Controll Developement

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Chapter 1

Introduction

This is v0.3 of this document. This document specifies some of the the Controll project implementation and models.

`http://github.com/thecopy/Controll`

1.1 Specification of a plugin file

A plugin file is a .NET library (.dll) with classes implementing the `Controll¬ .Common.IControllPlugin` interface which declares:

- `void Execute(Controll.Common.IPluginContext)`
- `Guid Key { get; }`
- `string Name { get; }`
- `string CreatorName { get; }`
- `DateTime LastUpdated { get; }`
- `string Description { get; }`

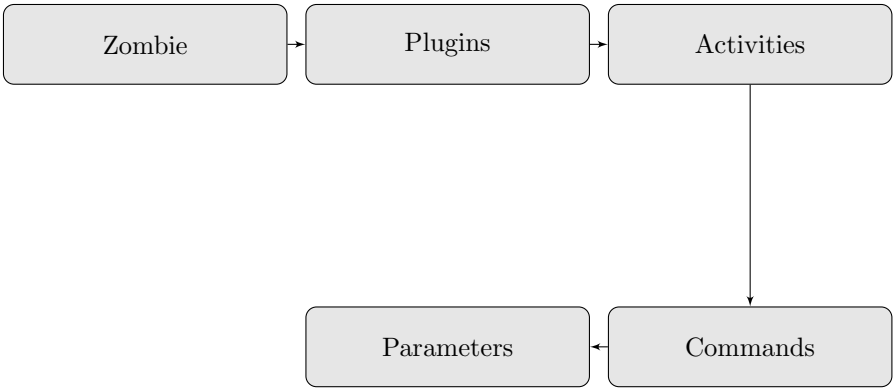
Where `Controll.Common.IPluginContext` is an object containing information about the execution parameters. It declares:

- `IDictionary<string, string> Parameters { get; }`
- `void Started();`
- `void Finish(string result);`
- `void Error(string errorMessage);`
- `void Notify(string message);`

The methods `Error(string)` and `Notify(string)` are functionality planned to be implemented in $\geq$ 0.0.3. It's purpose is to notify the client of an on-going process in the activity (or of course an error). `Started()` is called when the activity is started and `Finish(string)` is called when the activity is completed with the string parameter containing the result(s).

1.2 The Zombie Model

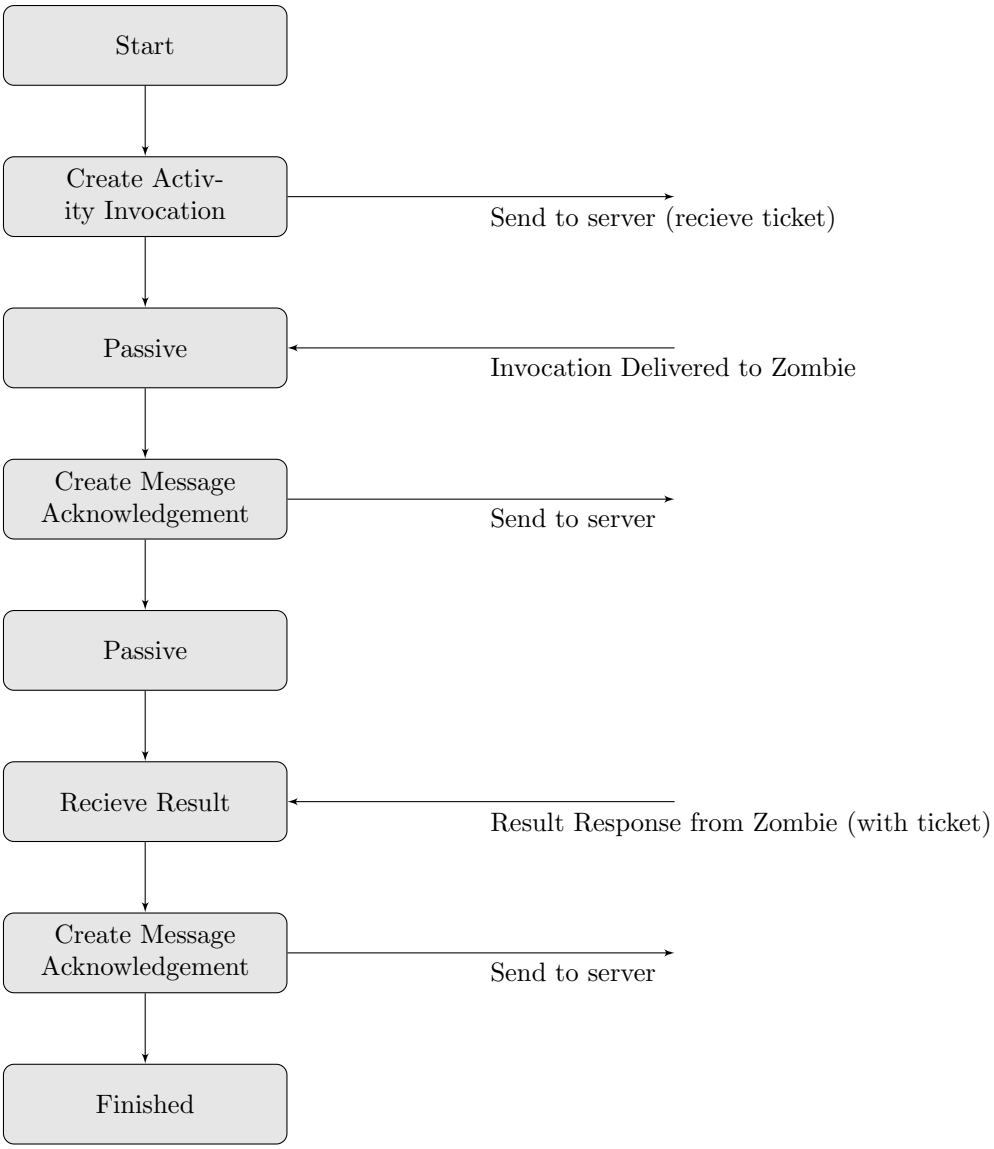
The arrow represents *have many.*



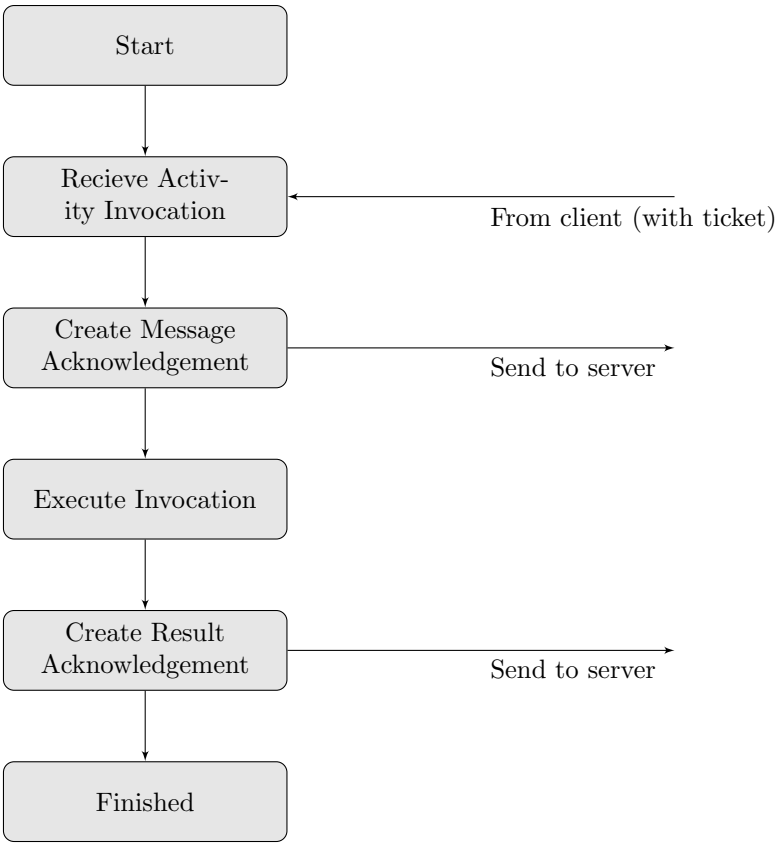
1.3 The messaging specification model in 0.0.2

These three flow charts shows the specification for the message routing between the client, the server and the zombie when the user invokes an activity on the zombie.
Note: Due to the implementation of SignalR (the transport) we will always get an acknowledgement whether what we send to the server is received or not.

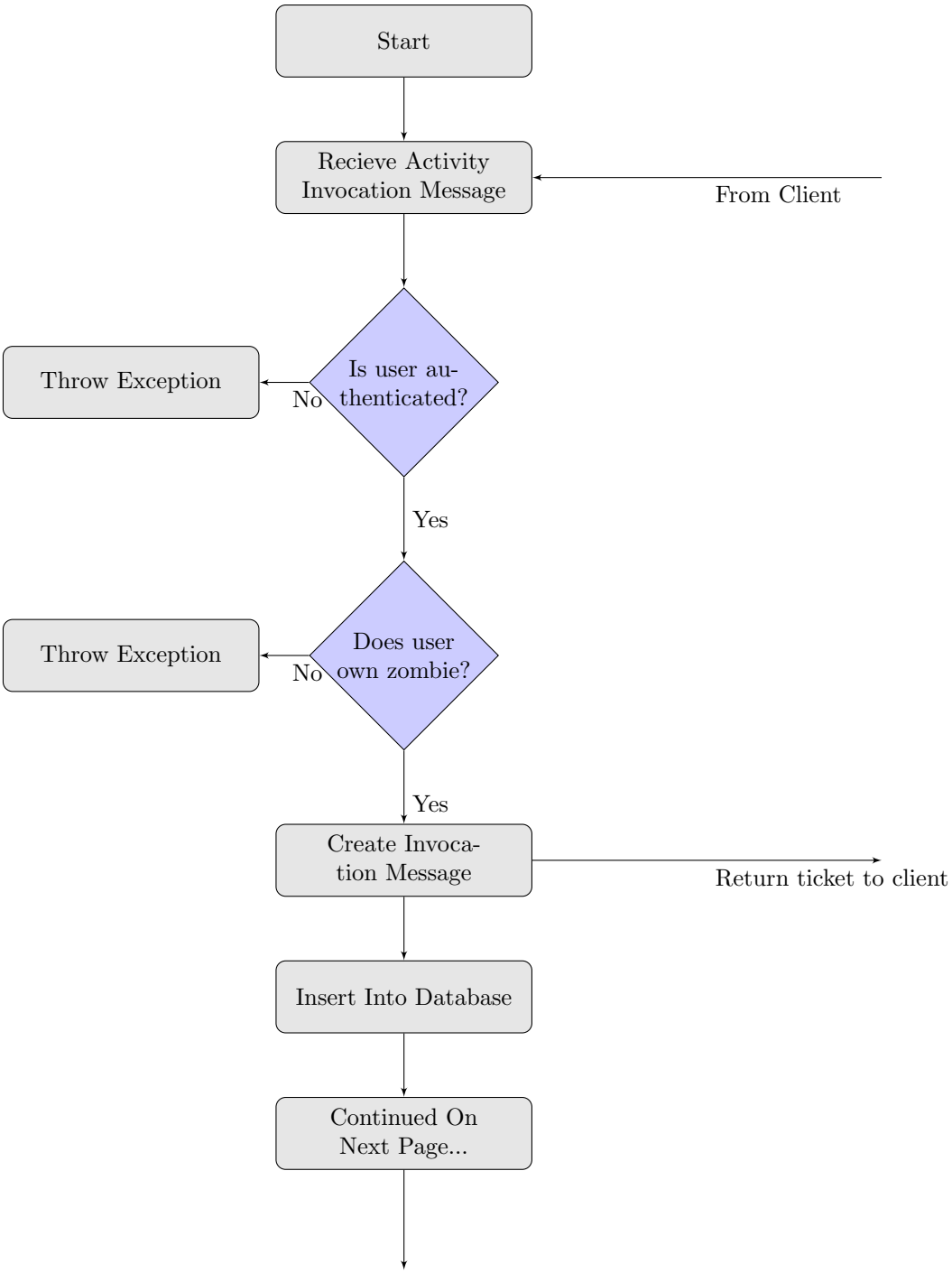
The Client

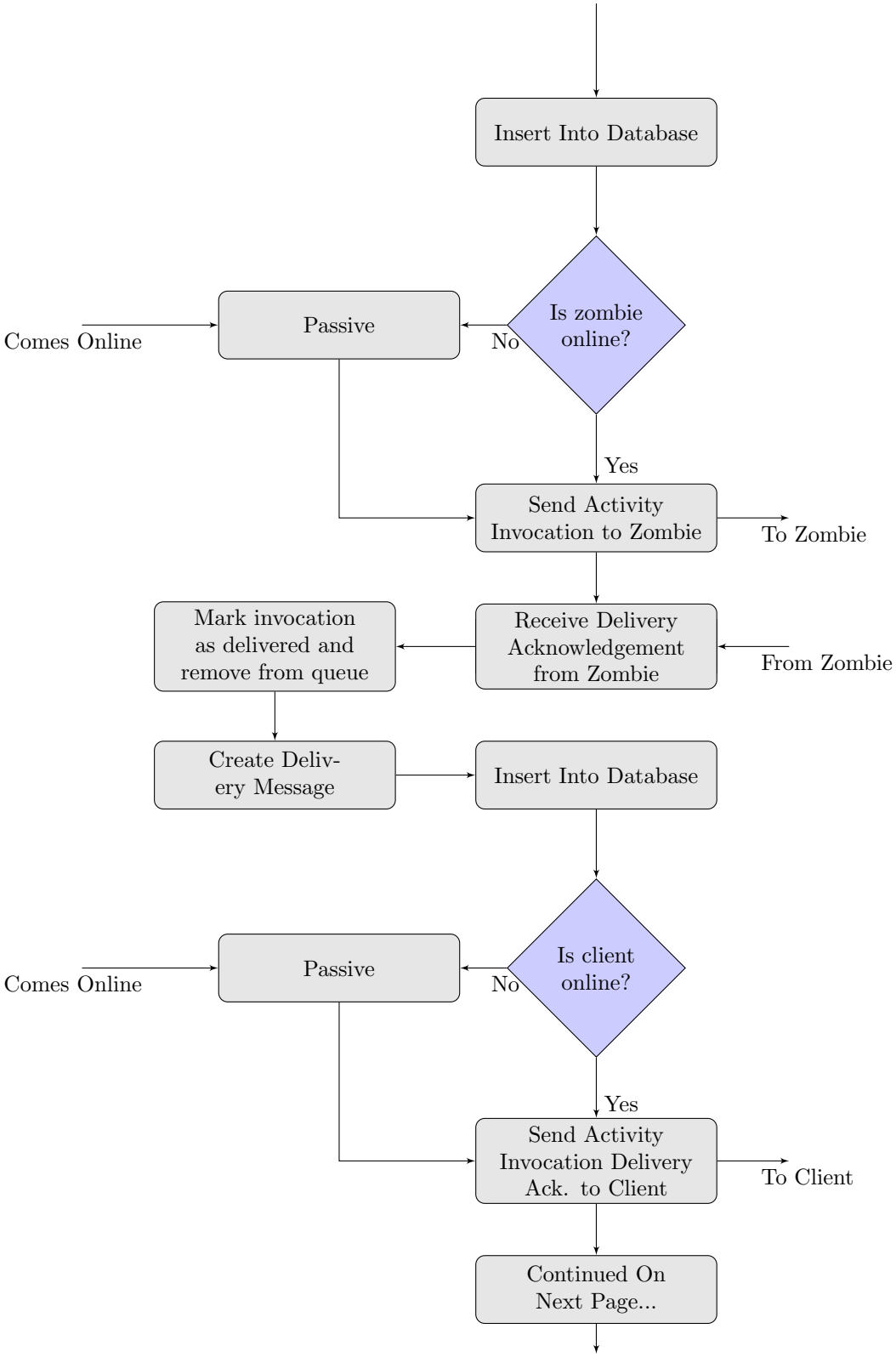

Start
Create Activity Invocation
Send to server (recieve ticket)
Passive
Invocation Delivered to Zombie
Create Message Acknowledgement
Send to server
Passive
Recieve Result
Result Response from Zombie (with ticket)
Create Message Acknowledgement
Send to server
Finished

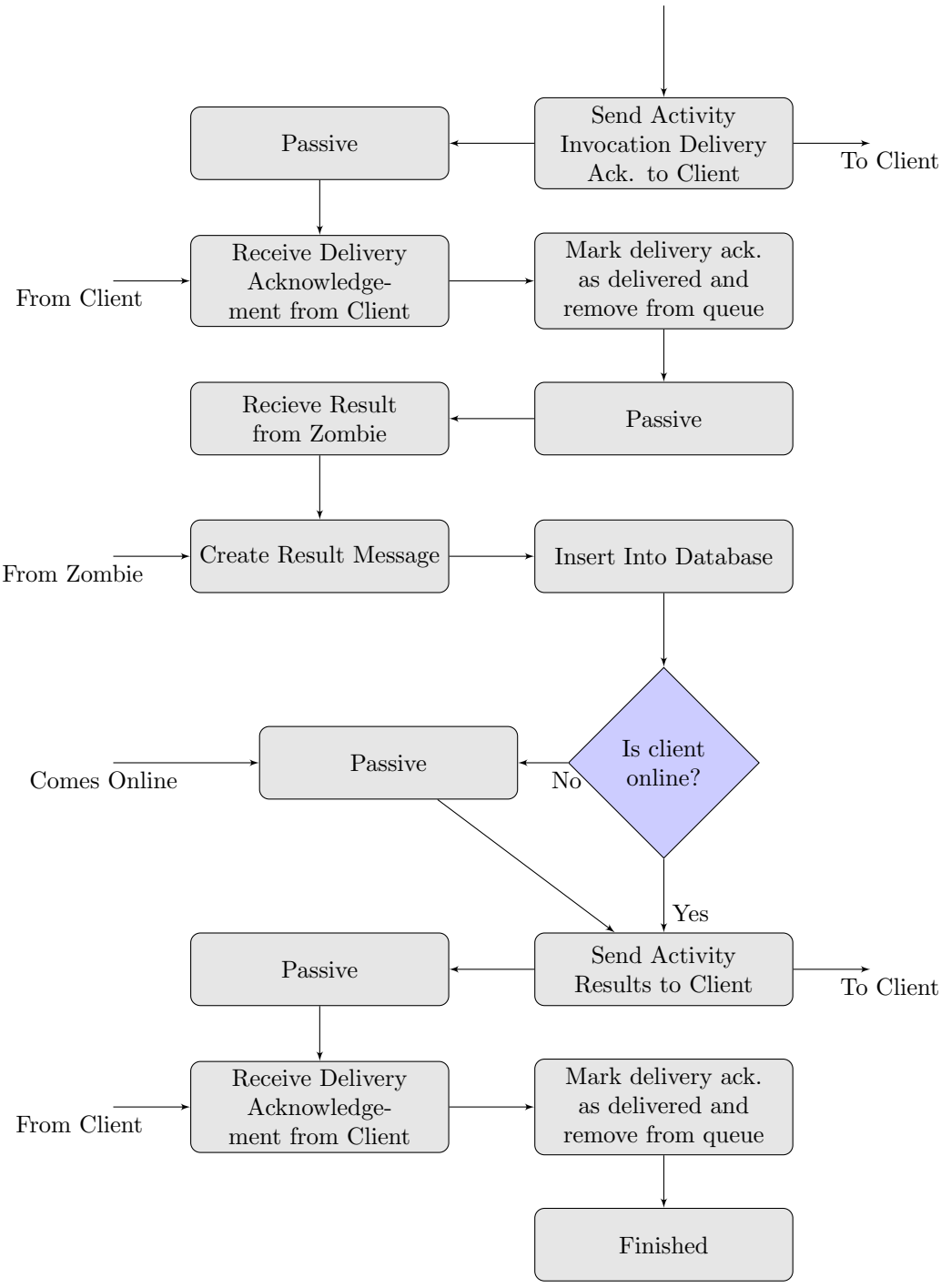
The Zombie


Start
Recieve Activity Invocation
From client (with ticket)
Create Message Acknowledgement
Send to server
Execute Invocation
Create Result Acknowledgement
Send to server
Finished

The Server


Start
Recieve Activity Invocation Message
From Client
Is user authenticated?
No
Throw Exception
Yes
Does user own zombie?
No
Throw Exception
Yes
Create Invocation Message
Return ticket to client
Insert Into Database
Continued On Next Page...


Insert Into Database
Is zombie online?
No
Passive
Comes Online
Yes
Send Activity Invocation to Zombie
To Zombie
Receive Delivery Acknowledgement from Zombie
From Zombie
Mark invocation as delivered and remove from queue
Create Deliv- ery Message
Insert Into Database
Is client online?
No
Passive
Comes Online
Yes
Send Activity Invocation Delivery Ack. to Client
To Client
Continued On Next Page...


Send Activity Invocation Delivery Ack. to Client
To Client
Passive
Receive Delivery Acknowledge- ment from Client
From Client
Mark delivery ack. as delivered and remove from queue
Passive
Recieve Result from Zombie
Create Result Message
From Zombie
Insert Into Database
Is client online?
No
Passive
Comes Online
Yes
Send Activity Results to Client
To Client
Passive
Receive Delivery Acknowledge- ment from Client
From Client
Mark delivery ack. as delivered and remove from queue
Finished