

ServicePlus: Metadata Based Framework Enabling Versatility In eService Delivery

A versatile application that allows Government officials and departments to quickly and easily create, format, publish forms, notifications etc., ServicePlus has a simple drag and drop functionality, in addition to many other advanced features, which makes it unique.



D.C. MISRA
DDG & HoG
dcmisra@nic.in



RAMA HARIHARAN
Sr. Tech. Director & HoD
rama.h@nic.in

Edited by
MOHAN DAS VISWAM

With the increasing reach of ICT penetration to the remotest parts of the country, there has been a growing emphasis by Governments at all levels to enable the citizens and businesses to access services in an efficient, transparent and accountable manner. This emphasis has been particularly reflected on a few major fronts namely, the Digital India Programme of the Government of India, the eDistrict Project, the enactment of Right to Service Delivery Act by many States and the efforts made by State Governments to improve their Ease of Doing Business index. This increased emphasis has resulted in efforts by governments to quickly automate government services. But writing separate software for each service is not only time consuming and a costly affair but also in most cases, the same functionality is required in most of the services. It is against this background that ServicePlus was conceived as a single, multi-tenant platform for quickly configuring services with end-to-end back-end processing.

ServicePlus (<https://serviceonline.gov.in>) is a metadata-based, single, unified, eService Delivery & Grievance Redressal framework that can be configured to rapidly deliver government services to its customers including citizens & businesses. It supports multi-tenancy architecture that enables each tenant to configure their eGovernance services as per their requirement. It supports UNICODE thus enabling services to be accessed in local languages.

Government departments can quickly configure their services in terms of beneficiary profile, submission modes, service charges, payment mechanisms, service delivery modes, application form, service output, notifications, process flow, digital signatures, 2D bar codes etc. using a wizard-like interface.

As a result, citizens can access all services through a single unified portal. They can also track submitted applications, subscribe to alerts etc. An online repository is also available to citizens for maintaining all documents which can be re-used across services.

Both CSC and non-CSC kiosks can be registered for providing services.



FEATURES

The major features offered by ServicePlus include the following:

Form Designer

A form builder tool is available within the ServicePlus application to build a multi-lingual form in minutes. The forms could be designed for citizens/ businesses or for officials. Fields with built-in validations can be dragged & dropped. Special fields with pre-determined functionalities are available. Forms can be made dynamic by attaching Java Scripts at required places. Fields can be linked across forms. Form and field level help can also be given to guide the user.

Process Flow Designer

The Process Flow Designer provides the much needed back-end processing of any service. The department can define the list of tasks in a service and map the flow between the tasks. Three types of tasks are available: Applicant task, Official Task and Web Service Task. All kinds of complicated workflows including conditional forking and merging can be configured. Each workflow player in the process flow can have his own form for entering any data related to the processing of a specific application and can be configured to generate intermediate or final documents/ certificates. The workflow players can also be given the option to upload any document and also merge

an uploaded document with a document that is being generated. FIFO mode can also be enabled.

Notification Designer

The Notification Designer provides a facility to configure SMS and emails to be sent to the mobile numbers/ emails mentioned in the application form or to any of the Workflow Players or even to external entities. Both the content as well as the notification triggering points can be configured.

Document Designer

Document templates can be designed using a custom editor. Any data associated with the application, data provided by officials or system data can be embedded in the document. These templates can be used to design custom acknowledgement, output certificate, rejection certificate, intermediate certificate, SMS and email notifications. Enclosures attached by applicant and intermediate certificates generated by officials can be merged with output certificate to give combined documents to applicant. Conditional modifications of certificate text based on data entered by applicant or official can also be made. Position of bar code and DSC can be specified. Watermark (as an image) can also be included.

Application Submission

Services can be configured to accept application in multiple modes (In-person,

Kiosk, Online, By Post). List of enclosures to be submitted along with the application can also be configured. Photographs can either be uploaded or captured through a web cam, if available.

Service Charge

Services may be configured with or without an associated charge. Payments can be made multiple times and at different stages of service process flow and using different modes of payment (online, DD, cash, cheque etc).

Activating, Testing and Launching a Service

ServicePlus supports selective activation of service units and launch of service only in the activated units. A service configured in the production server can be tested end-to-end in the activated units. Once user acceptance is obtained, the service can be launched with the click of a button. As soon as the service is launched, all test data used to test the service is automatically deleted. The service becomes visible to applicants only after the service is launched.

Tracking the Application Status

Applicants can track their applications either online or through kiosk or government office (if the application was submitted through kiosk or government office).

Callback Functionality

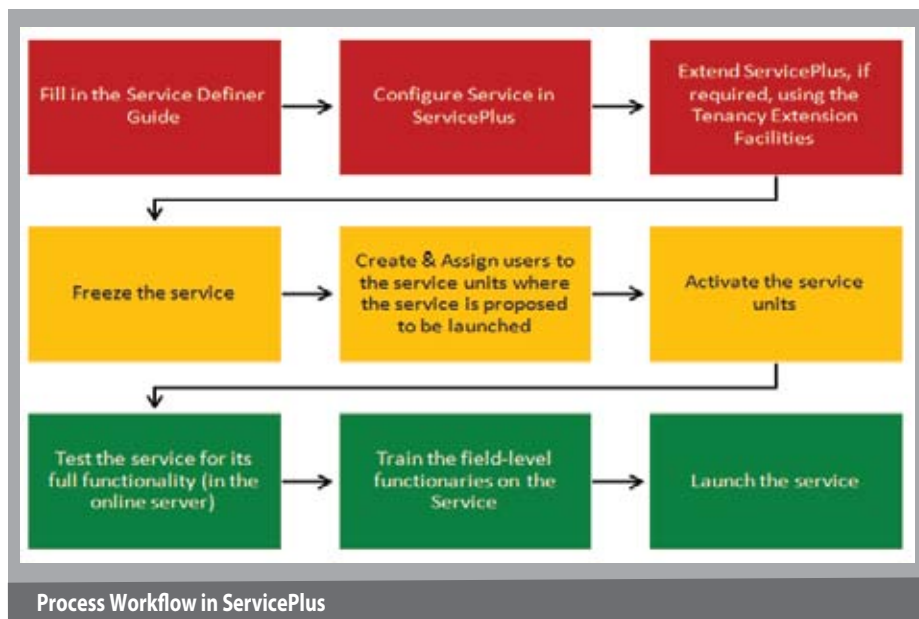
A workflow player can be given the privilege to callback any application in a particular task as long as no action has been taken by the next workflow player. Callback can be used even after delivering a service to an applicant in which case the delivery action is reverted and the issued certificate is cancelled.

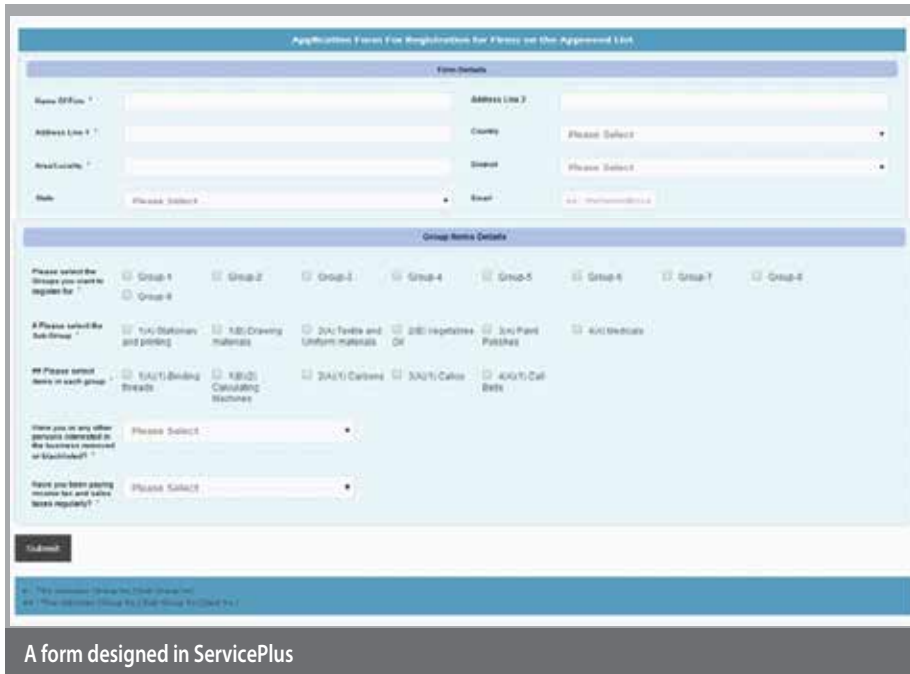
Pages Generated by ServicePlus

Separate pages can be defined for each service, for a department or for the entire State.

Integration with External Systems

ServicePlus is integrated with many external systems which can be configured in each service as per the requirements of the service. It is integrated with Payment Gateways (NDML, SBI ePay), CSC Connect, CSC eWallet, eTreasury (Kerala), NSDG/ SSDG, Digilocker, eSign and RAS.





A form designed in ServicePlus



A sample of output generated by ServicePlus

Web Service Integration with other Software Applications

A service can be configured to interact with any other software applications through web service. Web services can be used to populate data in application or official forms or validate the data entered in these forms. Web services can also be integrated at the process flow level by defining a task as a web service task. Both synchronous and asynchronous services can be integrated with a service. A web service task is also associated with a fallback user. This facility allows manual intervention in case the web services associated with the task is not available for extended period of time. By facilitating manual intervention, ServicePlus ensures that applications can be processed in time even if the web services provided by external applications are unavailable.

Reports

A number of generic reports are available. Of particular interest to Government departments is the pendency report. Two types of pendency reports are available: Task-wise pendency report and Hierarchy-wise pendency report. Facility for quickly generating service-specific reports is also available.

Tenancy Extensions

ServicePlus provides the much required flexibility through tenancy extensions to

plug-in code to meet typical requirements of a service. Provision is available to make a form dynamic by attaching Javascripts with required fields and on specific events. MVEL functions can be attached at pre-defined trigger points to override the default functionality of ServicePlus. Both Java Scripts and MVEL functions help in overriding the default functionality of ServicePlus without disturbing its code base. Such functionalities are usually written by NIC State units or divisions while the core software is managed by ServicePlus team.

Digitization & Legacy Services

ServicePlus provides the States the facility to digitize their manual records using the facility of legacy services. Data in legacy services can be queried from the corresponding primary service.

Integration Between Data of Different Services

Through a simple mechanism, data across different services can be accessed/queried thus enabling seamless integration among services.

Grievance Redressal

ServicePlus provides a facility to each State to configure its Right to Service Delivery Act. Citizens can lodge a grievance against a service if they have been denied or if the service was not delivered on time.

IMPLEMENTATION STATUS

So far, 85 services are being delivered through ServicePlus by 11 States. More than 4.5 million applications have been received so far and more than Rs. 870 million have been collected as revenue from these services.

Shri Adesh Chand Gupta (Scientist-D), Shri S.P. Nautiyal (Scientist-D), Shri N.P. Sreejith (Scientist-B), Shri Ashwin Ayyappan (Scientist-B) and Shri Sajjad Abbid (Scientific Officer-SB) are the other key members of the ServicePlus design and development team of National Informatics Centre.

For further information, please contact:

Ms. RAMA HARIHARAN
Sr. Technical Director & HoD
Panchayat Informatics Division
National Informatics Centre, A-Block, CGO Complex
Lodhi Road, New Delhi - 110 003
Email: rama.h@nic.in
Phone: 011-24360563