

Спецификация Match Service

Инфраструктура

- SignalR
- gRPC
- Postgres DB
- Entity Framework ORM
- Service Bus – RabbitMQ
- ChessDotNet

SignalR Hub

Конечные точки:

- /matches

Порядок взаимодействия клиента и сервера:

Метод хаба	Клиентский метод	Кто отправляет запрос	Кому отправлять ответ
OnConnectedAsync	LoadMatchInfo(MatchInfo)	Anon	To everyone
CreateMatch (CreateMatchDto)	MatchCreated(MatchCreatedDto)	Auth	To match creator
CancelMatch(string matchId)	MatchCancelled(string matchId)	Auth (Match creator)	To everyone
AcceptMatch(string matchId)	MatchStarted(MatchStartedDto)	Auth (not match creator)	To everyone
RequestDraw(string matchId)	DrawRequested(DrawRequestedDto)	Auth (Participant)	To everyone
AcceptDraw(string matchId)	MatchFinished(MatchFinishedDto)	Auth (Participant)	To everyone
RejectDraw(string matchId)	DrawRejected(string matchId)	Auth (Participant)	To everyone
MakeMove(MakeMoveDto)	MoveMade(MoveMadeDto)	Auth (Participant)	To everyone
Resign(string matchId)	MatchFinished(MatchFinishedDto)	Auth (Participant)	To everyone
Другие причины завершения матча, не связанные с клиентским запросом	MatchFinished(MatchFinishedDto)		To everyone

gRPC

Сервис выступает в качестве gRPC клиента. Запросы выполняются к сервису AIService для получения следующего хода для AI-соперника

Сигнатура запроса:

GetMove (GetMoveRequest) returns (GrpcMoveResponse)

Формат сообщений:

```
message GetMoveRequest {  
    string fen = 1;  
}  
  
message GrpcMoveInfo {  
    string move = 1;  
    google.protobuf.DoubleValue moveEv = 2;  
    google.protobuf.Int32Value mateIn = 3;  
}  
  
message GrpcMoveResponse {  
    GrpcMoveInfo moveInfo = 1;  
}
```

Модели

Match (class)

Свойство	Тип	Значение по умолчанию
Id	Guid	
CreatedAtUtc	DateTime	DateTime.UtcNow
StartedAtUtc	DateTime?	
EndedAtUtc	DateTime?	
LastMoveMadeAtUtc	DateTime?	
TimeLimit	int?	
ExtraTimePerMove	int?	
WhiteSidePlayer	string?	
ActingSide	MatchSide?	
Status	MatchStatus	MatchStatus.Created
Creator	string	
Acceptor	string?	
AILevel	int?	
Board	string?	
History	List<string>	
Winner	string?	
WinBy	WinDescriptor?	
DrawBy	DrawDescriptor?	
DrawRequestedSide	MatchSide?	
WhiteSideTimeRemaining	int?	
BlackSideTimeRemaining	int?	

MatchStatus (enum)

Created
InProgress
Finished

WinDescriptor (enum)

Mate
Resignation
OnTime

DrawDescriptor (enum)

Agreement
Stalemate
InsufficientMaterial
ThreefoldRepetition
FiftyMoveRule

MatchSide (enum)

White
Black

DTOs

MatchInfo (record)

Свойство	Тип
Id	Guid
CreatedAtUtc	DateTime
StartedAtUtc	DateTime?
EndedAtUtc	DateTime?
LastMoveMadeAtUtc	DateTime?
TimeLimit	int?
ExtraTimePerMove	int?
WhiteSidePlayer	string?
Status	string
Creator	string
Acceptor	string?
AILevel	int?
Fen	string?
Pgn	string?
Winner	string?
WinBy	string?
DrawBy	string?
DrawRequestedSide	int?
WhiteSideTimeRemaining	int?
BlackSideTimeRemaining	int?

CreateMatchDto (record)

Свойство	Тип
MatchId	Guid
VsBot	bool
AILevel	int?
TimeLimit	int?
ExtraTimePerMove	int?
FirstToActSide	int?

MatchCreatedDto (record)

Свойство	Тип
MatchId	Guid
CreatedAtUtc	DateTime
Creator	string

MatchStartedDto (record)

Свойство	Тип
MatchId	Guid
StartedAtUtc	DateTime
Acceptor	string
WhiteSidePlayer	string

DrawRequestedDto (record)

Свойство	Тип
MatchId	Guid
RequestSide	int

MakeMoveDto (record)

Свойство	Тип
MatchId	Guid
Move	string
MoveNumber	int

MoveMadeDto (record)

Свойство	Тип
MatchId	Guid
ActedSide	int
Move	string
MoveNumber	int

MatchFinishedDto (record)

Свойство	Тип
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MatchId	Guid
EndedAtUtc	DateTime
Winner	string?
WinBy	string?
DrawBy	string?

События

Publisher

- MatchCreated
- MatchCancelled
- MatchStarted
- DrawRequested
- DrawRejected
- MoveMade
- MatchFinished
- SideToActChanged

Consumer

- TimedOut