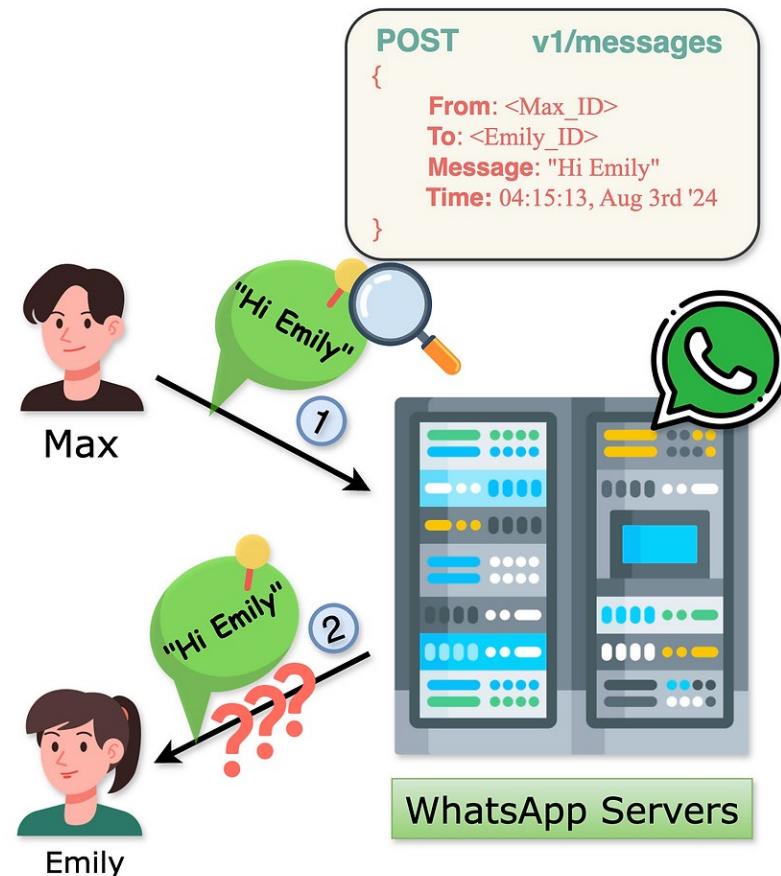
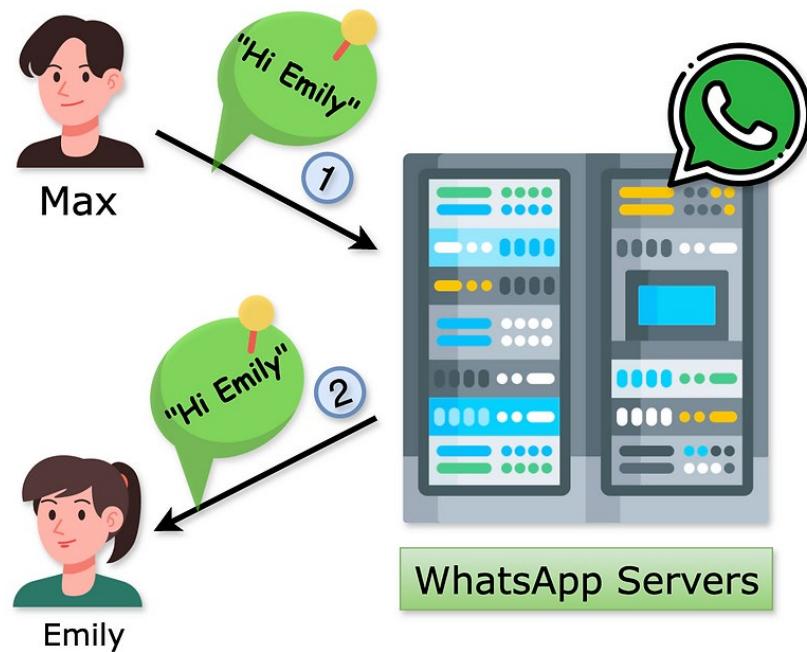
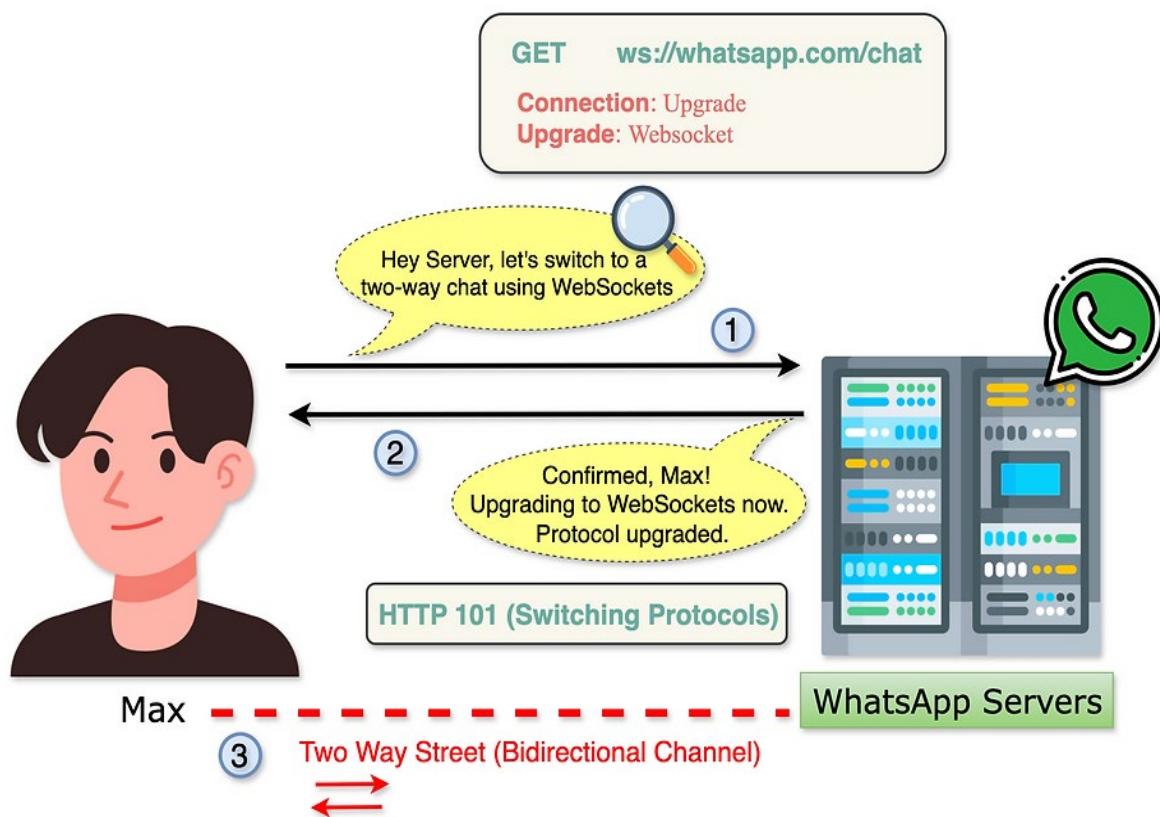
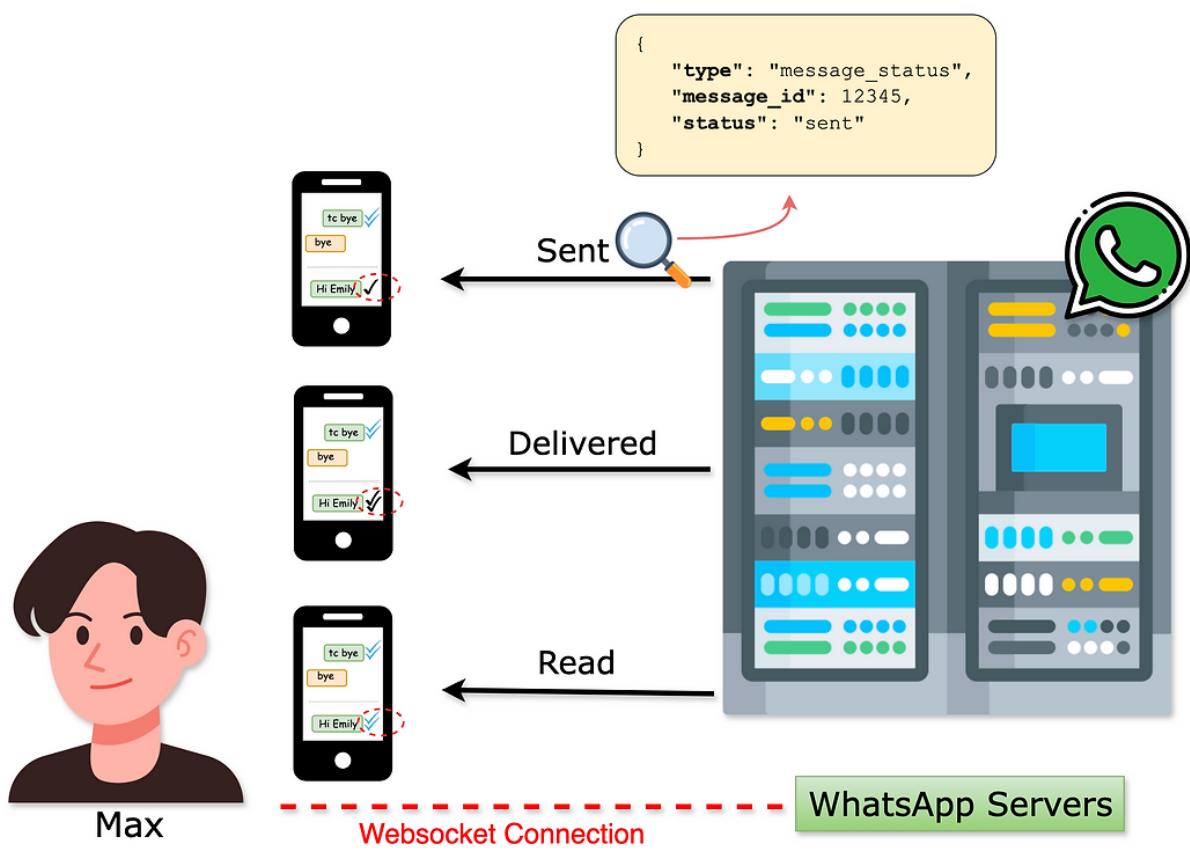


API Design: One-One Messaging

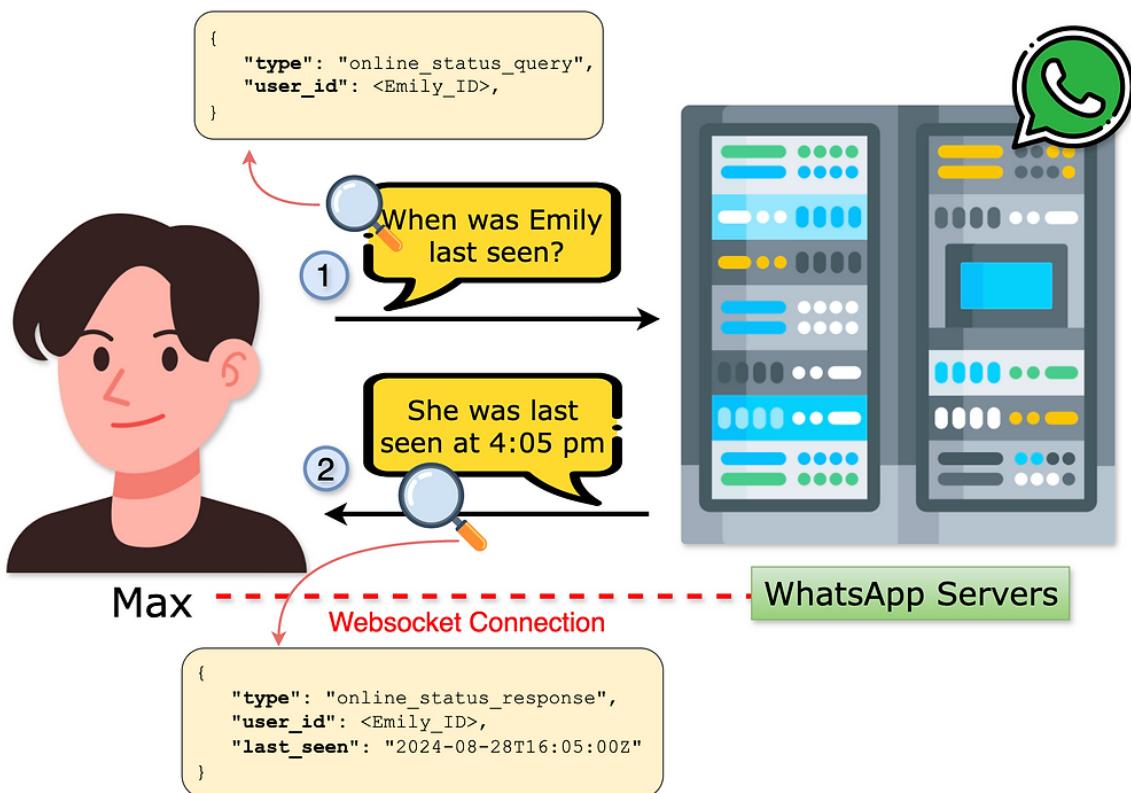
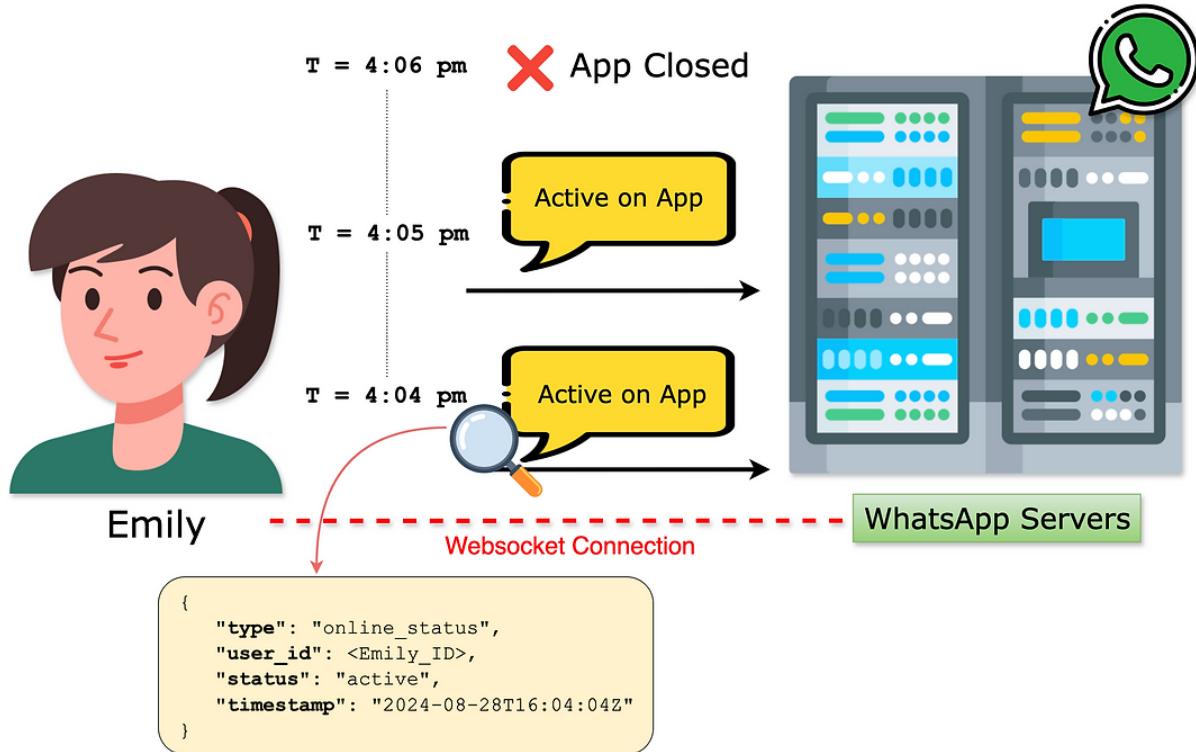




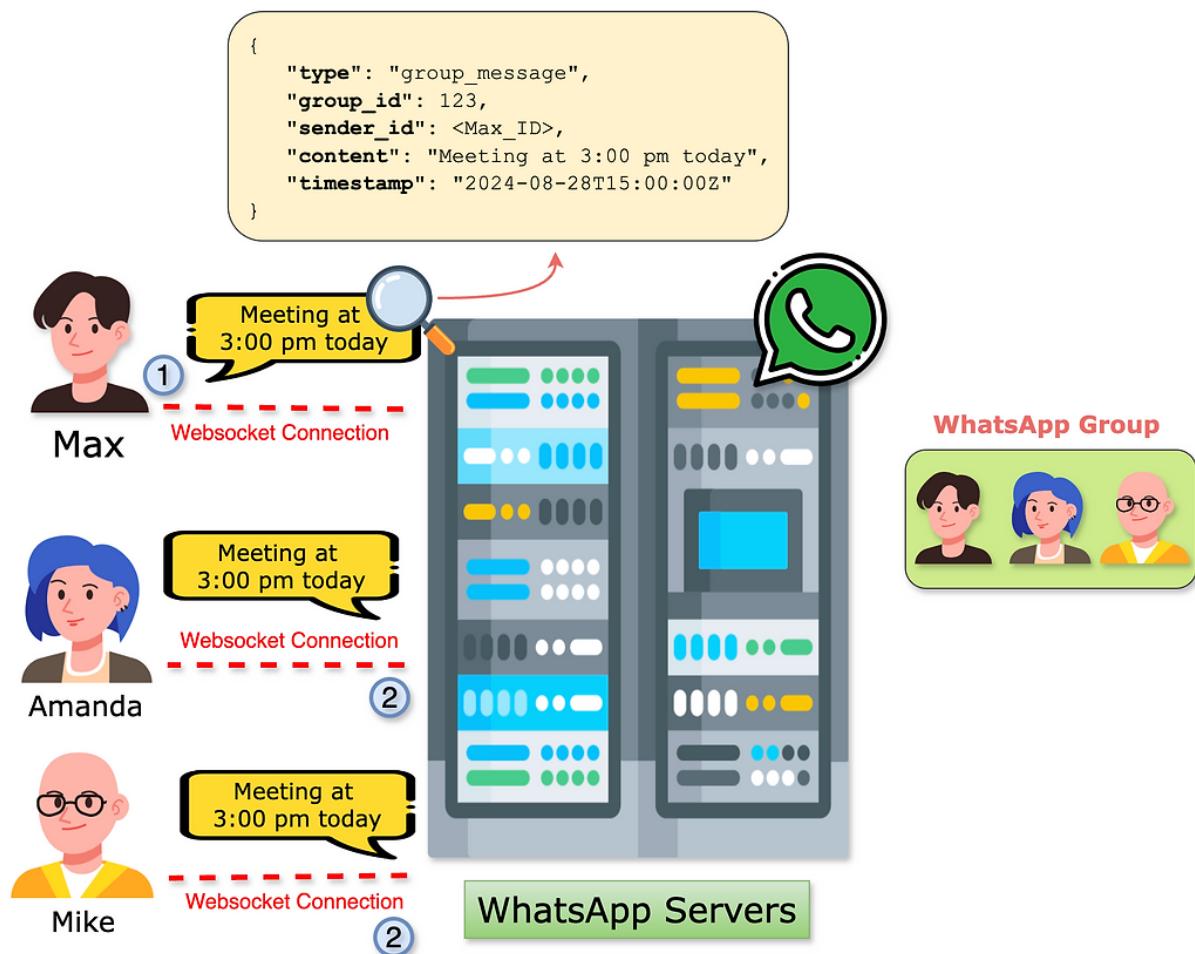
API Design: Message Status



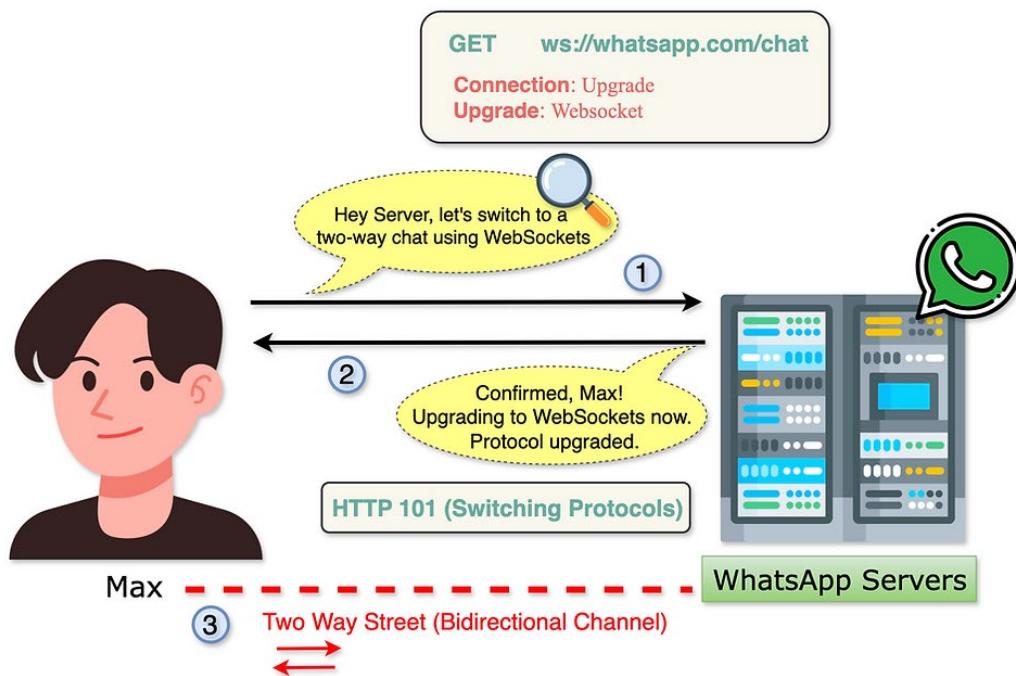
API Design: Online Status

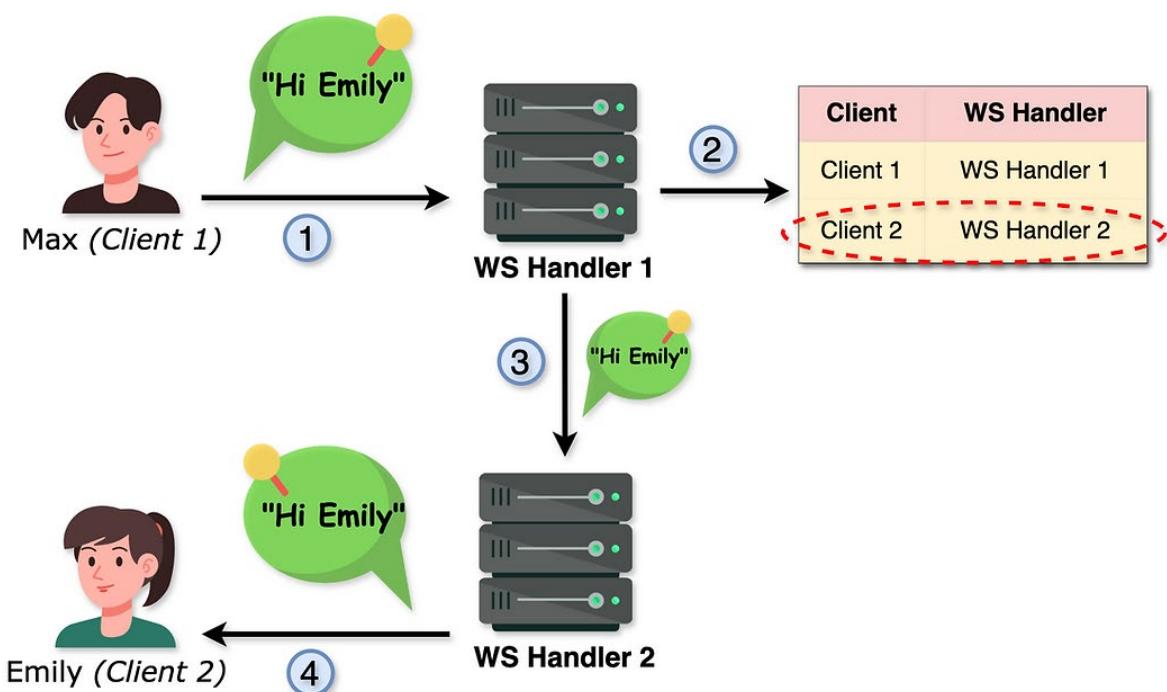
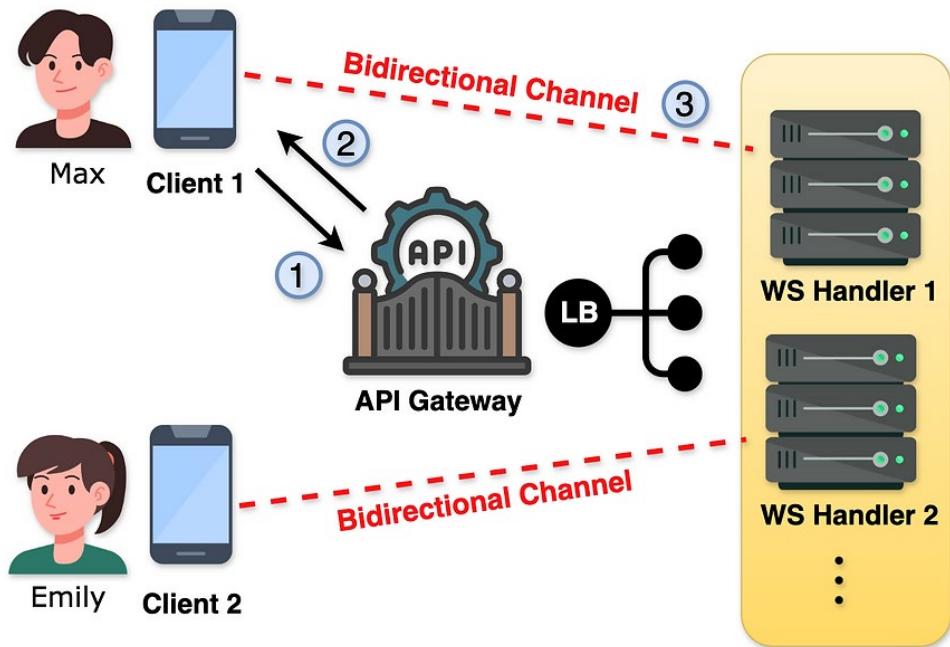


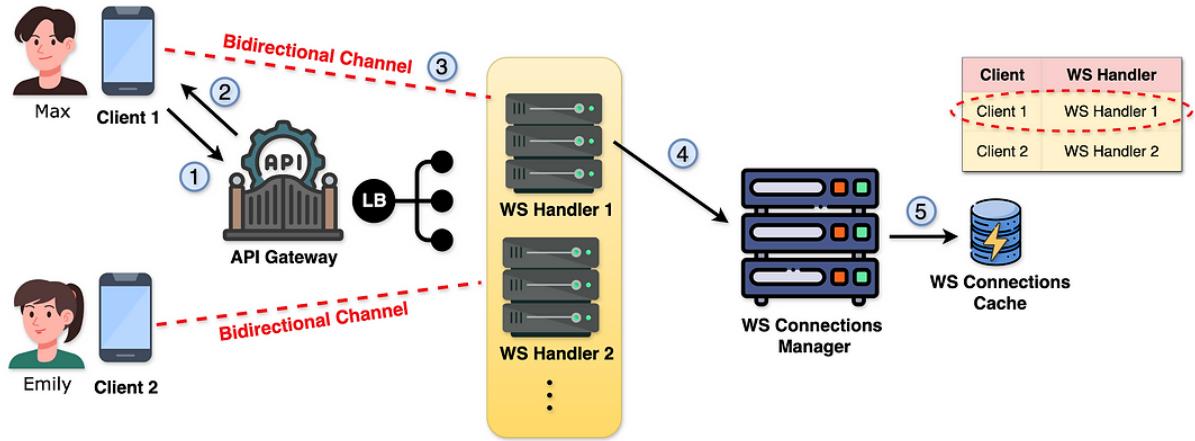
API Design: Group Messaging



Establishing WebSocket connection

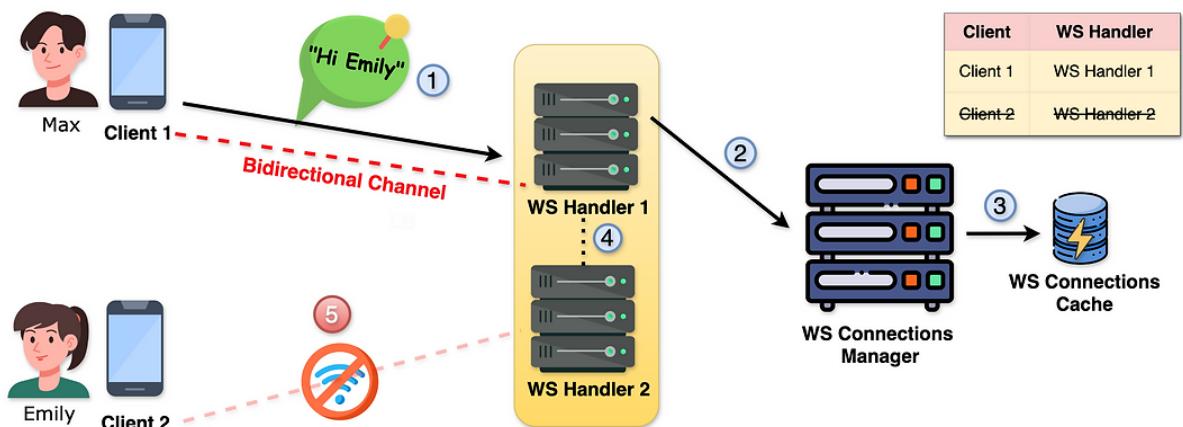
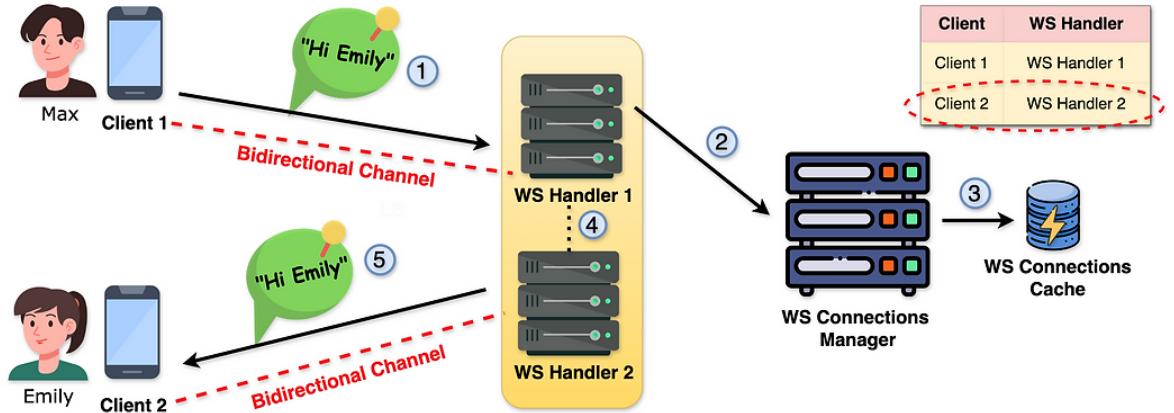




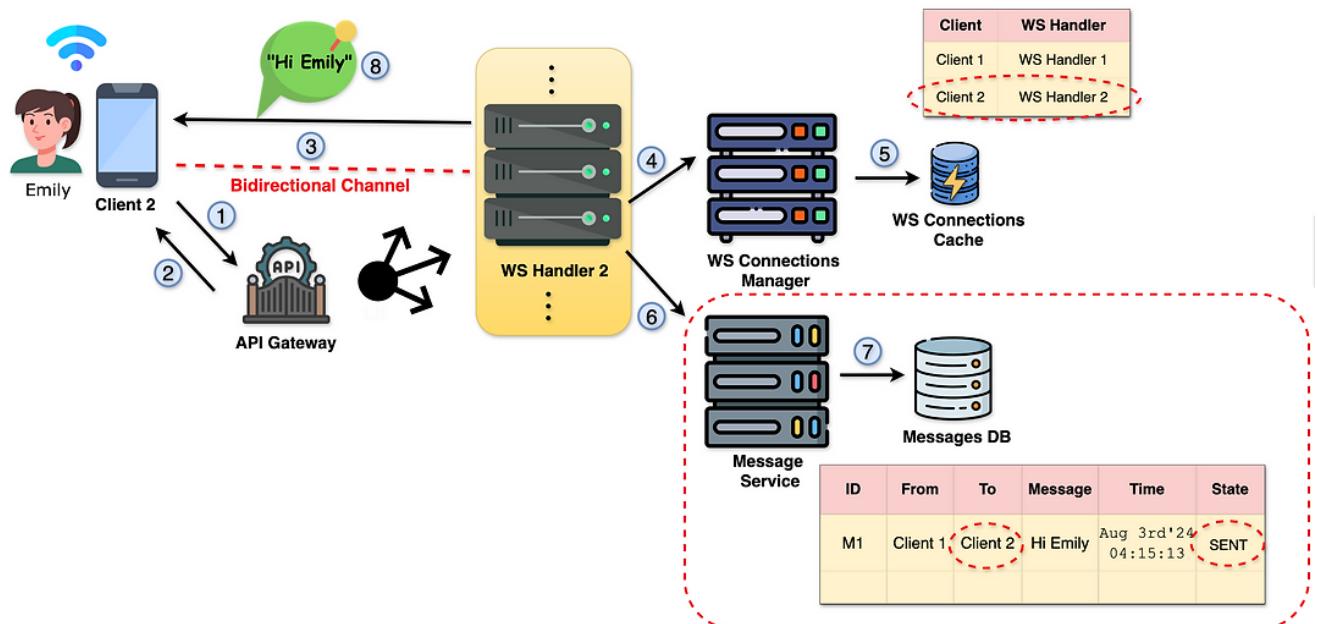
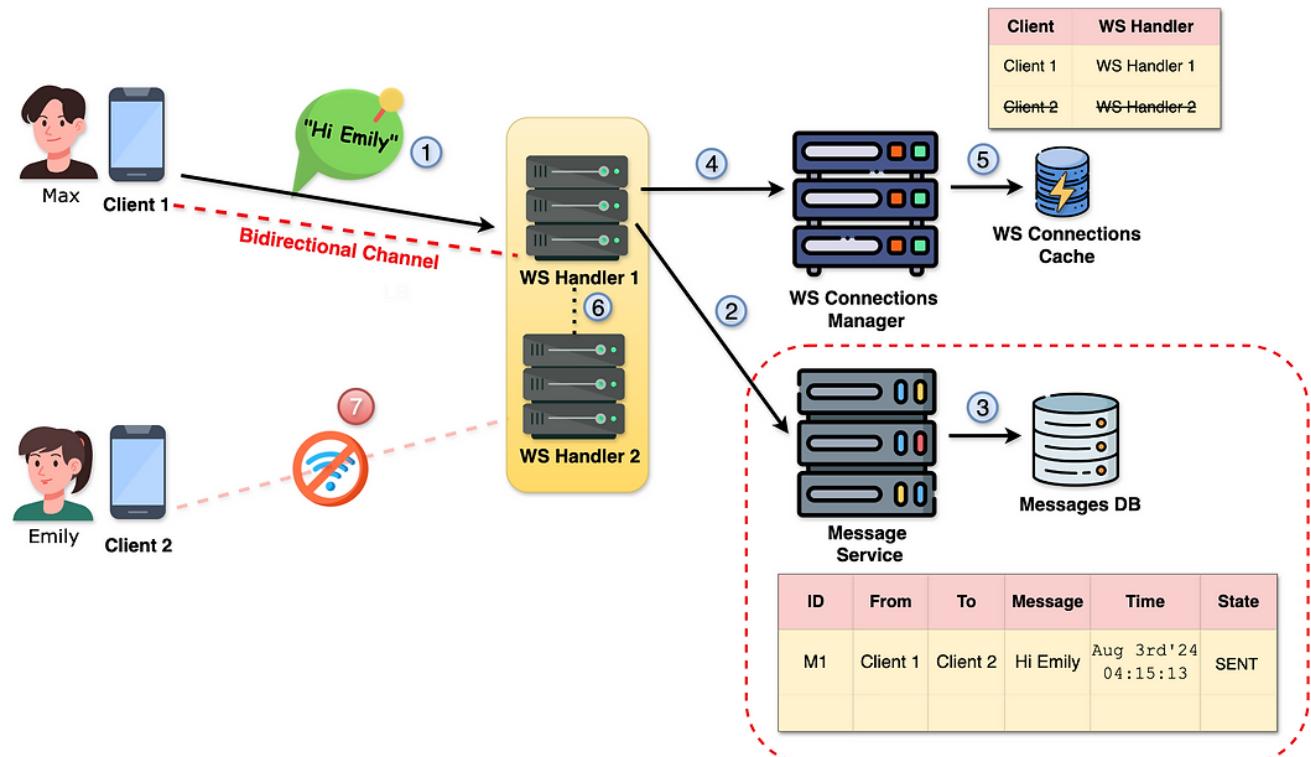


High Level Design: One-One Messaging

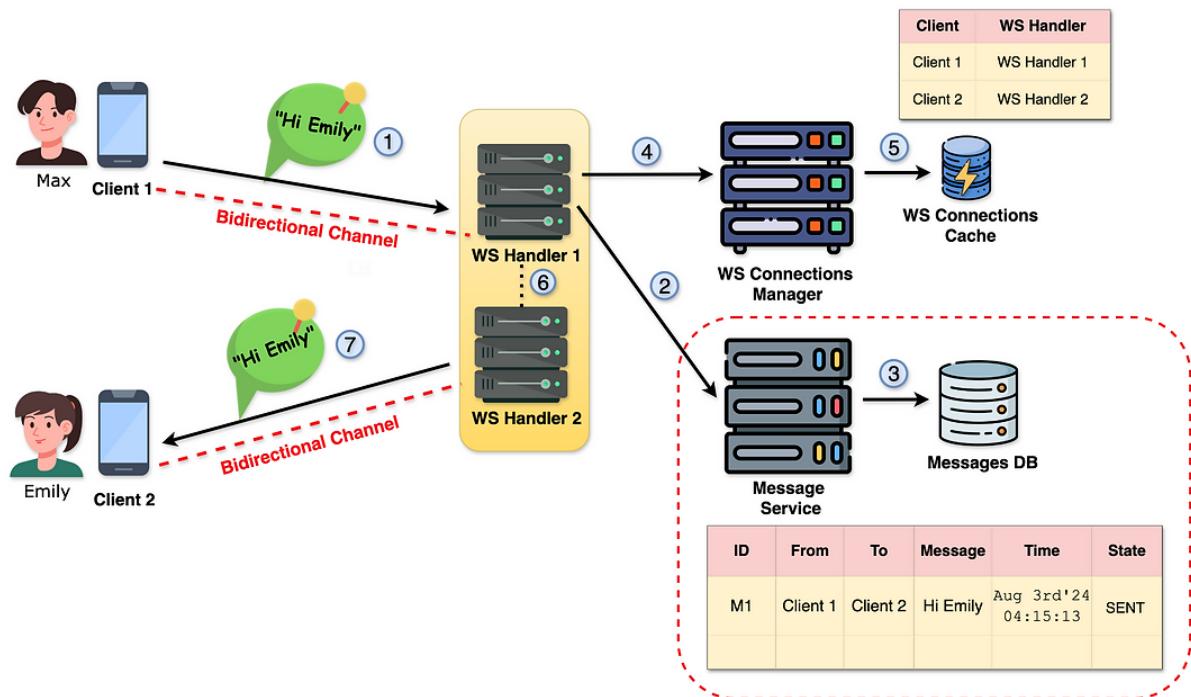
1:1 Messaging



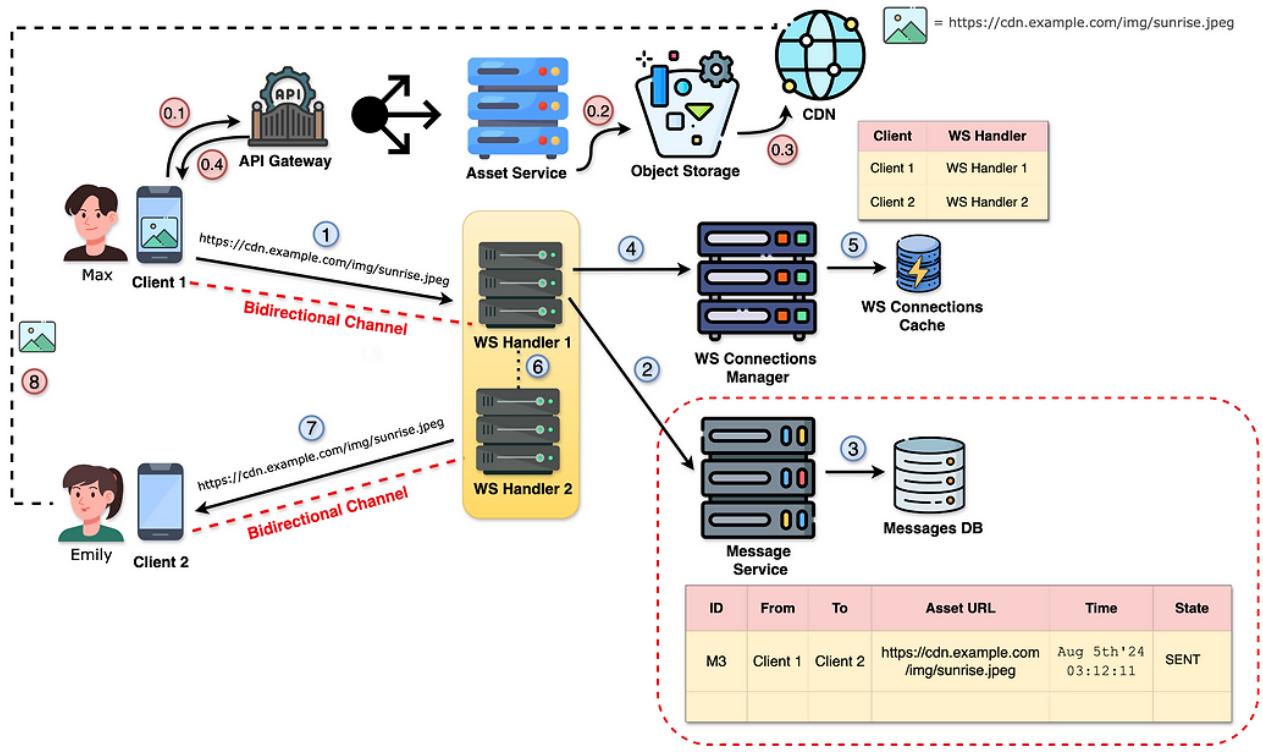
High Level Design: One-One Messaging (Offline Client)



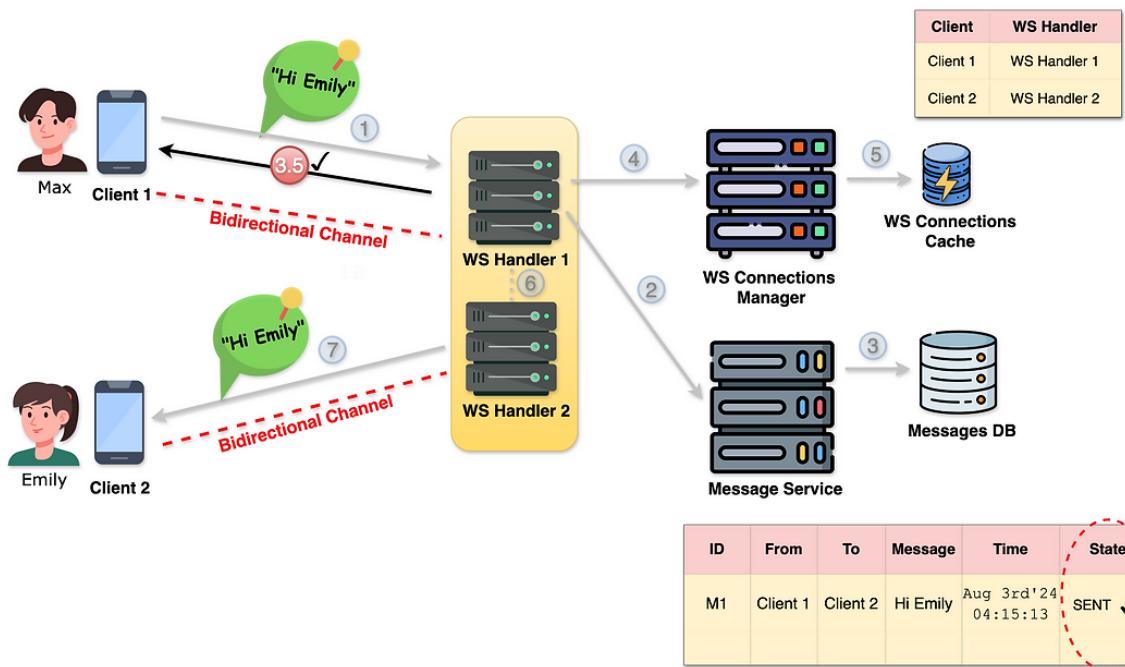
High Level Design: One-One Messaging Final Design



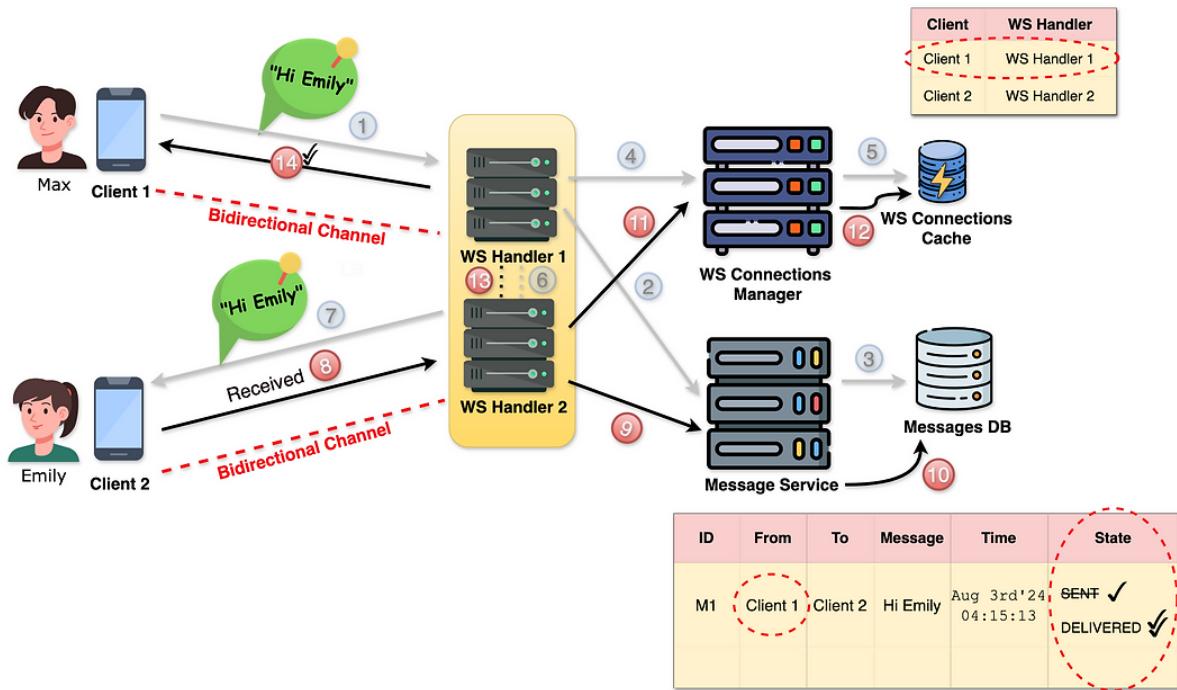
High Level Design: One-One Messaging (Image, Video, Document)



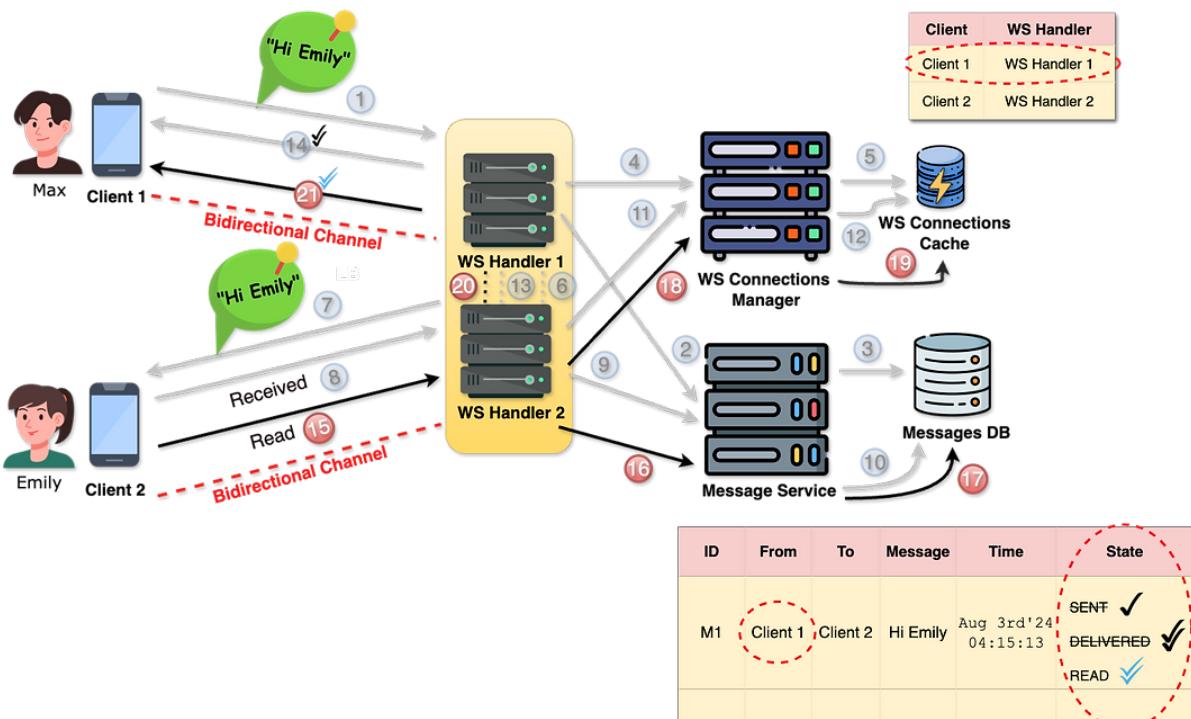
High Level Design: Message Status (Sent)



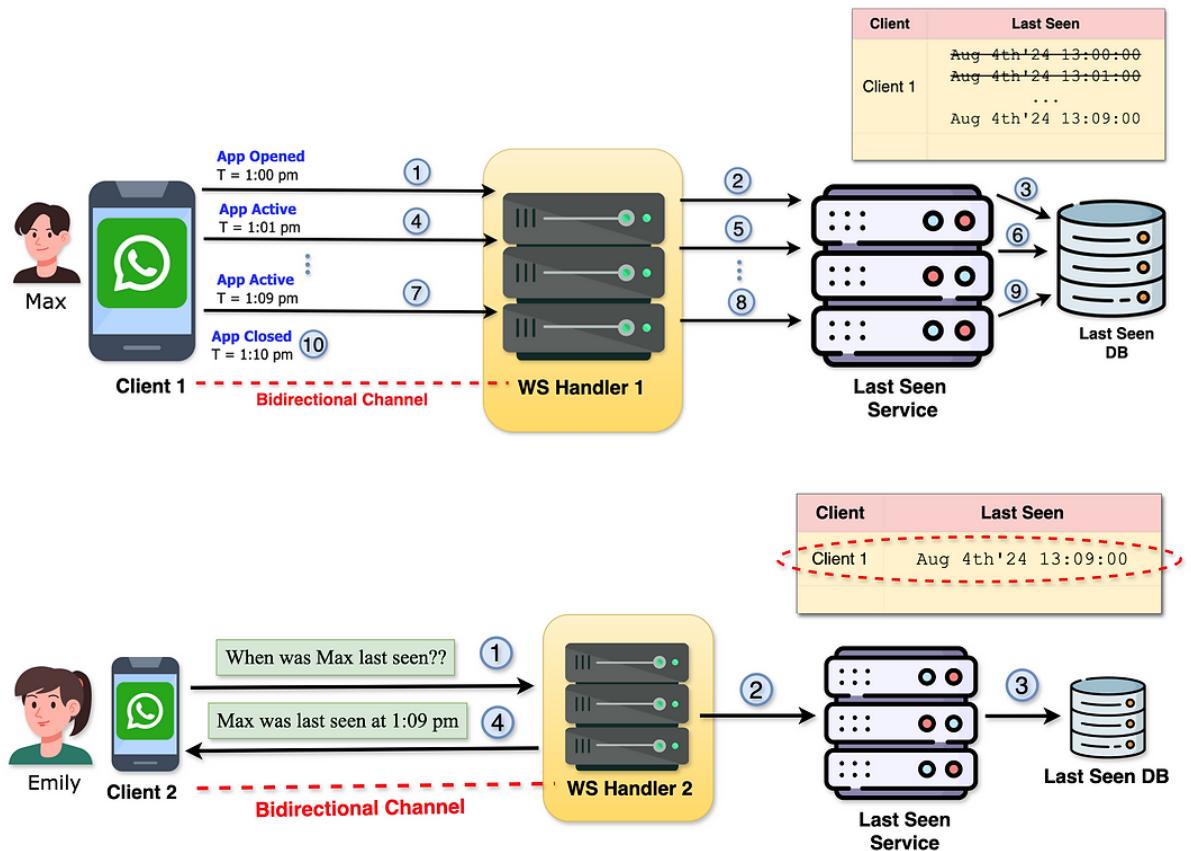
High Level Design: Message Status (Delivered)



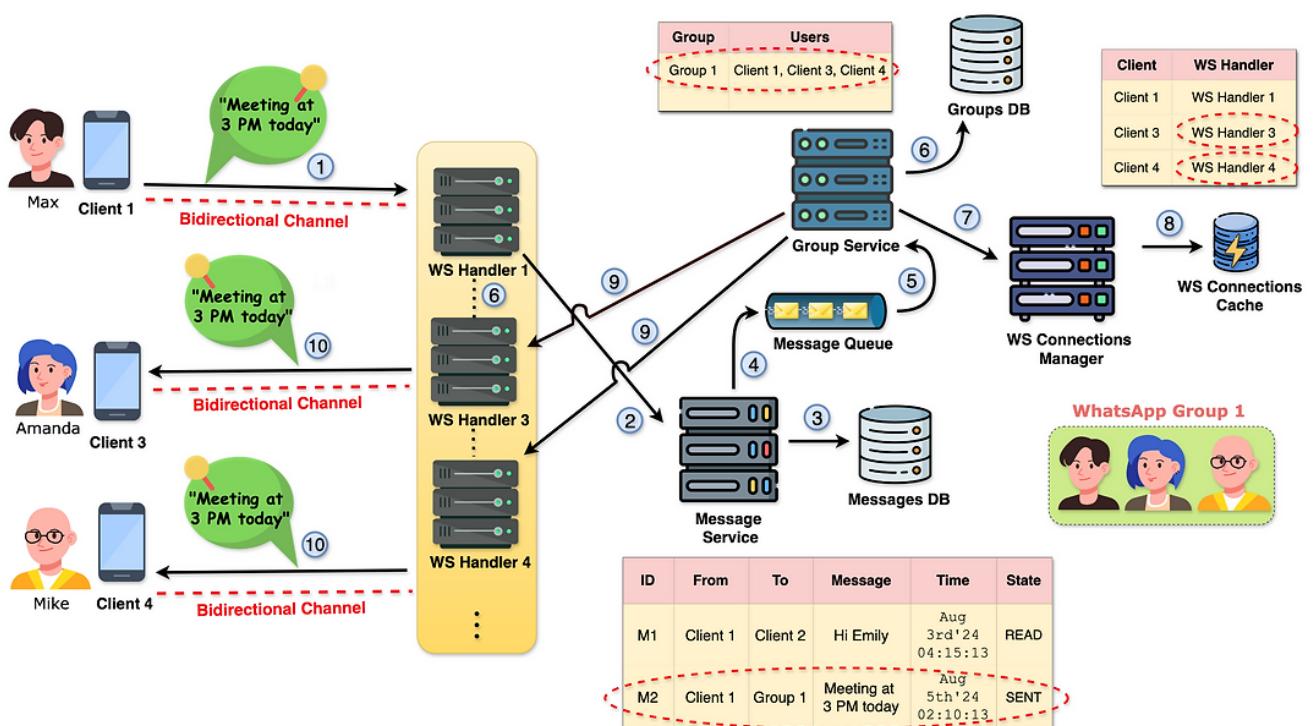
High Level Design: Message Status (Read)



High Level Design: Online Status



High Level Design: Group Messaging



Messages DB schema

{
}

MessageId: A unique ID for each message.
SenderId ("From"): ID of the user sending the message.
ReceiverId ("To"): ID of the user or group getting the message.
MessageType: Type of the message, such as text, image, or video.
Message: The actual text of the message.
AssetURL: Link to any images, videos, or files attached.
State: Current status of the message, like 'Sent', 'Delivered', or 'Read'.
Time: When the message was sent.

}
}

Groups DB schema

{
}

GroupId: A unique identifier for each group.
GroupName: The name of the group.
GroupDescription: A short description or purpose of the group.
CreatorId: The user ID of the person who created the group.
Members: A list of user IDs that are members of the group.
CreatedTime: Timestamp when the group was created.
LastUpdatedTime: Timestamp for the last update to the group such as adding or removing members.

}
}

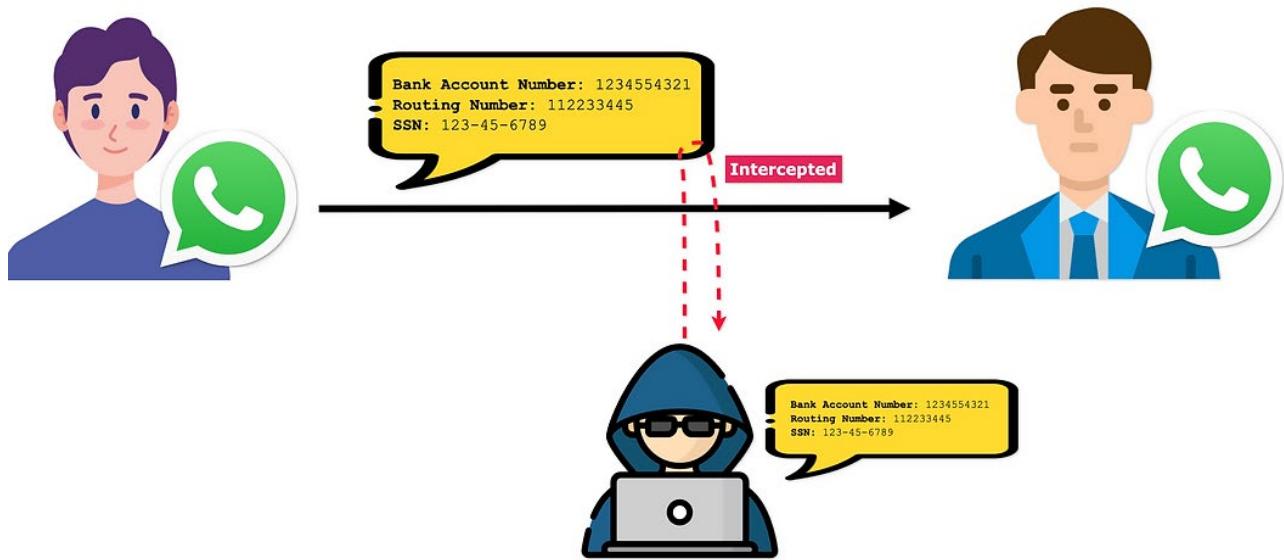
Last Seen DB schema

{
}

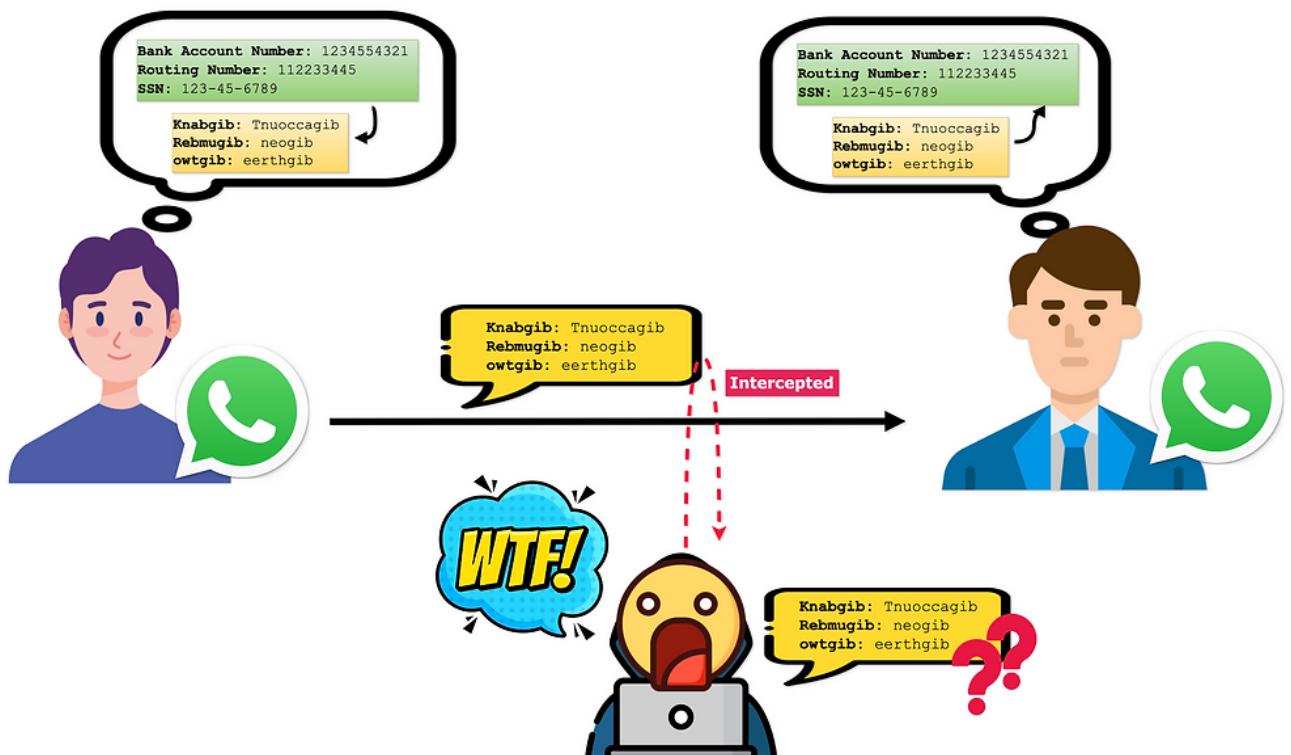
ClientId: A unique identifier for each user/client.
LastSeenTime: The timestamp when the user was last active on the app.

}
}

End-to-End Encryption (without Encryption)



End-to-End Encryption (with Encryption)



End-to-End Encryption (Encryption with lock & Key)

