



APRIL 2010

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TECHNOLOGY STANDARDS

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## FOUR POINTS TECHNOLOGY DOCUMENTATION

INTRODUCTION  
SCOPE

COMPLIANCE  
GUARANTEES

DISCLAIMER

### Overview

The purpose of this document and all available Four Points Technology Profile documents is to provide a simple and easy to understand overview of the property technology components for Four Points hotels.

It is designed to provide owners, general managers and the respective operations team a definitive resource by which to understand, order/source and implement each of the technologies selected for the property.

### Manual Disclaimer




This document and all other Starwood or brand specific technology profile documents (the "Document" or "Documents") and the materials, procedures and systems contained or depicted herein have been developed by, and are the sole and exclusive property of Starwood Hotels & Resorts Worldwide, Inc. ("Starwood"), 1111 Westchester Avenue, White Plains, New York 10604.

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This manual may be altered, amended or supplemented by Starwood in its sole discretion from time to time and is to serve as reference for 2010 only. It is your responsibility to familiarize yourself with the contents of the Manual and to keep yourself apprised of any and all updates posted on [www.starwoodone.com](http://www.starwoodone.com).

In the event of any inconsistency or conflict between a provision in this Document or any related Documents and any federal, provincial, state or local statute, regulation, order or other law, such law will supersede the conflicting or inconsistent provision(s) of this Document or related Documents in all properties subject to that law. A franchised hotel should seek independent legal counsel for advice concerning application of and compliance with any and all applicable law.

### External Resources

-  StarwoodONE Portal  
<http://one.starwoodhotels.com>
-  Four Points Hotels  
<http://www.starwoodhotels.com/fourpoints/index.html>
-  Starwood Development for Four Points  
[http://development.starwoodhotels.com/brands/four\\_points](http://development.starwoodhotels.com/brands/four_points)

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[gustaf.burman@starwoodhotels.com](mailto:gustaf.burman@starwoodhotels.com)

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## SCOPE

This document is part of a series of documents (or Technology Profiles), which cover the complete set of technology related components required to open and operate a Four Points hotel. The documents have been purpose fully separated to provide concise and easy to digest documents for each topic. Also, where appropriate, references are made to Divisional IT Infrastructure Standards for each of Starwood’s global divisions: Asia Pacific (AP), Europe, Africa & the Middle East (EAME), Latin American (LAD) and North American (NAD). Where noted, please refer to Divisional Technology Profile documents for additional detail and specification.

## DOCUMENT APPROACH

These documents highlight the systems required to run all functions for the successful operation of a Four Points hotel are divided into the following separate profiles:

Technology Document Number	Description
1	<a href="#">Four Points Standards - NAD - Technology Overview Document</a>
2	<a href="#">Four Points Standards - NAD - Change log</a>
3	<a href="#">Four Points Standards - NAD - Starwood Central Systems</a>
4	<a href="#">Four Points Standards - NAD - Property Management Systems</a>
5	<a href="#">Four Points Standards - NAD - Time &amp; Attendance Systems</a>
6	<a href="#">Four Points Standards - NAD - Guest Internet Terminals</a>
7	<a href="#">Four Points Standards - NAD - Guest Internet and Wireless</a>
8	<a href="#">Four Points Standards - NAD - Doorlock Systems</a>
9	<a href="#">Four Points Standards - NAD - Associate Communications</a>
10	<a href="#">Four Points Standards - NAD - Front Desk Technology</a>
11	<a href="#">Four Points Standards - NAD – Point Of Sale Technology</a>
12	<a href="#">Four Points Standards - NAD - IP PBX, Voicemail and Call Accounting</a>
13	<a href="#">Four Points Standards - NAD - Guest Room Telephones</a>
14	<a href="#">Four Points Standards - NAD - Public Area Telephones</a>
15	<a href="#">Four Points Standards - NAD - Property Hardware and Software</a>
16	<a href="#">Four Points Standards - NAD - Electronic Funds Transfer</a>
17	<a href="#">Four Points Standards - NAD - Public Area Music</a>
18	<a href="#">Four Points Standards - NAD - In Room Entertainment and TV Programming</a>
19	<a href="#">Four Points Standards - NAD - Guest Room Televisions, Mounts &amp; Panels</a>
20	<a href="#">Four Points Standards - NAD - Pubic Area Televisions and Mounts</a>

## PROJECT MANAGEMENT

Starwood has a team of dedicated technology project managers who can assist with the procurement, coordination and installation of each of the technology systems included. The IT Project Manager (PM) is responsible for managing vendor relations to assure estimates and invoices are based on Starwood negotiated and established pricing. These Project Managers have expertise working with vendors and owners during construction, pre-opening and post opening phases to assure smooth implementation. If you are interested in obtaining an estimate for project management for your hotel, please contact your Starwood representative.




## REQUIRED vs VENDOR OPTIONAL vs PRODUCT OPTIONAL TECHNOLOGIES

The technology components that are approved for use in a Four Points hotel are listed in each document under the heading of 'Approved Product(s)'. In certain cases, particular products are considered to be mandatory to Four Points brand standards and consequently must be implemented.

In other cases a certain product is required by brand standards but there are multiple approved vendors from which the owner / operator may choose one. This approach has been taken to allow the owner/operator to install a system that is considered to provide the same functionality allowing owner/operator some flexibility due to local presence & support. As such these items can be modified at property owner/operator discretion as long as they support those elements that are required and/or meet minimum performance specifications. Items designated as required and do not have any alternate systems are brand defining items and therefore impact the overall guest experience. These components are to be the exact items specified and are designated brand standards. Any deviation to standards and selection of vendors not listed in this document needs to be approved by your Starwood Representative or Regional IT Director.

The last classification shown in the technology profiles is one of "product optional" which designates that a product or service may be elected by the owner / operator.

The key to these requirements is illustrated in each technology profile by the following key and icon set:

- Key:
-  = Required by Standards
  -  = Required but Vendor Optional
  -  = Product Optional

## GUARANTEES AND WARRANTIES

Starwood makes no representations, warranties or guarantees regarding the technology, specified in this Document or set of Documents and purchased by you. You must look to the manufacturer of the products purchased for the hotel for questions and cost issues regarding warranties, product defects and replacement parts. Any cost information provided by Starwood is for reference only. You with your chosen vendor must verify all final costs for budgeting purposes. Starwood is not responsible for soliciting current price information.

## GENERAL COMPLIANCE REQUIREMENTS

All technology purchased for, and installed in, your hotel (whether or not specified in this Document or set of Documents) must comply in all respects with applicable federal, state and local laws, ordinances or other requirements; including, without limitation, all applicable fire, life and safety requirements. Additionally, all technology purchased for hotels in the North American Division is required to comply with the Americans with Disabilities Act (the "ADA"). It is the responsibility of each hotel owner to ensure that such products are compliant.

Last updated: May 10, 2010 (Valid until – September 30<sup>th</sup>, 2010)

## FOUR POINTS TECHNOLOGY DOCUMENTATION CHANGE

### CHANGE LOG

#### Overview

The purpose of this document is to record all changes made by Starwood personnel to the Four Points Technology Profile documents.

When a change is made to a Technology Profile, the changes must be recorded in the table on the following pages. Each change must represent a version increment of 0.1. For example, if the previous version of the profile was 5.0 then please update the version to 5.1 upon alterations.

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#### External Resources

-  StarwoodONE Portal  
<http://one.starwoodhotels.com>
-  Four Points Hotels  
<http://www.starwoodhotels.com/fourpoints/index.html>
-  Starwood Development for Four Points  
[http://development.starwoodhotels.com/brands/four\\_points](http://development.starwoodhotels.com/brands/four_points)

#### Key information:

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**CHANGE LOG**

Record all documentation changes below:

Date of Change	Changed by	Previous Version	New Version	Technology Profile Changed	Description Of Change
4/13/10	Peter Chambers	N/A	5.0	Profile 2 – Change Log	Creation
5/5/10	Peter Chambers	5.0	5.1	Profile 6 – NAD – Guest Internet Terminals	Removal of 'In-Touch' reference
5/5/10	Peter Chambers	5.0	5.1	Profile 17 – NAD – Public Area Music	Removal of Video related technology and description

## STARWOOD CENTRALIZED SYSTEMS

CENTRAL RESERVATIONS SYSTEM  
STARGUEST

STARWOOD ONE  
WAN NETWORK SUPPORT SERVICES

ORACLE MAINTENANCE  
EMAIL

### Overview

This section provides an overview of each of the business applications required to run a Four Points hotel that are “centrally” hosted by Starwood and therefore do not require servers or hardware at the individual property level. Because these applications are centrally hosted, individual responsibility for day-to-day monitoring and maintenance is limited. Any indication of an interruption in service or an unresponsive system should be forwarded directly to the Starwood IT help desk.

Training is required for many of the applications listed below and is administered during the opening process for the Associates who will be using the respective application as part of their normal job function.

### Items Reviewed



Starwood One



StarGuest

### External Resources

For further information on Starwood Central Systems and Services, please contact the Starwood representative listed in this document.

### Key information:

#### Approved Product(s)

- StarGuest (P)
- StarwoodOne (P)
- Central Reservations (P)
- WAN Network Support Services (P)
- Oracle license Maintenance (P)

#### Starwood Contact(s)

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gustaf.burman@starwoodhotels.com

#### Approved Vendor(s)

See Starwood contact above

Key:

- (P) = Required by Standards
- (V) = Vendor Optional
- (P) = Product Optional

## STARGUEST

### FUNCTION

StarGuest is Starwood's technology platform used to deliver and respond to guest requests, issues, and preferences identified on property or via the call center. It is interfaced with Starwood's centralized guest database providing a profile for all guests with a previous or upcoming stay at a Starwood hotel. The system enables properties to efficiently record, resolve and measure guest complaints / requests as well as prepare for and anticipate guest needs as captured in their global Starwood profile. StarGuest allows properties to transform shared customer insights into action and deliver enhanced guest experiences.

### BENEFIT

StarGuest allows properties to deliver a personalized guest experience leveraging information that has been captured in the guest's global Starwood profile. It enables associates to improve the guest experience by providing a mechanism to respond quickly and effectively to guest needs. The system helps associates proactively manage and follow-up on each guest's individual request or defect and allows hotel associates to anticipate guest needs through detailed reporting. StarGuest interfaces with the property management system and allows properties to schedule events in advance, and dispatch tasks via work tickets or two-way text email messages. Reports can be generated to streamline room set-up based on stored guest preferences, VIP recognition and treatment, amenity delivery, and recognition of special events like birthdays and anniversaries. StarGuest gives properties a powerful tool to exceed customer expectations and manage their hotels more efficiently.

## CENTRAL RESERVATIONS

Starwood currently runs the Integrated Property Management System (IPS), which interfaces with Galaxy LightSpeed PMS, and Starwood's centralized reservation systems. Reservations from call centers, the Global Distribution System (GDS) and Maximize Available Reservations Systems (MARS) all flow to the Property Management System (PMS) through these applications.

## StarwoodONE PORTAL SERVICES

StarwoodONE, the company portal, is the single, global entry point into Starwood for information, collaboration and knowledge sharing as well as access to applications and systems used for Starwood business. The portal serves as one of the primary means for communication between franchisee's and Starwood including updates on the brand, standards reviews/updates, new openings, etc. It also provides an intranet platform for communication between the corporate office, divisional offices, each of Starwood's hotel brand teams and the properties around the globe. It houses business content and documentation relating to HR, sales, marketing, finance and operations, and is used globally across the company.

## WIDE AREA NETWORK (WAN) NETWORK SUPPORT SERVICES (NSS)

WAN Network Support Services manage and maintain Starwood's global infrastructure providing each property with connectivity to the Starwood Technology Center and core business applications including Reservations, email, StarwoodONE, StarGuest, TLPe, etc. NSS supports day-to-day operations of the WAN and remote access, and provides support and design for brand business initiatives. NSS also manages global network service providers, including circuit and router monitoring contracts.

## ORACLE LICENSE MAINTENANCE

The purchase and annual maintenance of a centrally purchased Oracle license permits the use of current and future software applications that operate on the Oracle database platform. These applications include: StarwoodONE Portal, TLPe and all StarGuest applications. The centrally purchased Oracle license gives properties the ability to use the license for all applications without requiring a name to be assigned to each license. Please contact your Starwood Representative for more details.



## EMAIL

Four Points hotels require a generic email address to be used at Owned & Managed properties for general property communications, Franchises being optional. The standard staff email address format follows that of the property web address as indicated below:

- Property Address: [www.FourPointshotels.com/property](http://www.FourPointshotels.com/property)
- General Information: [FourPointscity@FourPointscity.com](mailto:FourPointscity@FourPointscity.com)
- Property Talent: [first.last@FourPointscity.com](mailto:first.last@FourPointscity.com)

Starwood Central Email servers do not provide email services for Four Points under a Franchise agreement and no email hosting services are provided or included by default. However, Starwood does offer the following guidelines and options for using Starwood brand name email domains at a Franchise location.

Due to Starwood branded trademarks and copyrights, Starwood must own all franchise property domains, as agreed to by both parties in the franchise disclosure document. However, Starwood will forward email traffic from the Starwood-owned domain for a franchise property to a third party email hosting provider of the franchisees choosing. We do this via MX Records. MX stands for Mail Exchange Records, and in short these records may be added to any Starwood owned domain (i.e. [www.FourPointsbroomfield.com](http://www.FourPointsbroomfield.com), [www.westinwallcentre.com](http://www.westinwallcentre.com), etc) to redirect email traffic bound for that domain (i.e. [john.smith@FourPointsbroomfield.com](mailto:john.smith@FourPointsbroomfield.com), [tim.allen@westinwallcentre.com](mailto:tim.allen@westinwallcentre.com), etc.) to an email-hosting provider of your choosing.

Examples of email hosting providers that franchisees could contract for their email hosting are GoDaddy and NetworkSolutions. You will need to call or sign up on the web for an email hosting package with an email hosting provider, and then upon completion ask the provider for the MX records which your domain registrar (Starwood) can use to forward the email to their provider (and therefore their mailboxes). Finally, you will enter these MX records into an online form provided by Starwood (directions below).

### Common pitfalls:

- Franchisees should NOT purchase a domain to have email hosting, and especially not a domain with a Starwood brand name included (i.e. [FourPointsbroomfieldCO.com](http://FourPointsbroomfieldCO.com), [westinwallcentrevancouver.com](http://westinwallcentrevancouver.com), etc). If you purchase a domain with a Starwood brand name included, ownership then must immediately be transferred to Starwood.
- [Online.compliance@starwoodhotels.com](mailto:Online.compliance@starwoodhotels.com) should be emailed to work with the franchisee on transfer.
- Email accounts should be created per brand standards: ([firstname.lastname@starwoodregistereddomeinname.com](mailto:firstname.lastname@starwoodregistereddomeinname.com)).

To complete the mail forwarding process please follow these steps:

- Confirm your Starwood approved/registered domain with either your SDO or by emailing [Online.compliance@starwoodhotels.com](mailto:Online.compliance@starwoodhotels.com). A ticket will be opened and Online Compliance should respond in 5-7 business days.
- Contract with a third party email hosting provider as needed for your associates. Once a provider is contracted ask them for the appropriate MX records you should provide to Starwood (Online Compliance) for email forwarding.
- Complete a request to add MX records to your registered domain via the online form: <http://www.starwoodhotels.com/domainname>
- Wait for Online Compliance to process the MX record add request, upon completion test send an email from another account to your new Starwood on-brand email address.

**Option for Starwood Hosted Email Solution:**

If you prefer to have Starwood host your email you may enroll in the program through StarwoodONE using the following directions:

1. Log into Starwood One
2. Go to the eTools Menu
3. Select MyServiceDesk
4. On the MyServiceDesk page, click the MyServiceDesk link
5. On the left hand side under go to "Self Service" section and click on "Place An Order"
6. Choose the Email Services (Property Only) choice
7. Fill in the form.
9. Click the orange Order Now button in the upper right
9. Make a note of the ticket number you are given. Visit the MyServiceDesk location for progress/status on your ticket.

NOTE – your property will be billed \$11 per account per month.

## PROPERTY MANAGEMENT SYSTEMS (PMS)

### PMS

#### Overview

Galaxy Hotel Systems is a wholly owned subsidiary of Starwood Hotels that operates and services the required PMS called Galaxy LightSpeed. LightSpeed has been designated as the standard in the North American Division for all Starwood owned, managed and franchised hotels.

#### Items Reviewed



Galaxy Home Screen



Quick Check-In, Check-Out



Task Tracker

#### External Resources

 Galaxy LightSpeed Information  
<https://www.galaxyhotelsystems.com/sections/products/home.jsf?conversationId=53973>

#### Key information:

##### Approved Product(s)

Galaxy LightSpeed



##### Starwood Contact(s)




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Leonard Dean  
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#### Key:

-  = Required by Standards
-  = Required but Vendor Optional
-  = Product Optional

## PMS HARDWARE

Galaxy LightSpeed runs on low-cost HP Proliant servers with a Linux operating system. This server may be purchased from Galaxy or directly from Insight. All servers are pre-staged before shipment to the hotel. For the purposes of infrastructure planning, the rack mounted server model is recommended and this will require 5U of rack space.

## PMS INSTALLATION, TRAINING AND CONFIGURATION

All required services to complete the installation and training associated with LightSpeed must be provided by Galaxy. A training schedule and implementation plan specifically designed for your property will be provided prior to the anticipated hotel opening date. The property will be responsible for providing or renting computers for training purposes at their own cost. The provision and set up of training hardware is not the responsibility of Galaxy Hotel Systems.

Training for LightSpeed is integrated into the training schedule and will be administered as part of the pre-opening and opening process to those talent who will be using it as part of their primary job function. Galaxy has adjusted its training schedule and delivery methods to ensure a more competitive pricing point for smaller hotels.

## PMS INTERFACES

Currently the following interfaces are required as a standard at all Four Points properties in the North American Division:

- Point of Sale
- Voicemail
- Elavon EFT (Credit Card processing)
- IP PBX
- Call Accounting
- Back Office (finance)
- Doorlock systems
- Guest Internet / HSIA Authentication

## TIME AND ATTENDANCE SYSTEMS

### TIMESAVER BY ADP

#### ADP BIOMETRIC TIMECLOCKS

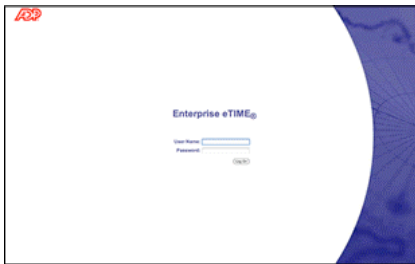
#### Overview

Starwood recommends ADP's Time Saver solution.

Time Saver is a hosted (ASP) time and labor management solution that collects, calculates, and reports Associate work hours and offers scheduling and labor forecasting functions.

A Four Points hotel may opt to install this product but it is not considered as mandatory. If selected, Starwood requires that the timeclocks be installed by the Associate entrance and the Break Room, allowing employees to punch in and out effectively.

#### Items Reviewed



ADP Login



ADP 5101 Biometric Timeclock

#### External Resources

[ADP for Hospitality Information](http://www.adp.com/tools-and-resources/industry-vertical-markets/hospitality-and-gaming.aspx)  
<http://www.adp.com/tools-and-resources/industry-vertical-markets/hospitality-and-gaming.aspx>

[ADP Timeclock Information](http://www.adp.com/solutions/employer-services/time-and-attendance/workforce-management/time-clocks-and-other-time-collection-devices.aspx)  
<http://www.adp.com/solutions/employer-services/time-and-attendance/workforce-management/time-clocks-and-other-time-collection-devices.aspx>

#### Key information:

#### Approved Product(s)

TimeSaver by ADP

#### Starwood Contact(s)

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#### Approved Vendor(s)

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Key:

- = Required by Standards
- = Required but Vendor Optional
- = Product Optional

**ADP DETAILS**

The property will require timeclock hardware installed at the local property, which will communicate directly with the ADP hosted solution. The suggested model is the ADP 5101 single finger biometric clock.

The Starwood negotiated pricing level for the ADP solution is \$1.95 per employee, per month and each timeclock is \$89 per month.

There will be additional costs associated with implementation and training that will be assessed individually by ADP depending on the size of the property, training requirements and required interfaces.

**ADP 5101 BIOMETRIC TIMECLOCK DETAILS**

ADP's biometric timeclocks deliver the security and convenience of biometric technology in a rugged, aluminum housing and steel lockable base. When used with ADP's TimeSaver® software, the biometric series data collection readers offer a complete time and labor management solution that reduces administrative time and increases payroll accuracy by eliminating employee time theft from "buddy punching," extended breaks, and long lunches.

Starwood recommends the ADP 5101 model which combines a badge and 1 finger scan.

Description	Specifications
Dimensions:	7.25h x 10"w x 4"d (18.41cm x 25.4cm x 10.16cm) "
Weight:	6 lbs. (2.7 kg)
Display:	4 line by 20 character super-twist backlit LCD
Clock:	12 or 24 hour format – USA or International (quartz precision) time stamp of data transactions
Keypad:	Software defined function keys; large 20 key tactile 4x5 matrix; custom user-defined keypad legends
Memory:	512KB RAM and 256K flash memory (2000 employee base program dependent)
Memory backup:	Up to 30 hours
Self-test:	On-board set-up and full-feature diagnostics
Interface:	Ethernet: TCP/IP Ethernet 10/100Base T 802.3 (optional); Direct: RS-232/RS-485; or Modem: Standard AT Command set for 33.6KB baud modem (optional); DI/DO or serial interface printer port (optional)
Enclosure:	Die cast aluminum housing with steel key-lockable base assembly
Power:	+10 to +17 VDC (+12VDC @ 1 Amp nominal); non-interruptible power source with charger (optional)
Environment:	32° to 110°F (0° to 43°C)
Certification:	CE Mark Certified (CE, RE, ESD, RS and CS), FCC Part 15, Class A
Optional Accessories:	Integrated/external visible/infrared bar code slot readers; integrated magnetic slot readers; solid state or dry contact relay modules; integrated/external proximity readers; serial interface printer port

## GUEST INTERNET TERMINALS

### PUBLIC TECHNOLOGY FOR GUESTS

#### Overview

Four Points provides guests with two computer terminals in the public area of the hotel for guests to use for basic business functions including Internet access, to check into flights, to print boarding passes, check email, check local area events and activities, etc.

These computers run Microsoft Office applications, Adobe Acrobat Reader, and an Internet browser with plug-ins. The computer is also integrated with the PrintMe or PrinterOn solution to provide guests an easy and secure solution for printing documents.

#### Items Reviewed



Dell Studio Workstation



PrintMe Keypad



PrinterOn 'Print Connect' and 'PrintValet'

#### External Resources

[Eleven Wireless BC Information](http://www.elevenwireless.com/Products/BusinessCenterComputer/tabid/98/Default.aspx)  
<http://www.elevenwireless.com/Products/BusinessCenterComputer/tabid/98/Default.aspx>

[GBC Blue Information](http://gbcblue.com/products.html)  
<http://gbcblue.com/products.html>

[Uniguest Information](http://www.uniguest.com/)  
<http://www.uniguest.com/>

#### Key information:

#### Approved Product(s)

Eleven Wireless Dell Studio

GBC Blue Dell Studio

Uniguest Dell Studio

PrintMe

PrinterOn

#### Starwood Contact(s)

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#### Approved Vendor(s)

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GBC Blue  
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Uniguest  
Shirley A. Holman  
[Shirley.holman@uniguest.co](mailto:Shirley.holman@uniguest.co)  
T: +1 615 467 3143 x 101

Key:

- = Required by Standards
- = Vendor Optional
- = Product Optional

## GUEST INTERNET TERMINAL HARDWARE

The two computers must be loaded with software designed to delete user information between sessions, protecting the computers from tampering and viruses as well as filtering objectionable content. The identity of a computer terminal user must be easily determined if required by law enforcement officials. The computers should be physically secured to the location to prevent theft (property supplied.)

Wireless Keyboards and mice are not recommended. All approved vendors provide appropriate software to “clean” the system after each use, as well as a hardware replacement program. Please contact either vendor for further information. The below hardware is a recommendation.

Area	Manufacturer	Item	Model #	Quantity
Public Areas	Dell Studio all-in-one	All-In-One Technology Center PC	Dependent Upon Vendor	2

## GUEST PRINTING OPTION 1 - PRINTME SOLUTION HARDWARE

There is a onetime cost for the purchase of the hardware necessary to manage both the code entry and printing. This should be purchased from the selected vendor providing the Guest Internet Terminal solution.

Area	Manufacturer	Item	Ports	Quantity
Lobby / Public Areas	EFI	PrintMe Key Pad	USB or Ethernet	1

## GUEST PRINTING OPTION 2 - PRINTERON SOLUTION HARDWARE

PrinterOn should be purchased from the selected vendor providing the Guest Internet Terminal solution.

PrinterOn easily enables mobile printing within the property. Simply put, any number of guests can print from their mobile device or Internet-enabled laptop to a specific PrinterOn-enabled printer in the hotel and privately release the print job on the PrintValet™ keypad. You may extend the benefits of this service to the guests by offering several printers with different functionalities.

At a minimum the following pieces of hardware should be placed in Guest Internet Terminal final location to allow guests to print:

Area	Manufacturer	Item	Ports	Quantity
Lobby / Public Areas	PrinterOn	PrintConnect	Ethernet	1
Lobby / Public Areas	PrinterOn	PrintValet	USB to Printer	1



## GUEST INTERNET AND WIRELESS NETWORK

HIGH SPEED INTERNET  
WIRELESS NETWORK

### Overview

A Guest Internet / High Speed Internet Access (HSIA) infrastructure must be made available throughout the hotel for the use of guests and throughout the hotel public areas and meeting areas. The implementation will be a mix of hard wired Ethernet and Wireless in every guest room and meeting room and wireless only in all public areas.

The wireless infrastructure for Starwood properties must utilize a controller based, thin access point architecture. Wireless LAN controllers provide system-wide wireless LAN functions, such as security policies, intrusion prevention, RF management, quality of service (QoS), and mobility. They work in conjunction with lightweight access points and Wireless Control Software to support all wireless applications.

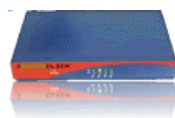
### Items Reviewed



Nomadix AG3100 Gateway



Guest-tek Oneview Internet



Superclick SIMS



iBahn Gateway



LodgeNet Broadband



Datavalet



Solution IP



HP Procurve Wireless



Cisco Wireless

### External Resources

[HP Procurve Wireless LAN Information](http://www.procurve.com/products/wireless/index.htm)

[Guest-tek OneView Internet Information](http://www.guest-tek.com/product/Internet.php)

[Nomadix AG3100 Gateway Information](http://www.nomadix.com/products/platforms/ag3000/)

[iBahn Information](http://www.ibahn.com/products-services/Wired-Wireless-Guestroom-HISA.php)

[Cisco Wireless LAN Information](http://www.cisco.com/en/US/products/hw/wireless/)

[Datavalet Information](http://www.datavalet.com/index.php)

[Solution Inc. Information](http://www.solutioninc.com/default.asp?mn=1.10.36)

[Superclick Information](http://www.superclick.com/index.php/static/sims)

### Key information:

#### Approved Product(s)

Nomadix Gateway	Ⓡ
OneView Internet by Guest-tek	Ⓡ
iBahn Gateway	Ⓡ
Solution Inc Gateway	Ⓡ
Superclick SIMS	Ⓡ
Datavalet SMG	Ⓡ
Lodgenet Broadband	Ⓡ
HP Procurve Wireless	Ⓡ
Cisco Wireless	Ⓡ

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Key:  
 = Required by Standards  
 = Required but Vendor Optional  
 = Product Optional

## GUEST INTERNET ARCHITECTURE AND CAPACITIES

The physical guest Internet solution consists of several parts:

- The High Speed Internet Access 'Server'. This is the unit that will provide the intelligence to the network by handling security, registration, and web experience. It will be referred to in this document as the (Visitor Based Networking) VBN Server or Subscriber Management Gateway (SMG)
- Wireless Access Points that will be placed in strategic locations around the hotel to provide best coverage while maintaining aesthetics of the area by being concealed and out of plain sight.
- Ethernet switches to accommodate the connectivity requirements of hard-wired Ethernet from guest bedrooms, meeting spaces and public areas (please see the separate Starwood technology profile "Converged Network Standards" for full details).

### INTERNET GATEWAY / VBN SERVER / SMG

The VBN Server / SMG is responsible for the management of clients authenticating or joining the guest Internet network and performs a number of functions. The minimum specified requirements of the VBN Server / SMG Gateway are stated below:

- The ability to for the client to connect to the Internet without configuration changes or software downloads. No configuration necessary in the following circumstances: static IP, DHCP, public and internal DNS, and Web proxies
- Support for NAT-compatible VPNs
- An intuitive guest login page
- Ability to ensure users can send and receive email using their regular outgoing (SMTP) and incoming (POP3) email protocols without changing configuration settings
- Compatible with IPSec and PPTP VPN systems set up to handle Network Address Translation (NAT)
- Security to the guest by ensuring each room or port connection is isolated from other rooms and ports. Connectivity is to be granted to the Management server only
- Firewall security that blocks unauthorized access to the network from external sources. All end users' IP addresses are to be hidden from the public Internet
- The ability to provide and customize a portal environment to which guests can be redirected upon registration
- Administration functions available from a Web browser
- Customized billing package creation (if required)
- Interfacing capability with Galaxy LightSpeed
- Reporting capability for usage
- Redundancy and fault tolerance feature in the event of hardware failure
- The hotel should control any content that is viewed by guests via their guest Internet provider. Each provider will present guests with Starwood-approved terms and conditions of use that the guest must agree to prior to gaining full Internet access
- Support for the following operating systems and browsers:
- Windows 2000, ME, NT4.0, XP, Vista, 7 and any new versions of Microsoft Operating Systems
- Unix
- Mac OS 9.0 and OS/X and any new versions of Macintosh Operating System
- Browsers: Internet Explorer, Netscape, Firefox and Safari at a minimum

### BANDWIDTH REQUIREMENTS

Guest Internet networks at a Four Points Hotel must be capable of supporting a minimum of 6Mbps in total bandwidth available. This must be achieved with the use of a minimum of one typical, full T1 Internet circuit (1.5Mbps) and the remaining bandwidth should be made up of a combination of Business class Cable internet services and / or Business class DSL services depending upon local availability. This combination of Internet services and the implementation of a bandwidth consolidation device (otherwise know as 'Link Aggregation' has the following benefits:





- Business Continuity utilizing multiple ISPs reduces downtime
- Lower Telecom Costs than standard NxT1 upgrade path
- QoS—Control bandwidth prioritization

- Highly Scalable WAN Connection Options
- Compatible with existing HSIA equipment
- Supports Dynamic & Static IP Addressing
- Failsafe and Failover capabilities to operate during ISP outage

In order to facilitate the combination of different Internet bandwidth sources, the selected Guest Internet provider should provide and install a consolidation device such as Elfiq or Mushroom. More information about these solutions can be found at these locations:

- <http://www.elfiq.com/hospitality>
- <http://www.mushroomnetworks.com/default.aspx>

Starwood recommends the following models from both manufacturers depending upon local requirements and amount of aggregation:

Manufacturer	Image	Model number	Maximum Throughput	Maximum # of Links (WAN)	Ports (LAN)
Elfiq		LB-550E	80Mbps	3 x 10/100	4 x 10/100
Elfiq		LB-1100E	120Mbps	6 x 10/100	4 x 10/100
Mushroom		5201G	300Mbps	5 x GigE	2 x GigE
Mushroom		6401	65Mbps	6 x 10/100	4 x 10/100

## SECURITY REQUIREMENTS

- All users of Guest Internet must authenticate to use the service. Anonymous access is prohibited.
- Internet systems must archive usage data so that investigations of abuse can be facilitated and correlated to a guest folio or individual.
- Information regarding Internet access usage must be recorded and securely stored in the event that this information is requested by law enforcement officials
- The provider may not use any guest information, personally identifiable information (PII) or usage data for its own marketing purposes including credit card information, e-mail addresses, etc. This data may only be used as necessary to provide the Internet service. Any content, or data, whether or not it is from the hotel or Starwood Hotels & Resorts, shall remain the property of the hotel or Starwood Hotels & Resorts
- Wired and wireless Internet connections must be separated from user to user
- It is advisable that access control lists deny port-to-port visibility of NetBIOS traffic and commonly exploited ports.
- Protocols other than TCP/IP should be blocked
- Guest Internet users must be blocked from “seeing” other guests on the network. Technologies shall be employed to prevent MS Networking and other activity between users that are not specifically defined in workgroups for that purpose
- The system must allow for the creation of meeting room Virtual Local Area Networks (VLANS). This common meeting room request permits authorized users to share information within their particular group and maintain a separate collision domain from other hotel users. VLANs can also be used to create individual collision domains restricted to each port. VLANs shall not be used to separate administrative networks from HSIA networks on switching devices and the two must be physically separate
- The Internet service must prevent unauthorized network traffic to pass from the guest to the admin network. This is a required separation that can be achieved through proper firewall, VLAN, and ACL management.
- Guest Internet Infrastructure device management IP addresses must not be accessible to the Internet or guest Internet users. Appropriate VLANS, IP networking, Calls and other vendor technologies must ensure that only authorized users can access administrative interfaces

- To protect guests and Starwood from abuses, the provider must block all inbound unsolicited requests to guests either via Network Address Translation (NAT), router Access Control Lists (ACL) or a firewall. Examples: Ping is a network command that is a command to check to see if a host address is live on the network. It is frequently a precursor activity to an attack. It is not a 'business need' to have anonymous Internet users have the ability to test our publicly known guest Internet addresses. To protect Starwood from charges stemming from guest abuse, guests shall not be permitted to host Web Sites while using guest Internet services. In addition, the provider must block broadcasts on the Internet since this is one technique to spread viruses.
- All Inbound Unsolicited TCP port 80 shall be blocked
- To protect the guest Internet bandwidth and reduce complaints regarding abuse from infected users outbound NETBIOS shall be blocked from all guests to the Internet. Example: TCP/UDP ports 135,137,139,445 are related to MS Networking and are recommended by Microsoft to not be used outside of a trusted environment and are a major source of malicious software propagation and should be blocked by ACL or firewall to be prevented from reaching the Internet
- All wireless Internet services must employ a SSL encryption system to protect information between the guest's computer and authentication devices
- The wireless access point should be set-up with password protection and other settings to ensure that unauthorized reconfiguration is not possible
- The guest Internet log on process must include terms and conditions that the guest assumes a risk when connecting to the wireless service since it is not encrypted or secure from eavesdropping. The provider must take reasonable precautions to protect the end-users from internal and external attacks

#### WEB-BASED PRINTING

- Web-based printing solutions enable guests to print documents to a centrally located printer by uploading them through a web browser. Starwood recommends the PrintMe or PrinterOn solutions (please refer to the separate Four Points Technology Profile 6 – NAD – Guest Internet Terminals).

### WIRELESS NETWORK ARCHITECTURE AND CAPACITIES

Wireless LAN controllers should smoothly integrate into the network and communicate with "thin" access points over any Layer 2 (Ethernet) or Layer 3 (IP) infrastructure using standard protocols. Communication between access points and wireless LAN controllers must remain secure and enable important wireless LAN configuration and management functions to be completely automated for cost-effective wireless LAN operations. By utilizing controller-based thin access point architecture, deployment time and costs will be reduced in addition to simplifying management and troubleshooting processes.

All Wireless Access Points should be powered by Power Over Ethernet (PoE).

The selected wireless system must, at a minimum, meet all of the specifications defined below:

#### WIRELESS CONTROLLER FEATURES AND CAPABILITIES

At a minimum, the selected Wireless Controller should support all of the features/capabilities listed below:

- Multilayered security policies
- Integrated wireless intrusion detection capabilities
- Support for centralized configuration and deployment
- Support for self-configuration, self-healing and self-optimization
- Minimum of two 10/100 Ethernet ports
- AAA Support and Integration
- Support for current wireless technology standards (e.g. IEEE 802.11a, 802.11b, 802.11g, 802.11d, 802.11h, 802.11n)
- Support for 802.1q VLAN Tagging
- Support for current wireless security standards (WEP, WPA-TKIP, WPA2-AES, 802.11i)
- Support for current wireless encryption standards (WEP 128, TKIP-MIC, SSL, TLS, AES)
- Support for Quality of Service (QoS) and priority queuing
- Support for rogue access point detection and containment
- Support for up to 6 SSIDs (beaconing and non beaconing)
- Support for up to 50 Wireless Access Points

- 802.1X and RADIUS authentication control
- Support for System Logging (Syslog) to external log servers
- Secure SNMP read/write access controlled through access strings and IP-based access control lists
- Secure TCP/IP based administration utilizing SSH or HTTPS

## WIRELESS ACCESS POINT FEATURES AND CAPABILITIES

At a minimum, the selected Wireless Access Points should support the functionality listed below:

- Standards based thin / fit / lightweight connectivity model with centralized configuration and management
- Power over Ethernet (802.3af) compliant
- Auto channel selection
- Automatic, remote AP updates
- Support for a minimum of 50 simultaneous clients
- Support for the following data rates: 54, 48, 36, 24, 18, 12, 11, 5.5, 2, 1 Mbps
- Capable of internal or external antenna deployments
- Minimum of one 10/100 Ethernet port
- Dual radio support for current wireless technology standards (IEEE 802.11b, 802.11g)
- Variable transmitter power settings
- Variety of mounting options including wall and ceiling
- Plenum rating
- US Certified

For acceptable wireless coverage and signal strength to support data only transmissions, the wireless signal must be measured at a minimum of -75db throughout the property.

## GUEST INTERNET HEAD END AND WIRELESS CONTROLLER – UPS REQUIREMENTS

The system must include an Uninterruptible Power Supply (UPS) solution capable of providing a minimum of 30 minutes of run time for all equipment. Additionally, all hardware must be new (not refurbished) and rack mountable. The UPS used may be shared between the Guest Internet Gateway, routers, firewalls, core switches and Wireless Controllers as long as it meets the runtime requirement.

## GUEST INTERNET AND WIRELESS NETWORK – NETWORK INFRASTRUCTURE

The approved Guest Internet and Wireless Network vendor will be responsible for supplying and installing the Converged Local Area Network infrastructure. The selected vendor will provide all Ethernet switching and associated equipment and installation services. The Converged network infrastructure must be designed to support not only the Guest Internet and Wireless Network but also the IP PBX (including all administrative and guest end points) and administrative workstations, servers and other network nodes. For more details on standards, technical requirements and approved vendors, please refer to the Starwood Technology Profile document 'Converged Network Standards'.

## GUEST INTERNET AND WIRELESS NETWORK – SUPPORT AND MAINTENANCE REQUIREMENTS

### HELPDESK AVAILABILITY AND RESPONSE

- The selected provider must be able to provide live answer, in-house 24x7x365 helpdesk services for all Four Points
- The selected provider will provide this 24x7x365 availability for all support requests whether initiated by a guest or by an associate
- The selected provider must provide at a minimum the following methods of submitting a support request:
- Telephone (see above conditions)
- It is recommended that the selected provider offer the following methods of submitting a support request:
  - Email

- Web form

## SERVICE LEVELS FOR SUPPORT

- The selected provider must provide a toll free number available to all guests for the purposes of requesting support with the Guest Internet system
- The selected provider must ensure that a live answer service is available 24x7x365 for guests
- The average speed of answer must be <=60 seconds
- The first call fix rate must be >=90% of incidents within Help Desk resolution capability
- The selected provider must respond within four (4) hours to a request for research of information regarding abuse of the service and within one (1) hour for a suspected abuse that is in progress and make resources available to immediately remedy the situation. Requests for device configuration information must be honored as soon as possible
- The selected provider must perform onsite replacement of any Gateway or server within 24 hours of the issue being confirmed as faulty or malfunctioning equipment. This replacement service level applies Monday to Sunday
- The selected provider must respond within 4 hours to a support request reporting issues with or related to any wireless controller or access point specified in this document
- The selected provider must perform onsite replacement of any wireless controller or access point within 24 hours of the issue being confirmed as faulty or malfunctioning equipment. This replacement service level applies Monday to Friday

## MAINTENANCE

- The selected provider must provide any revisions, software patches or updates for the Guest Internet system on a regular basis
- The selected provider must back-up the hotel's Guest Internet system sufficiently in order to restore the software configuration in case the service experiences an outage or failure
- The selected provider must ensure that adequate vendor support is in place to maintain software levels on all wireless devices. Announced critical security patches must be applied within twenty-four (24) hours to all affected devices

## MONITORING

As a part of maintenance services offered by the selected provider, monitoring of the communications equipment must be provided. The selected provider shall proactively monitor equipment utilizing the best commercially reasonable practices for network management (including without limitation receipt of unsolicited SNMP and ICMP traps). The monitoring status and historical data should be available for web based viewing at all times by the provider, property ownership and Starwood Hotels & Resorts.

At a minimum the selected provider must be able to clearly illustrate the ongoing presence of remote monitoring for the following items:

- IP communication with internal network and the Internet
- ISP Management – selected provider to work directly with ISP (under LOA) to troubleshoot
- II ISP related problems
- License availability
- IP communication between Guest Internet Gateway / server and wireless controller
- IP communication between thin APs and wireless controller

## REPORTING

As part of ongoing maintenance and support given by the selected provider, regular reports must be available or issued to property management, property ownership and Starwood Hotels & Resorts.

The delivery methods in order of preference for all reports are as follows:

- Web based report database (end user driven)
- Emailing of electronic report in html or PDF format to appropriate individuals
- Physical delivery of printed reports to appropriate locations

The following reports must be provided at a minimum:

**Monthly basis**

- Guest HSIA support requests
- Must include Guest name, room number, time, date, issue description, issue resolution, time to resolve
- Associate support request log
- Must include Associate name, position, department, time, date, issue description, issue resolution, time to resolve
- Network outages
- Must include reports of any downtime experienced for network and communications components

**Semi annual basis**

- Patch report
- Must include details of all critical patches applied to all systems
- Upgrade report
- Must include details of all firmware, OS or software revision upgrades to network or communications equipment
- Inventory changes

**GUEST INTERNET AND WIRELESS NETWORK – INSTALLATION REQUIREMENTS**

**COMPLETE INSTALLATION**

The selected vendor must be responsible for the physical installation and configuration of all items sold related to Guest Internet and the Wireless Network. At a minimum, this includes the following:

- High Speed Internet Access VBN Server / Gateway
- Wireless controller and access points
- Ethernet switch infrastructure
- Routing hardware and software
- Security /firewall hardware and software
- Any required wired presentation devices
- UPS and other head end requirements

**SINGLE POINT OF CONTACT**

The selected provider must provide a single point of contact that is responsible for the following at a minimum:

- Product delivery
- Installation scheduling
- Training scheduling
- Coordination with local carriers / providers of Internet bandwidth to ensure timely and accurate delivery of service and acceptable performance
- Functionality questions and product enquiries
- Owner communication
- On site resource allocation
- Project Management liaison to other 3rd party contractors

**DOCUMENTATION**

In all cases, the selected provider will provide full documentation for all installed products. At a minimum, the documentation will include the following:

- Network topology diagrams in Visio format (physical and logical)
- Configuration outputs for all routing, switching and security appliances
- Wireless network diagrams in Visio format (must indicate access point locations on top of architectural backgrounds)
- Wireless network security configuration (SSIDs, security keys)
- Wireless controller configuration
- Serial numbers and model numbers for all hardware

- Manufacturer warranty documents for all hardware
- All top level administrative usernames and passwords
- Gateway server configuration output

The selected provider will also be responsible for updating the documentation and making available new documents to property Ownership and Starwood Hotels & Resorts at a minimum of every 6 months.

## **PROJECT MANAGEMENT**

All installation services provided by the selected provider must include Project Management services, which are handled by the SPOC (see above section entitled 'Single Point Of Contact').

## **TRAINING**

The selected provider is responsible for providing training to all associates at the time of implementation. Where possible the training should be classroom based, instructor led training that is performed on site at the hotel. Training will cover at a minimum the following aspects:

- Viewing connection and registration information on the Guest Internet gateway / server
- Instruction on how to request support from the helpdesk of the selected provider
- Instruction on how guests request support for Guest Internet related issues



## DOORLOCK SYSTEMS

### ELECTRONIC DOOR LOCK SYSTEMS

#### Overview

In every Four Points, both the back of house (BOH) and all guest rooms are to be equipped with electronic locks that interface with the Property Management System (PMS).

Currently Starwood recommends a magstripe based keycard and lock system to provide the required functionality, however, an RFID Online based locking system to provide the enhanced functionality while keeping the 'per key' investment at acceptable levels.

For all Four Points properties that have a projected opening in 2010, the option to install the standalone, offline Magstripe door lock system is recommended. All properties with a projected opening date of January 1<sup>st</sup>, 2011 and beyond are advised to carefully consider the deployment of an RFID Online locking system take advantage of current and future capabilities.

#### Items Reviewed



Vingcard Signature Doorlock (Magstripe)



Saflok Quantum Adese Doorlock (Magstripe)



Vingcard Signature RFID Door lock



Saflok Quantum MT RFID Door

#### External Resources

Vingcard Signature Series Lock Information  
<http://www.vingcard.com/page?id=1568>

Vingcard Signature RFID Lock Information  
<http://www.vingcard.com/page?id=1838>

Vingcard Vision Software Information  
<http://www.vingcard.com/page?id=1571>

Saflok Quantum Adese Lock Information  
<http://www.saflok.com/saflok/products/hospitality/adese.aspx>

Saflok Quantum RFID Lock Information  
<http://www.saflok.com/saflok/products/hospitality/quantum.aspx>

Saflok System 6000 Information  
[http://www.saflok.com/saflok/products/hospitality/system\\_6000.aspx](http://www.saflok.com/saflok/products/hospitality/system_6000.aspx)

#### Key information:

#### Approved Product(s)

Vingcard Vision with Signature magstripe locks

Saflok System 6000 with Quantum Adese Magstripe locks

Vingcard Vision Software with Signature RFID Online locks (magstripe locks permitted for 2010 openings)

Saflok System 6000 with Quantum MT RFID Online locks (magstripe locks permitted for 2010 openings)

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#### Key:

- = Required by Standards
- = Vendor Optional
- = Product Optional

**OFFLINE, MAGSTRIPE SYSTEM DETAILS**

The selected system will consist of a management Desktop and a dual card key encoder. The system uses the standard magnetic key card (manufactured according to ISO or ABA norms) as specified in the Element hotels OS&E Style Guide. When the key is “cut” for each new guest it is erased and then encrypted with information specific to the individual hotel and includes time limitations on the room (check-in/check-out dates), room number and additional door access (where applicable). The door terminal unit reads the data and will only grant access to the room when the information on the key matches the room. Each door unit can operate for 2-3 years on 3 AA alkaline batteries. The system maintains an entry log of the most recent 600 events and includes information on which key opened the door and at what time the door was opened. This allows for the interrogation of the lock if an investigation becomes necessary.

Please refer to the latest revision of the A&C complete Element change bulletin as well as your Starwood IT Project Manager for more specifications regarding the necessary door locks.


Area	Manufacturer	Item	Model #	Qty
Property-wide Front of house	VingCard	Door locks	Signature Trend Bezel x DC-One electronics x Wing Lever x US26D Satin (Brushed) Chrome x 4-switch lockcase	137*
Property-Wide Back of house	VingCard	Door Locks	Signature Trend Bezel x DC-One electronics x Wing Lever x US26D Satin (Brushed) Chrome x 4-switch lockcase	17*
Property-Wide Back of house	VingCard Classic Escutcheon x DC-One Electronics x Sargent Rim Exit Device	Door Locks	Exit device	2*

\*The quantities above are based on an example room count of 125 rooms and the example of using the Vingcard solution. The quantity should be adjusted to reflect an appropriate amount for the size of the property in question.


**MAGSTRIPE DOOR LOCK SYSTEM – KEY ENCODERS**

Key encoders are required to create and modify guest and BOH keycards and should be placed at the check-in and check-out areas of the hotel.

Vingcard Magstripe Encoder details:

Image	Model	Dimensions	Power
	Vingcard Slim Line Encoder	Width: 5.4 in/138mm Depth: 8.7 in/220mm Height: 3.8 in/97mm	Power supply through a transformer. The motorized card encoder can operate with either 120 or 230 Volts, depending on the transformer

Saflok Magstripe Encoder details:

Image	Model	Dimensions	Power
	Saflok Insertion Encoder	Width: 4 in Depth: 3.9 in Height: 4.9 in	6V DC, .3A

**ONLINE, RFID LOCK SYSTEM OVERVIEW (OPTIONAL)**

An Online lock system offers the latest Radio Frequency IDentification (RFID) technology, which allows stand alone electronic locks to work wirelessly online. In addition to providing the foundation for Element’s smart check-in initiative, and RFID Online system brings the following benefits and enhancements to the property:

- Remote Guest Card Cancellation
- Remote Master Card Cancellation
- Wandering Intruder Report/Alarm
- Extended Stay without visiting reception
- Change my Room without visiting reception
- Online Passage Mode Activation
- Live Tracking of Cards/Users
- Auto Check-out of guest cards
- Extend Stay
- Remote Audit Trail Report
- Remote Low Battery Report
- Insert Maintenance Report Card
- SMS/e-mail/pager alerts
- On screen alarm panels
- Door ajar alarm
- Inside opening audit trail
- Block cards per user group per section

The RFID specifications in use are as follows:

- 13,56MHz technology
- Compatible with the following standards:
  - ISO 14.443A (MIFARE)
  - ISO 14.443B
  - ISO 15.693

In addition to the RFID locks and accessories, the selected vendor will provide a Desktop platform on which the central management software will run within the Starwood converged network environment. Please refer to the latest revision of the A&C complete Element change bulletin as well as your Starwood IT Project Manager for more specifications regarding the necessary door locks.

If Vingcard is the selected Vendor:

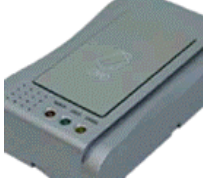
Area	Manufacturer	Item	Model #	Qty
Property-wide Front of house	VingCard	Door locks	Signature RFID lock x Wing Lever x US26D Satin (Brushed) Chrome x 4-switch lockcase	137*
Property-Wide Back of house	VingCard	Door Locks	Signature RFID lock x Wing Lever x US26D Satin (Brushed) Chrome x 4-switch lockcase	17*
Property-Wide Back of house	VingCard Classic Escutcheon x DC-One Electronics x Sargent Rim Exit Device	Door Locks	Exit device	2*

\*The quantities above are based on an example room count of 125 rooms and the example of using the Vingcard solution. The quantity should be adjusted to reflect an appropriate amount for the size of the property in question or adjusted to reflect Saflok equipment if selected.


**RFID ONLINE DOOR LOCK SYSTEM – KEY ENCODERS**

Key encoders are required to create and modify guest and BOH keycards and should be placed at the check-in and check-out areas of the hotel.

Vingcard RFID Encoder details:

Image	Model	Dimensions	Power	Connectivity
	Vingcard RFID Encoder	Width: 80mm Depth: 134mm Height: 30mm	Power Supply: DC 9 ~ 12V ± 5% Current Consumption: Max 400 [mA]	TCP/IP 10/100 Base-T auto detection

Saflok RFID Encoder details:

Image	Model	Dimensions	Power	Connectivity
	Saflok Network RFID Encoder	Width: 1.49 in Depth: 3.27 in Height: 6 in	6V DC, .3A	Directly to PC via USB or to Ethernet network via TCP/IP

## ASSOCIATE COMMUNICATIONS

### MOBILE RADIO SYSTEMS AND HEADSETS

#### Overview

In every Four Points, the Associates must be provided with means to communicate while mobile around the property.

This document will cover the basic requirements to integrate the StarGuest application with MOTOTRBO™ which is the Starwood recommended solution for providing in-house, mobile communications.

Furthermore, in order to fully integrate with StarGuest, the property will require ZapMail™ by Neoterra.

#### Items Reviewed



Motorola XPR 6550 Portable



Motorola XPR 4550 Mobile



Motorola XPR 4350 Control Station



Motorola XPR 8300 Repeater

#### External Resources

[Motorola MotoTRBO Information](http://www.motorola.com/Business/XF-EN/Product+Lines/MOTOTRBO)  
<http://www.motorola.com/Business/XF-EN/Product+Lines/MOTOTRBO>

[Zapmail by Neoterra Information](http://www.neoterra.ca/motorola.html#nogo)  
<http://www.neoterra.ca/motorola.html#nogo>

#### Key information:

#### Approved Product(s)

MotoTRBO by Motorola

ZapMail by Neoterra

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[gustaf.burman@starwoodhotels.com](mailto:gustaf.burman@starwoodhotels.com)

#### Approved Vendor(s)

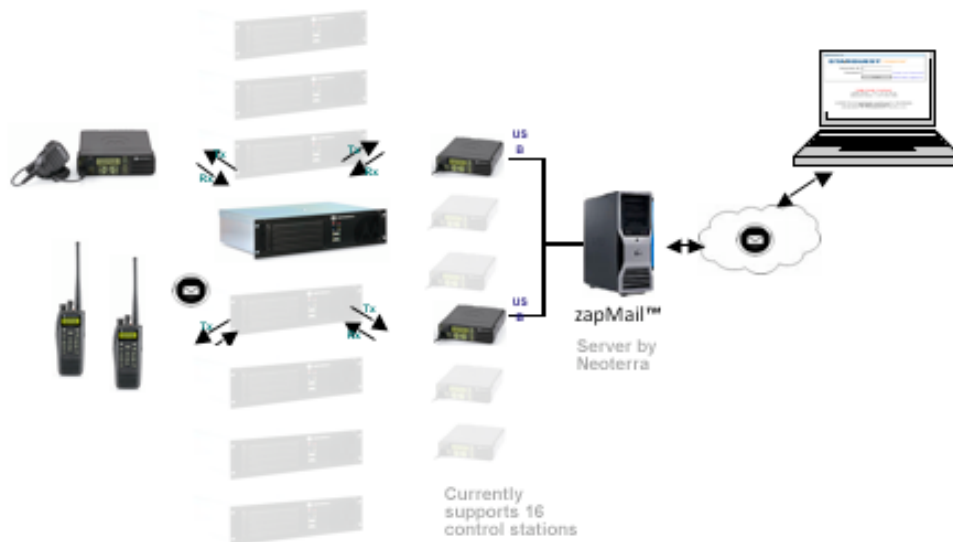
Motorola  
[Partner Locator](#)  
T: +1 888 325 9336  
Or  
T: +1 800 927 2744 (option 3,3,2)

Neoterra  
[support@neoterra.ca](mailto:support@neoterra.ca)  
T: +1 519 833 7588

Key:  
 = Required by Standards  
 = Vendor Optional  
 = Product Optional

## OVERVIEW

This document will cover the basic requirements to integrate the StarGuest application with MOTOTRBO™. Below is the basic topology of a typical MOTOTRBO™ system when integrated with StarGuest application and ZapMail™.



## GENERAL REQUIREMENTS

For MOTOTRBO™ to work with the SGR System there are several mandatory components. From Motorola you will require the following equipment:

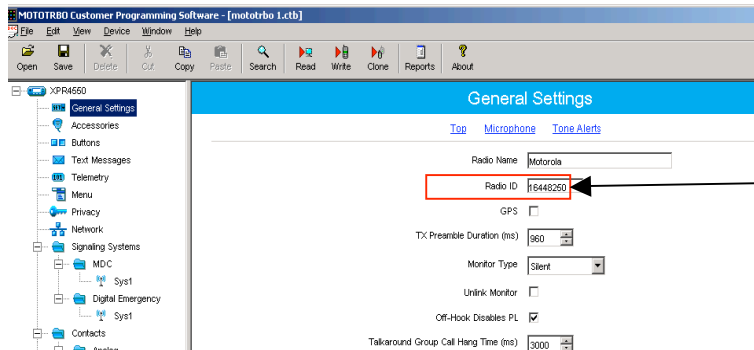
Item	Part #	Description
<b>Subscribers</b>	• XPR 6550 Portable	Display Radios to receive and send work orders. Firmware version 1.03.01 or later
	• XPR 4550 Mobile (needs keypad mic)	
<b>Control Stations</b>	• XPR 4350 Mobile	Numeric Mobile to interface to ZapMail™ Server. Need 1 per logical channel requiring data services
	○ Typically Low Power Models Preferred	
	○ Power Supply HPN4007 (High Power) or HPN4008 (Low Power)	
	○ Antenna (Consult your Motorola Dealer)	
<b>Repeater</b>	• XPR 8300 Repeater	Optional item depending on coverage area required. Most sites will require a repeater. Note there are two logical channels per repeater.
<b>Cables</b>	• PMKN4010 – Mobile Programming Cable to connect 1 control station to server	Control Station and Programming Cables
	• PMKN4012 – Portable programming cable (not shown)	

Parts required from NeoTerra:

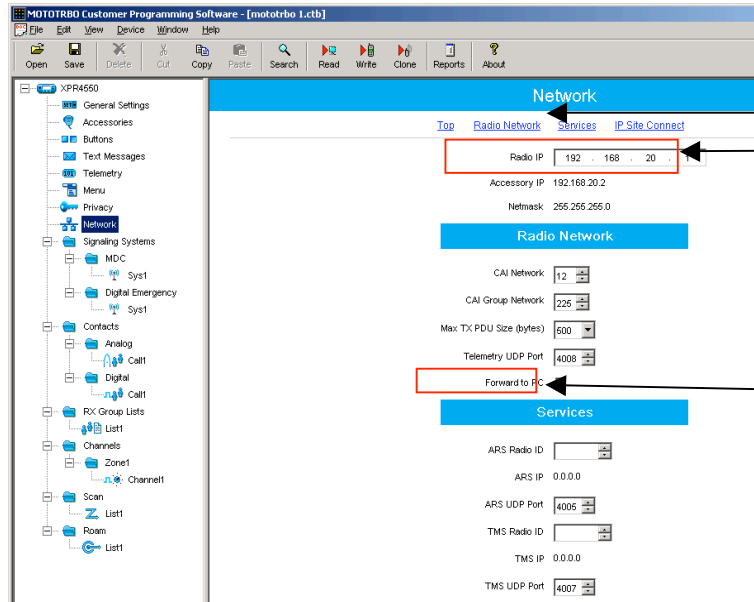
Item	Part #	Description
zapMail™	<ul style="list-style-type: none"> <li>zapMail™ by NeoTerra™ Systems</li> </ul>	Email gateway
Email Account	<ul style="list-style-type: none"> <li>Netfirms or other comparable email account</li> <li>Visit <a href="http://netfirms.com">http://netfirms.com</a></li> </ul>	Pop 3 web account with Catch all capability. See ZapMail™ User Manual for detailed information

## MOTOROLA CONTROL STATION PROGRAMMING REQUIREMENTS

This section is intended to help Dealers program MOTOTRBO™ control stations appropriately for use with ZapMail™. Note that the MOTOTRBO™ Text Messaging Application is NOT compatible with the StarGuest application. There must be one control station for each logical channel (slot) that will have access to the StarGuest system. The connection from the control station to the PC where the ZapMail™ server resides should be done with the standard mobile programming cable PMKN4010. If the PC running the ZapMail™ application does not have sufficient USB Ports then a Powered USB Hub can be used to increase the number of available ports. MOTOTRBO™ control stations for use with ZapMail™ are programmed in the same manner as with Motorola Text Messaging Application. Below are some key fields that Dealers should pay close attention to.

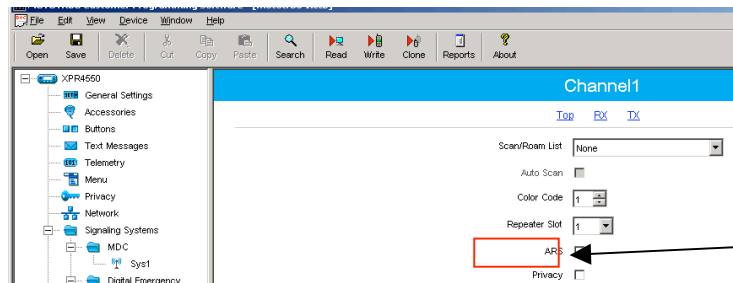


Radio ID Should be the same for ALL control stations on your system. We recommend 16448250 as the radio ID for all control stations



The Radio IP for control stations must be unique for each mobile. We recommend starting control stations at 192.168.20.1 and incrementing the 3<sup>rd</sup> octet by 10 for each control additional control station. So the next control station IP address will be 192.168.30.1.

Ensure Forward to PC is checked

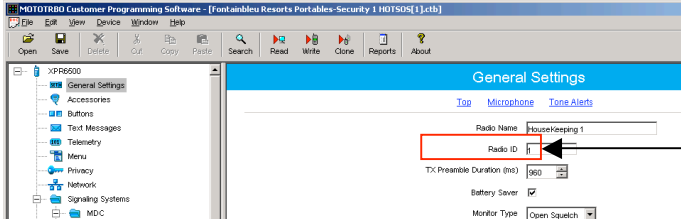


ARS should be UNCHECKED on control stations

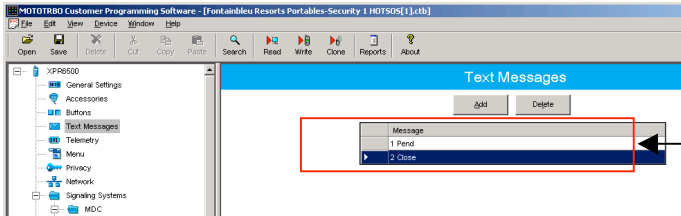


## MOTOROLA SUBSCRIBER PROGRAMMING REQUIREMENTS

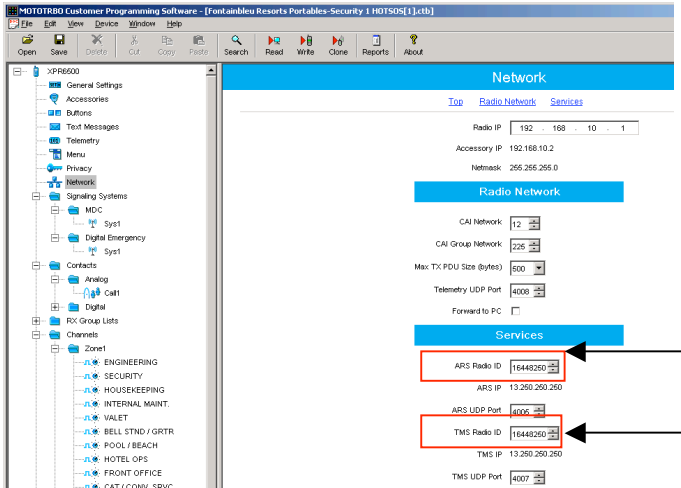
Subscribers that will receive and send work orders to the StarGuest application should be programmed to ensure simplest access to the MOTOTRBO™ Text Messaging features. Programmable buttons can be used to achieve this. The dealer should also pay special close attention to the following fields:



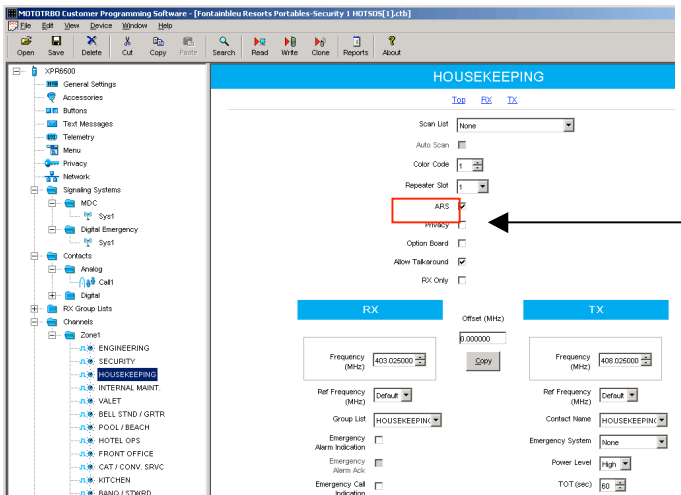
Radio ID should be unique for each subscriber. Note that the email address for each subscriber is derived from this Radio ID. The email address for this unit would be: [1.1@mydomain.com](mailto:1.1@mydomain.com)



Quick Text inputs should be created to assist users when replying to work orders. Those recommended by StarGuest are listed here.



In Services the ARS Radio ID and TMS Radio ID field should have the ID of the control stations for your system. We recommend you use 16448250 for all control station IDs



Ensure ARS is checked on each channel that will be required to work with the ZapMail™ Application.

## ZAPMAIL SETUP REQUIREMENTS

ZapMail™ installation should be done as per the instructions in the ZapMail™ User Manual. A copy of the user manual can be obtained at the following link: [http://neoterra.ca/applications/zapmail/zapMail\\_V1.1\\_Training\\_Manual.pdf](http://neoterra.ca/applications/zapmail/zapMail_V1.1_Training_Manual.pdf). The basic requirements for the ZapMail™ server are as follows:

- A Microsoft Windows Platform - Windows Vista or Windows XP Home/Professional.
- 2 GHz Dual-Core 32-bit (x86) or 64-bit (x64) processor
- For Windows XP 2 GB of system memory
- For Windows Vista 3 GB of system memory
- 160 GB hard drive with at least 15 GB of available space (Minimum)
- Audio Output (Optional)
- Local Area Network with IP Platform support
- Internet access for remote support

The main feature ZapMail has that allows MOTOTRBO™ to work with the SGR system is the “Variable” feature. It must be setup and configured appropriately for the two systems to work.

Server Setup  
Save and Exit Cancel

Admin | Units | Groups | Clients | Email 1 | Email 2 | Variable

General Options

Serial Number: 0

System Password: \*

ARS Interval: 1 \* 30 mins

Network CAI: 12

CAI Group: 225

TMS Port: 4007

ARS Port: 4005

Store ageing: 60 Mins

Retry Cycle: 15 Secs

Process: Variable

Reset Stats

Network Settings

TRBO Interface	IP Address	Interface Name
TRBO Interface 1	192.168.10.2	System 1
TRBO Interface 2	192.168.20.2	System 2
TRBO Interface 3	None	System 3
TRBO Interface 4	None	System 4
TRBO Interface 5	None	System 5
TRBO Interface 6	None	System 6
TRBO Interface 7	None	System 7
TRBO Interface 8	None	System 8
TRBO Interface 9	None	System 9
TRBO Interface 10	None	System 10
TRBO Interface 11	None	System 11
TRBO Interface 12	None	System 12
TRBO Interface 13	None	System 13
TRBO Interface 14	None	System 14
TRBO Interface 15	None	System 15
TRBO Interface 16	None	System 16

Set Process on ZapMail to “Variable”

Server Setup  
Save and Exit Cancel

Admin | Units | Groups | Clients | Email 1 | Email 2 | Variable

Variable Setup

Valid email FROM domain  
seas.starwoodhotels.com

MIN Dispatch call range: 10000

MAX Dispatch call range: 20000

Alias Age: 240

The “Variable” setup should have the domain name setup to read: seas.starwoodhotels.com

MIN Dispatch call range is 10000  
MAX Dispatch call range is 20000  
Alias Age is 240

The primary reason this feature is needed is because SGR workorders generate a unique email address for each work order. The variable feature will allow for the SGR work orders to pass through the email gateway and assign each one a random alias. The random alias will be maintained in the server database until the Alias Age expires.

For the example above the first work order from SGR will arrive at a radio with the ID of 10000 and the next one will increment until 10000 work orders have passed through the system. When the work order with alias 20000 has been reached the next work order will start again at 10000.

Since work orders do not typically last longer than a few hours the settings provided here should be sufficient for most cases. Users carrying radios should be trained to recognize that text messages from IDs 10000 to 20000 in this example are all SGR workorders.

## EMAIL AND NETWORK

As mentioned earlier the email address for each subscriber is derived from the unique Radio ID for each subscriber. Radio IDs for all subscribers take on the following form:

<RadioID>.1@domain\_name.com

Note that .com can be .net, .edu, org, ca or any other recognizable email domain. Please refer to the ZapMail™ User Manual for detailed instructions on the server setup.

## FRONT DESK TECHNOLOGY

### FOUR POINTS FRONT DESK

#### Overview

The Front desk is the center for all Four Points hotels operations. It serves as the hub for guests and as such requires a significant amount of both hardware and software to operate efficiently.

The physical layout of the desk should be designed to accommodate the required equipment where the minimum functionality set forth must be met in order to be in compliance with brand standards. The technology specified serves traditional hotel operations.

#### Items Reviewed



Four Points Front Desk Example



Lenovo Desktop



Planar 17" Touchscreen



Xerox Phaser Printers

#### Key information:

#### Approved Product(s)

Lenovo Desktops	
Planar Touchscreen Monitors	
Xerox Phaser Printers	

#### Starwood Contact(s)

Gustaf Burman  
Senior Director IT  
Specialty Select Brands  
+1 914 640 7658  
gustaf.burman@starwoodhotels.com

#### Approved Vendor(s)

For Desktops, Monitors & Printers:

Insight  
John Wheeler  
jwheeler@insight.com  
T: +1 800 879 9921

For other components, please see the 'External Resources' in this document

#### External Resources

For current hardware standards and specifications, please refer to the following documents:

- Four Points Technology Profile 15 – NAD - Property Hardware and Software
- Four Points Technology Profile 12 – NAD - IP PBX, Voicemail and Call Accounting
- Four Points Technology Profile 8 – NAD - Doorlock Systems

Key:

- = Required by Standards
- = Required but Vendor Optional
- = Product Optional

## FRONT DESK TECHNOLOGY DETAILS

The desk is made up of a minimum of two (2) fully operational stations installed with the following equipment\*:

Area	Manufacturer	Item	Model #	Quantity
Front Desk	Lenovo	Think Center Desktop	See Property Hardware standards	2
Front Desk	Planar	Touchscreen 17" Monitor	See Property Hardware standards	2
Front Desk	Xerox	Laser Printer	See Property Hardware standards	2
Front Desk	Dependent on PBX	Telephone	Dependent on PBX	2
Front Desk	Dependent on Doorlock System	Key Encoders	Dependent on Doorlock System	2

\*More stations may be installed as required by the size of the hotel and operational discretion. Please increase quantities as required.

## POINT OF SALE TECHNOLOGY

### FOOD AND BEVERAGE POINT OF SALE (POS) SYSTEMS BAR AND FAMILY ROOM TECHNOLOGY

#### Overview

Starwood designed the Family Room as the gathering place for guests. The space serves as the primary beverage outlet for the hotel and as such needs to be outfitted with POS technology to accurately process transactions. The hardware specified in this document is designed to interface with the property PMS allowing for both in-room charges and traditional credit card transactions.

In order to support Food & Beverage and retail operations Starwood recommends either the HSI POS or the Micros 3700 POS.

The POS system will interface with the property PMS, allowing guests to charge consumption to their folios. The POS system will also be connected to the online credit card system (EFT) provided by Elavon (please see separate Technology Profile 'Electronic Funds Transfer').

#### Items Reviewed



Example Four Points Bar



Micros Workstation 5



Epson Thermal Printer

#### External Resources

 [HSI Information  
http://web.hsi-solutions.com/Solutions/Profit-Series/Hotel--Resort.aspx](http://web.hsi-solutions.com/Solutions/Profit-Series/Hotel--Resort.aspx)

 [Micros Information  
http://www.micros.com/Products/MICROS3700/](http://www.micros.com/Products/MICROS3700/)

#### Key information:

#### Approved Product(s)

Micros 3700 POS 

HSI POS 

#### Starwood Contact(s)




Gustaf Burman  
Senior Director IT  
Specialty Select Brands  
+1 914 640 7658  
gustaf.burman@starwoodhotels.com

#### Approved Vendor(s)

HSI (Hospitality Solutions Intl)  
Sly Glass  
sly.glass@hsi-solutions.com  
T: +1 919 453 0482

Micros  
Jennifer Hayward  
jhayward@micros.com  
T: +1 412 366 4452

#### Key:

-  = Required by Standards
-  = Required but Vendor Optional
-  = Product Optional

## POS TECHNOLOGY DETAILS

The Family Room and Bar area serve as the primary beverage outlet for the hotel and as such need to be outfitted with POS technology to accurately process transactions. The bar has one hardware component for ordering, generating checks and/or posting charges to a guest folio. In addition to the bar, software licenses are included for the installation of the POS software on the Front Desk workstations for those properties that operate a pantry or 'grab and go' facility. Starwood recommends either HSI or Micros 3700 POS. Both solutions are listed below:

### HSI SOLUTION

Area	Manufacturer	Item	Model #	Quantity
Bar / Family Room & Front Desk	HSI	HSI POS Software	V7	3
Bar / Family Room	Micros	Touch Screen POS	Workstation 5	1
Bar / Family Room	HSI	Cash Drawer	400018-013	1
Bar / Family Room	Epson	Thermal Receipt Printer	TM-T88IV	1

### MICROS SOLUTION

Area	Manufacturer	Item	Model #	Quantity
Bar / Family Room & Front Desk	Micros	POS 3700 Software	Micros 3700/WS5	3
Bar / Family Room	Micros	Touch Screen POS	Workstation 5	1
Bar / Family Room	Micros	Cash drawer	400018-013	1
Bar / Family Room	Epson	Thermal Receipt Printer	TM-T88IV	1

## POS HARDWARE AND LOCATIONS

A typical Four Points hotel requires that the POS system be installed at each of the PCs located at the Front desk (as well as the Family Room and Bar) allowing Associates to process hotel transactions for pantry or 'grab and go' counters. In this case there is no requirement for a standalone POS workstation at the Front Desk but rather the POS software will be loaded on to the workstations and used in conjunction with a touchscreen monitor. The bar is to be equipped with a Micros Workstation 5, a receipt printer and a cash drawer as specified by the chosen system. The bar will use a Micros Workstation 5 touchscreen unit regardless of whether the selected vendor is Micros or HSI.


For the purposes of planning the specifications of the Micros Workstation 5 are as follows:

Processor	<ul style="list-style-type: none"> <li>■ AMD Geode LX800 with CS5536 Companion Chip                             <ul style="list-style-type: none"> <li>● 32-bit x86 processor</li> </ul> </li> </ul>
Operating System	<ul style="list-style-type: none"> <li>■ Microsoft Windows Embedded CE 6.0</li> <li>■ Microsoft WEPOS, XP Embedded Support <i>(Linux may also be supported)</i></li> </ul>
Solid State Flash Storage	<ul style="list-style-type: none"> <li>■ 256 MB uDOC – Standard for CE</li> <li>■ 4 GB uDOC - Standard for WEPOS</li> </ul>
Volatile Memory	<ul style="list-style-type: none"> <li>■ Up to 2GB DDR RAM <i>(Two DIMM Sockets)</i> <ul style="list-style-type: none"> <li>● 256 MB Standard</li> </ul> </li> </ul>
Removable Flash Memory	<ul style="list-style-type: none"> <li>■ Standard 50 Pin Type 1 Compact Flash <i>(Expandable to 8 GB)</i></li> </ul>
Networking	<ul style="list-style-type: none"> <li>■ IEEE 802.3 Compliant 10/100/1000 BaseT on Board                             <ul style="list-style-type: none"> <li>● Wake On LAN Supported</li> </ul> </li> </ul>
Integrated Wireless	<ul style="list-style-type: none"> <li>■ Mini-PCI WLAN 802.11 a/b/g Option                             <ul style="list-style-type: none"> <li>● Internal or External Antenna Placement</li> </ul> </li> </ul>
Display	<ul style="list-style-type: none"> <li>■ 15" TFT Active LCD &gt;250 NIT Brightness                             <ul style="list-style-type: none"> <li>● 1024 x 768 XGA Resolution</li> <li>● 16M Colors</li> </ul> </li> </ul>
Touchscreen	<ul style="list-style-type: none"> <li>■ 5-Wire Resistive                             <ul style="list-style-type: none"> <li>● Capacitive Touchscreen Option</li> <li>● No Touchscreen Option</li> </ul> </li> </ul>
Power Supply	<ul style="list-style-type: none"> <li>■ Internal, Universal Input / Auto-Switching</li> </ul>
Integrated Magnetic Stripe Reader	<ul style="list-style-type: none"> <li>■ 3 Track Serial TTL Interface <i>(Internal)</i></li> </ul>
Audio	<ul style="list-style-type: none"> <li>■ Mic In, Line Out Ports</li> <li>■ Integrated R/L Speakers Standard</li> </ul>
Cash Drawer Ports	<ul style="list-style-type: none"> <li>■ 2 - MICROS 12/24 Volt Cash Drawer Ports</li> </ul>
Serial Port	<ul style="list-style-type: none"> <li>■ 1 - 9 pin RS-232 Serial Port</li> <li>■ 2 - RJ45 RS-232 Serial Port</li> </ul>
IDN Port	<ul style="list-style-type: none"> <li>■ 1 - RJ45 RS422/RS485/RS232 Switchable Port – Labeled "Port A"</li> </ul>
Customer Display Ports	<ul style="list-style-type: none"> <li>■ 1 - 4 Pin Mini-DIN Connector for MICROS Pole Display</li> <li>■ 1 - 7 Pin Port Header for Integrated Customer Display Option</li> <li>■ Optional Support for VGA 2nd Display <i>(WEPOS only)</i></li> </ul>
USB Ports	<ul style="list-style-type: none"> <li>■ 4 External USB V2.0</li> </ul>
Mini-PCI Port	<ul style="list-style-type: none"> <li>■ Mini-PCI Port Provided to Support Integrated Wireless or Second Graphics Card <i>(WEPOS only)</i></li> </ul>
Integrated Fingerprint Reader	<ul style="list-style-type: none"> <li>■ Optional – Optical USB</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>■ 4.3" H x 15.40" W x 13.00" D</li> </ul>
Weight	<ul style="list-style-type: none"> <li>■ 6.46kg/14.24lbs</li> </ul>
Enclosure	<ul style="list-style-type: none"> <li>■ Rugged ABS Plastic Blend, Spill Resistant Enclosure. <i>(MICROS Grey)</i></li> <li>■ Passive Cooling <i>(No fans)</i></li> </ul>
Operating Temp	<ul style="list-style-type: none"> <li>■ 0° C to 45° C (32° to 113° F)</li> </ul>
Certifications	<ul style="list-style-type: none"> <li>■ FCC Class A, UL, CE, CCC</li> </ul>
Other	<ul style="list-style-type: none"> <li>■ RoHS Compliant Design</li> </ul>





Thermal POS printers are required at the Front Desk and in the Bar as well as a one for the kitchen area. The typically recommended model for both HSI and Micros is the Epson TM-T88IV with specifications as follows:

Image	Model	Dimensions	Power	Info
	Epson TM-T88IV or Micros IP Thermal Printer	Width: 5.71 in/145mm Depth: 7.68 in/195mm Height: 5.83 in/ 148mm	.22 Amps, 27VA	<ul style="list-style-type: none"> <li>Two-color printing of receipts including logos and all other graphics</li> <li>Ease-of-use features including drop-in paper loading, long-lasting auto cutter and Auto Status Back messages</li> <li>Improved cover design for increased spill resistance</li> </ul>

## POS INSTALLATION, TRAINING AND CONFIGURATION

All required services to complete the installation and training associated with the POS system must be provided by the selected vendor. A training schedule and implementation plan will be provided several months prior to the anticipated hotel opening date.

## POS INTERFACES

Currently the following POS interfaces are required as a standard at all Four Points properties in the North American Division:

- Property Management Systems (Galaxy LightSpeed PMS)
- Elavon EFT (Credit Card processing)

## TELECOMMUNICATIONS – IP PBX, VOICEMAIL, CAS

IP PBX

CALL ACCOUNTING SYSTEMS

VOICEMAIL SYSTEM

### Overview

The IP PBX communication platform will be the foundation to all voice communications at the hotel. The communications system should support an end-to-end IP architecture in order to support all administrative and guest room telephones. Only communications platforms that have been specifically identified as having hospitality features should be considered.

A Call Accounting System (CAS) must be installed in all Four Points properties to ensure correct and timely billing of telephone charges from guestrooms, meeting rooms and other public areas.

As a vital component of the telecommunications package and the overall guest experience, the voicemail system should support all common property management system interfaces (guestroom and administrative) as well as the specified hospitality features.

### Items Reviewed



Call Accounting Systems



IP PBX Systems



IP Admin Phones

### External Resources

Innovation Inline Voicemail information  
<http://www.innovationtw.com/products/messaging.php>

Mitel Hospitality Solutions  
<http://www.mitel.com/DocController?documentId=9183>

Jazz Fusion CAS overview  
[http://www.sddsistemas.com/software\\_fullymanaged.asp](http://www.sddsistemas.com/software_fullymanaged.asp)

Thing5 information  
<http://www.thing5.com/pages/hostedpbx.html>

Metropolis Profitwatch CAS Overview  
<http://www.metropolis.com/hotelcallaccounting.html>

NEC Hospitality Solutions  
<http://www.necunifiedsolutions.com/main/Industries/ndindustry.asp?indid=57>

### Key information:

#### Approved Product(s)

- Mitel 3300 Series IP PBX
- NEC Hospitality IP PBX
- Thing5 Hosted PBX
- Jazz / Profitwatch / Xeta CAS
- Mitel / NEC / Innovation Voicemail

#### Starwood Contact(s)

Gustaf Burman  
Senior Director IT  
Specialty Select Brands  
+1 914 640 7658  
gustaf.burman@starwoodhotels.com

#### Approved Vendor(s)

NOTE: IP PBX, Voicemail and CAS must all be purchased from one of the approved vendors as follows:

Telnet  
kshadow@telnetdata.com  
T: +1 609 914 0148

Guest-tek  
brian.fillo@guest-tek.com  
T: +1 866 509 1010 x 8376

Xeta  
sbrown@xeta.com  
T: +1 856 988 7179

DCI  
smohabir@dc-design.com  
T: +1 516 394 4545

Thing5  
eric.thor@thing5.com  
T: +1 413 241 2739

#### Key:

- = Required by Standards
- = Required but Vendor Optional
- = Product Optional

## IP PBX ARCHITECTURE AND CAPACITIES

The system must be based on IP architecture with centralized call processing, support for VLANs (802.1q), and Quality of Service support (802.1p/q and RTP). Redundant call processing is an optional feature that should be considered. All guest room phones and employee / administrative phones will be IP based.

The chart below illustrates the minimum required system capacities based on the number of rooms. Additionally, the system should have a minimum of four channels of digital recording with each having a 2 minute capacity.

Description	<100 rooms	150 rooms	200 rooms	300 rooms	400 rooms	500 rooms	600 rooms	700 rooms
<b>IP Stations</b>	Number of required guest and employee IP stations + 20%							
<b>Analog Stations</b>	4	6	8	12	16	20	24	28
<b>T1 or PRI Trunks</b>	24	36	48	72	72	72	96	96
<b>Analog Trunks</b>	4	6	8	12	16	20	24	28
<b>IP Trunks</b>	8	12	16	24	32	40	48	56
<b>Simultaneous Calls</b>	50	75	100	150	200	250	300	350

## IP PBX SYSTEM FEATURES

### GENERAL FEATURES

At a minimum, the system should support all of the features/capabilities listed below:

- Alternate Automatic Routing (AAR) and Automatic Route Selection (ARS)
- Call Coverage
- Forwarding based on internal/external calls, forwarding out of coverage
- Timers for maximum time in coverage
- Coverage based on time of day
- Call Display Restrictions
- Class of Service and Class of Restriction by station or time of day
- Digit Analysis and Call Treatment (digit string insertion, deletion, stripping, dial access codes, digit string translation)
- Emergency service capable and emergency alerting to console
- Forced Authorization/Accounting Codes
- Basic ACD/UCD Capabilities
- Hotline
- Hunt Groups (Circular and Linear)
- Dial Plan Partitioning
- Multiple ISDN Protocol Support
- Outbound Call Blocking
- Out-of-band DTMF Signaling over IP
- QSIG
- SIP Trunk and Endpoint Support
- Call Accounting Output (SMDR/CDR)
- Time of Day, Day of Week and Day of Year Routing and Restrictions
- Toll Fraud Prevention
- Power Fail/Emergency Line Capabilities
- Unified Device and System Configuration
- Dial by Name Directory
- Web-enabled configuration and management interface
- Ability to backup/restore system settings
- Ability to remotely report major/minor alarms to support vendor

## HOSPITALITY SPECIFIC SYSTEM FEATURES

At a minimum, the system should support the hospitality functionality listed below:

- Interface with Property Management System (Galaxy Lightspeed)
- Up to 16 unique room status codes
- Check-In/Check-Out functionality
- Automatic restrictions based on room status
- Station Name updates based on information received from property management system
- Suite Grouping Feature (allow multiple phones to appear as one)
- Staff Services
  - Room Status updated to PMS via IP Phone
  - Unlimited room status codes can be defined
- Wake- Up System
  - Single or Group Wake-Up calls (From PMS)
  - Attendant programmed wake-up calls (From PMS)
  - Guest programmed wake-up calls (via phone screen)
  - All registered wakeup requests follows the guest in case of room changes
- DND (Do not Disturb)

## ASSOCIATE USEABLE FEATURES

At a minimum, the system should support the user features listed below:

- Abbreviated Dial
- Bridged Line Appearances
- Call Coverage
- Call Forward (busy, no answer, on/off net)
- Call Hold and Retrieve
- Call Park/Pickup
- Caller ID (CLID/CNID)
- Conference (up to 6 simultaneous parties)
- Direct Inward and Outward Dial (DID/DOD)
- Housekeeping status change from guest room phones
- Logs (placed, received and missed calls)
- Distinctive ringing for on/off net calls
- Full Duplex Speakerphone
- Last Number Redial
- Message Waiting Indication
- Multiple line appearances per telephone
- Music on Hold
- Mute capability from speakerphone and handset
- On-Hook dialing
- Transfer (Blind, consultative and direct)

## ASSOCIATE DEVICE FEATURES

At a minimum, the system should support the end user features listed below:

- Administrative Telephones
  - Full Duplex Speakerphone
  - Two-Line Display
  - Six Programmable Feature/Line Buttons
  - Integrated Headset Jack
  - Integrated buttons for Hold, Transfer, Conference and Volume Control

- Wall Mountable
- Ethernet switch pass through port
- Powered by PoE (802.3af)
- Console
  - Multi-Line Display
  - Integrated Headset Jack
  - Numeric Keypad
  - Twelve Programmable Feature/Line Buttons
- VoWLAN Wireless Handsets (not required for Four Points properties)
  - Two-Line Display
  - 802.11b/g Compliant
  - Support for WEP and WPA / WPA2
  - Audible and Vibrating Alerts
  - Minimum of 3 hours talk time
  - NOTE: For successful Wireless coverage in a VoWLAN environment, Starwood recommends a signal strength measured at -65db.

## OPERATOR CONSOLE FEATURES

At a minimum, the system should support the console functionality listed below:

- Abbreviated Dial Access
- Night Service
- ACD Access
- Caller ID Display (Internal and External)
- Direct Trunk Access
- Conferencing
- Call Park/Call Pickup
- Privacy Line Lock Out
- Trunk Group Busy Indicators
- Busy verification of Stations
- Direct Paging Access
- Major and Minor system alarm notification
- Wake-Up Call Set/Cancel
- Do Not Disturb Set/Cancel

## IP PBX APPROVED HARDWARE AND SOFTWARE

- IP PBX Software Platform
  - Mitel 3300 ICP Release 10 or higher
  - Thing5 Hosted PBX
  - NEC Hospitality Server
- Talent / administrative telephones
  - Mitel 5312 IP Telephone
  - Mitel 5320 IP Telephone
  - Mitel 5324 IP Telephone
  - Mitel 5330 IP Telephone
  - Mitel 5310 IP Conference Module
  - Mitel 5340 IP Telephone
  - Polycom 550 IP Telephone
  - Polycom 650 IP Telephone
- Console
  - Mitel 5540 IP Console
  - Polycom 650 IP with 650 Backlit Extension
- Guest Room Telephones – See separate Technology Profile Document for ‘Guest Room Telephones’
- Public Area Telephones - See separate Technology Profile Document for ‘Public Area Telephones’

## IP PBX – ADMIN / BACK OF HOUSE PHONE DISTRIBUTION

At a minimum, the selected should provide the following number and type (or comparable types compared to the Mitel example models listed below if not providing a Mitel IP PBX) of phones in the BOH and administrative areas of the hotel (for details on type and number of Public Area telephones and Guest Room telephones, please refer to the separate Technology Profile documents 'Public Area Telephones' and 'Guest Room Telephones'):

Area	Quantity	Type of Phone
Worksapce (open)	5	Mitel 5312 or similar
Offices (GM & DOS)	2	Mitel 5320 or similar
Housekeeping	1	Mitel 5312 or similar
Front Desk	1	Mitel 5540 or similar
Front Desk	2	Mitel 5320 or similar
Kitchen	1	Telematrix 3300IP-TRM
Mechanical Room	1	Telematrix 3300IP-TRM
Break Room	1	Mitel 5312 or similar
Pump Room	1	Telematrix 3300IP-TRM

## VOICEMAIL CAPACITIES

See the chart below for required system capacities based on number of rooms.

Description	<100 rooms	150 rooms	200 rooms	300 rooms	400 rooms	500 rooms	600 rooms	700 rooms
<b>Voicemail Ports</b>	8	12	16	24	24	24	24	24
<b>Hours of Storage</b>	240	360	480	720	960	1200	1440	1680
<b>Admin Mailboxes</b>	25	40	55	80	100	125	150	200
<b>Guest Mailboxes</b>	100	150	200	300	400	500	600	700
<b>Languages</b>	4	4	4	4	4	4	4	4
<b>Distribution Lists</b>	20	30	40	60	80	100	120	140

## VOICEMAIL SYSTEM FEATURES

At a minimum, the system should support all the features/capabilities listed below:

- IP or TDM integration with communications platform
- Message Waiting Indication signaling to communications platform
- Automated Attendant
  - Up to three independent auto-attendants
  - Single-digit menu options
  - Up to four menu levels
  - Time of Day routing
- Remote mailbox access capability for all users (guest and administrative)
- Support for bulletin board mailboxes
- Fax tone detection and redirection
- TCP/IP based administration tool
- Ability to backup/restore system settings and messages

## VOICEMAIL USER FEATURES

At a minimum, the system should support the user features listed below:

- Play and process messages (repeat, reply, forward, delete, save, mark as new, date/time stamp, skip message)
- Reverse, pause or fast forward during playback
- Address messages to multiple recipients
- Perform global addressing
- Record message and specify as normal or urgent
- Record up to 3 personal greetings
- Specify order in which messages are played (urgent, FIFO, LIFO)
- Create personal distribution lists
- Provide message notification (SMTP, pager, email and phone destinations)
- Announcement of message types (new, saved, total)
- Ability to set, modify and cancel wake-up calls

## VOICEMAIL HOSPITALITY FEATURES

At a minimum, the system should support the hospitality functionality listed below:

- Interface with Property Management System (Galaxy Lightspeed)
- Mailbox Name updates based on information received from property management system
- Check-In/Check-Out functionality
- Distinguish between administrative and guestroom callers (separate system greetings)
- Wake-up Calls

## CALL ACCOUNTING CAPABILITIES / FUNCTIONALITY

At a minimum, the system should support all the features/capabilities listed below:

- Call charging tables allowing for customized billing rates and packages
- Percentage markup (with at least 6 different rate steps set by time and length of call)
- Discounting capability by call type, destination and time of day
- Two-way property management system interface for automatic posting of guest telephone call charges
- Departmental usage billing and reporting
- Detailed reporting module allowing for a minimum of the following reports:
  - Daily general
  - Daily night audit
  - Monthly
  - Yearly
  - All of above by group, department, extension, time of day, destination, length of call, cost and charge
- Ability to bill surcharges
- Minimum of one day buffer capability in the event of loss of property management interface connectivity
- Operator assisted billing
- Ability to place handling charges on non-sent paid calls such as credit card and third-party billed calls
- Printer logging capability
- Easy method of access for updating rate tables or reporting
- Minimal onsite hardware and/or hosted solutions preferred
- Audible alert on buffer
- SMS/Email alerts for non-posting periods
- Group billing capabilities for meeting rooms, discounting

## TELECOMMUNICATIONS – HOSTED vs ON PREMISE SOLUTIONS

Starwood currently approves the selection of fully hosted PBX solutions in addition to more traditional, premise-based solutions. As of the writing of this document, in the NAD for Four Points, Starwood approves the use of two vendors that provide a hosted solution (Guest-tek and Thing5). The benefits of the hosted model may (but not in all cases) include a dramatically lower upfront investment in the required equipment and infrastructure and no requirement for local equipment to be maintained and repaired.

For information on hosted PBX offerings, please contact the Starwood contact listed in this document or contact the approved vendors in question.

## TELECOMMUNICATIONS – UPS REQUIREMENTS

The system must include an Uninterruptible Power Supply (UPS) solution capable of providing a minimum of 30 minutes of run time for all equipment. Additionally, all hardware must be new (not refurbished) and rack mountable. The UPS used may be shared between the IP PBX, Voicemail and Call Accounting Systems as long as it meets the runtime requirement.

## TELECOMMUNICATIONS – NETWORK INFRASTRUCTURE

The approved IP PBX vendor will **not** be responsible for supplying and installing the Local Area Network infrastructure. An approved Converged Network vendor will provide all Ethernet switching and associated equipment and installation services. For more details, please refer to the Starwood Technology Profile document 'Converged Network Standards'.

## TELECOMMUNICATIONS – SUPPORT AND MAINTENANCE REQUIREMENTS

### HELPDESK AVAILABILITY AND RESPONSE

- The selected provider must be able to provide live answer, in-house 24x7x365 helpdesk services for all Four Pointss described in this document
- The selected provider will provide this 24x7x365 availability for all support requests whether initiated by a guest or by an associate
- The selected provider must provide at a minimum the following methods of submitting a support request:
- Telephone (see above conditions)
- It is recommended that the selected provider offer the following methods of submitting a support request:
  - Email
  - Web form (accessible from inside and outside the Starwood network)

### SERVICE LEVELS FOR SUPPORT

- The selected provider must respond, at a minimum, within one (1) hour to a major alarm event and within four (4) hours for a minor alarm event
- The selected provider must perform onsite replacement of any major part under an existing warranty or maintenance agreement within 24 hours of the issue being confirmed as faulty or malfunctioning equipment. This replacement service level applies Monday to Sunday. A major part is classified as a part that causes a fault in the communications platform that results in any one of the following:
  - A down system
  - Inability to access or use voicemail
  - Interface link to call accounting or Property Management System to be in a down or disconnected state
  - Inability to make outside calls for more that 5% of in-house guests
  - Inability to receive external calls



## MAINTENANCE

- The selected provider must provide a minimum of 10 basic Moves, Adds and Changes (MACs) free of charge per day to a property. The changes may be made remotely and if onsite presence is required, charges may be applicable
- The selected provider will ensure that all critical software patches are applied to PBX and voicemail software (The property should be notified if there is a cost associated with that)

## MONITORING

- As a part of maintenance services offered by the selected provider, monitoring of the communications equipment must be provided. The selected provider shall proactively monitor equipment utilizing the best commercially reasonable practices for network management (including without limitation receipt of unsolicited SNMP and ICMP traps). The monitoring status and historical data should be available for web based viewing at all times by the provider, property ownership and Starwood Hotels & Resorts.
- At a minimum the selected provider must be able to clearly illustrate the ongoing presence of remote monitoring for the following items:
  - IP communication with internal network and the Internet
  - Trunk usage
  - Major and minor Alarm status

## TELECOMMUNICATIONS – INSTALLATION REQUIREMENTS

### COMPLETE INSTALLATION

The selected vendor must be responsible for the physical installation and configuration of all items sold related to telecommunications. At a minimum, this includes the following:

- IP PBX Core / Head End
- Voicemail System
- Call Accounting Solution
- Interfaces to PMS and other systems as required
- Guest room phones
- Public area phones
- Employee / administrative phones and consoles
- Any required cross connect wiring
- Patching and verified connectivity of all IP end user devices

### SINGLE POINT OF CONTACT

The selected provider must provide a single point of contact that is responsible for the following at a minimum:

- Product delivery
- Installation scheduling
- Training scheduling
- Functionality questions and product enquiries
- Owner communication
- On site resource allocation
- Project Management liaison to other 3rd party contractors

### DOCUMENTATION

In all cases, the selected provider will provide full documentation for all installed products. At a minimum, the documentation will include the following:

- PBX configuration (including extension listings, DIDs, trunk configuration, software versions at a minimum)
- Voicemail configuration
- Serial numbers and model numbers for all hardware
- Manufacturer warranty documents for all hardware
- All top level administrative usernames and passwords

The selected provider will also be responsible for updating the documentation and making available new documents to property Ownership and Starwood Hotels & Resorts at a minimum of every 6 months.

## PROJECT MANAGEMENT

All installation services provided by the selected provider must include Project Management services, which are handled by the SPOC (see above section entitled 'Single Point Of Contact').

## TRAINING

The selected provider is responsible for providing training to all associates at the time of implementation. Where possible the training should be classroom based, instructor led training that is performed on site at the hotel. Training will cover at a minimum the following aspects:

- Instruction on how to request support from the helpdesk of the selected provider
- Instruction on how to use administrative IP handsets (basic functionality such as conference, hold, transfer etc)
- Instruction on how to use PBX console hardware or software
- Instruction on how the associates and guests access and use the voicemail system
- Instruction on how to access and use reporting on the Call Accounting System

## GUEST ROOM TELEPHONES

### GUEST ROOM TELEPHONES

#### Overview

Each guest room in a Four Points Hotel must be supplied with one, single line, 5 button, cordless, VoIP telephone with speakerphone.

Four Points has selected the Teledex IP Dect NDC2105S series phone as the standard for all guest rooms.

#### Items Reviewed



Teledex IP Dect NDC2105S

#### External Resources

 [Teledex SIP NDC Series Phones Datasheet  
http://www.teledex.com/documents/NDC\\_series\\_IP\\_DECT\\_spec.pdf](http://www.teledex.com/documents/NDC_series_IP_DECT_spec.pdf)

#### Key information:

#### Approved Product(s)

Teledex IP Dect NDC2105S 

#### Starwood Contact(s)

Gustaf Burman  
Senior Director IT  
Specialty Select Brands  
+1 914 640 7658  
gustaf.burman@starwoodhotels.com

#### Approved Vendor(s)

**NOTE:** Guest room phones should be purchased from approved IP PBX vendors as follows:

Telnet  
kshadow@telnetdata.com  
T: +1 609 914 0148




Guest-tek  
brian.fillo@guest-tek.com  
T: +1 866 509 1010 x 8376

Xeta  
sbrown@xeta.com  
T: +1 856 988 7179

DCI  
smohabir@dci-design.com  
T: +1 516 394 4545

Thing5  
eric.thor@thing5.com  
T: +1 413 241 2739

Key:

-  = Required by Standards
-  = Required but Vendor Optional
-  = Product Optional

## GUEST ROOM PHONE DETAIL

The IP telephone in each Four Points guest room is supported by the Four Points converged network infrastructure that is designed to supply voice, HSIA and data services for both guests and administrative functions throughout the property. The converged network simplifies the support and maintenance and provides for cost savings in wiring/cabling.

The selected guest room phone provides the guest with 5 hotkeys for one touch dialing to Four Points services, a speakerphone, a cordless handset and message waiting indication. The phone is connected to the chosen PBX platform using recognized Session Initiation Protocol (SIP) standards.

The features and ordering specifications for the guest room phone are as follows:

- Secure and clear cordless transmission & reception
- Supports multiple DECT remote handsets per base
- Professional quality speakerphone
- Visual message waiting indicator
- 5 guest service keys
- Supports 802.1Q VLAN tagging
- Supports DHCP or static IP address

Area	Manufacturer	Model #	Quantity	Dimensions
Guest room	Teledex	NDC2105S	1 phone per room	6" x 9"

Note: the remote DECT handset by Teledex (called a Redidock and shown below) is an optional extra to the main phone base station to be placed at the bedside if so desired:



## GUEST ROOM PHONE FACEPLATES

The design, printing and installation of the phone faceplates should be coordinated with the approved PBX installation vendor. The following are brand standard guidelines for faceplate printing in the NAD.

## GUEST ROOM PHONE FACEPLATE PRINT SPECIFICATIONS

### Finish

Varies by model

### Paper

90# Cream Index with smooth finish

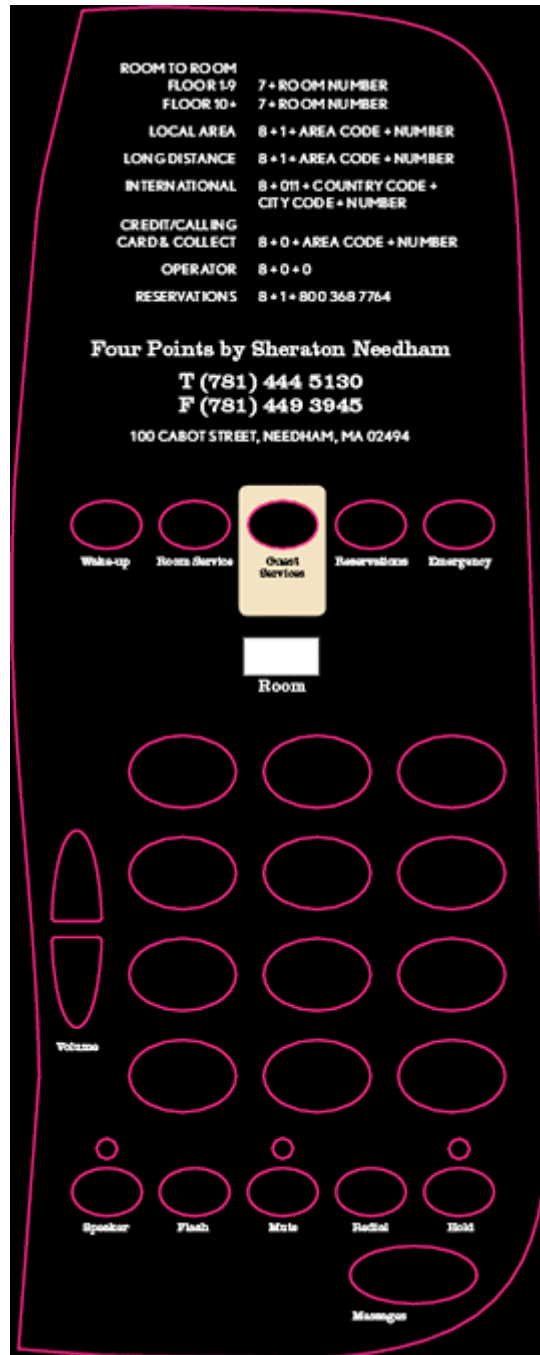
**Colors**

2/0 (PMS 7501U + Black), Full bleed

**Art**

Please reference template on starwoodassetlibrary.com.  
Customize template with property-specific information.

**Faceplate image example:**



**PUBLIC AREA TELEPHONES**

- HOUSE PHONES
- MEETING ROOM PHONES

**Overview**

House phones are located in public spaces to provide guests with access to dial direct to rooms or the Front desk. The selected model of house phone is the single line, SIP Teledex ND210LPOE.

Meeting Room phones provide guests with access to dial direct to rooms or the Front desk. The selected model of single line, SIP Teledex ND2100NMW, which has the message-waiting indicator removed.

All phones should be provided and installed by the selected Starwood approved vendor. Please note the phones should be the black color models in all cases.

**Items Reviewed**



Teledex House Phone  
ND210LPOE



Teledex Meeting Room Phone  
ND2100NMW

**External Resources**

[Teledex iPhone SIP ND Series Overview](http://www.teledex.com/index.cfm?page=LP_3&crd=184)  
[http://www.teledex.com/index.cfm?page=LP\\_3&crd=184](http://www.teledex.com/index.cfm?page=LP_3&crd=184)

**Key information:**

**Approved Product(s)**

- Teledex House Phone ND210LPOE
- Teledex Meeting Room Phone ND2100NMW

**Starwood Contact(s)**

Gustaf Burman  
Senior Director IT  
Specialty Select Brands  
+1 914 640 7658  
gustaf.burman@starwoodhotels.com

**Approved Vendor(s)**

**NOTE:** Public Area phones should be purchased from approved IP PBX vendors as follows:

**Telnet**  
kshadow@telnetdata.com  
T: +1 609 914 0148

**Guest-tek**  
brian.fillo@guest-tek.com  
T: +1 866 509 1010 x 8376

**Xeta**  
sbrown@xeta.com  
T: +1 856 988 7179

**DCI**  
smohabir@dc-design.com  
T: +1 516 394 4545

**Thing5**  
eric.thor@thing5.com  
T: +1 413 241 2739

- Key:**
- = Required by Standards
  - = Required but Vendor Optional
  - = Product Optional

**PUBLIC AREA PHONE DISTRIBUTION**

The required phones are to be distributed through the Four Points property as follows although changes must be made to allow for unique property layouts and the following list is designed to be a guide only:

<b>Space</b>	<b>Brand Requirement</b>
Meeting Rooms	1 Phone per Room
Lobby	1 House Phone
Fitness Area	1 House Phone
Elevator	1 House Phone (emergency and may need to be analog and included from elevator vendor – check with local requirements)
Elevator landing	1 House Phone
Guest Internet Terminals	1 House Phone

## PROPERTY HARDWARE AND SOFTWARE

SERVER HARDWARE

SOFTWARE AND LICENSING

DESKTOP AND LAPTOP HARDWARE

PRINTERS AND PERIPHERALS

### Overview

Each area within a Four Points hotel has specific hardware required to access the underlying infrastructure and/or run the specified software applications mentioned above.

This section provides a brief description along with specifications of the required hardware and software. Alternatives are only offered in cases where the minimum functional or aesthetic requirements are achieved by multiple pieces of equipment.

Starwood has negotiated heavily discounted pricing and Starwood imaging services with Insight who serves as the vendor for all products described in this document unless otherwise stated.

### Items Reviewed



Lenovo Desktops



Planar Monitors



Lenovo Laptops



Xerox Phaser Printers



HP Proliant Servers

### External Resources



Lenovo Laptops and Desktops  
<http://www.lenovo.com/us/en/>



Xerox Phaser Printers  
<http://www.office.xerox.com/printers/enus.html>

### Key information:

#### Approved Product(s)

- Lenovo (Desktops, Laptops) P
- IBM Servers P
- Xerox Phaser Printers P
- Planar Monitors P
- HP Proliant Servers P

#### Starwood Contact(s)

Gustaf Burman  
Senior Director IT  
Specialty Select Brands  
+1 914 640 7658  
gustaf.burman@starwoodhotels.com

#### Approved Vendor(s)

Insight  
John Wheeler  
jwheeler@insight.com  
T: +1 800 879 9921

Key:

- P = Required by Standards
- V = Required but Vendor Optional
- P = Product Optional



## DESKTOPS

The following specifications are the minimum desktop requirements based on current pricing, availability and compatibility. You may choose and are encouraged to purchase above the minimum specifications listed. Computer hardware not meeting the minimum specifications will not adequately support the specified applications and as a result is not permitted.

Starwood's strategy for Four Points Associates is a blended curriculum approach. The training will combine classroom opportunities as well as a portion of learning content designed in an online format. The online content allows for simple changes and enhancements to be made in a timely manner. This allows your property to stay on the cutting edge of content and new delivery methods, which create a dynamic learning environment for the members of your team. Since your property may not allow for a group of talent to be away from their positions all in one day, the online learning allows for flexibility in scheduling and can be used at anytime. In addition, the heart of the house pc will provide full access to onsite training that includes language skills and leadership. Talent will not only have access to Four Points classes but also professional development opportunities right on site. The 'heart of the house' desktop is a vital part of training for Four Points. Its location will vary based on drawings.

### DESKTOP LOCATIONS AND QUANTITIES

Desktops should be deployed as follows:

Location	Quantity
Back Office	1
Housekeeping Manager	1
Rooms Manager	1
Engineering	1
Front Desk	2*

\*The number of Front Desk Desktops should be increased with local requirements.

### DESKTOP SPECIFICATIONS

Description	Specification
Manufacturer	Lenovo
Model Name and Number	ThinkCentre M58e Small FormFactor (7408A72)
Processor	Intel Pentium Dual Core E5300 Processor 2.6GHz
Memory	2GB RAM
Hard Drive	160GB
Multimedia	DVDRW
Operating System	Windows 7 Professional (Insight will provide the desktop pre-staged with a Starwood "image". Quote part number 99-PACK2)
Warranty	Lenovo 4-Year Warranty Upgrade to 9x5xNBD

## LAPTOPS

The following specifications are the minimum laptop requirements based on current pricing, availability and compatibility. You may choose enhanced options and are encouraged to purchase above the minimum specifications listed. Computer hardware not meeting the minimum specifications stated below is not permitted. If you order a laptop, it is recommended that you order the appropriate port replicator, as well as an external monitor, mouse, and keyboard.

### LAPTOP LOCATIONS AND QUANTITIES

Laptops should be deployed as follows:

Location	Quantity
General Manager	1
Director of Sales	1
Systems Manager	1
Human Resources for Training	1

### LAPTOP SPECIFICATIONS

Description	Specification
Manufacturer	Lenovo
Model Name and Number	ThinkPad T400 2768 (2768P8U)
Processor	Core 2 Duo P8700 / 2.4 GHz - Centrino 2 with vPro
Memory	2GB RAM
Hard Drive	160GB
Multimedia	CDRW-DVDRW
Graphics	Mobility Radeon HD 3470
Networking	Gigabit Ethernet, Wireless LAN (802.11a/b/g/n, Bluetooth 2.0)
Screen	14.1" TFT Widescreen (1440x900)
Security	Fingerprint reader
Operating System	Windows 7 Professional (Insight will provide the desktop pre-staged with a Starwood "image". Quote part number 99-PACK2)
Warranty	Lenovo 4-Year Warranty Upgrade to 9x5xNBD

### LAPTOP DOCKING STATION SPECIFICATIONS

Description	Specification
Manufacturer	Lenovo
Model Name and Number	ThinkPad Advanced Mini Dock with US/Canada/LA Line Cord (250410U)
Processor	ThinkPlus Enhanced Wireless Keyboard & Optical Mouse (73P4067)

## PRINTERS

The following specifications are the minimum printer requirements based on current pricing, availability and compatibility.

### PRINTER LOCATIONS AND QUANTITIES

Location	Quantity
Front Desk (Xerox P3250dn)	2
GM (Xerox P3250dn)	1
Back Of House / Offices (Xerox P4510n)	1

### PRINTER SPECIFICATIONS

Description	Specification
Manufacturer	Xerox
Model Name and Number	P3250dn
Print Speed	Up to 30ppm
Colors	Black and White
Connectivity	10/100BaseTX Ethernet, USB 2.0

Description	Specification
Manufacturer	Xerox
Model Name and Number	P4510n
Print Speed	Up to 45ppm
Colors	Black and White
Connectivity	10/100BaseTX Ethernet, USB 2.0

## MONITORS

The following specifications are the minimum monitor requirements based on current pricing, availability and compatibility.

### MONITOR LOCATIONS AND QUANTITIES

Location	Quantity
Front Desk / Back Of House / Offices (Planar 17" LCD)	9
Front Desk (Planar 17" Touchscreen)	2

### MONITOR SPECIFICATIONS

Description	Specification
Manufacturer	Planar
Model Name and Number	T1700MX 17" touch screen monitor (997-4158-00)

Description	Specification
Manufacturer	Planar
Model Name and Number	PL1700 17" Black LCD (997-2795-00)

**SERVERS**

A server is defined as a computer or device on the LAN that manages the resources including property applications and hardware. Any user on the network can store and access files, print and manage the property network traffic. At Four Points the servers will be centrally located in the Main Equipment Room (MER) at each property location. Below are descriptions of both the hardware and software configurations as well as detail on the specific servers.

The HP Proliant DL and ML lines are currently the standard for property servers (Intel processor based) hardware. HP Proliant rack mounted servers have been chosen because of space efficiencies, ease of use and consistency with corporate and international standards. Microsoft Windows 2008 Server is the current standard used for the primary network operating system. The Microsoft Windows 2008 Operating System provides a solution that supports secure user access, data collaboration, application access and data and in some cases interface data. To create and monitor Talent access to network devices and files, an authentication server will be required to which Talent can login to. This is provided through Microsoft's Active Directory.

In all Four Points properties, the following servers should be installed in the Main Equipment Room (MER), into a rack-mounted environment:

Server Description	Supplied by:	Make and Model	Specifications
Office Automation / Domain Controller / Print Server	Insight	HP Proliant ML350 (487931-001)	HP ML350R05 E5420 SFF Processor: (1) Quad-Core Intel® Xeon® E5420 Processor (2.50 GHz, 80 Watts, 1333 FSB) Cache Memory: 12MB (2 x 6MB) Level 2 cache - 5400 Series Memory: Quad-Core 5400 Series: 2 GB (2 x 1GB) standard Network Controller: Embedded NC373i Multifunction Gigabit Server Adapter Storage Controller: Smart Array E200i/128 BBWC Controller (RAID 0/1/1+0/5) Hard Drive: None Ship Standard; (0/8 SFF) Internal Storage: 1.168TB SFF SAS; 480GB SFF SATA Optical Drive: Quad-Core: 16x DVD-ROM standard PCI-Express Slots: Six expansion slots (three PCI Express, three PCI-X) Power Supplies: 800-Watt CE-mark compliant Hot-Plug power supply Optional second power supply provides redundant operation Fans: 2 fans ship standard, 4 fans total supported (does not include power supply or processor heatsink fans) Form Factor: Rack (5U), (8.75 in/22.25 cm) (Second) Processor upgrade - 1 x Intel Xeon E5520 / 2.26 GHz - L3 8 MB HP BBWC Upgrade - Memory - 512 MB HP Dual Port - Hard drive - 146 GB - hot-swap - 2.5" SFF - SAS - 10000 rpm HP Common Slot High Efficiency - Power supply - hot-plug ( plug-in module ) - 750 Watt HP Smart Array P212/Zero Memory- Storage controller (RAID) - SATA-150 / SAS low profile - 300 MBps - RAID 0, 1, 10 HP NC112T PCIe Gigabit Server Adapter - Network adapter - PCI Express x1 low profile - EN, Fast EN, Gigabit EN HP Serial Attached SCSI (SAS) cable Electronic HP Care Pack 6-Hour Call-To-Repair Hardware Support - parts and labor - 4 years - on-site - 24x7 - 6 h Insight ISO:9002 install of all components into server & image load before shipping

Galaxy LightSpeed PMS Server	Galaxy Hotel Systems	HP Proliant ML350 (sourced and provided by Galaxy Hotel Systems)	<p>HP ML350 G6 Base Server - rack mountable - 5U - 2 way Processor: (1) Quad-Core Intel Xeon E5520 (2.26 GHz, - RAM 6 GB - SAS - hot-swap 2.5" - no HDD - DVD - Gigabit Ethernet) Cache Memory: 8MB (1X8MB) Level 3 cache Memory: 6GB (3 X 2GB) Std; PC3-10600R (DDR3-1333) Network Controller: Embedded NC326i PCI Express Dual Port Gigabit Server Storage Controller: Smart Array P410i/256 MB Controller Hard Drive: None Ship Standard PCI-Express Slots: (8) expansion slots ((6) PCI Express, (2) PCI-X) Rack Mountable HP Dual Port Hard Drive, 146 GB, Hot Swap 2.5" SFF, SAS 10000rpm HP Redundant Fan HP Common Slot High Efficiency Power Supply hot plug 750 Watt HP Smart Array P212/Zero Memory Controller RAID-SATA-150/SAS low profile-300 MBps-RAID0,1 10-PCI Express x8</p>																				
Doorlock System Server	Selected Doorlock Vendor	To be determined and provided by Doorlock Vendor	The server is provided as part of the hardware bundle offered by the Doorlock system vendors. This standard varies from time to time so for exact specifications, please contact the selected vendors.																				
Point of Sale Server	Selected POS Vendor	To be determined by POS Vendor	<p>At a Four Points property, the POS system will be based on an enhanced PC / Desktop platform which will be provided in a hardware bundle by the selected POS vendor. This standard varies from time to time so for exact specifications, please contact the selected vendors.</p> <table border="1" data-bbox="862 1226 1511 1843"> <tr> <td>Processor</td> <td>Pentium 4 class CPU</td> </tr> <tr> <td>Operating System</td> <td>Windows XP</td> </tr> <tr> <td>Frequency Response</td> <td>20.0 Hz to 20.0 KHz+/3.0 dB</td> </tr> <tr> <td>Audio Performance</td> <td>Sampling Rate: 44.1 KHz Digital Audio: 1 zone</td> </tr> <tr> <td>Video Performance</td> <td>DVI - 800 x 600 at 60Hz VGA - 800 x 600 at 60Hz</td> </tr> <tr> <td>Composite</td> <td>NTSC or PAL</td> </tr> <tr> <td>Graphics</td> <td>DirectX9 compatible graphics card</td> </tr> <tr> <td>Consumption</td> <td>100 watts maximum</td> </tr> <tr> <td>Connectivity</td> <td>Internet-enabled Ethernet: 10/100 Mbps Rear Panel* Analog Audio: 1 zone, 1/8" connection Video: DVI, VGA, S-Video, Composite Video</td> </tr> <tr> <td>Dimensions</td> <td>Width: 17.5 in/444mm Depth: 18.75 in/476mm Height: 6.25 in/159mm</td> </tr> </table>	Processor	Pentium 4 class CPU	Operating System	Windows XP	Frequency Response	20.0 Hz to 20.0 KHz+/3.0 dB	Audio Performance	Sampling Rate: 44.1 KHz Digital Audio: 1 zone	Video Performance	DVI - 800 x 600 at 60Hz VGA - 800 x 600 at 60Hz	Composite	NTSC or PAL	Graphics	DirectX9 compatible graphics card	Consumption	100 watts maximum	Connectivity	Internet-enabled Ethernet: 10/100 Mbps Rear Panel* Analog Audio: 1 zone, 1/8" connection Video: DVI, VGA, S-Video, Composite Video	Dimensions	Width: 17.5 in/444mm Depth: 18.75 in/476mm Height: 6.25 in/159mm
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DMX ProFusion 5 Audio Playback Server	DMX	ProFusion 5 (sourced and provided by DMX)																					

DMX ProFusion X  
Audio Delivery Server      DMX

ProFusion X  
(sourced and  
provided by DMX)

Audio Connections	(4) RCA female jacks
Network	1 RJ45 Ethernet port
Comms port	1 serial port
Voltage	115/230 VAC
Range	105/125 Vrms
Watts	220W
Current	4.0 Arms @ 115V / 2.0 Arms @ 230V
Thermal Output	751 BTUs
Dimensions	Length: 15.5" (38.74 cm)
	Depth: 16" (24.13 cm)
	Height: 3.75" (8.89 cm)
Weight	15 lbs (4.99 kg)

**SOFTWARE**

The following software is to be installed and available on all Desktops and Laptops throughout the property. It has been fully tested and certified as the Starwood standard, and provides both the appropriate functionality and required security. Starwood has negotiated pricing with several software manufacturers such as Microsoft for workstation and server software and McAfee for anti virus protection. Negotiated discount prices are available when purchased through Insight or elsewhere as indicated.

Software Description	Quantity	Supplier	Part #	Comments
Windows XP Professional w/SP2 or Windows Vista Business	See # of desktops & laptops	Insight	99-PACK2	Special Windows Imaging service for Starwood provided by Insight
Microsoft Office 2007 Standard Select Level D	See # of desktops & laptops	Insight	021-07777D	
CD Media Kit for Microsoft Office 2007 Standard	2	Insight	021-08228	
Microsoft Windows 2003 Device CAL Select Level D + 2-Year SA	See # of desktops, laptops & servers	Insight	R18-00129D2YR	Only for those machines that authenticate to Active Directory
Symantec Backup Exec for Windows Servers - ( v. 12.5 ) - license + 1 Year Essential Support - 1 server	1	Insight	14348113	Main Backup Server
Symantec Backup Exec for Windows Servers Agent for Microsoft SQL Server - ( v. 12.5 ) - license + 1 Year Essential Support	1	Insight	14355704	Backup for SQL Database
Symantec Backup Exec for Windows Servers - ( v. 12.5 ) - media - CD - Win - Multi	3	Insight	14173720	Backup other servers and clients
Microsoft Windows 2008 Select Level D Standard Server with 1-Year SA	1	Insight	P73-00205D1YR	For the property OA / DC/ FP Server. Other servers will have or not require Server licenses.
Media CD for Windows 2008 Server	1	Insight	P73-04650	Required for install.
McAfee Total Protection Enterprise Anti-Virus Software	See # of desktops, laptops & servers	Insight		Order via Stephanie Jones at Starwood (781 380 0489)

## MISCELLANEOUS ITEMS

In order to support client machine installation and provide a ready installation package, the following miscellaneous items are also required:

Description	Quantity	Supplier	Part #	Comments
APC Professional Surge Arrest – 7 outlet	See # of desktops & laptops	Insight	PRO7	Handles desk electrical needs in the event of too few outlets
Belkin CAT5e 7-Foot Patch Cable	See # of desktops, laptops and servers (multiplied by 2.25)	Insight	A3L791-07	Patch connections for client machines and servers.

## MAIN EQUIPMENT ROOM (MER) HARDWARE

In order to house and protect the installation and operation of servers and other rack mounted server equipment at the property, the following items must be purchased and installed. In many cases it is possible to purchase these items from Insight at a significant Starwood discount or directly via Galaxy Hotel Systems.

Description	Quantity	Comments
HP 10642 42U Rack Cabinet - Shock Pallet	1	Main equipment rack
HP 42U Side Panel (Graphite Metallic)	2	Rack panels
HP Integrated Rack Monitor/Keyboard	1	Rack Keyboard / Monitor
HP Server Console Switch / KVM - OX1X8 KVM SVR CNSL SW ALL	1	KVM for connecting multiple servers to monitor / kb / mouse
APC Smart UPS 1500VA USB & Serial 120V	1	Battery back up
3-Year Support - 1500VA UPS	1	Battery support

## LAN / WAN EQUIPMENT (ETHERNET SWITCHES, ROUTERS AND FIREWALLS)

For all specifications and details relating to LAN and WAN equipment, please refer the Starwood document 'Converged Network Standards'.

## ELECTRONIC FUNDS TRANSFER (EFT)

### ELECTRONIC FUNDS TRANSFER (EFT)

#### Overview

EFT is the process of transferring money from one bank account directly to another without any paper money changing hands.

At Four Points hotels the system is used to process guest credit card payments. Transactions are processed by the bank through the Automated Clearing House (ACH) network, which is the secure transfer system that connects all U.S. financial institutions. For payments, funds are transferred electronically from one bank account to the billing company's bank, usually less than a day after the scheduled payment date.

Starwood recommends that each Four Points hotel located in the United States use the preferred online hi-speed two-way credit card application provided by Elavon Gateway Payment Solution (formerly called SDC). The system provides lower transaction costs, and works with both the specified PMS & POS systems.

For properties outside of the North American Division please contact your Regional Director of IT for details on the corresponding divisional/local solution.

#### Items Reviewed




Elavon Payment Gateway Solutions

#### External Resources

 Elavon Payment Gateway Solutions information  
<http://gateway.elavon.com/>

#### Key information:

#### Approved Product(s)

Elavon Gateway Payment Solutions 

#### Starwood Contact(s)

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Key:

-  = Required by Standards
-  = Required but Vendor Optional
-  = Product Optional



## PUBLIC AREA MUSIC

### PUBLIC AREA AV (SOUND SYSTEM)

#### Overview

Four Points hotels require a centrally distributed music solution in each property as mandated by the brand standards.

The platform provides both simplicity and flexibility allowing for the centralized distribution and scheduling of audio content pushed to the property over the Internet. The provider must have access to a large digital music and video library to allow for versatility in programming.

#### Items Reviewed



DMX Profusion X

#### External Resources

DMX website  
<http://www.dmx.com>

#### Key information:

#### Approved Product(s)

DMX Bose based Public Audio

#### Starwood Contact(s)

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Key:

- = Required by Standards
- = Required but Vendor Optional
- = Product Optional

## MUSIC DELIVERY

DMX has been identified as the distribution and in house system of choice for Four Points hotels. DMX are to be used to install all music related systems. The technology allows for programming to be pushed the properties across regions/divisions with limited/no property level management involvement assuring consistency across the brand. The brand team will centrally manage the specific music content and mixing, updating the property at regular intervals (quarterly, seasonally, annually, etc).

DMX will install the following zones into the standard Four Points hotel:

- Zone 1 - Lobby, Common, Pool Areas and F&B Areas
- Zone 2 - Meeting Rooms
- Zone 3 - Fitness Room
- Zone 4 - Music and Messaging On Hold

The DMX ProFusion Players will manage the Four Points audio environment. The services provided by DMX are designed to take the Four Points on-site audio experiences to a new level. DMX's ProFusion Player bring multiple audio and visual experiences into one uniquely designed package that delivers on the Four Points goals of creating a fresh sensory destination with a fun sense of design and spirit of fulfillment.

All areas have their own music feed based on zones and independent volume controls that have master controls at the Front desk, as well as remote controls for the Fitness Area and Meeting Room. The Bose Omni/Free Space 3 series, Model 16, 302V, and DS16 speakers are placed throughout the space to compliment the architecture and deliver a thick presence and rich audio blanket throughout the property.

## NETWORK CONNECTIVITY

The update of content is done remotely on a monthly; therefore, it is vital for the DMX server to have connectivity to the Ethernet network to provide Internet access. Detailed instructions on connecting these servers to the network are available from DMX.

## IN ROOM ENTERTAINMENT AND TV PROGRAMMING

### FREE TO GUEST TV PROGRAMMING

#### Overview

The Four Points in-room entertainment solution is designed to offer guests high definition content on the brand standard HD compatible televisions. Requirements necessary to meet the Element brand standards are as follows:

- Free-to-Guest (FTG) channels as published in the most current Element brand standards
- High Definition content on channels as required and published in the Element brand standards
- “Set top boxes” or in room devices are not to be used

Certain FTG Providers (such as World Cinema as of the writing of this document) may provide the required FTG infrastructure with zero up-front investment required. Local requirements and quotes should be reviewed carefully with your Starwood representative to ensure that all offers meet the required standards of equipment, support and service.

#### Items Reviewed



#### External Resources

- [Lodgenet FTG Solution Overview](http://www.lodgenet.com/OURSOLUTIONS/DVSOLUTIONS/Pages/Home.aspx)
- [BulkTV FTG Solution Overview](http://www.bulktv.com/MA-Hotel.html)
- [World Cinema FTG Solution Overview](http://worldcinemainc.com/products-services/)
- [DSS Installations Overview](http://www.dssinstallations.com/)

#### Key information:

#### Approved Product(s)

- Lodgenet FTG
- BulkTV FTG
- World Cinema FTG
- DSS Installations

#### Starwood Contact(s)

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**World Cinema**  
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- Key:
- = Required by Standards
  - = Required but Vendor Optional
  - = Product Optional

## CHANNEL LINE-UP

Four Points has established certain requirements for the channel line-up unique to the brand. Channel numbers will be permanently designated to a specific network for consistency in each property across the country.

The following Four Points channel line up must be followed according to brand standards:

- SPG (Starwood Preferred Guest) must be shown and reserved on Channel 77
- A minimum of 34 channels in total must be provided to the guests
- A minimum of 14 of those channels must be provided in HD
- Of the 14 required HD channels, 11 are mandated as a brand standard and are as follows:
  - Showtime
  - ABC
  - NBC
  - CBS
  - FOX
  - PBS
  - CNN
  - ESPN
  - ESPN2
  - Discovery Channel
  - TNT
- The remaining channels may be selected from the following categories (following the minimum count for each category)
  1. **PREMIUM** – 1 Channel required
    - HBO
    - Showtime (mandatory HD channel)
  2. **NEWS** – 3 channels required
    - Bloomberg
    - CNBC
    - CNN Headlines
    - C-SPAN
    - C-SPAN2
    - Fox Business
    - Fox News
    - MSNBC
  3. **WEATHER** – 1 channel required
    - Weather Channel
  4. **SPORTS** – 2 channels required
    - Big 10 Network
    - CBS College Sports
    - ESPN Classic
    - ESPN News
    - Fuel
    - Golf
    - NFL
    - NHL
    - Speed
    - Tennis
    - Versus
  5. **FAMILY** – 1 channel required
    - ABC Family
  6. **KIDS** – 1 channel required

- Cartoon Network
- Nickelodeon
- 7. **COMEDY** – 1 channel required
  - Comedy Central
- 8. **MUSIC** – 1 channel required
  - CMT
  - Fuse
  - MTV
  - MTV2
  - VH1
  - VH1 Classic
- 9. **LIFESTYLE / ENTERTAINMENT** – 7 channels required
  - Discovery HD Theatre
  - HDNET
  - A&E
  - Animal Planet
  - Biography
  - Food Network
  - FX
  - History Channel
  - National Geographic Channel
  - Science Channel
  - Spike
  - SyFy
  - TBS
  - TLC
  - USA
  - 101
  - AMC
  - BET
  - Chiller
  - CurrentTV
  - Discovery Health
  - E! Entertainment
  - Fine living
  - FitTV
  - Fox Movies
  - Fox Reality
  - G4
  - Gems
  - GOD TV
  - GSN
  - IFC
  - Lifetime
  - Lifetime Movies
  - LOGO
  - Military
  - Oxygen
  - Reelz
  - Sleuth
  - SOAP Net
  - Travel Channel
  - truTV
  - TV One
  - TV Land
  - WE

## GUEST ROOM TELEVISIONS AND MOUNTS

### GUEST ROOM TVs

### CONNECTIVITY PANELS

### TV MOUNTING HARDWARE

#### Overview

All Four Points guest rooms must have a 32" LCD HD compatible unit a compatible TV wall mount fixture. Please consult the most recent OS&E standards for exact TV and mount models.

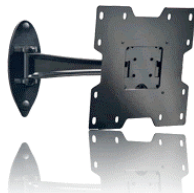
All video displays must have a serial interface compatible with the provider's set-back-box enabling one integrated remote control. All video displays must have built-in tuners for Hi-Definition reception. All display devices must be compatible with the video provider's encryption standards. The TV should be sourced from Philips or Insight and the TV Mount from Peerless Mounts.

All Four Points guest rooms may also be equipped with a connectivity panel which is a multi-media "hub" that allows guests to connect personal technology devices such as iPods, laptops, digital cameras, video cameras, and game consoles to the TV for viewing and listening purposes. The connectivity panel is not mandatory and maybe installed as an optional extra.

#### Items Reviewed



Philips Hospitality TVs






Peerless Mounts






Philips Guest Room Connectivity Panel

#### External Resources

-  Philips Hospitality Televisions  
<http://www.hospitality.philips.com/>
-  Peerless Mounts  
<http://www.peerlessmounts.com/>
-  Philips 22PP2104 Connectivity Panel information  
[http://www.consumer.philips.com/c//22pp2104\\_37/prd/us/professional](http://www.consumer.philips.com/c//22pp2104_37/prd/us/professional)

#### Key information:

#### Approved Product(s)

Philips Hospitality TVs	
Peerless TV Mounts	
Philips 22PP2104 Panel	

#### Starwood Contact(s)




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- Key:
-  = Required by Standards
  -  = Required but Vendor Optional
  -  = Product Optional

## GUEST ROOM CONNECTIVITY PANEL DETAIL

The connectivity panel incorporates the following functionality into a single desktop connectivity solution:

- Auto sensing inputs
- 2 power outlets with surge protector
- Modular platform for future technology
- Charge iPod & other devices through USB

The following connectors are featured on the unit:

- HDMI in Audio L/R (3.5mm jack)
- Audio L/R in (cinch)
- CVBS in
- S-Video in
- USB (5V Power)
- VGA PC in

The following accessories are available with the unit:

- Cable pack (5m)
- External Power adaptor
- HDMI cable
- RJ12 cable (SmartPort)
- RS232 cable
- Screws
- S-Video to CVBS adaptor
- VGA/Audio cable

Area	Manufacturer	Dimensions	Model #	Quantity
Guestroom	Philips	Width - 14.76" Depth - 4.7" Height - 3.3"	22PP2104	1 per room

## PUBLIC AREA TELEVISIONS AND MOUNTS

PUBLIC AREA TVs  
TV MOUNTS

### Overview

The design of each Four Points hotel provides for one (1) television to be included in the Library and one (1) for the Bar.

The televisions should be used for regular TV programming (CNN breakfast, evening per guests requests) or SPG TV.

### Items Reviewed



Philips  
42HFL5860S/27



Philips  
32HFL5860D/27 32" LCD TV

### External Resources



Philips 42HFL5860S/27 Product Specification Sheet  
[http://download.p4c.philips.com/files/4/42hfl5860s\\_27/42hfl5860s\\_27\\_pss\\_aen.pdf](http://download.p4c.philips.com/files/4/42hfl5860s_27/42hfl5860s_27_pss_aen.pdf)



Philips 32HFL5860D/27 32" LCD TV Product Information Sheet  
[http://www.hospitality.philips.com/docs/32HFL5860D\\_27\\_leaflet.pdf](http://www.hospitality.philips.com/docs/32HFL5860D_27_leaflet.pdf)

### Key information:

#### Approved Product(s)

Philips 42HFL5860S/27 TV ●  
Peerless TV Mounts ●

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#### Key:

- = Required by Standards
- = Required but Vendor Optional
- = Product Optional



**LIBRARY**


The following equipment should be installed in the Library area. For these installs please use the RC2888/01 remote for the Philips LCD's (shown below):



Philips rc2888/01 remote control

Area	Manufacturer	Item	Model #	Quantity
Library	Philips	42" LCD TV	42HFL5860S/27	2

The following TV Mount and TV Mount bracket must be used in conjunction with the TVs in the Library area:

Image	Manufacturer	Item	Model #	Quantity
	Peerless	Pull Out Swivel Wall Mount	FPS-1000	1

Peerless FPS-1000 Product Profile: <http://www.peerlessmounts.com/pcattachments/SELL%20SHEET-LIT0451-1-1.PDF>



Peerless	PLP Flat Panel Adapter Plate	PLP-V4X4	1
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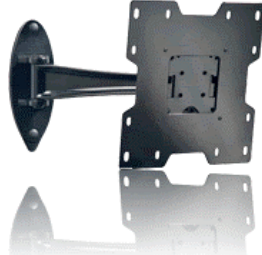
Peerless PLP-V4X4 Product page: <http://www.peerlessmounts.com/dyn/Products/BrowseProduct.aspx/sp/10643/>

**BAR**

The following equipment should be installed in the Bar area. The TV should be mounted directly on the wall. For these installs please use the RC2888/01 remote for the Philips LCD's.

Area	Manufacturer	Item	Model #	Quantity
Break room	Philips	32" LCD TV	32HFL5860D/27	1

The following TV Mount and TV Mount bracket must be used in conjunction with the TV in the Talent Break Room:

Image	Manufacturer	Item	Model #	Quantity
	Peerless	Pivot Mount Arm	SP740P	1

Peerless SP740P Product Profile: <http://www.peerlessmounts.com/dyn/Products/BrowseProduct.aspx/tn/49/u/t>



Peerless	Security Fasteners	ACC919	1
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Peerless ACC919 Product page: <http://www.peerlessmounts.com/dyn/Products/BrowseProduct.aspx/sp/8279>