

**NPAC SMS
High Level Overview of
Release 3.0 Number
Pooling Changes for
Service Providers**

Neu Star



NPAC SMS

HIGH LEVEL OVERVIEW OF RELEASE 3.0 NUMBER POOLING CHANGES
FOR SERVICE PROVIDERS

Software Version 3.0.0.0

Acknowledgments

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Chapter 1

Managing NPA-NXX-X/ Block Information

Creating and managing information for number pooling.

Number pooling is a telecommunications industry concept that addresses telephone number *exhaust*, or the lack of TNs available to a specific service provider. In number pooling, TNs are transferred from one service provider to another who has already exhausted or will soon exhaust its current supply of TNs.

Number pooling affects LNP because critical network information, GTT data and LRN data, must be broadcast to the regions affected by number pooling to ensure effective call routing.

Service providers

Service providers have the following functionality associated with number pooling:

- Create/activate a number pooling block over the SOA/LTI
- Modify number pooling block information

Service providers have access to the following reports associated with number pooling:

- Block Holder Default Routing Report
- Active-like TNs in an NPA-NXX-X

NPAC NPAC personnel have the following functionality associated with number pooling.

- Create an NPA-NXX-X
- Modify NPA-NXX-X and number pooling block information
- Delete an NPA-NXX-X (disconnecting a number pool block and subscription version of LNP type **POOL**)
- Resend a failed or partially-failed number pooling block
- Schedule the creation of a number pooling block for an NPA-NXX-X.

NPAC personnel have access to all of the number pooling reports.

NPA-NXX-Xs

An NPA-NXX-X is the network data representation of a range of 1000 POOLed TNs within the NPA-NXX, beginning with a station of X000 and ending with a station of X999, where X is a value between 0 and 9.

An example of an NPA-NXX-X is 404-333-3. The block of TNs for this NPA-NXX-X includes all non-contaminated TNs from 404--333-3000 through 404-333-3999.

The service provider that owns the NPA-NXX containing the NPA-NXX-X is referred to as the *code holder*. You can pool an NPA-NXX-X to another service provider who has already exhausted or will soon exhaust its current supply of TNs. After you pool this NPA-NXX-X, the new service provider is referred to as the *NPA-NXX-X* or *block holder*.

Contamination

If the NPA-NXX-X being donated by the code holder includes TNs that are already in service or have been ported away, the NPA-NXX-X is “contaminated.” The contamination level should be no more than 10%, and it is the code holder’s responsibility to prepare the NPA-NXX for number pooling before donation. There is no functionality in the NPAC SMS that will prevent creation of the NPA-NXX-X if the contamination level exceeds 10%.

To prepare the NPA-NXX-X for numbers already in service, the code holder creates an intra-service provider port (LISP) for each TN in service. This creates entries in the NPAC and LSMS databases and

ensures that pooled subscription versions will not be created for these TNs.

If the contaminating TNs are already ported to another service provider, they can have a status of **Active**, **Disconnect-Pending**, **Sending**, **Partial-Failure**, or **Old with a failed LSMS list**. They remain with the current service provider and no pooled subscription versions will be created for these TNs.

Number pooling blocks

Number Pooling

Number Pooling starts with a service provider, or *code holder*, that currently owns (or “holds”) blocks of telephone numbers, but not all of the TNs in these blocks are in service. These blocks of unused telephone numbers are reassigned to another service provider, the *block holder*, that has either exhausted his current telephone number supply or is on the verge of doing so.

Unlike a port carried out by the provisioning process described above, Number Pooling does not require contact between the service providers (the code holder and the block holder). A neutral third party, the *pool administrator*, is responsible for retrieving the relevant information from the code holder regarding the TNs that can be ported and assigning the block of TNs to the block holder. NPAC personnel enter the subscription version information at the NPAC. The subscription version port is activated according to the effective date entered by the NPAC or by the service provider (block holder).

After an NPA-NXX-X has been created for a block holder, and the effective date of the NPA-NXX-X has been reached, you can create a *number pooling block* for the NPA-NXX-X.

A number pooling block is the subscription data representation of the range of POOLed TNs in the NPA-NXX-X. A subscription version for a POOLed TN has an LNP type of **POOL**.

NPAC personnel, service provider personnel using the LTI, or service providers using their SOAs can add and activate number pooling blocks.

Finding an NPA-NXX-X and number pooling block

To search for an NPA-NXX-X or a number pooling block, use the Criteria and Advanced Criteria tabs of the NPA-NXX-X/Block Management window to select the appropriate search data. The NPAC SMS searches its database and displays the results on the Results tab.

From the Results tab, you can view information for any NPA-NXX-X in the system, and you can modify information for your number pooling blocks.

NPAC SMS assigns a unique ID to an NPA-NXX-X and a unique ID to a block at the time it creates the NPA-NXX-X or block. The Results tab displays the NPA-NXX-X ID and Block ID the first time you retrieve an NPA-NXX-X or block after a search. For subsequent searches for the same NPA-NXX-X or block, you can use either ID as one of the search criteria.

The NPAC SMS assigns a unique ID to an NPA-NXX-X and a unique ID to a block at the time it creates the NPA-NXX-X or block. The Results tab displays the NPA-NXX-X ID and Block ID the first time you retrieve an NPA-NXX-X or block after a search. For subsequent searches for the same NPA-NXX-X or block, you can use either ID as one of the search criteria.

To access the window

Step 1. On the NPAC main menu, click **Network Management**.

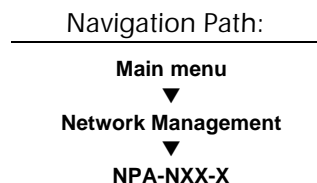
The Network Management menu opens.

Step 2. Click **NPA-NXX-X**.

The Criteria tab opens.

To see the requirements and limitations of the fields and other items that appear on this window, click **Help** at the bottom of the window.

Figure 1:
NPA-NXX-X/Block Management window, Criteria tab



Navigation Path:

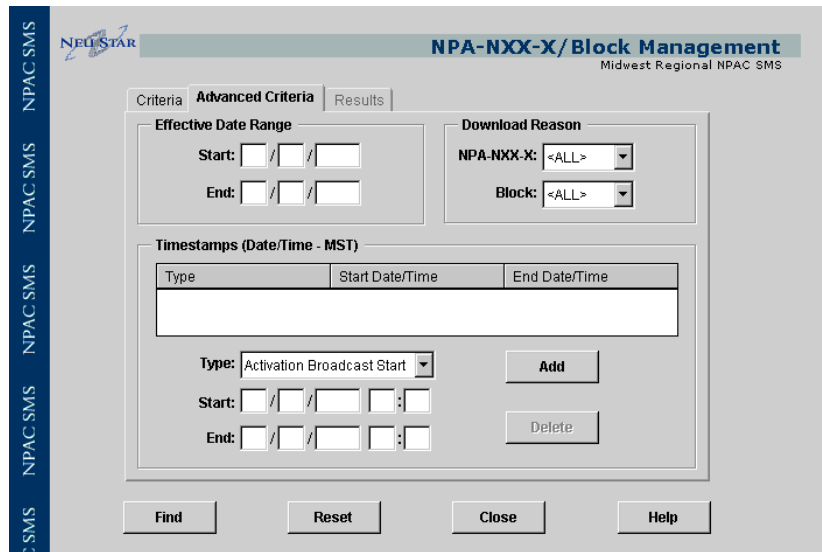
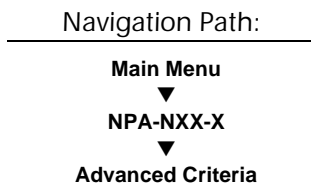
```
graph TD; A[Main menu] --> B[Network Management]; B --> C[NPA-NXX-X]
```

To search for an NPA-NXX-X

- Step 1. On the Criteria tab of the NPA-NXX-X/Block Management window, enter your search criteria in the entry fields. (See [Figure 1: “NPA-NXX-X/Block Management window, Criteria tab” on page 10.](#))
- Step 2. To enter additional search criteria such as effective dates, download reason, or pooled block timestamps, click the **Advanced Criteria** tab.

The Advanced Criteria tab opens.

*Figure 2:
 NPA-NXX-X/Block Management
 window, Advanced Criteria tab*

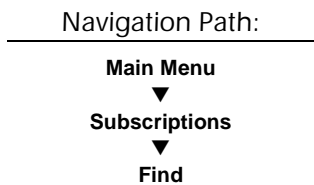


- Step 3. Enter search criteria for any or all of the following categories:
 - Effective date range for the NPA-NXX-X that you entered on the Criteria tab.
 - Download Reason for the NPA-NXX-X, block, or for both that you entered on the Criteria tab.
 - Timestamps. To search using a timestamp, add it to the Timestamps list. (See [“To add a timestamp to the Timestamps list” on page 12.](#)) Delete timestamps you do not want to use in the search. (See [“To delete a timestamp from the Timestamps list” on page 12.](#))
- Step 4. Click **Find**.

The NPAC SMS uses all of the criteria that you entered on the Criteria and Advanced Criteria tabs to search. The results of the search appear on the Results tab of the NPA-NXX-X/Block Management window. (See [“NPA-NXX-X/Block Management window, Results tab” on page 12.](#))

From the Results tab, you can view an NPA-NXX-X, schedule the activation of a number pooling block, or modify the NPA-NXX-X or block information.

Figure 3:
 NPA-NXX-X/Block Management
 window, Results tab



Criteria	Advanced Criteria	Results				
NPA-NXX-X	NPA-NXX-X ID	SPID	Effective Date	SOA Orig	Block ID	Status
111-111-5	8	1111	07/19/2000		9	Failed
111-111-7	13	1111	07/27/2000	Y		
111-111-9	47	1111	07/31/2000	Y		
111-222-0	7	1111	07/18/2000		7	Partial
111-222-1	49	1111	07/24/2000	Y	67	Failed
111-222-5	14	1111	07/28/2000	Y		
222-220-0	71	6666	07/29/2000			Sched
222-220-1	1	2222	07/18/2000		3	Active
222-220-2	75	1257	07/29/2000			Sched
222-220-3	74	7272	07/29/2000			Sched
222-220-4	73	2222	07/31/2000			Sched
222-220-5	72	5555	07/29/2000			Sched
222-220-8	76	5656	07/29/2000			Sched
222-222-2	10	2222	07/19/2000	Y	10	Failed
222-222-3	15	2222	07/26/2000	Y		

To add a timestamp to the Timestamps list

Adding a timestamp to the **Timestamps** list includes it in the search criteria.

- Step 1. On the Advanced Criteria tab under **Timestamps**, select the **Type** of timestamp you want to add to the search criteria.
- Step 2. In the **Start** and **End** fields, enter the date and time range for the timestamp.
- Step 3. Click **Add**.

The NPAC SMS adds the timestamp to the search criteria and displays it in the **Timestamps** list.

To delete a timestamp from the Timestamps list

Deleting a timestamp from the table removes it from the search criteria.

- Step 1. On the Advanced Criteria tab, select one or more timestamps to delete from the **Timestamps** list.
- Step 2. Click **Delete**.

The NPAC SMS removes everything you selected from the table.

Modifying an NPA-NXX-X and block information

You can modify the Block Creation information (Unscheduled or Immediate) and you can modify the network routing data for the block.

You cannot modify your service provider information (the name and ID of the block holder) for an NPA-NXX-X. If this information needs to be changed, NPAC personnel must delete the NPA-NXX-X and create a new NPA-NXX-X. You cannot also modify the effective date for an NPA-NXX-X. Only NPAC personnel can do this.

SOA Origination (Notifications)

The value for SOA Origination (Notifications) indicates whether you (NPAC service provider) schedule the creation of a number pooling block for an NPA-NXX-X—as well as define the network routing data for the block—or whether NPAC personnel are to define the routing data and activate the block. It also determines whether you receive notifications about a number pooling block after the block is activated.

When NPAC personnel create an NPA-NXX-X, they must specify the value of **SOA Origination**. If SOA Origination (Notifications) is turned on, you schedule the creation of block, and you also receive notifications about the number pooling block after the block is activated. If SOA Origination (Notifications) is turned off, NPAC personnel schedule the activation of the number pooling block and you do not receive notifications about the block after the number pooling block is activated.

You cannot modify the value for SOA Origination (Notifications) after the creation of the NPA-NXX-X. Only NPAC personnel can do this.

Effective date

You cannot modify the effective date of the NPA-NXX-X. Only NPAC personnel can modify this information.

Block information for a non-activated block

See [Table 1: “Possible information to modify for a non-activated number pooling block” on page 14.](#)

Table 1:
 Possible information to modify for a non-activated number pooling block

SOA Origination (Notifications)		Possible information to modify		
	Unscheduled	Block Creation Options Scheduled	Immediate ^a	Network Data
On	Available	N/A	Available	Enabled only if Immediate creation is scheduled.
Off	N/A	N/A. Defaulted to effective date at 00:01.	Available ^b	Enabled only if Immediate creation is scheduled.

- a. If you attempt to schedule a block for **Immediate** creation and the effective date of the NPA-NXX-X has not been reached, the NPAC fails the request.
- b. If you schedule a block for **Immediate** creation, **SOA Origination (Notifications)** is turned on. You can modify any data previously entered in the fields by NPAC personnel.

Block information for an activated block

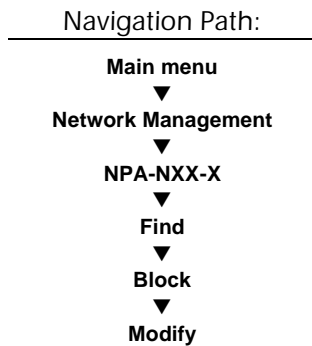
You can modify the network data for the block. The LRN is always required. The GTT data values can be NULL. If you modify the network data for the number pooling block, the changes are applied immediately to *any* POOLed subscription versions for the block.

To access the window

- Step 1. On the Results tab of the NPA-NXX-X/Block Management window, select the NPA-NXX-X/Block record to be modified. (See [Figure 3: “NPA-NXX-X/Block Management window, Results tab” on page 12.](#))
- Step 2. Click **Block**.
 The View/Modify NPA-NXX-X window opens with the information for the selected NPA-NXX-X/Block record.
- Step 3. Click **Modify**.
 The fields you can modify are available.
 To see the requirements and limitations of the fields and other items that appear on this window, click **Help** at the bottom of the window.



Figure 4:
 Modify NPA-NXX-X window



To modify NPA-NXX-X/block information

- Step 1. Modify the network routing as appropriate.
- Step 2. Click **Submit**.

If the application successfully submits the request, a confirmation message appears.

If you submitted the request with any invalid or missing data, an error message stating the specific error appears. Correct the error and resubmit the request.

After the NPA-NXX-X or block information is modified, the NPAC SMS notifies all service providers who have requested to receive notifications about this NPA-NXX-X. If the pooled block has already been created, the changes are broadcast to the LSMSS.

- Step 3. Click **OK** in the message window.
- Step 4. Click **Close** to exit the NPA-NXX-X/Block Management window and return to the main menu.



Chapter 2

Number Pooling Reports

Reports showing the number pooling data in the NPAC database.

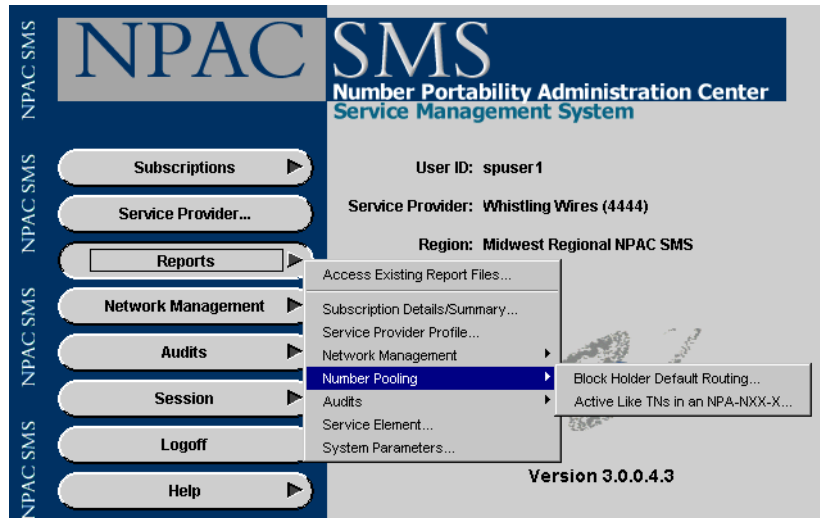
The following reports associated with number pooling are available to service providers.

- “[Block Holder Default Routing report](#)” on [page 19](#) lists all of the number pooling blocks for a selected TN range.
- “[Active-like TNs in an NPA-NXX-X](#)” on [page 21](#) lists all of the subscription versions with a status of **Active**, **Partially Failed**, **Old** with a failed SP list, or **Disconnect-Pending** for a selected NPA-NXX-X.

Reports menu

You can access the functions for managing reports and the reports themselves from the Reports menu shown in Figure 5.

Figure 5:
Number Pooling Reports menu



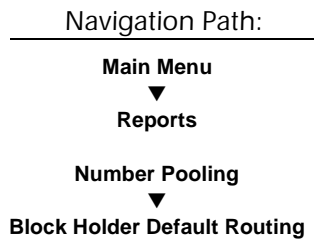
Block Holder Default Routing report

The Block Holder Default Routing report lists all of the number pooling blocks, including partial blocks, for a selected TN range.

Use the Block Holder Default Routing report window to specify the service provider and the TN range and to generate the report.

To see the requirements and limitations of the fields and other items that appear on this window, click **Help** at the bottom of the window.

Figure 6:
Block Holder Default Routing Report
window



Service Provider

Name: ID:

NPA-NXX-X Range

Start: - - End: - -

Report Destination

Destination:

Submit Close Help

Report results - Block Holder Default Routing

The format of the Block Holder Default Routing report is similar to the sample shown here.

Figure 7:
 Block Holder Default
 Routing report

06/15/2000		Block Holder Default Routing Report		Page 1	
of 5					
17:33					
Report Parameters:					
Block Holder ID: (All)					
NPA-NXX-X Range - From: (All) To: (All)					
BLOCK ID	NPA-NXX-X	EFFECTIVE DATE	LRN	DPC	SSN
7	040-040-1	05/30/2000	044-044-0440	CLASS	
	BH: Cust0440	(0440)		LIDB	
				CNAM	
				ISVM	
				WSMSC	
35	040-040-2	06/08/2000	044-044-0440	CLASS	
	BH: Cust0440	(0440)		LIDB	
				CNAM	
				ISVM	
				WSMSC	
33	040-040-5	06/07/2000	044-044-0440	CLASS	
	BH: Cust0440	(0440)		LIDB	
				CNAM	
				ISVM	
				WSMSC	
36	040-040-6	06/08/2000	044-044-0440	CLASS	
	BH: Cust0440	(0440)		LIDB	
				CNAM	
				ISVM	
				WSMSC	
N/A	040-040-7	06/20/2000		CLASS	
	BH: Cust0440	(0440)		LIDB	
				CNAM	
				ISVM	
				WSMSC	
N/A	040-040-8	06/20/2000	044-044-0440	CLASS	
	BH: Cust0440	(0440)		LIDB	111.111.111 111
				CNAM	222.222.222 222
				ISVM	
				WSMSC	
N/A	040-040-9	06/20/2000		CLASS	
	BH: Cust0440	(0440)		LIDB	
				CNAM	
				ISVM	
				WSMSC	
11	777-777-0	05/03/2000	444-444-5555	CLASS	
	BH: Cust0440	(0440)		LIDB	
				CNAM	
				ISVM	
				WSMSC	
52	777-778-7	06/13/2000	444-444-5555	CLASS	
	BH: Cust0440	(0440)		LIDB	111.111.111 111
				CNAM	
				ISVM	
				WSMSC	

Active-like TNs in an NPA-NXX-X

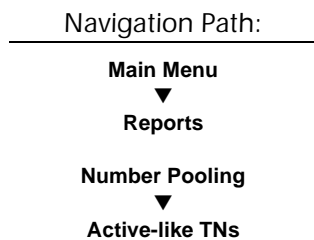
The Active-like TNs in an NPA-NXX-X report lists all of the subscription versions contained in the indicated NPA-NXX-X that have a status of either **Active**, **Partially Failed**, **Old** with a failed SP list, or **Disconnect-Pending**.

Use the Active-Like TNs in an NPA-NXX-X report window to specify the NPA-NXX-Xs and to generate the report. This report shows:

- TN
- SVID
- LNP Type
- Activation Start Timestamp
- SP Name
- Status

To see the requirements and limitations of the fields and other items that appear on this window, click **Help** at the bottom of the window.

Figure 8:
Active-like TNs in an NPA-NXX-X
Report window



The screenshot shows a web application window titled "Active-Like TNs in an NPA-NXX-X Report" with the "Midwest Regional NPAC SMS" logo. The window features a vertical sidebar on the left with the text "NPAC SMS" repeated. The main content area is divided into three sections: "Service Provider" with "Name" and "ID" dropdown menus both set to "<ALL>"; "NPA-NXX-X" with three yellow input boxes; and "Report Destination" with a "Destination" dropdown menu set to "Screen". At the bottom of the window are three buttons: "Submit", "Close", and "Help".

Report results - Active-like TNs in an NPA-NXX-X

The format of the Active-like TNs in an NPA-NXX-X report is similar to the sample shown here.

Figure 9:
 Active-like TNs in an
 NPA-NXX-X report

06/15/2000		Subscription Report			Page 1	
of 5						
17:28						
Active-Like TNS in Dash-X Report						
Report Parameters:						
NPA_NXX_X:		111-111-1				
TN	SVID	LNP TYPE	ACTIVATION START	SP	STATUS	
			TIMESTAMP	NAME		

111-111-1000	9061	LSPP	06/05/2000 16:04	Customer66	Active	
				46		
111-111-1001	5016	LSPP	05/26/2000 13:59	Customer22	Active	
				22		
111-111-1002	5019	LSPP	05/26/2000 16:41	Customer22	Active	
				22		
111-111-1003	5023	LSPP	05/25/2000 20:23	Customer11	Partially Failed	
				11		
111-111-1004	5032	LSPP	05/25/2000 20:23	Customer11	Partially Failed	
				11		
111-111-1006	5034	LSPP	05/25/2000 20:23	Customer11	Partially Failed	
				11		
111-111-1007	5036	LSPP	05/25/2000 20:23	Customer11	Partially Failed	
				11		
111-111-1008	4020	POOL	05/25/2000 20:23	Customer11	Active	
				11		
111-111-1009	4021	POOL	05/25/2000 20:23	Customer11	Active	
				11		
111-111-1010	4022	POOL	05/25/2000 20:23	Customer11	Active	
				11		
111-111-1011	5038	LSPP	05/30/2000 19:10	Customer22	Disconnect Pendi	
				22	ng	
111-111-1012	5040	LSPP	05/30/2000 20:00	Customer22	Disconnect Pendi	
				22	ng	
111-111-1013	5042	LSPP	05/30/2000 20:34	Customer22	Disconnect Pendi	
				22	ng	
111-111-1015	4027	POOL	05/25/2000 20:23	Customer11	Active	
				11		
111-111-1020	4032	POOL	05/25/2000 20:23	Customer11	Active	
				11		
111-111-1021	4033	POOL	05/25/2000 20:23	Customer11	Active	
				11		
111-111-1022	4034	POOL	05/25/2000 20:23	Customer11	Active	
				11		
111-111-1023	4035	POOL	05/25/2000 20:23	Customer11	Active	
				11		
111-111-1024	4036	POOL	05/25/2000 20:23	Customer11	Active	
				11		

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