# 🚀 META WHATSAPP BUSINESS API - DIRECT SETUP

## Get WhatsApp API Directly from Facebook/Meta (No Third-Party Provider)

---

## 📋 TABLE OF CONTENTS

---

## 🎯 OPTION 1: CLOUD API (RECOMMENDED - EASIEST)

### ✅ Why Cloud API?

- Hosted by Meta (no server needed)
- **FREE for first 1,000 conversations/month**
- Easiest to setup (no technical infrastructure needed)
- Best for beginners
- Scales automatically

### 📊 Pricing:

- First **1,000 conversations/month: FREE**
- After that: ₹0.50 - ₹3 per conversation (India rates)
- **Much cheaper than providers like Gupshup**

---

## 📝 PREREQUISITES (MUST HAVE)

Before starting, ensure you have:

**1. Business Documents:**

□ Business name (registered or doing business as)
□ Business address
□ Business email
□ Business phone number
□ Business website (optional but recommended)
□ GST certificate or business registration (for India)

**2. Meta Accounts:**

□ Personal Facebook account (must be admin)
□ Must have 2FA (Two-Factor Authentication) enabled

**3. Phone Number:**

□ Dedicated phone number for WhatsApp Business
□ **Important:** Cannot be used with regular WhatsApp
□ Can be landline or mobile
□ Must be able to receive SMS or voice calls

**4. Technical Requirements:**

□ Basic coding knowledge (or developer)
□ Server/hosting for your backend (Railway/Render)
□ SSL certificate (HTTPS webhook URL)

---

## 🛠️ STEP-BY-STEP SETUP PROCESS

**STEP 1: Create Meta Business Account**

1. **Go to:** https://business.facebook.com
2. **Click "Create Account"**
3. **Fill Business Information:**

```
Business Name: Ultraa Events
Your Name: [Your Full Name]
Business Email: contact@ultraaevents.com
```

4. **Verify Email:**
    - Check inbox
    - Click verification link
5. **Add Business Details:**

    - Business address
    - Business phone
    - Business website (if any)

6. **Complete Business Verification (Important!):**
    - Go to Settings → Business Info
    - Click "Start Verification"
    - Upload documents:
        - GST certificate OR
        - Business registration certificate OR
        - Utility bill + Business proof

    **Verification takes 1-3 business days**

✅ **Meta Business Account Created!**

---

**STEP 2: Create Meta App for WhatsApp**

1. **Go to:** https://developers.facebook.com
2. **Click "My Apps" → "Create App"**
3. **Choose App Type:**
    - Select: **"Business"**
    - Click "Next"
4. **App Details:**

```
App Name: Ultraa Events WhatsApp Bot
App Contact Email: tech@ultraaevents.com
Business Account: [Select your Meta Business Account]
```

- Click "Create App"

5. **Add WhatsApp Product:**
    - In app dashboard, find "WhatsApp"
    - Click "Set Up"
6. **Select Business Portfolio:**
    - Choose your Meta Business Account
    - Click "Continue"

✅ **App Created with WhatsApp Product!**

---

### STEP 3: Setup WhatsApp Business API

1. **In Your App Dashboard:**
    - Go to WhatsApp → Getting Started
    - You'll see a temporary test number provided by Meta
2. **Add Your Phone Number (Recipient for Testing):**
    - Click "Add phone number"
    - Enter YOUR personal WhatsApp number
    - Verify with OTP
3. **Test the API:**
    - Use the test number to send yourself a message
    - You should receive it on WhatsApp
    - This confirms API is working!

---

### STEP 4: Add Your Business Phone Number

⚠️ **Important:** This number will become your WhatsApp Business number

1. **In WhatsApp Dashboard → API Setup:**
    - Click "Add Phone Number"
2. **Enter Your Business Phone:**
    - Must be a number NOT already on WhatsApp
    - Format: +91XXXXXXXXXX (for India)
    - Click "Next"
3. **Choose Verification Method:**
    - **SMS** (easiest) or
    - **Voice Call**
4. **Verify Number:**
    - Receive 6-digit code
    - Enter code
    - Click "Verify"
5. **Display Name & Business Profile:**

```
Display Name: Ultraa Events
Category: Event Planning Service
Description: Your go-to platform for booking event tickets
Profile Photo: Upload your logo
```

6. **Submit for Review:**
   - Meta will review your business profile
   - Takes 1-2 business days
   - You'll receive email notification

✅ **Business Number Added & Under Review!**

---

**STEP 5: Get API Credentials**

1. **In App Dashboard → WhatsApp → API Setup:**
2. **Note These Important Details: a) Access Token:**

```
Temporary Token: (valid for 24 hours - for testing)
Permanent Token: (generate after setup - for production)
```

**b) Phone Number ID:**

```
Phone Number ID: 123456789012345
(This is your WhatsApp Business number identifier)
```

**c) WhatsApp Business Account ID:**

```
WABA ID: 987654321098765
```

**d) App ID & App Secret:**

- Go to Settings → Basic
- Copy App ID
- Click "Show" for App Secret

🔐 **SAVE ALL THESE SECURELY!**

---

**STEP 6: Generate Permanent Access Token**

⚠️ The temporary token expires in 24 hours. You need a permanent one.

**Option A: Using System User (Recommended)**

1. **Create System User:**
   - Go to Meta Business Suite: https://business.facebook.com
   - Settings → Users → System Users
   - Click "Add" → Name it: "WhatsApp Bot"
2. **Assign Assets:**
   - Click on system user
   - Click "Add Assets"
   - Select your WhatsApp App
   - Give "Full Control" permissions
3. **Generate Token:**
   - Click "Generate New Token"
   - Select your App
   - Select permissions:
     - whatsapp_business_messaging
     - whatsapp_business_management
   - Click "Generate Token"
   - **Copy and save this token** (never expires!)

**Option B: Using User Access Token**

1. Go to: https://developers.facebook.com/tools/explorer/
2. Select your app
3. Get Token → Get User Access Token
4. Select required permissions
5. Generate token

⚠️ **Store token in .env file immediately!**

---

**STEP 7: Setup Webhook (Connect to Your Backend)**

Webhooks allow you to receive messages from customers.

1. **Deploy Your Backend First:**
   - Make sure your backend is live on Railway/Render

- URL must be HTTPS (SSL required)
- Example: `https://your-app.railway.app`

2. **In App Dashboard → WhatsApp → Configuration:**
3. **Click "Edit" next to Webhook: Callback URL:**

```
https://your-app.railway.app/webhook/whatsapp
```

**Verify Token:**

```
ultraa_events_secure_token_123
(Create any random secure string)
```

4. **Backend Webhook Code:**

Add this to your `server.js`:

javascript

```
// Webhook Verification (GET request from Meta)
app.get('/webhook/whatsapp', (req, res) => {
  const VERIFY_TOKEN = 'ultraa_events_secure_token_123';

  const mode = req.query['hub.mode'];
  const token = req.query['hub.verify_token'];
  const challenge = req.query['hub.challenge'];

  if (mode === 'subscribe' && token === VERIFY_TOKEN) {
    console.log('✅ Webhook verified!');
    res.status(200).send(challenge);
  } else {
    res.sendStatus(403);
  }
});

// Webhook Messages (POST request from Meta)
app.post('/webhook/whatsapp', async (req, res) => {
  try {
    const body = req.body;

    // Check if this is a WhatsApp message
    if (body.object === 'whatsapp_business_account') {
      body.entry.forEach(entry => {
        entry.changes.forEach(change => {
          if (change.field === 'messages') {
            const message = change.value.messages[0];
            const from = message.from; // Customer's phone
            const text = message.text.body; // Message text

            console.log(`📱 Message from ${from}: ${text}`);

            // Process message and send reply
            handleIncomingMessage(from, text);
          }
        });
      });
    }

    res.sendStatus(200);
  } catch (error) {
    console.error('Webhook error:', error);
    res.sendStatus(500);
  }
});
```

5. **Verify Webhook:**
   - Click "Verify and Save"
   - Meta will send a GET request to your URL
   - If successful, you'll see green checkmark ✅

6. **Subscribe to Webhook Fields:**
   - Check: **messages**
   - This tells Meta to send you message updates

✅ **Webhook Connected Successfully!**

---

### STEP 8: Send Messages via API

Now you can send WhatsApp messages from your code!

```
javascript
```

```
const axios = require('axios');

async function sendWhatsAppMessage(to, message) {
  const PHONE_NUMBER_ID = 'your_phone_number_id';
  const ACCESS_TOKEN = 'your_permanent_access_token';

  const url = `https://graph.facebook.com/v18.0/${PHONE_NUMBER_ID}/messages`;

  try {
    const response = await axios.post(url, {
      messaging_product: 'whatsapp',
      to: to, // Format: 91XXXXXXXXXX (no + sign)
      type: 'text',
      text: {
        body: message
      }
    }, {
      headers: {
        'Authorization': `Bearer ${ACCESS_TOKEN}`,
        'Content-Type': 'application/json'
      }
    });

    console.log('✅ Message sent:', response.data);
    return response.data;
  } catch (error) {
    console.error('❌ Error sending message:', error.response.data);
  }
}

// Usage:
sendWhatsAppMessage('919876543210', 'Hello! Welcome to Ultraa Events 🎉');
```

---

### STEP 9: Create Message Templates

For **business-initiated messages** (like confirmations), you need approved templates.

1. **In App Dashboard → WhatsApp → Message Templates:**

2. **Click "Create Template"**

3. **Template Details:**

```
Name: payment_confirmation
Category: TRANSACTIONAL
Language: English (US) and हिन्दी (Hindi - India)
```

4. **Template Content:**

```
🎉 Payment Successful!

Your ticket for {{1}} is confirmed!

Order ID: {{2}}
Amount: ₹{{3}}

QR Code: {{4}}

See you at the event! 🎊
```

5. **Submit for Approval:**
   - Review time: 24-48 hours
   - You'll receive email notification

6. **Send Template Message:**

```javascript
await axios.post(url, {
  messaging_product: 'whatsapp',
  to: '919876543210',
  type: 'template',
  template: {
    name: 'payment_confirmation',
    language: { code: 'en_US' },
    components: [{
      type: 'body',
      parameters: [
        { type: 'text', text: 'Neon Nights Festival' },
        { type: 'text', text: 'UE123456' },
        { type: 'text', text: '2500' },
        { type: 'text', text: 'QR_UE123456' }
      ]
    }]
  }
}, { headers });
```

✅ **Templates Created!**

---

**STEP 10: Request Business Verification (For Higher Limits)**

1. **Go to:** Meta Business Suite → Settings → Business Info
2. **Click "Start Verification"**
3. **Upload Documents:**
   - Business registration certificate
   - GST certificate
   - Bank statement or utility bill
   - Business website proof
4. **Wait for Approval:**
   - Takes 3-5 business days
   - Meta may request additional docs
5. **Benefits After Verification:**
   - Higher message limits (250+ conversations/day)
   - Better deliverability
   - Green checkmark on WhatsApp

---

## 💰 PRICING BREAKDOWN (CLOUD API)

**Free Tier:**

- First **1,000 conversations/month: FREE**
- A "conversation" = 24-hour window with a user

**Paid Rates (India):**

| Conversation Type | Price per Conversation |
|---|---|
| Marketing | ₹2.50 |
| Utility (Confirmations) | ₹0.80 |
| Authentication | ₹0.50 |
| Service (Support) | ₹0.50 |

**Example Calculation:**

- 500 ticket bookings/month

- Each booking = 2 utility conversations (booking + confirmation)
- Total: 1,000 conversations
- **Cost: FREE** (within free tier)

If 2,000 bookings/month:

- 4,000 conversations
- First 1,000 = FREE
- Next 3,000 × ₹0.80 = ₹2,400/month

🎯 **Much cheaper than Gupshup (₹1,500-3,000/month)!**

---

## ⚖️ CLOUD API vs BSP (Provider)

**Cloud API (Direct from Meta)** ✅

**Pros:**

- ✅ FREE for first 1,000 conversations
- ✅ Cheaper at scale
- ✅ Full control
- ✅ Direct Meta support
- ✅ Latest features first

**Cons:**

- ❌ Requires technical setup
- ❌ Need to manage infrastructure
- ❌ No hand-holding support

**BSP Provider (Gupshup, Twilio)** ⚠️

**Pros:**

- ✅ Easy setup (no code needed)
- ✅ Customer support
- ✅ Pre-built dashboards
- ✅ No technical expertise needed

**Cons:**

- ❌ Expensive (₹1,500-5,000/month)

- ❌ Per-message charges on top
- ❌ Less control
- ❌ Vendor lock-in

---

## 🔧 COMPLETE BACKEND INTEGRATION

Update your `.env` file:

```env
# Meta WhatsApp Cloud API
WHATSAPP_PHONE_NUMBER_ID=123456789012345
WHATSAPP_ACCESS_TOKEN=your_permanent_access_token
WHATSAPP_BUSINESS_ACCOUNT_ID=987654321098765
WHATSAPP_VERIFY_TOKEN=ultraa_events_secure_token_123
WHATSAPP_APP_ID=your_app_id
WHATSAPP_APP_SECRET=your_app_secret
```

Complete integration code:

```javascript
```

```
const axios = require('axios');

// Configuration
const PHONE_NUMBER_ID = process.env.WHATSAPP_PHONE_NUMBER_ID;
const ACCESS_TOKEN = process.env.WHATSAPP_ACCESS_TOKEN;
const API_VERSION = 'v18.0';

// Send Text Message
async function sendTextMessage(to, message) {
  const url = `https://graph.facebook.com/${API_VERSION}/${PHONE_NUMBER_ID}/messages`;

  try {
    await axios.post(url, {
      messaging_product: 'whatsapp',
      recipient_type: 'individual',
      to: to,
      type: 'text',
      text: { body: message }
    }, {
      headers: {
        'Authorization': `Bearer ${ACCESS_TOKEN}`,
        'Content-Type': 'application/json'
      }
    });
    console.log('✅ Message sent to', to);
  } catch (error) {
    console.error('❌ Error:', error.response?.data || error.message);
  }
}

// Send Interactive Buttons
async function sendButtonMessage(to, text, buttons) {
  const url = `https://graph.facebook.com/${API_VERSION}/${PHONE_NUMBER_ID}/messages`;

  try {
    await axios.post(url, {
      messaging_product: 'whatsapp',
      to: to,
      type: 'interactive',
      interactive: {
        type: 'button',
        body: { text: text },
        action: {
          buttons: buttons.map((btn, idx) => ({
            type: 'reply',
            reply: {
              id: `btn_${idx}`,
              title: btn
            }
          }))
        }
      }
    }, {
      headers: {
        'Authorization': `Bearer ${ACCESS_TOKEN}`,
        'Content-Type': 'application/json'
      }
    });
    console.log('✅ Button message sent');
  } catch (error) {
    console.error('❌ Error:', error.response?.data || error.message);
  }
}

// Send List Message
async function sendListMessage(to, text, sections) {
  const url = `https://graph.facebook.com/${API_VERSION}/${PHONE_NUMBER_ID}/messages`;

  try {
    await axios.post(url, {
      messaging_product: 'whatsapp',
      to: to,
      type: 'interactive',
      interactive: {
        type: 'list',
        body: { text: text },
        action: {
          button: 'View Events',
          sections: sections
        }
      }
    }, {
      headers: {
        'Authorization': `Bearer ${ACCESS_TOKEN}`,
        'Content-Type': 'application/json'
      }
    });
    console.log('✅ List message sent');
  } catch (error) {
    console.error('❌ Error:', error.response?.data || error.message);
  }
}
```

```
// Usage Examples:
module.exports = {
  sendTextMessage,
  sendButtonMessage,
  sendListMessage
};
```

---

## 🐛 COMMON ISSUES & SOLUTIONS

### 1. "Access token invalid" Error

**Fix:**

- Generate new permanent token
- Ensure token has correct permissions
- Check if token expired (system user tokens don't expire)

### 2. "Phone number not verified" Error

**Fix:**

- Complete phone number verification
- Wait for Meta approval (1-2 days)
- Check if number is already used elsewhere

### 3. "Webhook verification failed" Error

**Fix:**

- Ensure your backend is using HTTPS (not HTTP)
- Check verify token matches exactly
- Test your webhook URL independently

### 4. "Message not delivered" Error

**Fix:**

- Check if recipient has WhatsApp
- Verify phone number format (no spaces, include country code)
- Check message template is approved
- Ensure you're within rate limits

### 5. "Business verification pending" Status

**Fix:**

- Wait 3-5 business days
- Ensure documents are clear and valid
- Check email for Meta requests
- May need to resubmit documents

---

## ✅ TESTING CHECKLIST

Before going live:

□ Business account verified
□ Phone number added and verified
□ Permanent access token generated
□ Webhook connected and verified
□ Test message sent successfully
□ Message templates approved
□ Interactive buttons working
□ List messages working
□ Media messages working (optional)
□ Error handling implemented

---

## 📚 OFFICIAL RESOURCES

- **Cloud API Docs:** https://developers.facebook.com/docs/whatsapp/cloud-api
- **Getting Started:** https://developers.facebook.com/docs/whatsapp/cloud-api/get-started
- **Message Templates:** https://developers.facebook.com/docs/whatsapp/message-templates
- **API Reference:** https://developers.facebook.com/docs/whatsapp/cloud-api/reference
- **Webhooks Guide:** https://developers.facebook.com/docs/whatsapp/cloud-api/webhooks
- **Business Manager:** https://business.facebook.com

---

## 🎯 FINAL RECOMMENDATION

**For Ultraa Events, I recommend:**

✅ **Use Cloud API** if:

- You have a developer or technical person
- Want to save money long-term
- Need full control
- Expect 1000+ conversations/month

❌ **Use BSP Provider** if:

- You're non-technical
- Need immediate setup
- Want managed support
- Don't want to deal with code

**For your case:** Go with **Cloud API** since you're already building the backend. It's FREE for first 1,000 conversations and much cheaper after that!

---

**Total Setup Time:** 3-5 days (including verification) **Total Cost:** FREE for first 1,000 conversations/month

**Ready to start? Begin with Step 1!** 🚀