

# Teaming Function for Intel NIC

## User's Guide

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# Chapter 1 Overview

## 1.1 Express teaming

Express teaming is a quick way to group all of the ports on a multi-port adapter into a Receive Load Balancing (RLB) team. It will team all ports on the adapter.

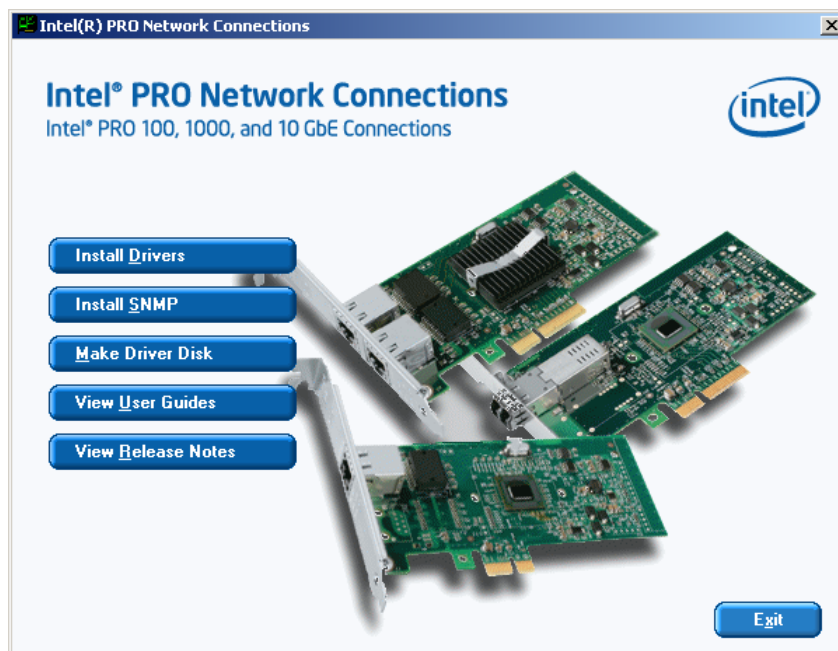
## 1.2 Advanced Network Services (ANS) Teaming

Advanced Network Services (ANS) Teaming, a feature of the Advanced Network Services component, lets you take advantage of multiple adapters in a system by grouping them together. ANS teaming can use features like fault tolerance and load balancing to increase throughput and reliability.

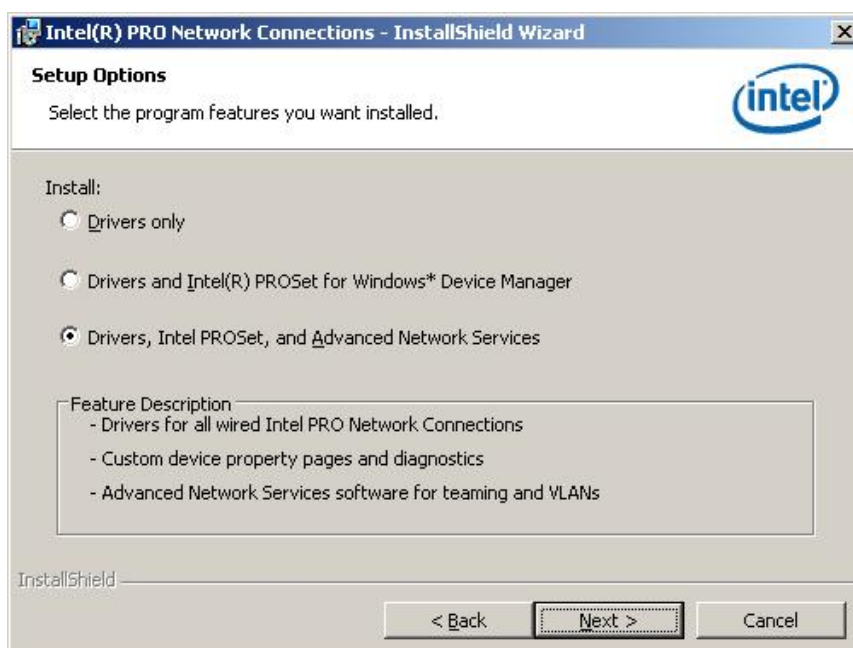
# Chapter 2 Environment Preparation

## 2.1 Installing Intel Network Drivers and PROSet utility

1. Launch **Intel PRO Network Connections** software installation guide, and then select **Install Drivers**.



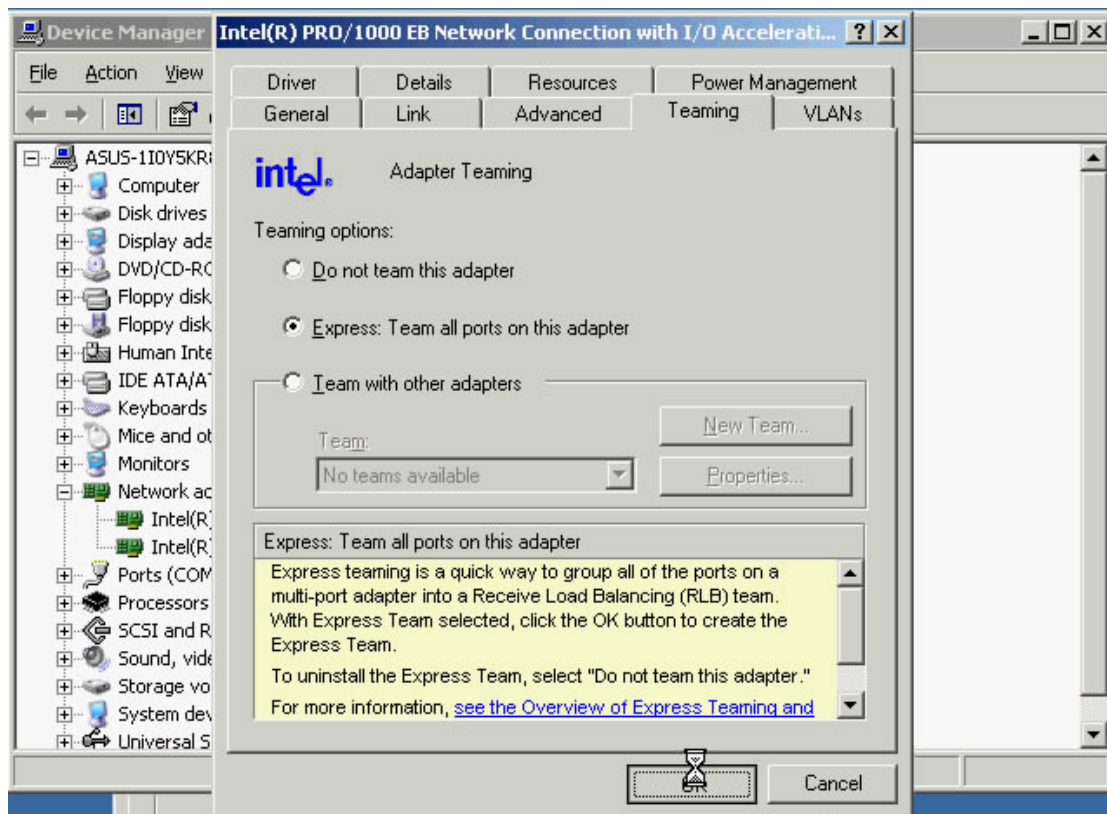
2. While installing driver, select **Install: Drivers, Intel PROSet and Advanced Network Services**.



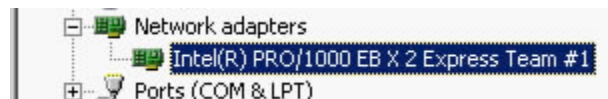
# Chapter 3 Setting up Teaming

## 3.1 Express Teaming

Express Teaming can be found on the Teaming tab of NIC's property in Windows Device Manager. To create an express team, select **Express: Team all ports on this adapter** in **Teaming** tab:



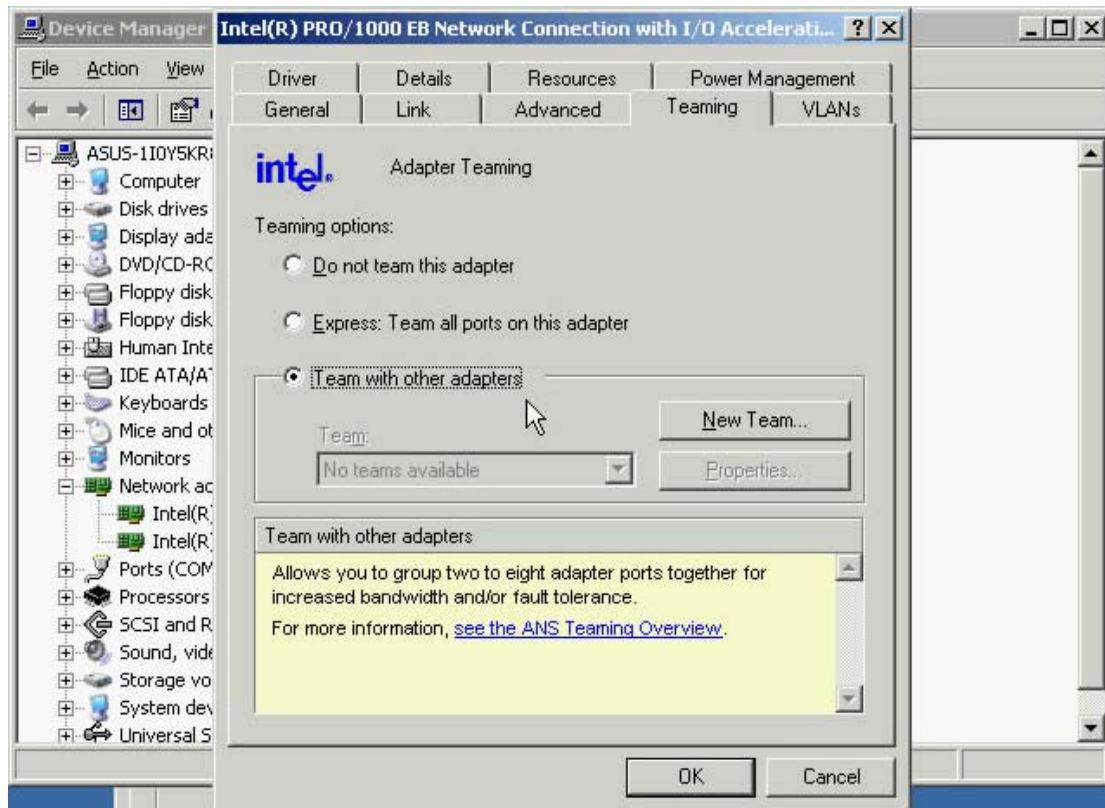
When an Express Team is created, only the initiator port remains visible. All other member ports are hidden.



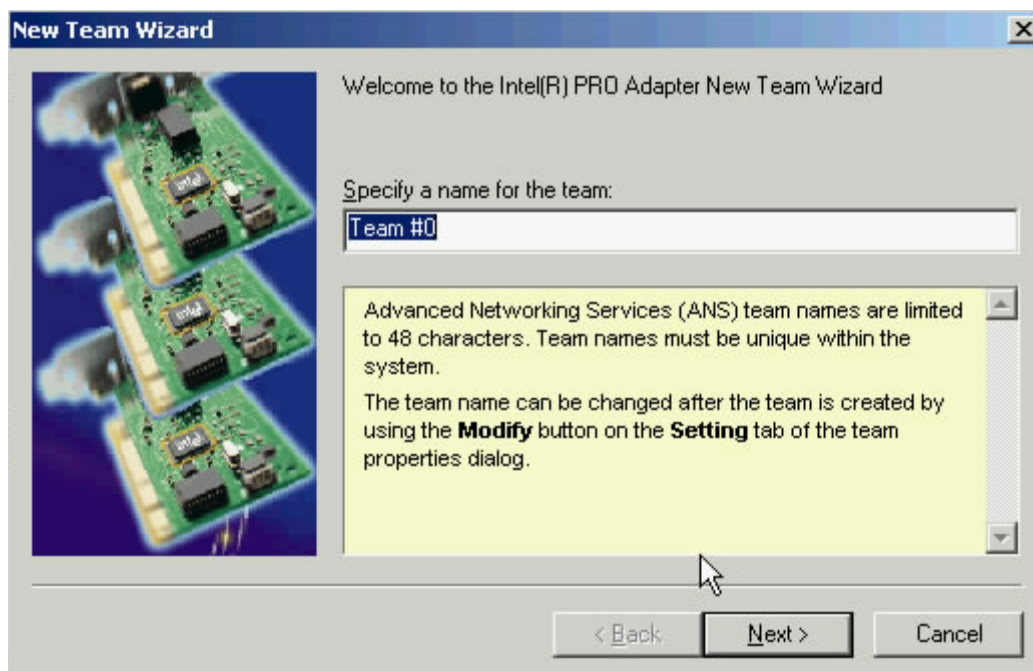
Note: Do not uninstall an Express Team by right-clicking on it in device manager. Uninstall Express Teams only through adapter properties.

## 3.2 Advanced Network Services Teaming

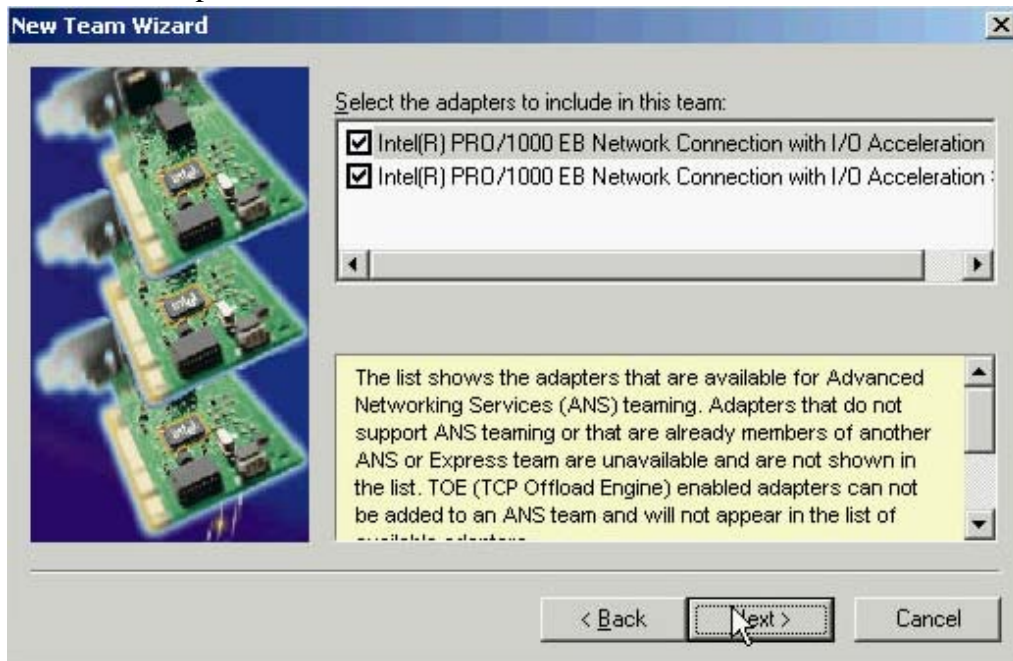
1. To create a advanced network services team, select **Team with other adapters** in **Teaming** tab:



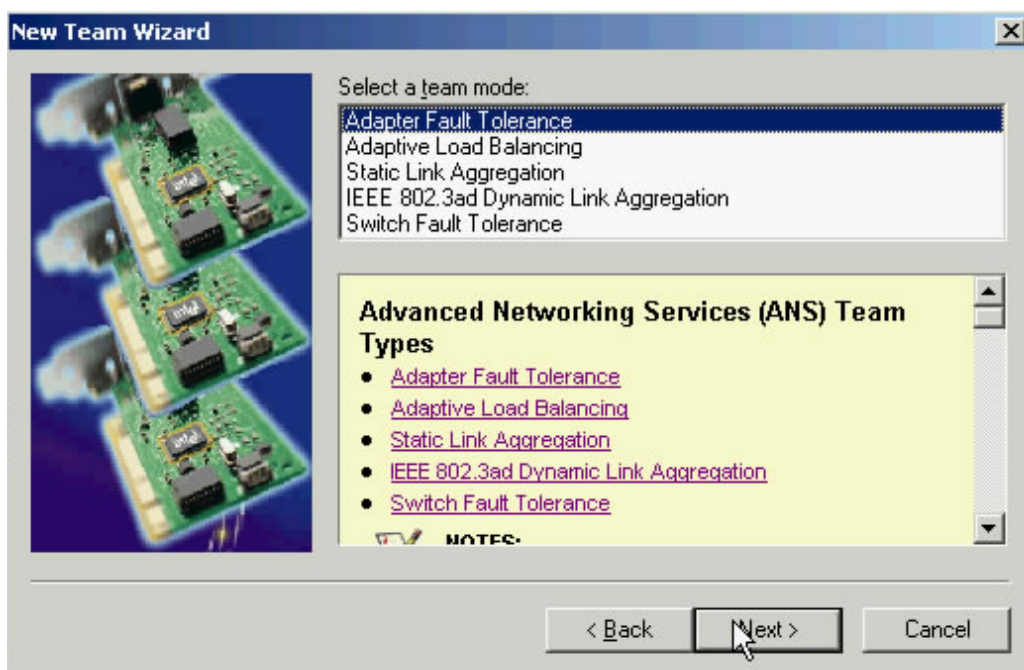
2. Specify a name for the team:



3. Select the adapter to be included in the team:



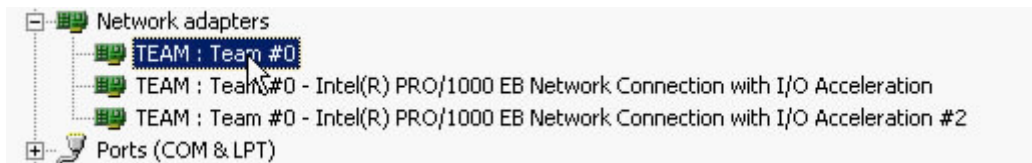
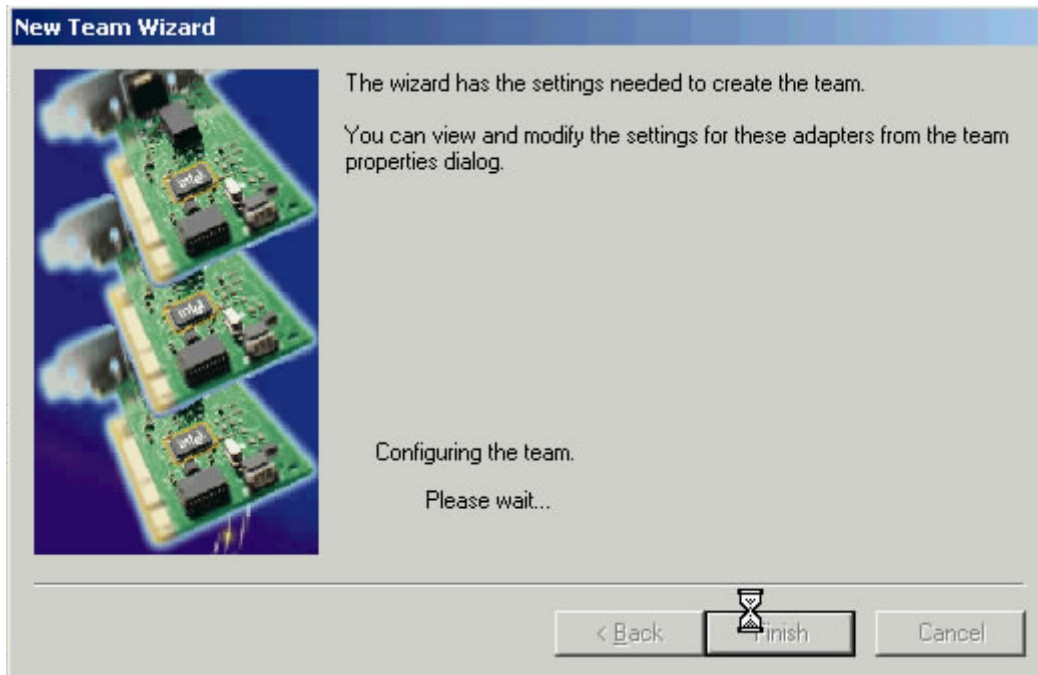
4. Select the ANS Teaming Mode:



**NOTES:**

- Please refer to Chapter 4 for team types' introduction.
- Mixing Intel PRO/100 and Intel PRO/10GbE adapters in a team is not supported.
- ANS teaming cannot coexist with Express Teaming on multi-port adapters. If the ports on a multi-port adapter are grouped into an Express team, none of the ports on the adapter are available for ANS teaming.

5. Click Finish, team configuring process will start:





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## Chapter 4 ANS Teaming Modes

### 4.1 Adapter Fault Tolerance (AFT)

Adapter Fault Tolerance provides automatic redundancy for a server's network connection. If the primary adapter fails, the secondary adapter takes over. This teaming mode works with any hub or switch, and all team members must be connected to the same device.

### 4.2 Adaptive Load Balancing (ALB)

Adaptive Load Balancing provides load balancing of transmit traffic and adapter fault tolerance. This teaming mode works with any switch.

### 4.3 Static Link Aggregation

This mode includes adapter fault tolerance and load balancing (only routed protocols). All adapters in a Link Aggregation team running in static mode must run at the same speed and must be connected to a Static Link Aggregation capable switch.

### 4.4 IEEE 802.3ad Dynamic Link Aggregation

IEEE 802.3ad Dynamic Link Aggregation creates one or more teams using Dynamic Link Aggregation with mixed-speed adapters. This teaming mode requires a switch that fully supports the IEEE 802.3ad standard.

### 4.5 Switch Fault Tolerance (SFT)

Switch Fault Tolerance provides failover between two adapters connected to separate switches. Switch Fault Tolerance supports two adapters per team.

Spanning Tree Protocol (STP) must be enabled when you create a team in SFT mode. This teaming mode works with any switch or hub.

## Reference

### Chapter 1

Intel Corporation: [www.intel.com](http://www.intel.com)

### Chapter 3

Intel Corporation: [www.intel.com](http://www.intel.com)

### Chapter 4

Intel Corporation: [www.intel.com](http://www.intel.com)

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