IGspectrum

IT for Health

Summary of IGspectrum Services on

G-Cloud 13

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Overview of IGspectrum Web Applications

IGspectrum's extensive portfolio of web applications are cloud-based with access available 24/7 from any supported browser. A typical contract term is for 3 years, thereafter renewable every 12 months, covering application license, hosting, service management and support, and service upgrades.

Our hosting arrangements, where we work with our partner Rackspace to host all of our cloud-based services and applications, conform to: data protection legislation; organisational information governance policies; Data Security and Protection Toolkit with whom we are accredited; and are provided from a secure ISO27001 accredited facility with a HSCN connection available.

All CREST related work (Secure Infrastructure Platform and Cyber-Security Services) is supported by our partner Defendza, a privately-owned UK company, who offer cyber security consulting, training and security solutions. Their website is https://www.defendza.com/. Some of our development team are based offshore (India).

IGspectrum has provided some of the key applications for the new digital hospital at Chase Farm (part of the Royal Free London NHS Foundation Trust) including:

• eDocs/Document/Form Viewer – all historic paper documents are held electronically and are viewed via this service.
• eForms Platform – all key electronic forms which are not being delivered as part of the new EPR will be provided by this service.
• Subject Access Requests Service – all Subject Access requests are processed by this service and electronic and/or paper- based records are automatically loaded. After review and approval, the documents are made available via a secure portal to the requestor.

IGspectrum provides a number of electronic forms, with associated workflows, accessible directly by patients. An example of this is the Family History Form for the West Midlands Regional Genetics Service which enable patients and their relatives to complete their personal history directly from their devices.

These and some of our other web applications are described in further detail below.

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Ordering and invoicing process

On receipt of a purchase order IGspectrum will invoice the client and initiate the service. Invoice terms are 30 days.

The service includes standard support during the working day, problem resolution and any updates that are released during the contract term.

Start-up

Start-up costs are usually included unless significant additional configuration is required.

So, for example, modifying an existing e-form would be offered at no additional charge, creating a new form would incur a one-off configuration charge with the level of charge dependent on the complexity of the form.

Training

A comprehensive service user guide is provided an online tool. Initial on-site training is provided free of charge (one day is usually sufficient) and further training is offered as a chargeable option at a current (April 2020) rate of £400/day.

Service constraints

All services are available 24/7 with a 99% uptime.

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1   Hosted Applications

1.1   Clinical Record Viewer

A solution to your paperless objectives. All historical paper documents held in the medical records files may be viewed.

Collection, scanning and paper destruction capabilities can also be provided. Electronic documents are also uploaded if required.

Clinical/medical records and case notes are viewable in their original format. Users are categorised to ensure full user control with access only provided with those registered to view on a specialty or other agreed basis. The service provides a twin field global search alongside a meta-data search capability (e.g. Hospital number, NHS number, etc.).

Documents can be scanned locally by hospital users and directly uploaded into the service.

Features

Repository for medical records / case notes

Supports navigation and image management functions

Extensive search facilities

Automation and digitisation of case notes quickly

Easy and secure access to case notes

Data available through any internet-enabled device

Benefits

Complete case notes easily viewable

Search facilities enable quick retrieval of relevant data

Cost effective

1.2   eDocs/Document/Form Viewer

All documents, including those containing patient information which are not suitable for storing in an EPR or EDRM can be managed here.

The service includes collection, scanning, indexing, storage and certified destruction but uniquely all the documents are available to be viewed on demand by the eDocs service.

Small volumes of documents can also be loaded by users directly to the platform from their local computer or device. Additionally, email based documents can be automatically stored.

Benefits

Fast access to stored files, folders and documents

Extensive indexing to allow for intelligent retrieval

No software installation required

Service complies with the NHS Data Security & Protection requirements

Access to the service through any internet-enabled device

Hosted securely at an ISO27001 accredited facility

Flexible access using any internet-enabled device

1.3   Data Sharing Agreement Portal

Our unique portal provides a single web-based repository where all data sharing reference documents e.g. Information sharing frameworks, protocols and agreements can be held.

It will enable a record and evidence to be shared on Privacy Impact Assessments (PIAs) and Risk Assessments and caters for explicit signoffs by both Caldicott Guardians and DPOs.

The service provides automatic alerts when agreements are shortly to expire to ensure that an organisation is operating within the relevant laws and directives. A key feature is the ability to manage multi-agency agreements.

Features

Single repository for information sharing frameworks and protocols, agreements, templates

Automatic alerts prior to expiry

Portal providing controlled opening to the general public for document sharing

Single view of all agreements

Multi-agency information sharing agreement templates available

Sign-off can be achieved inside the portal

Administrator and user access

Benefits

Easy review and management of all agreements recorded by partner organisations

Solves protracted issues around capturing signatures / approvals

Tiered security access enables sharing inside and outside the NHS

Optional existing templates encourage rapid acceptance and implementation

1.4 Electronic Referrals Service

Incorporating integrated workflow management this provides a centralised, intuitive, platform on which all referrals can be digitised, automated, accessed, transferred and managed using any web browser on all devices.

Rules and workflows for completing and receiving forms are fully automated and information is captured, stored and made available securely. Trust wide department dashboards are also included.

Forms include:

Cancer Referrals

Neurology and Neurophysiology Referrals

Macmillan Cancer Referrals

A&E Referrals

Radiotherapy Plan Referral Service

Section 2&5 Referrals (Transfer of Care)

Features

Enables sharing through approval, alerting and broadcasting functionality

Supports navigation and image management functions

Automated workflow and approval processes

Different levels of user access to submit and view form data

Secure online submissions using any internet-enabled device

Secure system access with data held in an encrypted database

Benefits

Automation and digitisation of forms quickly and cost-effectively

Data accuracy increased through on-line validation

No software installation required

Service complies with the NHS IG Toolkit requirements

Access to the service through any internet-enabled device

Hosted securely at an ISO27001 accredited facility

Simple e-referral creation process

Immediate status and priority view of sent and received referrals

Rapid deployment of new form

Cost effective

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1.5 eForms Platform

This Electronic Forms platform, with integrated workflow management, provides a single centralised, intuitive platform on which existing forms can be automated, accessed and managed using any device with a web browser.

Rules and workflows for completing and submitting forms are fully automated and all information is captured, stored securely and made available to all that require access.

Current forms available on the platform include:

- Bedside Audit Questionnaire
- Gallbladder Treatment Referral Form
- POCT BARCODE ISSUE
- POCT Training register for Glucose and Ketones Abbott FPP meters
- Patient Experience Survey
- Space Application Form
- Accommodation Enquiry Form on UAT
- Hormone Deprivation Treatment Summary on UAT
- Family History Form
- MDT Referrals
- Admission & Discharge to Social Care forms

Features

Digital signatures available

Effective using both static and mobile devices

Enables sharing through approval, alerting and broadcasting functionality

Supports navigation and image management functions

Automated workflow and approval process for the recording of outcomes

Different levels of user access to submit and view data

Encrypted database for secure online submissions and access

My eForms functionality provides personalised use of the service

Links available to EPR, EDRM and Data Warehouses

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…eForms Platform continued:

Benefits

Automation digitisation of forms quickly and cost-effectively

Simple e-form creation process

Rapid deployment of new forms

Data accuracy increased through on-line validation

No software installation required enabling the rapid deployment of new forms

Service complies with the NHS Data Security & Protection requirements

Access to the service through any internet-enabled device

Hosted securely at an ISO27001 accredited facility

Simple e-form creation process

Key element of moving an organisation towards paperless operation

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1.6 Cardiology eForms Platform

The Cardiology service provides comprehensive recording and support in the following areas:

- Cardiac Counselling
- Therapies
- Cardiac Rehabilitation
- Cardiology Community Service
- Cardiometabolic / Lipid Clinic
- Heart Failure Assessment Clinic
- Rapid Access Chest Pain Clinic
- MDT Valvular Heart Disease

Outputs to National registries are provided to assess CV epidemiology, diagnostic/therapeutic processes, and adherence to guidelines.

Features

Comprehensive Access Control incorporated in the Administration module

Effective using both static and mobile devices

Enables sharing through approval, alerting and broadcasting functionality

Automated workflow and approval process

Different levels of user access to submit and view data

Encrypted database for secure online access

Functionality provides personalised use of the service

Links available to EPR, EDRM and Data Warehouses

Benefits

Automation digitisation of forms quickly and cost-effectively

Simple eForm and eReferral creation process

Rapid deployment of new forms

Data accuracy increased through on-line validation

No software installation required enabling rapid deployment of new forms

Service complies with the NHS Data Security & Protection requirements

Access to the service through any internet-enabled device

Hosted securely at an ISO27001 accredited facility

Key element in achieving enhanced patient safety

Substantial financial saving over legacy systems and registries

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1.7   Maternity Self-Referral Service

This service allows mums-to-be to self-refer to any maternity clinic within a trust via an e-form on the Trust website.

The mum-to-be provides basic demographic and summary medical history and then makes a selection of the particular clinic she would like to register at.

When complete, the form is received by the relevant maternity unit and an appointment can be made. The referral is automatically relayed to the mum-to-be's GP so that they have full knowledge of the self-referral.

A GP may also use the service to refer a mum-to-be attending their practice.

Features

Mums-to-be can self-refer and choose their preferred maternity clinic

Relevant materials and brochures are provided automatically on first enquiry

The GP receives notification of the self-referral

Service also available for GP referrals

Benefits

Patient choice and control GP always fully informed

Significant take-up of the Trust's maternity services

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1.8   Hepatitis Virtual Clinic Service

A platform for the automation and management of many clinical and administrative aspects at a Hepatitis Virtual (Telephone) Clinic.

Appointments, blood tests and investigations are scheduled; reminders and alerts automatically sent to patient, clinic nurses and clinicians; recorded; loaded with relevant information received from the hospital EPR. GP letters are generated automatically.

Features

Full feature virtual clinic managing patients through pre-planned pathways

Includes appointment management, reminders and alerts

Telephone interaction is captured electronically

Optionally extended to include a recording of the telephone appointment

Auto-generated GP and Patient letters are sent automatically

Benefits

Telephone delivery makes the service more accessible

Automatic actions reduce the need for manual interaction

Cost effective to both patient and clinic

Substantial savings due to reduced volume of patient visits to OP clinics

1.9 Subject Access Requests Service

Facilitates access to Medical and Care Records as a result of a Subject Access Request (SAR) under Freedom of Information (FOI) via an IG compliant secure web site link.

The portal can also be used by clinicians and referrers who require access to records but cannot access main hospital systems.

Features

Full SAR lifecycle automation

Capture of the Subject Access Request application and security credentials

Uploading patient medical records from the physical or electronic case file/EPR /EDRM/e-Docs

Case file access via a user-friendly screen set up

Navigation and image management functions for medical records personnel and clinicians

Patient medical records release approval process

Notification that case file / medical records are available for viewing via the Patient Portal

Download and print options along with simple and fast navigation functions

Redaction capability

Strong authentication security on records access

Benefits

Increased efficiency

Substantial stationery, printing and postage cost reductions

Security improved over mailing paper or electronic media

Hosting available on either our or your own infrastructure

IG compliant access for citizens, patients and/or their authorised representatives

Pre-built interface to local EDRM

Cost effective

1.10   Patient Consultation Recording Portal

This secure, web-based application provides patients with the ability to playback their hospital consultations, so that they may hear, share with relatives and understand what was originally said. It also allows the consultant to transcribe key information directly into GP letters that can then be sent to the consultant's secretary for formatting and onward delivery.

The Patient Consultation Recording (PCR) service has been developed to enable patients to listen on demand to their consultations. Independent research tells us that most patients forget much of what is said during medical consultations, particularly if bad news is given.

The PCR service enables patients, along with friends and family, to re-listen to what was said. The recordings enable good advice such as lifestyle changes to be reinforced in the security of the patient's own home.

Patients need to hear what was said in context but current outpatient conditions are not conducive to this. Thus, this service is an add-on to current practice that will improve patient experience and potentially clinical outcomes.

Features

A patient consent routine authorises the recording process

Consultations are recorded via the consultation room computer

Data is securely transferred to the online service

Patients are sent an email or text providing login details

Patients can securely access their consultation recording through any web browser

Patient authorised third parties (e.g. friends & family) can have access to the recording

Consultants may also access the sound recordings

Benefits

Patients more likely to understand and adhere to recommended treatment

Mutual collaboration can foster patient satisfaction and improve healthcare outcomes

Sharing access with third parties ensures details are not mis-interpreted

Evidences: decisions, findings, progress, investigations, dates, results, consent, and referral

Continued…

Patient Experience: This is improved with the recording enhancing the overall quality of consultations.

Litigation: 20% of all litigation is based on what was allegedly said during the consultation. The PCR service removes any uncertainty, saving time and money.

Data Protection: If the Trust owns the recording, the Trust owns the copyright.

Patient Testimonials

- …an excellent and very clear recording with no problems at all.

- …easy to access and nice that you can always refer back to it.

- …I have listened with my wife and it was very useful to keep her informed.

- …the prime function of this is actually amazing. Whereas my mother for example can't remember half the things that are said to her when she is seeing a doctor, this would truly be beneficial for her.

- …over time, years or decades, it would be really good to refer back to information stored about me.

- …one further and very significant effect of being able to listen to your diagnosis whenever I need to, is that it has proved an invaluable tool in reinforcing my intention to remain abstinent. A diagnosis which can be very shocking at first tends to lose much of its impact with the passage of time. Especially when I have no symptoms and memory becomes blurry as I am forced to stick with difficult lifestyle changes. I listen to the interview regularly and, somehow yet more impactful in my own home than in a hospital environment, it reminds me each time of the seriousness of my situation - that it is very real and ongoing. This has been very motivating in remaining abstinent. Thank you again for the recording.

1.11   Private Patients Service

This service provides full workflow support and management of all aspects of the patient episode for private patients.

The service allows the Private Patients unit to receive automated notifications of enquiries and can then request the secure transfer of patient records from referrers who are often in other countries. This fully functional service includes full episode management, clinician allocation and management and finally the secure transmission of any reports or updated records back to the referrer.

The service has recently been substantially enhanced to allow patients or referrers to select clinicians and appointments via a sophisticated interface.

Features

Automatic management of referrals, appointments, patients, episodes and clinicians

Safe and secure transfer of medical and other records

Full workflow coverage

Links to invoicing systems are incorporated

A full history of all patient episodes is maintained

Benefits

Complete patient history aids effective clinical management of the patient Referrers able to

maintain fully accurate patient record

Invoices are accurate and produced in a timely fashion

1.12 MS NeuroResponse Service

This Portal is designed to engage people living with Multiple Sclerosis (MS) and their families.

The first cohort at the Royal Free Hospital comprises approximately 500 patients living in the London Borough of Barnet. Within the cohort there are a number of patients that frequently attend A&E with symptoms such as UTI that may have been able to be treated in the community.

To prevent this the NHS 111 service is being adapted to provide a specialist response to these patients. To support this a summary care plan is agreed with the patients. This care plan will be co- completed by patients and clinicians on the online Neuro Patient Response Form, part of the Portal.

Patients access the partially completed form, make comments and commit if they are happy with it. The information is then incorporated into the Adastra system for use by the NHS 111 service.

Features
Patients are sent an email or text providing login details

Patients can securely access their individual care plan

Patients can self-report and self-manage

Service facilitates management of patients

Manages telephone and physical appointments

Patient reminders and alerts are included

Care plan can be tailored to specific requirements

Automatic rescheduling to tests based on care plan requirements

Benefits
Patient access through any web browser from their own device

Patients more likely to understand and adhere to recommended treatment

Patient self-management reduces footfall on clinics and hospitals

Clinician intervention at any point to alter the care plan

Mutual collaboration can foster patient satisfaction and improve healthcare outcomes

Sharing access with third parties ensures details are not mis-interpreted

Evidences decisions, clinical findings, progress and investigations

Evidences dates, results, consent, and referrals

Patient administration automated with dashboards for nurses and clinicians

1.13   HPB Multidisciplinary Request Service

The service is designed to improve the efficiency of HPB Multi-Disciplinary Teams by ensuring that submissions/referrals contain all the necessary information for a successful MDT review.

The service supports the MDT administration process by greatly reducing unnecessary email exchanges with referrers and provides overview, alerting and tracking capabilities, via a dashboard, of all new and outstanding submissions.

The new service allows the MDT to be totally managed from within the portal with only the IEP imaging being external. The mandatory fields will significantly reduce the number of requests 'rolled over' due to missing information.

The portal includes an interface to the Personal Demographic Service (PDS) to allow auto-filling of the request form based on combinations of NHS Number, First Name, Last Name and DOB.

Features

Patients are sent an email or text providing login details

Patients can securely access their individual care plan Service facilitates management of patients

Manages telephone and physical appointments Patient reminders and alerts are included

Care plan can be tailored to specific requirements

Automatic rescheduling to tests based on care plan requirements

Benefits

Patient access through any web browser from their own device

Patients more likely to understand and adhere to recommended treatment

Mutual collaboration can foster patient satisfaction and improve healthcare outcomes

Sharing access with third parties ensures details are not mis-interpreted

Evidences decisions, clinical findings, progress and investigations

Evidences dates, results, consent, and referrals

Patient administration automated with dashboards for nurses and clinicians

1.14   Liver Transplant Tracking Service

This proactively manages post-operative liver transplant patients and provides data on each patient along with patient management facilities.

Built in logic to assists in data entry and the facility to populate blood group and patient demographics from PDS and EPRs. The service also provides a patient dashboard with full reporting.

Features

Proactive management of post-operative liver transplant patients

Automatic load of patient and blood group information

Patient dashboard

Benefits

Currency of Patient information

Easy viewing dashboard to enable comprehensive assessment

1.15   Epilepsy Video Upload Portal

This service allows a parent or carer to upload a video taken while a child is experiencing some form of seizure.

The video can be reviewed by specialist clinicians to decide what type of intervention is required and the video can also be securely sent to other clinicians for further review and opinion.

Features

Supports all main video file types

Clear instructions provided to parent or carer for video upload

Clinical staff notified when an upload is received

Video accessible by specialist nurses and consultants

A patient dashboard is maintained for each patient

Historical videos can be viewed for comparison purposes

Benefits

Patient clinical assessment possible without having to attend a clinic

Patient situation quickly understood and actioned by clinical staff

Historical comparisons are easily made

1.16 Pulmonary Hypertension Service

The service supports the management of on-going Pulmonary Hypertension treatment at home.

Patient test results are automatically loaded from the Patient Record system, supplemented by manual additions where necessary (e.g. FBC and Liver Function), and signed off by clinicians.

Alerts are raised automatically when monthly results are abnormal or late.

Features

Single source shared by clinicians and nurses

Auto triggering of alerts when results thresholds are exceeded

Results available at a glance

History of all results and alerts available

Results sent securely to a patient's email with appropriate safeguards

No need for paper, letters, envelopes and stamps

Benefits

Medical staff have an identical view of patient data

Timely alerts ensure patient/clinician are less likely to miss an action

Results available to all

Historical view provides complete patient picture

Faster communication between Centre and patient

Reduced communication costs between Centre and patient

1.17   Document Encryption

The data encryption process which meets the AES 256 standard supports the complete anonymisation of all content in documents and files shared across nhs.net and beyond.

Encrypted information may be reconstituted once the receiving party has been authorised and provided with a decryption code.

Documents may be shared across NHS Net and beyond. Encrypted information may be opened, reconstituted to produce a true facsimile and made legible, once the receiving party has been authorised and provided with a decryption code, by the sender.

Features

Encrypts any document or file regardless of content

Full encryption to AES 256 standard

Secure online access using any internet-enabled device

Decryption by any recipient only with originating user permission

Benefits

Simple to use

Rapid deployment

Data shared securely

Cost effective

1.18   Pseudonymisation Service

This service enables data extraction and sharing of patient confidential data (PCD) pseudo-anonymised or anonymised at source which meet the requirements for compliant, safe, ethical and secure sharing of data enabling information to be shared legally.

A supporting product, IGautopseudo, is installed on user's own servers and automatically pseudonymises files containing PCD.

The data encryption process which meets the AES 256 standard supports the complete anonymisation of all content in documents and files shared across nhs.net and beyond.

Encrypted information may be reconstituted once the receiving party has been authorised and provided with a decryption code.

Documents may be shared across NHS Net and beyond. Encrypted information may be opened, reconstituted to produce a true facsimile and made legible, once the receiving party has been authorised and provided with a decryption code, by the sender.

There is no charge for decrypting a document thus enabling a cost-effective service and wide user base of recipients.

Features

Pseudonymises any document or file regardless of content

Full encryption to AES 256 standard

Secure online access using any internet-enabled device

De-pseudonymises by any recipient only with originating user permission

Benefits

Simple to use

Rapid deployment

Data shared securely

Cost effective

1.19   Cyber-Security Services

Application security testing encompasses the use of manual and automated methods to detect internal and external threats and protect business applications and data, either in static or dynamic form.

This CREST/CISSP service, supported by Defendza (see Service Definition document), includes penetration testing of Firewalls, VLANS, networks, applications and Wi-Fi with remote connections.

Testing includes DNS zone transfers attempts, services enumeration, OS detection and build version fingerprinting, password attacks, firewall traversal attacks, email spoofing and mail/web/relay tests, back-door discovery and uploads.

Our Application security services include scoping, identifying, assessing the security risks of the application/software product and identifying & recommending the risk treatment plans.

Features

Attempts on DNS zone transfers for public IP addresses

Enumeration of services and Enumeration command support

OS detection and build version fingerprinting

Password attacks for public IP addresses

Firewall traversal attacks

Checks for anonymous access and file/folder privileges

Configuration files will be searched and access attempts

Email spoofing and mail / web/ relay tests

Web crawls, method support and web directory enumeration

Upload and Input validation attempts

Benefits

Currency with CYBER latest threats ensures a high protection level

CREST/CISSP conformance ensures high standard of security

Comprehensive report enables pro-active protection interventions

Cost effective

1.20   Secure Infrastructure Platform

Provides the highest level of security to Healthcare Service providers without the cost and timescales involved in developing and commissioning a secure platform for confidential patient data.

Securely delivered in partnership with some of the world leaders in hosting, computing and security.

Protected by periodic penetration testing. IGspectrum's penetration testing services are accredited by the following organisations: CISSP CREST and CESG.

Provides the highest level of IG compliance and security to Healthcare Service providers without the cost and timescales involved in developing and commissioning their own platform.

Dedicated or cloud servers are selected and various levels of resilience and availability are possible. A HSCN connection is available. ISO27001, Cyber Essentials and all other NHS mandated accreditations are included.

Features

Secure service which can be deployed quickly and effectively

Fully compliant with regulations including DoH and IGSOC2 (IG Toolkit)

Protected by periodic penetration testing – see IGsecurity service

Hosted at secure facilities managed by experienced BS27001 accredited staff

100% guaranteed network and infrastructure uptime

Delivery partners are world leaders in hosting, computing and security

HSCN Connection available

Benefits

Uptime guarantee ensures that your database is always available

Hosted configuration meets your required service levels and subsequent dependencies Cost effective

Availability requirements can be satisfied

Annual cyber-security test

Help desk during normal working hours 24/7 Help Desk available

Maintenance and enhancement services available

Capacity management included

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2   Further Information and Contact Details

IGspectrum specialises in providing an extensive portfolio of hosted web-based applications to NHS trusts and hospitals with simple 24/7 access available from any supported browser by both clinicians, clinical and administrative staff and, when permitted, patients, family and carers.

This document details those applications currently used by Royal Free but there are many other applications available from our portfolio which have been developed for other trusts.

Our hosting arrangements, where we work with our partner Rackspace to host all of our cloud-based services and applications, conform to: data protection legislation; organisational information governance policies; Data Security & Protection and Cyber Security requirements; and are provided from a secure ISO27001 accredited facility with a HSCN connection available.

We offer a full suite of cyber-security consulting, training and security solutions.

For further information about our services or to find out how we can configure new or existing applications to meet your exact requirements please contact:

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