



# Peer Collaboration Service Framework

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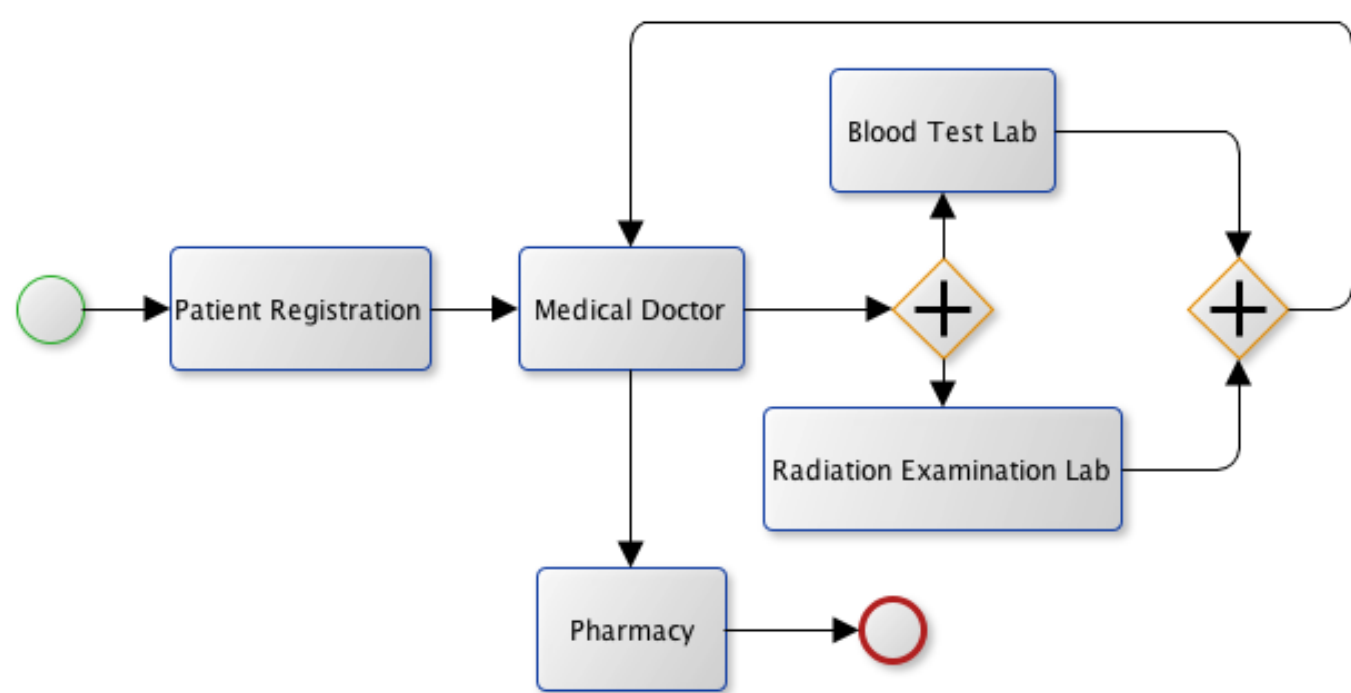
## Introduction

Internet technologies have been making great changes to collaboration. Not only desktop and laptop but also many lightweight clients such as mobile devices can access the internet much easier than before since the high bandwidth been provided and a powerful system running at the backend like cloud to support it. These enrich network based collaboration, but at the same time also make it more flexible and dynamic. So the objective of our research is to investigate a systematic approach to manage network based collaborations. We aim to make the collaboration easily to be used by the creator and participants and also bring a high quality to it such as the issues like security, reliability and performance.

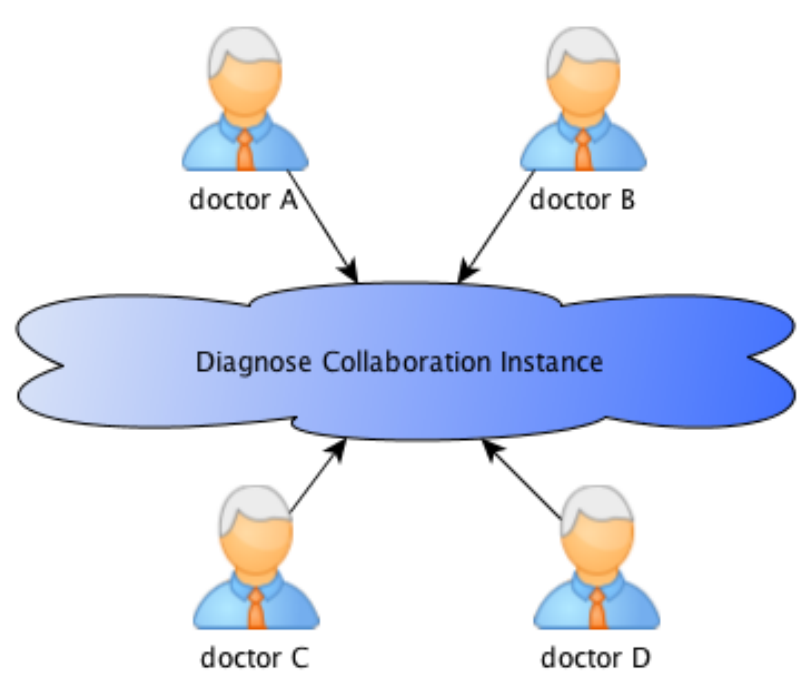
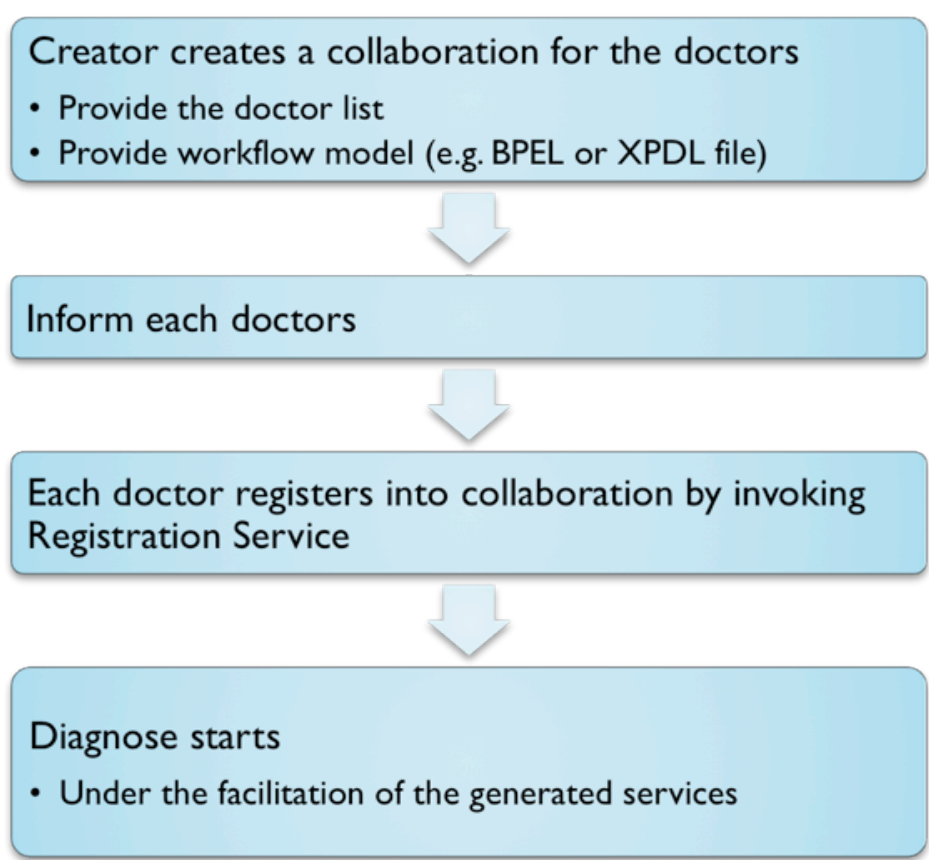
The problem of doing this is that resources and people are scattered and located in different places, and there's not a well-defined collaboration model and service model to support it. Under the notion of SAAS and cloud computing, we propose the PCSF (Peer Collaboration Service Framework) which will define what kind of services are required and thereby provide a mechanism to allow these services working effectively to support a systematically managed collaboration.

## Application Example

We can build up a collaboration between doctors to diagnose a patient, the work flow for this kind of process is like:

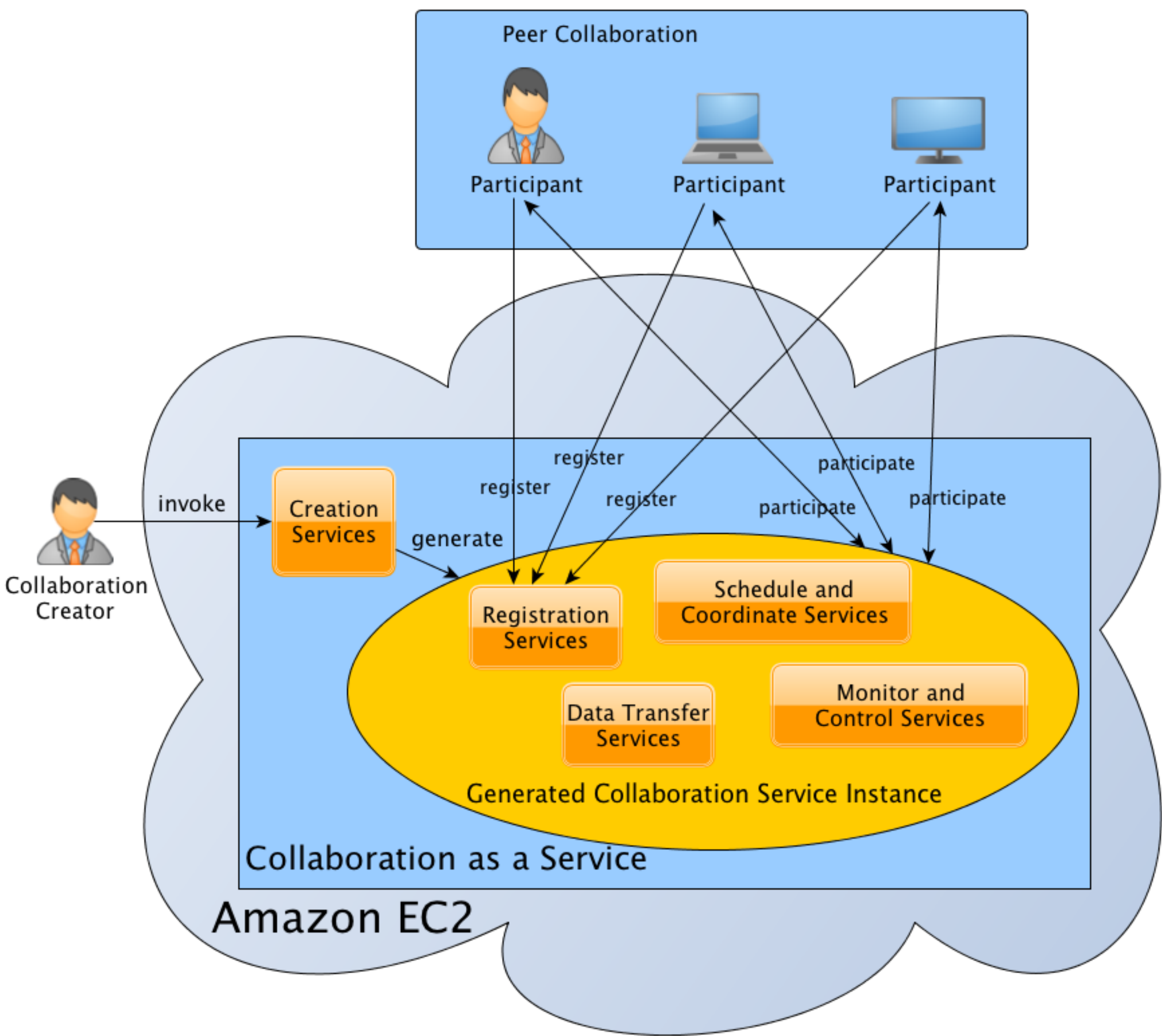


Assign this work flow to the collaboration when building it, and after that, this collaboration will start under the facilitation of a set of collaboration services:



## Overview of PCSF

The PCSF is a framework deployed on cloud, which can generate collaboration services based on the information the collaboration creator provides which then participants can register and take part in.



There are two roles in the framework, collaboration participant and collaboration creator, as shown in above figure. The creator is in charge of establishing and configuring the collaboration. The configuration information of certain collaboration includes: the peers (participants) that are going to join the collaboration who provide resources; the collaboration model, which is a workflow indicating how they will collaborate to finish the task. The participants need to register first into the services that been generated and then can they be included in collaboration.