- PF Service Overview Fujitsu provides the following services:
- (1) PF Basic Service
 - i Application Execution Environment

This PF Service provides an environment which enables the Customer's Java-based applications to be deployed and executed on this PF Service.

It also provides the system configuration packages (combinations of Web, AP, and DB) shown in Attachment Table 1 as an environment in which the applications deployed by the Customer (hereinafter "Applications") can be executed. *1Note that instances referred to in this Service Description are units of virtual execution of the applications on a K5 Resource.

ii Development Framework

This PF Service provides the Java development framework for support of the Customer's development work for Applications.

iii Eclipse Plugins for Application Development

This PF Service provides Eclipse plugins for support of the Customer's development work for Applications. Attachment Table 2 shows the types of Eclipse plugins provided.

(2) Dashboard

This PF Service provides a dashboard for management of Applications.

i Notification

The Customer can confirm the related information (such as release information)

ii Overview

The Customer can confirm the operational status of Applications, the health status of the Web, AP and DB, and operation of Web and AP (start / stop/ restart/ Scale Out and Scale In)

iii Load Balancer Access URL

The Customer can confirm the FQDN used to access Applications

(3) Monitoring

i System Monitoring

The status of the resource for this PF Service (including the CPU usage rate and the amount of memory used) can be checked via the operations monitoring window.

ii Log Monitor Setting

The log files output to the Application Execution Environment can be monitored by using keywords set by the Customer.

- (4) Application Development
 - i User Resource Management

This Service enables new user resources (WAR files, etc.) to be registered and deployed in the Application Execution Environment.

ii Web and AP logs

The Customer can obtain and download in the form of ZIP Business Logs*2 and System Logs*3

iii Web and AP past logs

The Customer can download past Business Logs and System Logs that are automatically preserved to the external storage as a backup in the form of ZIP.

iv Viewing logs (database logs)

The Customer can obtain and download logs of the database used in this PF Service.

v Database

Information on connecting to the relational database services is displayed.

The Customer can use the relational database services by using this connection information.

- (5) Environment Setting
 - i Load Balancer Setting

The communication protocol can be changed to https by registering the Customer's certificate of purchase with the load balancer. It is also possible to remove the registered certificate from the load balancer.

ii Application of Patches

The Customer can apply the patches (for software, etc.) displayed in the list of available patches as shown via the patch application view.

iii Access Control

The Customer can specify the IP address(es) through which the deployed applications or the jump server to the database service can be accessed via the access control view.

iv Email Recipient Setting

The Customer can register the recipient to which a notification is emailed when the keyword set in the Log Monitor Setting is found.

- (6) Documentation
 - i Manuals

Documentation about accessing and using this PF Service is available via the K5 Service Portal. A variety of development tools (development framework and Eclipse plugins) are provided in a ready-to-download format.

ii FAQs

FAQs related to the PF Service are available via the K5 Service Portal.

(7) Web API

The Customer can perform the followings through Web API.

- i Obtain and download of Web and AP logs and lists of Web and AP past logs
- ii User Resource Management
- 2. Restrictions and Notes
 - (1) As part of a service revision, Fujitsu will not newly accept the Customer's Service Application for the PF Service after 00:00 (UTC) on 11th January, 2018 (Thursday). The timeframe for restarting the acceptance of new service applications will be notified separately.
 - (2) Refer to the following web site for the client environment under which the Customer can use this PF Service: <u>https://sdp-portaluser.uk-1.paas.cloud.global.fujitsu.com/appfdocs/contents/en/pf/PFServiceManual.htm</u> Manuals > Service Functional Overview > What is the PF Service > System Requirements
 - (3) This PF Service is deemed to commence when Fujitsu has completed setting up after the Customer has applied for the service in a method prescribed by Fujitsu.
 - (4) At the time of the commencement of the Customer's use of this PF Service, the Application Execution Environment is provided in "ALL DENY" status where all access is denied. The Customer is solely responsible for the security of the Applications when the Customer sets to permit access through the Internet in the Access Control. The Customer is also solely responsible for any damages caused by an action such as wrongful
 - operation by a third party with malicious intention.(5) This PF Service is available in following regions:
 - Eastern Japan Region 1
 - UK Region 1
 - Finland Region 1
 - Germany Region 1
 - Spain Region 1
 - US Region 1
 - (6) The Scale Out and Scale In function can be used in environments deployed after July 14, 2017.
 - (7) A database connection error may be generated when the maximum size of the database described in Attachment Table 1 is reached. Take precautions such as connecting to the database and checking the database usage so that the size of the database remains within limits.

Footnotes:

- *1 In this PF Service K5- "AP" means an instance where business logic is implemented to control the flow of business process, and "Web" means an instance which receives users' request and bridge such request to AP.
- *2 "Business Logs" mean logs outputted from Customer's Applications
- *3 "System Logs" mean system logs such as the logs of httpd, Tomcat, OS, etc.

Attachment Table 1: System Configuration Package List

The application execution platform building function provides the following system configuration packages:

System configuration package	Configuration	No. of initial instances		No. of maximum instances			Availability of
		Web configuration	AP configuration	Web configuration	AP configuration	Maximum database size	database configuration redundancy configuration
Web-Application-D B Minimum scale	Web+AP+DB	1	1	5 No. that can be scaled out: 4)	5 No. that can be scaled out: 4)	50GB	No
Application-DB Minimum scale	AP+DB	-	1	-	5 No. that can be scaled out: 4)	50GB	No
Web-Application-D B Small scale	Web+AP+DB	2	2	9 No. that can be scaled out: 7)	9 No. that can be scaled out: 7)	200GB	No
Application DB Small scale	AP+DB	-	2	-	9 No. that can be scaled out: 7)	200GB	No

Apache http 2.2 Tomcat 8 (JDK 8.0) is installed as middleware for both web and AP.

Attachment Table 2: Eclipse Plugin Types

Application architecture is standardized by defining models, use cases (business behavior), rule definitions, and business logic (Java resources), and plugins are provided to support patterned development work. The following 5 plugin types are available for this PF Service:

Plugin name	Description				
Model, Catalog, and Rule Definitions	Defines the models, rules, the database tables connected to models, and the operations (search criteria, etc.) for those tables				
SimpleEventFlow Definition	Defines the execution sequence (flow control) of service functions on a per-use-case basis (API call-out)				
URI Mapping Definitions	Defines the connection between the external access REST interface and the application developed by the Customer				
Code Checker	Checks whether Java resources conform to Java coding standards				
Impact Analysis	Conducts analysis of model definitions, rules definitions, Java resources, etc., analyzing the potential consequences of resource modification				

Supplementary Provision (July 31, 2016)

The present Service Description is effective from July 31, 2016.

Supplementary Provision (August 19, 2016)

The present Service Description is effective from August 19, 2016.

Supplementary Provision (November 25, 2016)

The present Service Description is effective from November 25, 2016.

Supplementary Provision (January 27, 2017)

The present Service Description is effective from January 27, 2017.

Supplementary Provision (February 28, 2017)

The present Service Description is effective from February 28, 2017.

Supplementary Provision (March 23, 2017)

The present Service Description is effective from March 23, 2017.

Supplementary Provision (May 8, 2017)

The present Service Description is effective from May 8, 2017.

Supplementary Provision (July 14, 2017)

The present Service Description is effective from July 14, 2017.

Supplementary Provision (August 9, 2017)

The present Service Description is effective from August 9, 2017.

Supplementary Provision (October 2, 2017)

The present Service Description is effective from October 19, 2017.

Supplementary Provision (December 22, 2017)

The present Service Description is effective from January 11, 2018.