

System of Automatic Notification (SAN)

1. Type of messages
 - a. **Transaction** — information about transaction. Can be sent in shadow mode as soon as DeNovo receive information from terminal or when a batch was closed.
 - b. **Batch** — only when batch was closed. Contents some summary data and text of batch receipt.
2. type of communications
 - a. **JSon via HTTP** — DeNovo send information to you server in online mode and receive confirmation of sending from your server. Test HTTP-listener:
<http://dvmms.com/uiadv/api/testsan/sanpoint>
 - b. **FTP** — DeNovo push a file with data about transaction or batch to your ftp:// server
 - c. **Email** — data will be sent as a content of email message.
3. Setting:
 - a. **Company level** — all merchants of particular company will have the same settings for sending information about transactions and batches
 - b. **Merchant level** — user of DeNovo can change settings for particular merchant, add new, or stop sending information about transactions of particular merchant.
4. format of default request and example of data:
 - a. **Transaction:**

```
{
  "Id":17674, // unique id of transaction
  "BatchId":30968, // unique id of batch for this transaction
  "Batch":null, //
  "Code":"2", //
  "Number":"2", //
  "DateTime":"2016-02-16T16:52:03", //
  "CardMode":0, // Debit/Credit/...
  "CardType":2, // Visa/MS/...
  "TransactionType":"0", // sales/return/...
  "TransactionMode":0, // Online/Offline
  "Amount":5700, // clear amount
  "TotalAmount":5700, // amount with all tip and additional fees
  "SurchargeAmount":null, // amount of additional fee
  "TipAmount":0 // amount if tip
  "AccountSource":0, // swipe/contactless/...
  "CardNumber":"1004", // last 4 digits from card number
  "CardHolder":"ANSI/AMEX TEST", //
  "CardExpirationDate":"0416", //
  "ApprovalCode":"090036", // approval code from host
  "Signature":null, // image coded in base64
  "Status":1, // success/error
  "ConsumerPhone":"9991234567", // terminal can ask customer phone or something else
}
```

```

"ClerkId":null, // terminal can recognise operator
"MerchantName":"Merch for Test", // Merchant Name
"Tpnl":"Z1testTPN03" // TPN - ID of terminal
}

```

b. Batch:

```

{
"BatchId":274162, // uniq ID from our system
"BatchNumber":"36004", // from host
"DateOfClosing":"2016-02-08T00:00:00",
"DateOfCreating":"2016-02-08T16:17:55",
"ListOfTransactions":[4622349,4622346,4622337], // list of transactions id which in this batch
"TerminalId":"MCI382terZ9",
"TotalAmount":0.0, // total amount of all transactions
"Receipt":"<rc><SEP c=\".\" /><C>_____</C><BR /><SEP c=\"-\" /><C>CR/DB Settle Daily
Batch</C><BR /><BR /><SEP c=\"=\" /><L>02/08/2016</L><R>17:40</R><BR /><SEP c=\"-\" />
/><L>Terminal Number:</L><R>MCI382terZ9</R><BR /><L>Merchant</L><R></R><BR /><L>Batch
Number:</L><R>36004</R><BR /><L>Status:</L><R>BATCH RELEASED</R><BR /><L>Host
Rsp:</L><R> </R><BR /><SEP c=\"-\" />Trn Crd Tp Acct $Amount<BR /> Tip Ck<BR /><SEP c=\"*\" /><L>
1 VIS SL 0049</L><R>13.00</R><BR /> 12.00 1.00 9991234567<BR /><L> 2 VIS SL
0049</L><R>10.00</R><BR /> 9.00 1.00 9991234567<BR /><L> 3 VIS SL 0049</L><R>10.00</R><BR />
9.00 1.00 9991234567<BR /><SEP c=\"*\" /><L>Total:</L><R>33.00</R><BR />
/><L>Records:</L><R>3</R><BR /><L>Total tip:</L><R>3.00</R><BR /><L>Total w/o
tip:</L><R>30.00</R><BR /><C>End of Report</C><BR /><SEP c=\"-\" /><BR /><BR /><BR /><BR /><BR />
/></rc>",
"SummaryReport":{"\"Merchant\":null,\"Location\":null,\"AppConfigName\":null,\"Tpnl\":null,\"ReportType\":\"B
atch
Report\", \"OpenDate\":\"0001-01-01T00:00:00\", \"BatchNumber\":\"36004\", \"CardReports\":{\"\"Type\": \"
VISA\", \"PaymentReports\":{\"\"PaymentType\": \"Sale\", \"TotalAmount\":\"33.00\", \"TotalNumber\":\"3\"
}}, \"Additional\":{\"\"Transactions Records\":\"3\", \"Transactions Total\":\"33.00\", \"Tip Total\":\"$3.00\"}}"}
}

```

5. List of Values for transaction details:

```

cardType {
  'DvCredit': {
    0: 'Visa',
    1: 'MasterCard',
    2: 'Amex',
    3: 'Discover',
    4: 'PayPal',
    5: 'Diners Club',
    6: 'JSB',
    7: 'Enroute',
    8: 'Debit',
    9: 'EBT'
  },
  'DvGift': {
    0: 'Gift',

```

```

        1: 'Loyalty'
    }
}

cardMode {
  'DvCredit': {
    0: 'Credit',
    1: 'Debit',
    2: 'EBT',
    3: 'EBT Cash',
    4: 'EBT Voucher',
    5: 'EBT Cash Voucher'
  },
  'DvGift': {
    0: 'Gift',
    1: 'Loyalty'
  }
}

transactionType {
  'DvCredit': {
    "0": 'Sale',
    "1": 'Return',
    "2": 'Void',
    "3": 'Auth',
    "4": 'Ticket',
    "5": 'Total Cashback',
    "6": 'Total Auto tip',
    "7": 'Total Tip',
    "9": 'EBT Bal Enq FS',
    "10": 'EBT Bal Enq Cash',
    "11": 'EBT Bal Enq Both',
    "12": 'Forward',
    "13": 'State',
    "14": 'Settle'
  },
  'DvGift': {
    "0": 'Redeem',
    "1": 'Reload',
    "2": 'Refund',
    "3": 'Activate',
    "4": 'Inquire',
    "5": 'Deactivate',
    "6": 'Reissue',
    "7": 'Void',
    "9": 'Add Points In Dollars',
    "10": 'Add Points In Points',
    "11": 'Trans Misc1',
    "12": 'Trans Misc2',
    "13": 'Trans Misc3',
  }
}

```

```

        "14": 'Trans Misc4',
        "15": 'Trans Misc5'
    },
    'DvCheck': {
        "0": 'Verification',
        "1": 'Conversion',
        "2": 'Conversion non-gurantee',
        "3": 'Void',
        "4": 'COD Open',
        "5": 'COD Close'
    },
    'DvCash': {
        "0": 'Sale',
        "1": 'Return'
    },
    'DvMo': {
        "0": 'Sale'
    }
}

accountSource {
    'DvCredit': {
        0: 'Swipe',
        1: 'Manual',
        2: 'EMV',
        3: 'Specific',
        4: 'Contactless'
        5: 'EMV Contactless'
    },
    'DvGift': {
        0: 'Others',
        1: 'Swipe'
    }
}

transactionMode {
    'DvCredit': {
        0: 'Online',
        1: 'Offline'
    },
    'DvGift': {
        0: 'Gift',
        1: 'Loyalty'
    },
    'DvMo': {
        0: 'Debit',
        1: 'Gift',
        2: 'Cash'
    }
}

```

6. How to work on DeNovo-web with SAN-notification (settings, test, status)

We have created a test environment on our test server:

- Company in test STEAM (user: ExpiTransManager q123456&)

http://test.dvmms.com/steam/admin.aspx?screen_id=101&CompanyID=1172

- Merchant in DeNovo (user: etmerch q123456&) <http://test.dvmms.com/denovo/companies/1172>

- TPN: EXPITRANS01 (you can use this TPN for ouploding to our terminal)

6.1. Login into DeNovo-web <http://test.dvmms.com/denovo>

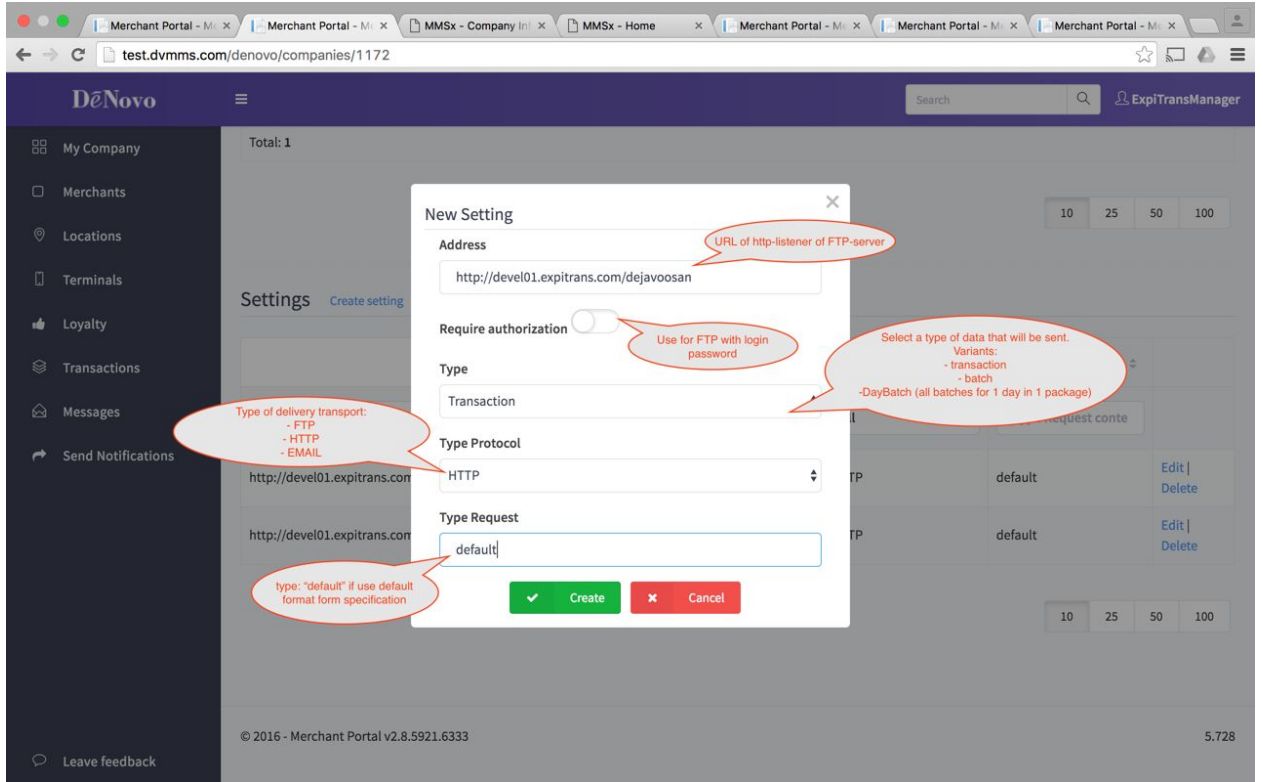
with login/password: ExpiTransManager q123456&

DeNovo will open Company details page on the bottom of this page you can set setting for SAN notifications.

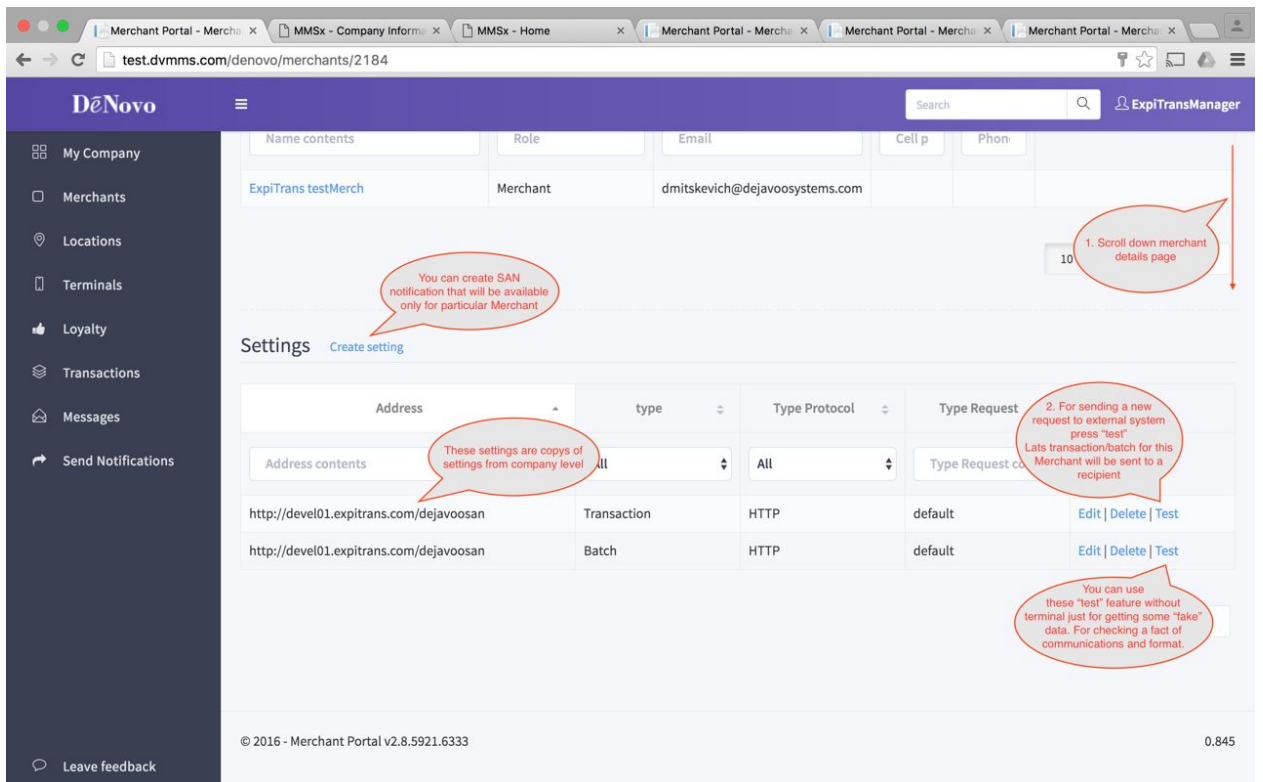
The screenshot displays the DeNovo web application interface. The top navigation bar is purple with the DeNovo logo and a search bar. The left sidebar contains a menu with options: My Company, Merchants, Locations, Terminals, Loyalty, Transactions, Messages, and Send Notifications. The main content area is titled 'ExpiTrans test' and 'Company details'. It features a 'Merchants' section with a table listing merchants. A red circle highlights the '1. Go to Merchant details' link. Below the merchants table is a 'Contacts' section with a 'Create contact' link and a table for adding contact information. A red circle highlights the 'Settings' link in the contacts table, with a callout box stating: 'Scroll down up to "settings" where you can check/edit SAN setting for company and all Merchant (existing and new)'. The bottom of the page has a 'Leave feedback' link.

6.2. On company details page and merchant details page you can set a new notification rule. If necessary change URL of listener just edit a rule of notification.

- Settings/changes in SAN that were set on Company level will be cloned to Merchants of this company
- Settings that were set on Merchant level available only for particular Merchant.



6.3. How to test receiving transaction/batch request by sending a "test" request from DeNovo web site.



6.4. How to see a result of sending data via SAN:

- Open transaction list
- If necessary ON displaying of column "SAN info"
- Press icon(button) of SAN info, DeNovo will open details and status of sending SAN request. New test requests will be added in SAN-info for last transactions in a list and into last batch.

The screenshot shows the DeNovo Merchant Portal interface. The main content area displays a list of transactions with columns for Receipt, Close date, and Batch Number. A 'Customize page' dialog box is open, allowing users to toggle various columns for display. The dialog box has two tabs: 'List of batches' and 'List of transactions'. The 'List of transactions' tab is active, and the 'SAN Info' column is toggled ON. Annotations explain the steps to enable the 'SAN Info' column.

1. Open "List of transaction"

2. You can customise list of transaction if press button "Customize page". Need to show column "SAN info"

3. If you do not see "SAN info" set this ON and the same on tab "List of transactions"

The 'Customize page' dialog box contains the following options:

- Show/Hide Transactions
- Receipt
- SAN Info
- Close date
- Batch Number
- Terminal
- Transaction Fees
- Tip Amount
- Total Amount
- Location
- Application Name
- Multi-Merchant Name
- Status

The background interface shows a sidebar with navigation options: My Company, Merchants, Locations, Terminals, Loyalty, Transactions, Messages, and Send Notifications. The main content area shows a table of transactions with columns for Number, Receipt, Date, and Total. The total for the first transaction is 1.

Merchant Portal - Merch x MMSx - Company Inform x MMSx - Home x Merchant Portal - Merch x Merchant Portal - Merch x Merchant Portal - Merch x

test.dvms.com/denovo/transactions?page=1&count=50&filter%5Bbtn%5D=EXPITRANS01

DeNovo Search ExpiTransManager

My Company Merchants Locations Terminals Loyalty Transactions Messages Send Notifications

Transactions

Default Custom Customize page Show filters

Press this icon for checkin SAN notification status for BATCH-notification

Number	SAN Info	Receipt	Date	Amounts	Card	Transaction					
				Total	Number	Holder	Type	Mode	Type	Source	Mode
3			3/18/16 8:07 PM	\$1.00	...0403	CARD B/VISA	Visa	Credit	Sale	EMV Contactless	
2					...0685	CARDHOLDER/MASTERCARD	MasterCard	Credit	Return	Swipe	Online
1					...0403	CARD B/VISA	Visa	Credit	Sale	EMV Contactless	

Total: 1

10 25 50 100

test.dvms.com/denovo/ 107

Merchant Portal - Mi x Merchant Portal - Mi x MMSx - Company In x MMSx - Home x Merchant Portal - Mi x Merchant Portal - Mi x Merchant Portal - Mi x

test.dvms.com/denovo/transactions?page=1&count=50&filter%5Bbtn%5D=EXPITRANS01

DeNovo Search ExpiTransManager

My Company Merchants Locations Terminals Loyalty Transactions Messages Send Notifications

SANInfo

3,3,13,The merchant Login ID is invalid or the account is inactive.,P.....P2

Fake Transaction 2184 c20ab908-552e-4d98-92a9-50cdb3f42c26

this request was sent automatically when terminal pushed data to DeNovo

this request was sent by buton "TEST" on Merchatn details page

Id	Object Id	Created	Sent	Tags	Response	Status
283	19037	3/18/16 2:08 PM	3/18/16 2:09 PM	HTTP19037 EXPITRANS01 transaction 31129	3,3,13,The merchant Login ID is invalid or the account is inactive.,P.....P2	Sent
285	19037	3/18/16 2:26 PM		Fake Transaction 2184 c20ab908-552e-4d98-92a9-50cdb3f42c26		New

10 25 50 100

© 2016 - Merchant Portal v2.8.5921.6333 181