IDRT Wallet Tracking & Analysis Queries

Comprehensive Query Guide untuk Analisis Transaksi IDRT

1. 📊 Query Transfer dari Wallet Tertentu

Semua transfer yang dikirim oleh wallet:

```graphql
query GetTransfersFrom($walletAddress: Bytes!) {
  transfers(
    where: { from: $walletAddress }
    orderBy: blockTimestamp
    orderDirection: desc
    first: 100
  ) {
    id
    to
    value
    blockTimestamp
    transactionHash
    blockNumber
  }

  # Summary account info
  account(id: $walletAddress) {
    totalSent
    transferCount
    firstTransactionTimestamp
    lastTransactionTimestamp
  }
}
```

Variabel:

```json
{
  "walletAddress": "0x..."
}
```

2. 📥 Query Transfer ke Wallet Tertentu

Semua transfer yang diterima wallet:

```graphql
query GetTransfersTo($walletAddress: Bytes!) {
  transfers(
    where: { to: $walletAddress }
```

```
    orderBy: blockTimestamp
    orderDirection: desc
    first: 100
  ) {
    id
    from
    value
    blockTimestamp
    transactionHash
    blockNumber
  }

  # Summary account info
  account(id: $walletAddress) {
    totalReceived
    transferCount
    firstTransactionTimestamp
    lastTransactionTimestamp
  }
}
```

3. 🔄 Query Complete Wallet Activity

Semua aktivitas wallet (in/out):

```
query GetWalletActivity($walletAddress: Bytes!) {
  account(id: $walletAddress) {
    id
    transferCount
    approvalCount
    totalSent
    totalReceived
    firstTransactionHash
    firstTransactionTimestamp
    lastTransactionHash
    lastTransactionTimestamp

    # Outgoing transfers
    transfersFrom(
      orderBy: blockTimestamp
      orderDirection: desc
      first: 50
    ) {
      id
      to
      value
      blockTimestamp
      transactionHash
    }
```

```
      # Incoming transfers
      transfersTo(
        orderBy: blockTimestamp
        orderDirection: desc
        first: 50
      ) {
        id
        from
        value
        blockTimestamp
        transactionHash
      }

      # Approvals given
      approvalsGiven(
        orderBy: blockTimestamp
        orderDirection: desc
        first: 20
      ) {
        id
        spender
        value
        blockTimestamp
        transactionHash
      }
    }
  }
```

4. 🤝 Query Interaksi Antar 2 Wallet

Tracking semua transaksi antara 2 wallet specific:

```
query GetWalletInteraction($fromWallet: Bytes!, $toWallet: Bytes!) {
  # Direct interaction A -> B
  walletInteractionA: walletInteraction(
    id: {fromWallet}-{toWallet}  # Replace dengan actual addresses
  ) {
    transferCount
    totalVolume
    firstTransactionHash
    firstTransactionTimestamp
    lastTransactionHash
    lastTransactionTimestamp
  }

  # Direct interaction B -> A
  walletInteractionB: walletInteraction(
    id: {toWallet}-{fromWallet}  # Replace dengan actual addresses
  ) {
    transferCount
```

```
      totalVolume
      firstTransactionHash
      firstTransactionTimestamp
      lastTransactionHash
      lastTransactionTimestamp
    }

    # All transfers between these wallets
    transfersAtoB: transfers(
      where: {
        from: $fromWallet,
        to: $toWallet
      }
      orderBy: blockTimestamp
      orderDirection: desc
    ) {
      id
      value
      blockTimestamp
      transactionHash
    }

    transfersBtoA: transfers(
      where: {
        from: $toWallet,
        to: $fromWallet
      }
      orderBy: blockTimestamp
      orderDirection: desc
    ) {
      id
      value
      blockTimestamp
      transactionHash
    }
  }
```

5. 💰 Query Transfer Berdasarkan Nilai

Transfer besar (> 1 juta IDRT):

```
query GetLargeTransfers($minAmount: BigInt!) {
  transfers(
    where: { value_gte: $minAmount }
    orderBy: value
    orderDirection: desc
    first: 100
  ) {
    id
    from
```

```
    to
    value
    blockTimestamp
    transactionHash

    # Account info
    fromAccount {
      id
      transferCount
    }
    toAccount {
      id
      transferCount
    }
  }
}
```

Variabel untuk 1M IDRT:

```
{
  "minAmount": "1000000000000000000000000"
}
```

6. ⏰ Query Transfer Berdasarkan Waktu

Transfer dalam range waktu tertentu:

```
query GetTransfersByTime($startTime: BigInt!, $endTime: BigInt!) {
  transfers(
    where: {
      blockTimestamp_gte: $startTime,
      blockTimestamp_lte: $endTime
    }
    orderBy: blockTimestamp
    orderDirection: desc
    first: 1000
  ) {
    id
    from
    to
    value
    blockTimestamp
    transactionHash
  }
}
```

7. 📈 Query Top Wallets

Top senders berdasarkan total volume:

```
query GetTopSenders {
  accounts(
    orderBy: totalSent
    orderDirection: desc
    first: 100
    where: { totalSent_gt: "0" }
  ) {
    id
    totalSent
    transferCount
    lastTransactionTimestamp
  }
}
```

Top receivers berdasarkan total volume:

```
query GetTopReceivers {
  accounts(
    orderBy: totalReceived
    orderDirection: desc
    first: 100
    where: { totalReceived_gt: "0" }
  ) {
    id
    totalReceived
    transferCount
    lastTransactionTimestamp
  }
}
```

8. 🔍 Query berdasarkan Transaction Hash

Cari transfer berdasarkan tx hash:

```
query GetTransferByTxHash($txHash: Bytes!) {
  transfers(where: { transactionHash: $txHash }) {
    id
    from
    to
    value
    blockTimestamp
    blockNumber
    transactionHash

    fromAccount {
```

```
      id
      transferCount
      totalSent
    }

    toAccount {
      id
      transferCount
      totalReceived
    }
  }
}
```

9. 📊 Query Daily Statistics

Volume transaksi harian:

```
query GetDailyStats($days: Int!) {
  dailyTransferSummaries(
    first: $days
    orderBy: date
    orderDirection: desc
  ) {
    date
    transferCount
    totalVolume
    uniqueSenders
    uniqueReceivers
  }
}
```

10. 🌐 Query Global Statistics

Overall network statistics:

```
query GetGlobalStats {
  globalStat(id: "global") {
    totalTransfers
    totalVolume
    totalAccounts
    largestTransfer
    largestTransferHash
  }
}
```

11. 🔗 Query Connection Pattern

Siapa saja yang pernah berinteraksi dengan wallet tertentu:

```graphql
query GetWalletConnections($walletAddress: Bytes!) {
  # Who this wallet sent to
  sentTo: walletInteractions(
    where: { from: $walletAddress }
    orderBy: totalVolume
    orderDirection: desc
    first: 100
  ) {
    to
    transferCount
    totalVolume
    lastTransactionTimestamp
    toAccount {
      id
      transferCount
    }
  }

  # Who sent to this wallet
  receivedFrom: walletInteractions(
    where: { to: $walletAddress }
    orderBy: totalVolume
    orderDirection: desc
    first: 100
  ) {
    from
    transferCount
    totalVolume
    lastTransactionTimestamp
    fromAccount {
      id
      transferCount
    }
  }
}
```

🚀 Contoh Penggunaan JavaScript/TypeScript

```javascript
// Example: Get wallet activity
const query = `
  query GetWalletActivity($walletAddress: Bytes!) {
    account(id: $walletAddress) {
      totalSent
      totalReceived
      transferCount
      transfersFrom(first: 10, orderBy: blockTimestamp, orderDirection:
desc) {
```

```
            to
            value
            blockTimestamp
            transactionHash
        }
      }
    }
  `;

  const variables = {
    walletAddress: "0x998ffe1e43facffb941dc337dd0468d52ba5b48a"
  };

  // Using fetch
  fetch('YOUR_SUBGRAPH_ENDPOINT', {
    method: 'POST',
    headers: { 'Content-Type': 'application/json' },
    body: JSON.stringify({ query, variables })
  })
  .then(response => response.json())
  .then(data => console.log(data));
```

📝 Tips Penggunaan:

1. **Pagination**: Gunakan `first`, `skip` untuk pagination
2. **Filtering**: Gunakan `where` dengan berbagai kondisi
3. **Sorting**: Gunakan `orderBy` dan `orderDirection`
4. **Time Range**: Convert timestamp ke BigInt format
5. **Amount**: IDRT menggunakan 18 decimals, jadi 1 IDRT = 1000000000000000000

Dengan query-query ini, Anda bisa melakukan analisis mendalam terhadap alur transaksi IDRT, tracking wallet activity, dan mendapatkan insights yang comprehensive!