit.

For this purpose, navigate to Connectivity -> Destinations and this will open destination editor. To create a new destination, click on New Destination option as below:

The screenshot shows the SAP Cloud Platform cockpit interface. The left sidebar contains a navigation menu with the following items:

- Overview
- Applications
- Services
- Solutions
- SAP HANA / SAP ASE
- Connectivity (selected)
- Destinations (selected)
- Cloud Connectors
- Security
- Trust
- Authorizations
- OAuth
- Repositories (selected)
- Document Repositories
- Git Repositories
- Useful Links

The main content area displays the following information:

Home [Europe (Rot) - Trial] / Europe (Rot) - Trial / p1942583186trial

Subaccount: p1942583186trial - Destinations

All: 1

New Destination Import Destination Certificates

Type	Name	Basic Properties	Authentication
HTTP	cpv2_plugin_dest	ProxyType URL	AppToAppSSO Internet https://portalwebidep

Destination Configuration

*Name:

Type: HTTP

Description:

*URL:

Proxy Type: Internet

Authentication: NoAuthentication

Save Cancel

The following details should be entered to create a destination:

Name	Enter a name for the destination that includes the desired service.
Type	HTTP
Description	Enter a description identifying the destination, for example, <code>Enterprise Portal</code> .
URL	<protocol>://<virtual host>:<virtual port> (since you are using SAP HANA Cloud Connector) Note Do not add the URL path for the usage (for example, <code>/sap/opu/odata</code>).
Proxy Type	Select OnPremise from the available options.
Authentication	<ol style="list-style-type: none"> Select Basic Authentication from the available options. Enter the user/password credentials of a portal user who is assigned the content administrator role.

In the Additional Properties section, click New Property for each of the properties and click Save to save the destination.

Destination Configuration

*Name:	<input type="text"/>	Additional Properties	New Property
Type:	HTTP		
Description:	<input type="text"/>		
*URL:	<input type="text"/>		
Proxy Type:	Internet		
Authentication:	NoAuthentication		
<input type="button" value="Save"/> <input type="button" value="Cancel"/>			

WebIDEUsage	Type <code>enterprise_portal</code> .
WebIDEEEnabled	Set the property to <code>true</code> .
WebIDESystem	Enter your portal system ID.
ConnectionTimeout	Enter the period of time in milliseconds that SAP Web IDE waits while establishing a connection before terminating the attempt and generating an error. <ul style="list-style-type: none"> ◦ Default: 10000 (10 secs) ◦ Max. value: 120000 (120 secs)
ClientReadTimeout	Enter the period of time in milliseconds that SAP Web IDE waits for a response from the requested service before terminating the attempt and generating an error. <ul style="list-style-type: none"> ◦ Default: 30000 (30 secs) ◦ Max. value: 300000 (300 secs)

You can also edit an existing destination by selecting Destination name and click on Edit button. You also have other options like- Clone, Export, Delete, etc.

Type	Name	Basic Properties	Actions	
HTTP	cpv2_plugin_dest	Authentication ProxyType URL	AppToAppSSO Internet https://portalwebideplugin-p1942583186trial.dispatcher.hanatrial.ondemand.com/	

Destination Configuration

*Name: cpv2_plugin_dest	Additional Properties	New Property
Type: HTTP	TrustAll	
Description: Portal Service	WebsIDEEnabled	
*URL: https://portalwebideplugin-p1942583186trial.d	WebsIDEUsage	
Proxy Type: Internet		
Authentication: AppToAppSSO		

21. SAP Cloud – Trial Limitations

You can get a free SAP Cloud platform account with developer license to try and test the platform. This account can be used for non-productive usage and it only allows one member per account.

Besides, there are few other limitations in a trial account:

- For productive purpose, you should use a commercial license for SAP Cloud platform. Following commercial license are available to be used:

 Subscription-based	 Consumption-based
Contract Period Subscription period (typically 12 months or more).	Contract Period Consumption period (12+ months).
Available SAP Cloud Platform services You can use the services that are specified in your contract. Additional services require contract modifications.	Available SAP Cloud Platform services You are entitled to use all eligible SAP Cloud Platform services. No additional contract is required for changes in usage.
Price / Cost The cost is fixed for the duration of the subscription period, irrespective of consumption.	Price / Cost You prepay for cloud credits, which are then balanced against consumption of services.
Payment In advance, at the start of the contract period.	Payment In advance, and again when cloud credits are used up*.
Renewal At the end of the subscription period.	Renewal At the end of the consumption period.

- SAP Cloud trial account does not offer a service level agreement related to availability of SAP Cloud platform service.
- You cannot add any additional member to trial account.
- Free trial provides 1GB of storage on shared HANA instance.
- Trial version only supports Java and HTML5 application. It does not support HANA XS application development in trial account.
- You can deploy multiple Java applications on your trial account however only one app can be in started state.

22. SAP Cloud –Developer Responsibilities

SAP Cloud platform developer is responsible for the development and management of application on Cloud platform.

Primary responsibilities of SAP Cloud platform developer are below:

- Developer is responsible for providing a reliable, scalable, extensible and secure infrastructure for application development and deployment on cloud platform.
- Manage VMs, tools for setting up services on SAP Cloud Platform. Responsible for deploying and controlling the application development lifecycle.
- Designing of new interfaces, wireframes and prototypes for new applications.
- Designing new application with help of application designers.

It is preferred that developers have experience in following:

- Exposure in configuring SAP Cloud Platform, Amazon Web Services, Azure, Google Cloud Platform.
- Development experience in Web UI programming using JavaScript, HTML5, CSS.
- Development experience using SAP UI5 application development methods.