

Overview

ProLiant Essentials Intelligent Networking Pack (INP) is a set of advanced teaming features that provides improved redundancy and load balancing capabilities. These advanced teaming features enhance standard or basic teaming by providing network-aware intelligence to the HP ProLiant servers. Included in this software pack is Virus Throttle, developed with HP Labs, which can block the spread of malicious code before it spreads to the entire network environment. This software discontinued September 30, 2007.

INP software was part of HP's networking software that ships with all HP ProLiant servers (through the ProLiant Support Pack) and HP NIC options, and was activated with a license key. The functions and features of INP was managed through the user interface (UI) of the HP's Network Configuration Utility (NCU). Intelligent Networking Pack can be installed on the same server as the HP Systems Insight Manager console, so a client machine was not needed to view INP.

INP licenses will continue to work on servers and NICs that launched prior to Sept. 30, 2007; however with these caveats:

1. NCDE 8.80 is the last NIC driver release that supports INP.
2. There is no support for 10 GbE or Windows Server 2008.
3. INP is NOT upgradeable for new servers announced after Sept. 30, 2007.
 - No next generation Intel server support.
 - No next generation AMD server (Barcelona) support.
4. The drivers for INP are located here by server type: <http://h18004.www1.hp.com/support/files/server/us/index.html>.
The drivers for INP are located here by NIC type: <http://h18004.www1.hp.com/support/files/networking/us/index.html>.
Existing customers can continue to use INP per the constraints listed in this QuickSpecs for the duration of the life of their server as long as they remain on NCDE 8.80 and usage is limited to the configurations listed in the support information included in this document for servers, NICs, drivers, and SmartStart support.

What's New

- End of Life (EOL) of the Single and Flexible license versions of this product effective July 9, 2007 and discontinuation effective on September 30, 2007.

Models

Licensing and Packaging	ProLiant Essentials Intelligent Networking Pack, Tracking License NOTE: For use with signed and implemented Activation Key Agreements only. Purchase of this part number entitles the customer to deploy additional licenses of the product under the terms of the existing Activation Key Agreement. Customers under AKA can continue to buy INP for the term of their agreement, but usage is limited to the configurations listed in the support information included in this document so no new servers, NICs, drivers, or SmartStart support will be added. There is no support for any future devices and software announced after 9/30/2007. NOTE: Nothing is delivered in conjunction with the purchase of this part number. Visit http://h18004.www1.hp.com/products/servers/proliantessentials/license/akalic.html for more information on Activation Key Agreements. NOTE: The following Intelligent Networking Pack - Windows Edition licenses have been discontinued and are listed below as reference information only.	372951-B21
	ProLiant Essentials Intelligent Networking Pack, Single Server License NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.	436225-B21

Overview

ProLiant Essentials Intelligent Networking Pack, Flexible License 436227-B21

NOTE: For use with multiple servers (minimum of 5). This part number allows you to specify the license quantity. When ordering this part number, the quantity ordered will be the number of licenses embedded in a single activation key. A single kit containing that key is then delivered to you.

Kit Contents

One peel and seal envelope containing a license card and license key label

Supported Servers for monitoring

BL Servers:

BL20p G2, BL20p G3, BL20p G4, BL25p, BL25p G2, BL30p, BL35p, BL40p, BL45p, BL45p G2, BL460c, BL465c, BL480c, BL685c

DL Servers:

DL320 G2, DL320 G3, DL320 G4, DL320 G5, DL360 G2, DL360 G3, DL360 G4, DL360 G4p, DL360 G5, DL365, DL380 G2, DL380 G2 Packaged Cluster, DL380 G3, DL380 G3 Packaged Cluster - MSA1000, DL380 G3 Packaged Cluster - MSA500, DL380 G4, DL380 G4 Packaged Cluster - MSA1000, DL380 G4 Packaged Cluster - MSA1000, DL380 G4 Packaged Cluster - MSA500, DL380 G4 Packaged Cluster - MSA500 G2, DL380 G5, DL385, DL385 G2, DL385 Packaged Cluster - MSA500 G2, DL560, DL580 G2, DL580 G3, DL580 G4, DL585, DL585 G2, DL740, DL760, DL760 G2

ML Servers:

ML310, ML310 G2, ML310 G3, ML310 G4, ML330 G2, ML330 G3, ML350 G2, ML350 G3, ML350 G4, ML350 G4p, ML350 G5, ML370 G2, ML370 G3, ML370 G4, ML370 G5, ML530 G2, ML570 G3, ML570 G4, ML370 G4, ML370 G5, ML530 G2, ML570 G2, ML570 G3, ML570 G4

NOTE: Some servers may be discontinued.

Supported Drivers

NCDE 8.80, posted 31 August, 2007

NCDE 8.70, posted 13 July 2007

NCDE 8.60, posted 21 March 2007

First supported driver was NCDE 7.70.

Supported SmartStart

SmartStart 7.80, posted on May 14, 2007.

SmartStart 7.20 - 7.70

Supported NICs for monitoring

Fast Ethernet NICs:

NC3122, NC3123, NC3131, NC3133, NC3134, NC3135

Gigabit NICs:

NC1020, NC110T, NC150T, NC310F, NC320m, NC325m, NC326m, NC360m, NC360T, NC364m, NC364T, NC370F, NC370i, NC373F, NC373m, NC373T, NC374m, NC380T, NC6132, NC6133, NC6134, NC6136, NC6170, NC6770,, NC7131, NC7132, NC7170, NC7170LP, NC7770, NC7771

Embedded NICs:

NC7761, NC7781, NC7782, NC320i, NC324i, NC326i, NC370i, NC371i, NC373i

NOTE: Some NICs may be discontinued.

Standard Features

Active Path Failover

Allows a ProLiant server to intelligently and proactively determine which of its teamed ports should or should not be used by the team based on "tested" connectivity with a network device called an Echo Node. Each teamed port tests connectivity to the Echo Node by transmitting a frame to the Echo Node and monitoring for a response. Active path can determine if teamed ports have become segregated onto different networks (for example, because of link loss on an upstream switch uplink, server network adapter ports connected to the wrong switch ports, VLAN misconfiguration on a switch, etc.) Teamed port segregation is determined based on successful communication with the Echo Node on a per teamed port basis. The Echo Node does not need to have any special software installed; standard network packets are used to determine connectivity of the teamed NICs. Setting up the Echo Node is a matter of providing the IP address and optional MAC address and then setting the interval and timeout values using NCU.

Fast Path Failover

Allows a ProLiant server to intelligently and proactively determine the best teamed ports to use to provide optimum network connectivity for the server. As with Active Path, Fast Path can determine if teamed ports have become segregated onto different broadcast domains (because of link loss on an upstream switch uplink, server network adapter ports are connected to the wrong switch ports, VLAN misconfiguration on a switch, etc.) It determines which teamed port is the optimal port to use as the team's primary port among one or more teamed ports with validated connectivity to the preferred Spanning Tree root switch.

Router Path Failover

Allows a ProLiant server to intelligently and proactively determine the best teamed ports to use based on router path availability to a user-specified router group on the network. The path to the router is monitored and a slow-down or loss of connection to the router can trigger a NIC teaming failover.

Dual Channel Teaming

With dual channel teaming, it allows a ProLiant server to configure a two logical groups that span across two switches thereby supporting receive and transmit load balancing (split teams). It is a team type that accomplishes everything that NFT (Network Fault Tolerance), TLB (Transmit Load Balancing) and SLB (Switch-assisted Load Balancing) team types accomplish. Prior to Dual Channel, a server with basic network adapter teaming had to choose between inbound load balancing (SLB or 802.3ad Dynamic) or switch redundancy (NFT, TLB). Dual Channel allows the user to create two teams, called groups, inside of a single team. Each group is assigned one or more teamed ports. Also, each group can be connected to a different switch to provide switch fault tolerance. Full inbound and outbound load balancing is provided across both groups. Should any group completely fail, caused by a failure of all teamed ports in the group or a failure of the group's switch (requires groups to be connected to different switches), the team remains available via the other group. Also referred to as Switch-assisted Dual Channel Load Balancing.

Dynamic Dual Channel Teaming

Similar to Dual Channel Teaming or Switch-assisted Dual Channel Load Balancing, Dynamic Dual Channel Teaming divides the team members into two groups where each team is connected to a different switch (for switch redundancy) and supports receive and transmit load balancing. The main difference between Dynamic and Switch-assisted is in the formation of NIC groups. Switch-assisted Dual Channel Teaming requires the NIC groups on both the switch and server to be configured manually while in Dynamic Dual Channel, the NIC formation is decided by the 802.3ad protocol, Link Aggregation Control Protocol (LACP), and the NIC connections. Also referred to as 802.3ad Dynamic Dual Channel Load Balancing.

Standard Features

Discovery Protocols Provides information about neighboring teamed network devices such as protocol addresses, platform of the device, and information about the interfaces used by routers for teamed devices. This feature uses Cisco Discovery Protocols (CDP) as well as Link Layer Discovery Protocol (LLDP) and is media and network protocol independent. The information provided by the discovery protocol can help detect mistakes in configuration.

Virus Throttle Monitors network traffic for abnormal behavior in outbound TCP and UDP connection requests, slows down the spread to "new" machines and reports to the network administrators. This software relies on the observation that under normal activity a machine makes a fairly low rate of outgoing connections to new or different machines, and it is more likely to connect to the same machine regularly than to different machines. This behavior contrasts with the fundamental behavior of a rapidly spreading viruses or worms. An infected machine attempts to make as many outgoing connections as possible to as many different machines as possible. Virus throttle feature implements a filter on the network stack that uses a series of delays to restrict the rate of connections to new hosts such that most normal traffic is unaffected.

Customer Usage Scenarios

- **Preventing availability issues** - ProLiant customers who are deploying these servers in production environments can use INP to identify, diagnose, and rectify problems that can lead to end-user dissatisfaction, in many cases before the dissatisfaction occurs.
 - **Increasing network bandwidth** - ProLiant Customers whose environments need to have maximum bandwidth at all times, can use INP to reach out into the network to determine the fastest path to the network core switch, thereby avoiding the use of smaller bandwidth backup connections when a primary path fails.
 - **Preventing the spread of virus** - ProLiant customers who are looking for security measures to be implemented in their network environment. Virus Throttle does not prevent infection (i.e. the virus has reached the machine) but it is particularly effective against fast-spreading viruses. It restricts the spread of virus thus containing the damage. The outbreak will grow less rapidly, because there will be fewer machines actively spreading the virus, and the network loading will be reduced.
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Complementary Products HP ProLiant Essentials Foundation Pack (shipped with every ProLiant Server from HP)
NOTE: May be named the Server Setup & Management Pack with some servers.

HP ProLiant Essentials Integrated Lights-Out Power Management Pack

HP ProLiant Essentials Integrated Lights-Out 2 Advanced Pack

HP Systems Insight Manager

HP ProLiant Essentials Rapid Deployment Pack

HP ProLiant Essentials Vulnerability and Patch Management Pack

HP ProLiant Essentials Virtual Machine Management Pack

SmartStart Scripting Toolkit

HP Insight Control Environment

HP Insight Power Manager

HP iLO Power Management Pack

HP ProLiant BL, ML and DL servers (except ProLiant 100 Series)

Select HP Integrity servers

MSA500, MSA1000 and MSA1500 shared storage devices

Standard Features

Other product information

Visit <http://h18004.www1.hp.com/products/servers/networking/whitepapers.html> for the "HP network adapter teaming" whitepaper that provides a detailed explanation of basic teaming and advanced teaming, please visit <http://h18004.www1.hp.com/products/servers/networking/index.html> for more information on the ProLiant Essentials Intelligent Networking Pack

Supported Products

Supported operating systems for monitored servers

Microsoft Windows 2000 Server
Microsoft Windows 2000 Advanced Server
Microsoft Windows Server 2003 Standard Edition
Microsoft Windows Server 2003 Enterprise Edition
Microsoft Windows Server 2003 Web Edition
Microsoft Windows Small Business Server 2003

Supported browsers for client systems

Microsoft Internet Explorer 6.0, SP1 or later

Service and Support, HP Care Pack, and Warranty Information

Warranty

Since this product is discontinued there is no longer any warranty.

HP will replace defective delivery media replacement for a period of 90 days following the date of purchase.

Startup technical software support is available at no additional charge by calling HP Support up to 90 days from the date of purchase. This includes phone support to assist customers with installation, set-up and product usage questions and/or problems. Worldwide numbers for Support are available at: <http://welcome.hp.com/country/us/en/wwcontact.html>

Complete warranty can be found at: <http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>.

HP Software Support

This section is no longer applicable to this product since INP is discontinued.

HP Care Pack offering combines comprehensive ProLiant Essentials and Insight Control software support with convenient access to ProLiant Essentials and Insight Control software updates.

Expert support for performance, availability, and productivity optimization

ProLiant Essentials and Insight Control software technical support brings timely assistance and trustworthy advice on issues such as product features and use, problem diagnosis and resolution, and software defect identification. Service highlights include:

- **Ready access to technical resources** - Connect with experienced HP IT Response Center engineers via telephone, electronic communication, or fax for help with ProLiant Essentials and Insight Control implementation or operations problems.
- **Problem analysis and resolution** - HP Services provides corrective support to resolve identifiable and reproducible ProLiant Essentials and Insight Control product problems, and to help you identify problems that are difficult to reproduce. You can also receive help with trouble-shooting and setting configuration parameters.
- **Software features and operational support** - HP provides information on the latest ProLiant Essentials and Insight Control features and known problems and solutions, plus operational advice and assistance.
- **Escalation management** - Established escalation procedures enlist specialized expertise from HP and selected third-parties.
- **Installation advisory** - Advisory support is available for help with installing and updating standalone or networked ProLiant Essentials and Insight Control products.
- **Choice of coverage windows** - Service is available 13x5 Monday-Friday or 24x7.

Productivity-enhancing software updates

This multifaceted service also brings updated ProLiant Essentials and Insight Control software products, patches, and technical manuals as they become available. And it includes licensing to use and copy the new updates. Subscription-based purchasing gives you substantial savings vs. the cost of individual updates.

Service highlights include:

- **Software updates** - Complete ProLiant Essentials and Insight Control product and documentation updates are made available to your system manager.

Service and Support, HP Care Pack, and Warranty Information

- **Software licensing** - You receive a license to use and copy updates for all systems covered by your original software license.
- **Electronic software information** - Access HP's electronic support facility for ProLiant Essentials and Insight Control software patches, a symptom-solution database, product descriptions, specifications, technical literature, and more.

This service gives the opportunity to obtain software updates faster and more efficiently with http://www.hp.com/softwarereleases/releases-media2/SUM/How_to_be_a_SUM_customer.htm

Software Update Manager provides online access to view support entitlements, manage release notification profile, and immediately download new updates.

Care Packs services for ProLiant Essentials Operating Environment provide support for the following products.

NOTE that supported products may change over time, the list of products:

- Rapid Deployment Pack Windows Edition
- Workload Management Pack
- Performance Management Pack
- Systems Insight Manager
- SmartStart
- SmartStart Scripting ToolKit
- iLO Advanced Pack
- iLO Select Pack
- Vulnerability and Patch Management Pack
- Intelligent Networking Pack
- Virtual Machine Management Pack
- Server Migration Pack
- HP Insight Control Linux Edition
- Server Migration Pack - Physical to ProLiant Edition (P2P)
- Insight Control Environment
- iLO Power Management Pack

Options

Service and Support Offerings (HP Care Pack Services)	ProLiant Essentials Operating Environment, - 1 year, 9x5 Unlimited SW Support - includes SW updates - per server	UF512E
	ProLiant Essentials Operating Environment, - 1 year, 24x7 Unlimited SW Support - includes SW updates - per server	UF513E
	ProLiant Essentials Operating Environment, - 3 year, 9x5 Unlimited SW Support - includes SW updates - per server	UF514E
	ProLiant Essentials Operating Environment, - 3 year, 24x7 Unlimited SW Support - includes SW updates - per server	UF515E

NOTE: For more information, customer/resellers can contact <http://www.hp.com/hps/carepack/services/>

Technical Specifications

Physical Data

Shipping Dimensions	Height	9.00 in (22.86 cm)
	Width	6.00 in (15.24 cm)
	Depth	.062 in (1.57 cm)
	Weight	.05 lbs (.023 kg)

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